

EXHIBIT 1

CSU

ALIAS PRAECIPE

TO: Prothonotary
Superior Court
Leonard L. Williams Justice Center
500 N. King Street
Wilmington, DE 19801

PLEASE ISSUE A SUMMONS and a copy of the complaint to Brandywine Process Servers, commanding them to summon and direct the below-named Defendant to appear and file an answer to the complaint by serving its registered agent pursuant to 8 *Del. C.* § 321:

CHEVRON CORPORATION
c/o Corporation System, Inc.
251 Little Falls Drive
Wilmington, DE 19808

Dated: September 18, 2020

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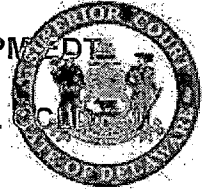
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Transaction ID 65948806
Case No. N20C-09-097 AML



IN THE SUPERIOR COURT OF THE STATE OF DELAWARE

STATE OF DELAWARE, *ex rel.*
KATHLEEN JENNINGS,
Attorney General of the State of
Delaware,

Plaintiff,

v.

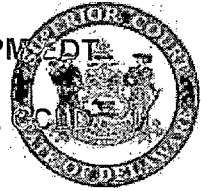
BP AMERICA INC., BP P.L.C.,
CHEVRON CORPORATION,
CHEVRON U.S.A. INC.,
CONOCOPHILLIPS, CONOCOPHILLIPS
COMPANY, PHILLIPS 66, PHILLIPS 66
COMPANY, EXXON MOBIL
CORPORATION, EXXONMOBIL OIL
CORPORATION, XTO ENERGY INC.,
HESS CORPORATION, MARATHON
OIL CORPORATION, MARATHON OIL
COMPANY, MARATHON PETROLEUM
CORPORATION, MARATHON
PETROLEUM COMPANY LP,
SPEEDWAY LLC, MURPHY OIL
CORPORATION, MURPHY USA INC.,
ROYAL DUTCH SHELL PLC, SHELL
OIL COMPANY, CITGO PETROLEUM
CORPORATION, TOTAL S.A., TOTAL
SPECIALTIES USA INC., OCCIDENTAL
PETROLEUM CORPORATION, DEVON
ENERGY CORPORATION, APACHE
CORPORATION, CNX RESOURCES
CORPORATION, CONSOL ENERGY
INC., OVINTIV, INC., and AMERICAN
PETROLEUM INSTITUTE,

Defendants.

C.A. No. N20C-09-097-
AML CCLD

**TRIAL BY JURY OF 12
DEMANDED**

EFiled: Sep 21 2020 12:58PM
Transaction ID 65948806
Case No. N20C-09-097 AML



IN THE SUPERIOR COURT OF THE STATE OF DELAWARE

STATE OF DELAWARE, *ex rel.*
KATHLEEN JENNINGS,
Attorney General of the State of
Delaware,

Plaintiff,

v.

BP AMERICA INC., BP P.L.C.,
CHEVRON CORPORATION,
CHEVRON U.S.A. INC.,
CONOCOPHILLIPS, CONOCOPHILLIPS
COMPANY, PHILLIPS 66, PHILLIPS 66
COMPANY, EXXON MOBIL
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CORPORATION, MURPHY USA INC.,
ROYAL DUTCH SHELL PLC, SHELL
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CORPORATION, TOTAL S.A., TOTAL
SPECIALTIES USA INC., OCCIDENTAL
PETROLEUM CORPORATION, DEVON
ENERGY CORPORATION, APACHE
CORPORATION, CNX RESOURCES
CORPORATION, CONSOL ENERGY
INC., OVINTIV, INC., and AMERICAN
PETROLEUM INSTITUTE,

Defendants.

C.A. No. N20C-09-097-
AML CCLD

**TRIAL BY JURY OF 12
DEMANDED**

ALIAS SUMMONS

**THE STATE OF DELAWARE,
BRANDYWINE PROCESS SERVERS:
YOU ARE COMMANDED:**

To Summon **CHEVRON CORPORATION** ("Defendant") so that, within 20 days after service hereof upon Defendant, exclusive of the day of service, Defendant shall serve upon Christian D. Wright, Esquire, Plaintiff's attorney, whose address is Delaware Attorney General, Delaware Department of Justice, 820 N. French Street, Wilmington, DE 19801 an answer to the complaint (and, if an affidavit of demand has been filed, an affidavit of defense).

To serve upon Defendant a copy hereof and of the complaint (and of the affidavit of demand if any has been filed by Plaintiff).

Dated: OCT. 5, 2020

Lisa Gonzalez
Chief Deputy Prothonotary

Per Deputy



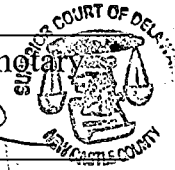
TO THE ABOVE NAMED DEFENDANT:

In case of your failure, within 20 days after service hereof upon you, exclusive of the day of service, to serve on Plaintiff's attorney named above an answer to the complaint (and, if an affidavit of demand has been filed, an affidavit of defense), judgment by default will be rendered against you for the relief demanded in the Complaint (or in the affidavit of demand, if any).

Dated: OCT. 5, 2020

Lisa Gonzalez
Chief Deputy Prothonotary

Per Deputy



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Case No. N20C-09-097 AML



IN THE SUPERIOR COURT OF THE STATE OF DELAWARE

STATE OF DELAWARE, *ex rel.*
KATHLEEN JENNINGS, Attorney
General of the State of Delaware,

Plaintiff,

v.

BP AMERICA INC., BP P.L.C.,
CHEVRON CORPORATION,
CHEVRON U.S.A. INC.,
CONOCOPHILLIPS, CONOCOPHILLIPS
COMPANY, PHILLIPS 66, PHILLIPS 66
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CORPORATION, CNX RESOURCES
CORPORATION, CONSOL ENERGY
INC., OVINTIV, INC., and AMERICAN
PETROLEUM INSTITUTE,

Defendants.

C.A. No. _____
CCLD

**TRIAL BY JURY OF 12
DEMANDED**

COMPLAINT

TABLE OF CONTENTS

I. INTRODUCTION1

II. PARTIES.....9

 A. Plaintiff9

 B. Defendants10

 C. Relevant Non-Parties: Defendants’ Agents and Front Groups58

III. JURISDICTION61

IV. FACTUAL BACKGROUND.....64

 A. Defendants Are Responsible for Causing and Accelerating Climate Change.64

 B. Defendants Went to Great Lengths to Understand, and Either Knew or Should Have Known About, the Dangers Associated with Their Fossil Fuel Products.....70

 C. Defendants Did Not Disclose Known Harms Associated with the Extraction, Promotion, and Consumption of Their Fossil Fuel Products, and Instead Affirmatively Acted to Obscure Those Harms and Engaged in a Campaign to Deceptively Protect and Expand the Use of their Fossil Fuel Products.....104

 D. In Contrast to Their Public Statements, Defendants’ Internal Actions Demonstrate Their Awareness of and Intent to Profit from the Unabated Use of Fossil Fuel Products.....132

 E. Defendants’ Actions Have Exacerbated the Costs of Adapting to and Mitigating the Adverse Impacts of the Climate Crisis.135

 F. Defendants Continue to Mislead About the Impact of Their Fossil Fuel Products on Climate Change Through Greenwashing Campaigns and Other Misleading Advertisements in Delaware and Elsewhere.149

 i. Exxon’s Misleading and Deceptive Greenwashing Campaigns.....156

 ii. Shell’s Misleading and Deceptive Greenwashing Campaigns159

iii. BP’s Misleading and Deceptive Greenwashing Campaigns	161
iv. Chevron’s Misleading and Deceptive Greenwashing Campaigns.....	164
v. Marathon’s Misleading and Deceptive Greenwashing Campaigns.....	168
vi. ConocoPhillips’s Misleading and Deceptive Greenwashing Campaigns.....	169
vii. API’s Misleading and Deceptive Greenwashing Campaigns.....	170
G. Defendants Also Made Misleading Claims About Specific “Green” or “Greener” Fossil Fuel Products.	172
H. Defendants Intended for Consumers to Rely on their Concealments and Omissions Regarding the Dangers of Their Fossil Fuel Products.	177
I. Defendants’ Deceit Only Recently Became Discoverable, and Their Misconduct Is Ongoing.	179
J. The State Has Suffered, Is Suffering, and Will Suffer Injuries from Defendants’ Wrongful Conduct.....	183
V. CAUSES OF ACTION.....	198
FIRST CAUSE OF ACTION (Negligent Failure to Warn) (Against All Fossil Fuel Defendants)	198
SECOND CAUSE OF ACTION (Trespass) (Against All Fossil Fuel Defendants)	203
THIRD CAUSE OF ACTION (Nuisance) (Against All Fossil Fuel Defendants)	204

FOURTH CAUSE OF ACTION

(Delaware Consumer Fraud Act)

(Against American Petroleum Institute, BP America Inc., BP plc, Chevron Corporation, Chevron U.S.A. Inc., Exxon Mobil Corporation, ExxonMobil Oil Corporation, XTO Energy, Inc., Hess Corporation, Royal Dutch Shell PLC, Shell Oil Company, Citgo Petroleum Corporation, CNX Resources Corporation, Marathon Oil Company, Marathon Petroleum Corporation, Marathon Oil Corporation, Marathon Petroleum Company LP, and Speedway LLC)209

VI. PRAYER FOR RELIEF217

VII. REQUEST FOR JURY TRIAL217

I. INTRODUCTION

1. Defendants, major corporate members of the fossil fuel industry, have known for nearly half a century that unrestricted production and use of fossil fuel products create greenhouse gas pollution that warms the planet and changes our climate. Climate change will have and has already had devastating economic and public health impacts across the State of Delaware, and will disproportionately impact people of color and people living in poverty. Defendants have known for decades that climate change impacts could be catastrophic, and that only a narrow window existed to take action before the consequences would be irreversible. They have nevertheless engaged in a coordinated, multi-front effort to conceal and deny their own knowledge of those threats, to discredit the growing body of publicly available scientific evidence, and to persistently create doubt in the minds of customers, consumers, regulators, the media, journalists, teachers, and the public about the reality and consequences of the impacts of their fossil fuel products. This campaign was intended to, and did, target and influence the public and consumers, including in Delaware.

2. At the same time, Defendants have promoted and profited from a massive increase in the extraction, production, and consumption of oil, coal, and natural gas, which has in turn caused an enormous, foreseeable, and avoidable increase in global greenhouse gas pollution and a concomitant increase in the

concentration of greenhouse gases,¹ particularly carbon dioxide (“CO₂”) and methane, in the Earth’s atmosphere. Those disruptions of the Earth’s otherwise balanced carbon cycle have substantially contributed to a wide range of dire climate-related effects, including, but not limited to, global atmospheric and ocean warming, ocean acidification, melting polar ice caps and glaciers, more extreme and volatile weather, drought, and sea level rise.

3. Plaintiff, the State of Delaware,² its departments and agencies, along with the State’s residents, infrastructure, public and private lands, and natural resources, suffer the consequences of Defendants’ campaign of deception.

4. Defendants are extractors, producers, refiners, manufacturers, distributors, promoters, marketers, and/or sellers of fossil fuel products, each of which contributed to deceiving the public and consumers, in and outside of Delaware, about the role of their products in causing the global climate crisis. Decades of scientific research has shown that pollution from Defendants’ fossil fuel products plays a direct and substantial role in the unprecedented rise in emissions of

¹ As used in this Complaint, the term “greenhouse gases” refers collectively to carbon dioxide, methane, and nitrous oxide. Where a cited source refers to a specific gas or gases, or when a process relates only to a specific gas or gases, this Complaint refers to each gas by name.

² In this Complaint, the terms “State” and “Plaintiff” refer to the State of Delaware, unless otherwise stated. The word “Delaware” refers to the area falling within Plaintiff’s geographic boundaries, excluding federal land, unless otherwise stated.

greenhouse gas pollution and increased atmospheric CO₂ concentrations that have occurred since the mid-20th century. This dramatic increase in atmospheric CO₂ and other greenhouse gases is the main driver of the gravely dangerous changes occurring to the global climate.

5. Anthropogenic greenhouse gas pollution, primarily in the form of CO₂, is far and away the dominant cause of global warming,³ resulting in severe impacts including, but not limited to: sea level rise, disruption to the hydrologic cycle, more frequent and intense extreme precipitation events and associated flooding, more frequent and intense heatwaves, more frequent and intense droughts, and associated consequences of those physical and environmental changes. These impacts, the consequences of Defendants' actions, disproportionately impact communities of color and low-income communities in Delaware. The primary cause of the climate crisis is the combustion of coal, oil, and natural gas,⁴ referred to collectively in this Complaint as "fossil fuel products."

6. The rate at which Defendants have extracted and sold fossil fuel products has exploded since the Second World War, as have emissions from those

³ See INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE ("IPCC"), CLIMATE CHANGE 2014 SYNTHESIS REPORT (2014), https://www.ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf.

⁴ See Pierre Friedlingstein et al., *Global Carbon Budget 2019*, 11 EARTH SYST. SCI. DATA 1783 (2019), <https://www.earth-syst-sci-data.net/11/1783/2019>.

products. The substantial majority of all anthropogenic greenhouse gas emissions in history have occurred since the 1950s, a period known as the “Great Acceleration.”⁵ About three-quarters of all industrial CO₂ emissions in history have occurred since the 1960s,⁶ and more than half have occurred since the late 1980s.⁷ The annual rate of CO₂ emissions from extraction, production, and consumption of fossil fuels has increased substantially since 1990.⁸

7. Defendants have known for more than 50 years that greenhouse gas pollution from their fossil fuel products would have a significant adverse impacts on the Earth’s climate and sea levels. Defendants’ awareness of the negative impacts of their actions corresponds almost exactly with the Great Acceleration, and with skyrocketing greenhouse gas emissions. With that knowledge, Defendants took steps to protect their own assets from those threats through immense internal investment in research, infrastructure improvements, and plans to exploit new opportunities in a warming world.

⁵ Will Steffen et al., *The Trajectory of the Anthropocene: The Great Acceleration*, 2 THE ANTHROPOCENE REVIEW 81, 81 (2015).

⁶ R.J. Andres et al., *A Synthesis of Carbon Dioxide Emissions from Fossil-Fuel Combustion*, 9 BIOGEOSCIENCES 1845, 1851 (2012).

⁷ *Id.*

⁸ Friedlingstein et al., *supra* note 4, at 630.

8. Instead of warning of those known consequences following from the intended and foreseeable use of their products and working to minimize the damage associated with the use and combustion of such products, Defendants concealed the dangers, promoted false and misleading information, sought to undermine public support for greenhouse gas regulation, and engaged in massive campaigns to promote the ever-increasing use of their products at ever-greater volumes. These campaigns were intended to and did target the people of Delaware. All Defendants' actions in concealing the dangers of, promoting false and misleading information about, and engaging in massive campaigns to promote increasing use of their fossil fuel products, have contributed substantially to the buildup of CO₂ in the atmosphere that drives global warming and its physical, environmental, and socioeconomic consequences, including those affecting the State.

9. Defendants are directly responsible for the substantial increase in all CO₂ emissions between 1965 and the present. Defendants individually and collectively played leadership roles in denialist campaigns to misinform and confuse consumers and the public and obscure the role of Defendants' products in causing global warming and its associated impacts. But for such campaigns, climate crisis impacts in Delaware would have been substantially mitigated or eliminated altogether. Accordingly, Defendants are directly responsible for a substantial portion of the climate crisis-related impacts in Delaware.

10. As a direct and proximate consequence of Defendants' wrongful conduct described in this Complaint, the environment in and around Delaware is changing, with devastating adverse impacts on the State and its residents, particularly communities of color and low-income communities. Virtually all of Delaware's eastern border is coastal or tidal, and Delaware is one of the lowest-lying states in the nation, with a mean elevation of only approximately 60 feet above sea level. In addition, the beach communities and coastal economy serve as an essential pillar of the State's economy. As a result, Delaware is very vulnerable to the impacts of sea level rise and other climate change impacts. For instance, the average sea level has already risen and will continue to rise substantially along Delaware's coast, causing flooding, inundation, saltwater intrusion, erosion, tidal wetland losses, and beach loss; extreme weather, including coastal storms, drought, heatwaves, and other extreme events will become more frequent, longer-lasting and more severe; and the cascading social, economic, and other consequences of those and myriad other environmental changes—all due to anthropogenic global warming—will increase in Delaware.

11. As a direct result of those and other climate crisis-caused environmental changes, the State has suffered and will continue to suffer severe injuries, including, but not limited to: inundation and loss of State property; inundation of private property and businesses with associated loss of tax revenue; injury or destruction of

State-owned or -operated facilities critical for operations, utility services, and risk management, as well as other assets essential to community health, safety, and well-being; increased costs of maintaining public infrastructure; increased costs of providing government services; increased health care and public health costs; increased planning and preparation costs for community adaptation and resiliency to the effects of the climate crisis; displacement, disruption and/or loss of coastal communities, with associated harm to the State; decreased tax revenue due to impacts on Delaware's tourism- and ocean-based economy; and others.⁹

12. Defendants' individual and collective conduct, including, but not limited to, their introduction of fossil fuel products into the stream of commerce while knowing but failing to warn of the threats posed to the world's climate; their wrongful promotion of their fossil fuel products and concealment of known hazards associated with the use of those products; their public deception campaigns designed

⁹ See, e.g., DIV. OF ENERGY AND CLIMATE, DELAWARE DEPT. OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL, ADAPTING TO SEA LEVEL RISE (2014), *available at* <https://dnrec.alpha.delaware.gov/coastal-programs/planning-training/adapting-to-sea-level-rise>; DIV. OF ENERGY AND CLIMATE, DELAWARE DEPT. OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL, CLIMATE CHANGE IMPACT ASSESSMENT (2014) (hereinafter "DCCIA"), *available at* http://www.dnrec.delaware.gov/energy/Documents/Climate%20Change%202013-2014/DCCIA%20interior_full_dated.pdf; DELAWARE EMERGENCY MGMT. AGENCY, ALL-HAZARD MITIGATION PLAN (Aug. 2018), *available at* <https://dema.delaware.gov/contentFolder/pdfs/HazardMitigationPlan.pdf>.

to obscure the connection between their products and global warming and the environmental, physical, social, and economic consequences flowing from it; and their failure to pursue less hazardous alternatives, actually and proximately caused the State's injuries. In other words, Defendants' concealment and misrepresentation of their products' known dangers—and simultaneous promotion of their unrestrained use—drove consumption, and thus greenhouse gas pollution, and thus the climate crisis.

13. Accordingly, the State brings this action against Defendants for negligent failure to warn, trespass, common law nuisance, and violations of the Delaware Consumer Fraud Act.

14. The State hereby disclaims injuries arising on federal property and those that arose from Defendants' provision of fossil fuel products to the federal government, and seeks no recovery or relief attributable to such injuries.

15. The State seeks to ensure that the parties who have profited from externalizing the consequences and costs of dealing with global warming and its physical, environmental, social, and economic consequences, bear the costs of those impacts on Delaware, rather than the State, taxpayers, residents, or broader segments of the public.

II. PARTIES

A. Plaintiff

16. Plaintiff, State of Delaware, *ex rel.* Kathleen Jennings, Attorney General of the State of Delaware, brings this action in the State's capacity as sovereign, in its proprietary capacity, in its *parens patriae* capacity as an exercise of its authority to protect public trust resources, and as an exercise of its police power, which includes, but is not limited to, its power to prevent injuries to and pollution of the State's property and waters, to prevent and abate nuisances, and to prevent and abate hazards to public health, safety, welfare, and the environment.

17. The Attorney General is the chief law officer of the State, and is statutorily authorized to initiate and maintain this action pursuant to 29 Del. C. §§ 2504 and 2522 and 6 Del. C. § 2522.

18. The State consists of several offices and departments, each with purview over the State's operations, facilities, property, and/or programs that have been injured by Defendants' conduct as alleged herein and consequent global warming-related impacts.

19. Delaware is the state with the lowest mean elevation in the nation, with 381 miles of shoreline, which presents a significant level of risk from climate change. Between eight percent and eleven percent of its land area, including nearly all its tidal wetlands, could be inundated by a sea level rise of 0.5 to 1.5 meters,

respectively.¹⁰ Additionally, average annual precipitation is projected to increase by ten percent in Delaware by the end of the century.¹¹

B. Defendants

20. When reference in this Complaint is made to an act or omission of Defendants, unless specifically attributed or otherwise stated, such references should be interpreted to mean that the officers, directors, agents, employees, or representatives of Defendants committed or authorized such an act or omission, or failed to adequately supervise or properly control or direct their employees while engaged in the management, direction, operation or control of the affairs of Defendants, and did so while acting within the scope of their employment or agency.

21. **BP Entities: BP P.L.C., BP America Inc.**

a. Defendant **BP P.L.C.** is a multinational, vertically integrated energy and petrochemical public limited company, registered in England and Wales with its principal place of business in London, England. BP P.L.C. consists of three

¹⁰ COASTAL PROGRAMS DIVISION, DELAWARE DEPT. OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL, PREPARING FOR TOMORROW'S HIGH TIDE: SEA LEVEL RISE VULNERABILITY ASSESSMENT FOR THE STATE OF DELAWARE ix (2012) (hereinafter "DNREC, SEA LEVEL RISE VULNERABILITY ASSESSMENT"), *available at* <http://www.dnrec.delaware.gov/coastal/Documents/SeaLevelRise/AssesmentForWeb.pdf>.

¹¹ DCCIA at 4-4.

main operating segments: (1) exploration and production, (2) refining and marketing, and (3) gas power and renewables. BP P.L.C. is the ultimate parent company of numerous subsidiaries, referred to collectively as the “BP Group,” which explore for and extract oil and gas worldwide; refine oil into fossil fuel products such as gasoline; and market and sell oil, fuel, other refined petroleum products, and natural gas worldwide. BP P.L.C.’s subsidiaries explore for oil and natural gas under a wide range of licensing, joint arrangement, and other contractual agreements.

b. BP P.L.C. controls and has controlled companywide decisions about the quantity and extent of fossil fuel production and sales, including those of its subsidiaries. BP P.L.C. is the ultimate decisionmaker on fundamental decisions about the BP Group’s core business, *i.e.*, the level of companywide fossil fuels to produce, including production among BP P.L.C.’s subsidiaries. For instance, BP P.L.C. reported that in 2016–17 it brought online thirteen major exploration and production projects. These contributed to a twelve percent increase in the BP Group’s overall fossil fuel product production. These projects were carried out by BP P.L.C.’s subsidiaries. Based on these projects, BP P.L.C. expects the BP Group to deliver to customers 900,000 barrels of new product per day by 2021. BP P.L.C. further reported that in 2017 it sanctioned three new exploration projects in Trinidad, India, and the Gulf of Mexico.

c. BP P.L.C. controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities. BP P.L.C. makes fossil fuel production decisions for the entire BP Group based on factors including climate change. BP P.L.C.'s Board of Directors is the highest decision-making body within the company, with direct responsibility for the BP Group's climate change policy. BP P.L.C.'s chief executive is responsible for maintaining the BP Group's system of internal control that governs the BP Group's business conduct. BP P.L.C.'s senior leadership directly oversees a carbon steering group, which manages climate-related matters and consists of two committees overseen directly by the board that focus on climate-related investments.

d. Defendant **BP America Inc.** is a wholly owned subsidiary of BP P.L.C. that acts on BP P.L.C.'s behalf and subject to BP P.L.C.'s control. BP America Inc. is a vertically integrated energy and petrochemical company incorporated in the state of Delaware with its headquarters and principal place of business in Houston, Texas. BP America Inc., consists of numerous divisions and affiliates in all aspects of the fossil fuel industry, including exploration for and production of crude oil and natural gas; manufacture of petroleum products; and

transportation, marketing, and sale of crude oil, natural gas, and petroleum products. BP America Inc. was formerly known as, did or does business as, and/or is the successor in liability to Amoco Corporation, Amoco Oil Company, ARCO Products Company, Atlantic Richfield Delaware Corporation, Atlantic Richfield Company (a Delaware Corporation), BP Exploration & Oil, Inc., BP Products North America Inc., BP Amoco Corporation, BP Amoco Plc, BP Oil, Inc., BP Oil Company, Sohio Oil Company, Standard Oil of Ohio (SOHIO), Standard Oil (Indiana), and The Atlantic Richfield Company (a Pennsylvania Corporation) and its division, the Arco Chemical Company.

e. Defendants BP P.L.C. and BP America, Inc., together with their predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as “BP.”

f. The State’s claims against BP arise out of the acts and omissions of BP in Delaware and BP’s actions elsewhere that caused the injuries in Delaware.

g. BP has and continues to purposefully direct its tortious conduct toward Delaware by intentionally and wrongfully distributing, marketing, advertising, promoting, and supplying its fossil fuel products in Delaware, with knowledge that those products have caused and will continue to cause climate crisis-related injuries in Delaware, including the State’s injuries. BP’s statements in and outside of Delaware made in furtherance of its campaign of deception and denial,

and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products both in and outside of Delaware, were intended to conceal and mislead consumers and the public, including the State and its residents, about the serious adverse consequences from continued use of BP's products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants' fossil fuel products in and outside Delaware, resulting in the State's injuries.

h. Over the last twenty-five years, BP, and specifically BP P.L.C., spent millions of dollars on radio, television, and outdoor advertisements in the Delaware market related to its fossil fuel products. At least as far back as 1988 and as recently as 2020, BP also advertised in print publications circulated widely to Delaware consumers, including but not limited to *The Atlantic*, *Fortune Magazine*, *The New York Times*, *Newsweek*, *Time Magazine*, *The Washington Post*, and *The Wall Street Journal*. These advertisements contained no warning commensurate with the risks of BP's products. Moreover, these advertisements also contained false or misleading statements, misrepresentations, and/or material omissions obfuscating the connection between BP's fossil fuel products and climate change, and/or misrepresenting BP's products or BP itself as environmentally friendly.

i. A significant amount of BP's fossil fuel products are or have been transported, traded, distributed, marketed, manufactured, promoted, sold,

and/or consumed in Delaware, from which BP derives and has derived substantial revenue. For example, BP directly and through its subsidiaries and/or predecessors-in-interest supplied substantial quantities of fossil fuel products to Delaware during the period relevant to this litigation. BP conducts and controls, either directly or through franchise agreements, retail fossil fuel sales at gas station locations throughout Delaware, at which it promotes, markets, and advertises its fossil fuel products under its BP and/or Amoco brand names. During the period relevant to this Complaint, BP sold a substantial percentage of all retail gasoline in Delaware. Additionally, BP distributes and provides its lubricant products for sale at locations throughout Delaware, including, but not limited to, auto body and repair shops, Safeway, and Home Depot locations.

j. BP historically directed its fossil fuel product advertising, marketing, and promotional campaigns to Delaware residents, including maps of Delaware identifying the locations of its service stations. BP continues to market and advertise its fossil fuel products in Delaware to Delaware residents by maintaining an interactive website available to prospective customers in Delaware by which it directs Delaware residents to BP's nearby retail service stations and/or lubricant distributors. Further, BP promotes its products in Delaware by regularly updating and actively promoting its mobile device application, "BPme Rewards,"

throughout the state of Delaware, encouraging Delaware users to consume fuel at its stations in Delaware in exchange for rewards and/or savings on every fuel purchase.

22. **Chevron Entities: Chevron Corporation, Chevron USA, Inc.**

a. Defendant **Chevron Corporation** is a multinational, vertically integrated energy and chemicals company incorporated in Delaware, with its global headquarters and principal place of business in San Ramon, California.

b. Chevron Corporation operates through a web of United States and international subsidiaries at all levels of the fossil fuel supply chain. Chevron Corporation's and its subsidiaries' operations consist of: (1) exploring for, developing, and producing crude oil and natural gas; (2) processing, liquefaction, transportation, and regasification associated with liquefied natural gas; (3) transporting crude oil by major international oil export pipelines; (4) transporting, storing, and marketing natural gas; (5) refining crude oil into petroleum products; (6) marketing of crude oil and refined products; (7) transporting crude oil and refined products by pipeline, marine vessel, motor equipment, and rail car; (8) basic and applied research in multiple scientific fields including chemistry, geology, and engineering; and (9) manufacturing and marketing of commodity petrochemicals, plastics for industrial uses, and fuel and lubricant additives.

c. Chevron Corporation controls and has controlled companywide decisions about the quantity and extent of fossil fuel production and sales, including

those of its subsidiaries. Chevron Corporation determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

d. Chevron Corporation controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

e. Defendant **Chevron U.S.A. Inc.** is a Pennsylvania corporation with its principal place of business located in San Ramon, California. Chevron U.S.A. Inc. is registered to do business in Delaware and has a registered agent for service of process in Wilmington, Delaware. Chevron U.S.A. Inc. is a wholly owned subsidiary of Chevron Corporation that acts on Chevron Corporation's behalf and subject to Chevron Corporation's control. Chevron U.S.A. Inc. was formerly known as, and did or does business as, and/or is the successor in liability to Gulf Oil Corporation, Gulf Oil Corporation of Pennsylvania, Chevron Products Company, and Chevron Chemical Company.

f. "Chevron" as used hereafter, means collectively, Defendants Chevron Corporation and Chevron U.S.A. Inc. and their predecessors, successors, parents, subsidiaries, affiliates, and divisions.

g. The State's claims against Chevron arise out of the acts and omissions of Chevron in Delaware and Chevron's actions elsewhere that caused the injuries in Delaware.

h. Chevron has and continues to direct its tortious conduct toward Delaware by intentionally and wrongfully distributing, marketing, advertising, promoting, and supplying its products in Delaware, with knowledge that those products have caused and will continue to cause climate crisis-related injuries in Delaware, including the State's injuries. Chevron's statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products both in and outside of Delaware, were intended to conceal and mislead consumers and the public, including the State and its residents, about the serious adverse consequences from continued use of Chevron's products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants' fossil fuel products in and outside Delaware, resulting in the State's injuries.

i. Over the last twenty-five years, Chevron spent millions of dollars on radio, television, and outdoor advertisements in the Delaware market related to its fossil fuel products. At least as far back as 1971 and as recently as 2020, Chevron also advertised in print publications circulated widely to Delaware consumers,

including but not limited to *The Atlantic*, *Fortune Magazine*, *The New York Times*, *Newsweek*, *People*, *Sports Illustrated*, *Time Magazine*, and *The Washington Post*. These advertisements contained no warning commensurate with the risks of Chevron's products. Moreover, these advertisements also contained false or misleading statements, misrepresentations, and/or material omissions obfuscating the connection between Chevron's fossil fuel products and climate change, and/or misrepresenting Chevron's products or Chevron itself as environmentally friendly.

j. A significant amount of Chevron's fossil fuel products are or have been transported, traded, distributed, promoted, marketed, manufactured, sold, and/or consumed in Delaware, from which Chevron derives and has derived substantial revenue. Chevron's predecessors, the Getty Oil Company and Texaco, owned and operated the Delaware City Refinery from approximately 1956–1988. Chevron conducts and controls, and/or has conducted and controlled, either directly or through franchise agreements, retail fossil fuel sales at its branded gas station locations throughout Delaware, at which it is engaging or at times relevant to this complaint has engaged in the promotion, marketing, and advertisement of its fossil fuel products under its various brand names, including its Chevron, Texaco, and other brand names. Chevron historically directed its fossil fuel product advertising, marketing, and promotional campaigns to Delaware residents, including maps of Delaware identifying the locations of its service stations. Chevron offers a

proprietary credit card known as the “Chevron Techron Advantage Card,” which allows consumers in Delaware to pay for gasoline and other products at Chevron-branded service stations, and which encourage Delaware consumers to use Chevron-branded service stations by offering various rewards, including discounts on gasoline purchases at Chevron service stations and cash rebates. Chevron maintains an interactive website available in Delaware by which it directs prospective customers to Chevron-branded service stations. Chevron further maintains a smartphone application known as the “Chevron App” that offers Delaware consumers a cashless payment method for gasoline and other products at Chevron-branded service stations. Consumers in Delaware can also receive rewards including discounts on gasoline purchases by registering their personal identifying information in the Chevron App and using the application to identify and activate gas pumps at Chevron service stations during a purchase.

23. **ConocoPhillips Entities: ConocoPhillips, ConocoPhillips Company, Phillips 66, Phillips 66 Company**

a. Defendant **ConocoPhillips** is a multinational energy company incorporated in Delaware and with its principal place of business in Houston, Texas. ConocoPhillips consists of numerous divisions, subsidiaries, and affiliates that carry out ConocoPhillips’s fundamental decisions related to all aspects of the fossil fuel

industry, including exploration, extraction, production, manufacture, transport, and marketing.

b. ConocoPhillips controls and has controlled companywide decisions about the quantity and extent of fossil fuel production and sales, including those of its subsidiaries. ConocoPhillips determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products. ConocoPhillips's most recent annual report subsumes the operations of the entire ConocoPhillips group of subsidiaries under its name. Therein, ConocoPhillips represents that its value—for which ConocoPhillips maintains ultimate responsibility—is a function of its decisions to direct subsidiaries to explore for and produce fossil fuels: “Unless we successfully add to our existing proved reserves, our future crude oil, bitumen, natural gas and natural gas liquids production will decline, resulting in an adverse impact to our business.”¹² ConocoPhillips optimizes the ConocoPhillips group's oil and gas portfolio to fit ConocoPhillips's strategic plan. For example, in November 2016, ConocoPhillips announced a plan to generate \$5 billion to \$8 billion of proceeds over two years by optimizing its business portfolio, including its fossil fuel

¹² CONOCOPHILLIPS, FORM 10-K: ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934 23 (Dec. 31, 2019).

product business, to focus on low cost-of-supply fossil fuel production projects that strategically fit its development plans.

c. ConocoPhillips controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities. For instance, ConocoPhillips's board has the highest level of direct responsibility for climate change policy within the company. ConocoPhillips has developed and implements a corporate Climate Change Action Plan to govern climate change decision-making across all entities in the ConocoPhillips group.

d. Defendant **ConocoPhillips Company** is a wholly owned subsidiary of ConocoPhillips that acts on ConocoPhillips's behalf and subject to ConocoPhillips's control. ConocoPhillips Company is incorporated in Delaware and has its principal office in Bartlesville, Oklahoma.

e. Defendant **Phillips 66** is a multinational energy and petrochemical company incorporated in Delaware and with its principal place of business in Houston, Texas. It encompasses downstream fossil fuel processing, refining, transport, and marketing segments that were formerly owned and/or controlled by ConocoPhillips.

f. Defendant **Phillips 66 Company** is a wholly owned subsidiary of Phillips 66 that acts on Phillips 66's behalf and subject to Phillips 66's control. Phillips 66 Company is incorporated in Delaware and has its principal office in Houston, Texas. Phillips 66 Company was formerly known as, did or does business as, and/or is the successor in liability to Phillips Petroleum Company, Conoco, Inc., Tosco Corporation, and Tosco Refining Co.

g. Defendants ConocoPhillips, ConocoPhillips Company, Phillips 66, and Phillips 66 Company, and their predecessors, successors, parents, subsidiaries, affiliates, and divisions are collectively referred to herein as "ConocoPhillips."

h. ConocoPhillips's statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products, were intended to conceal and mislead consumers and the public about the serious adverse consequences from continued use of ConocoPhillips's products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants' fossil fuel products, resulting in the State's injuries.

24. **Exxon Entities: Exxon Mobil Corporation, ExxonMobil Oil Corporation, XTO Energy, Inc.**

a. Defendant **Exxon Mobil Corporation** is a multinational, vertically integrated energy and chemicals company incorporated in New Jersey with its headquarters and principal place of business in Irving, Texas. Exxon Mobil Corporation is among the largest publicly traded international oil and gas companies in the world. Exxon Mobil Corporation was formerly known as, did or does business as, and/or is the successor in liability to ExxonMobil Refining and Supply Company, Exxon Chemical U.S.A., ExxonMobil Chemical Corporation, ExxonMobil Chemical U.S.A., ExxonMobil Refining & Supply Corporation, Exxon Company, U.S.A., Exxon Corporation, and Mobil Corporation. Exxon Mobil Corporation is registered to do business in Delaware and has a registered agent for service of process in Wilmington, Delaware.

b. Defendant **ExxonMobil Oil Corporation** is a wholly owned subsidiary of Exxon Mobil Corporation, acts on Exxon Mobil Corporation's behalf, and is subject to Exxon Mobil Corporation's control. ExxonMobil Oil Corporation is incorporated in the state of New York with its principal place of business at 5959 Las Colinas Boulevard, Irving, Texas, 75039. ExxonMobil Oil Corporation was formerly known as, did or does business as, and/or is the successor in liability to Mobil Oil Corporation.

c. **Defendant XTO Energy Inc.** is a wholly owned subsidiary of Exxon Mobil Corporation that acts on Exxon Mobil Corporation's behalf and subject to Exxon Mobil Corporation's control. XTO Energy Inc. is incorporated in Delaware with its principal place of business in Spring, Texas. XTO Energy Inc. and its subsidiaries are engaged in the acquisition, development, exploitation, and exploration of both producing oil and gas properties and unproved properties, and in the production, processing, marketing and transportation of oil and natural gas.

d. At least forty-four of Exxon Mobil Corporation's other subsidiaries are also incorporated in Delaware, including but not limited to Ellora Energy, Inc.; Esso Australia Resources Pty Ltd; Exxon International Finance Company, Exxon Luxembourg Holdings, LLC; and Exxon Neftegas Limited.

e. Exxon Mobil Corporation controls and has controlled companywide decisions about the quantity and extent of fossil fuel production and sales, including those of its subsidiaries. Exxon Mobil Corporation's 2017 Form 10-K filed with the United States Securities and Exchange Commission represents that its success, including its "ability to mitigate risk and provide attractive returns to stockholders, depends on [its] ability to successfully manage [its] overall portfolio,

including diversification among types and locations of [its] projects.”¹³ Exxon Mobil Corporation determines whether and to what extent its subsidiaries market, produce, and/or distribute fossil fuel products.

f. Exxon Mobil Corporation controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities. Exxon Mobil Corporation’s Board holds the highest level of direct responsibility for climate change policy within the company. Exxon Mobil Corporation’s Chairman of the Board and Chief Executive Officer, its President and the other members of its Management Committee are actively engaged in discussions relating to greenhouse gas emissions and the risks of climate change on an ongoing basis. Exxon Mobil Corporation requires its subsidiaries to provide an estimate of greenhouse gas-related emissions costs in their economic projections when seeking funding for capital investments.

¹³ EXXON MOBIL CORPORATION, FORM 10-K: ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934 3–4 (FEB. 28, 2018).

g. Defendants Exxon Mobil Corporation, ExxonMobil Oil Corporation, XTO Energy, Inc., and their predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as “Exxon.”

h. The State’s claims against Exxon arise out of the acts and omissions of Exxon in Delaware and Exxon’s actions elsewhere that caused the injuries in Delaware.

i. Exxon consists of numerous divisions and affiliates in all areas of the fossil fuel industry, including exploration for and production of crude oil and natural gas; manufacture of petroleum products; and transportation, promotion, marketing, and sale of crude oil, natural gas, and petroleum products. Exxon is also a major manufacturer and marketer of commodity petrochemical products.

j. Exxon has and continues to purposefully direct its tortious conduct toward Delaware by intentionally and wrongfully marketing, advertising, promoting, and supplying its fossil fuel products in Delaware, with knowledge that those products have caused and will continue to cause climate crisis-related injuries in Delaware, including the State’s injuries. Exxon’s statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products both in and outside of Delaware, were intended to conceal and mislead consumers and the public, including the State and

its residents, about the serious adverse consequences from continued use of Exxon's products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants' fossil fuel products in and outside Delaware, resulting in the State's injuries.

k. Over the last twenty-five years, Exxon spent millions of dollars on radio, television, and outdoor advertisements in the Delaware market related to its fossil fuel products. At least as far back as 1972 and as recently as 2020, Exxon also advertised in print publications circulated widely to Delaware consumers, including but not limited to *The Atlantic*, *The Economist*, *Fortune Magazine*, *The New York Times*, *People*, *Sports Illustrated*, *Time Magazine*, *The Washington Post*, and *The Wall Street Journal*. These advertisements contained no warning commensurate with the risks of their products. Moreover, these advertisements also contained false or misleading statements, misrepresentations, and/or material omissions obfuscating the connection between Exxon's fossil fuel products and climate change, and/or misrepresenting Exxon's products or Exxon itself as environmentally friendly.

l. A significant amount of Exxon's fossil fuel products are or have been transported, traded, distributed, promoted, marketed, manufactured, sold, and/or consumed in Delaware, from which Exxon derives and has derived substantial revenue. For example, Exxon directly and through its subsidiaries and/or

predecessors-in-interest supplied substantial quantities of fossil fuel products to Delaware during the period relevant to this litigation. Exxon conducts and controls, either directly or through franchise agreements, retail fossil fuel sales at gas station locations throughout Delaware, at which it promotes, markets, and advertises its fossil fuel products under its Exxon and/or Mobil brand names. During the period relevant to this Complaint, Exxon sold a substantial percentage of all retail gasoline in Delaware.

m. Exxon historically directed its fossil fuel product advertising, marketing, and promotional campaigns to Delaware residents, including maps of Delaware identifying the locations of its service stations. Exxon continues to market and advertise its fossil fuel products in Delaware to Delaware residents by maintaining an interactive website available to prospective customers by which it directs Delaware residents to Exxon's nearby retail service stations and lubricant distributors. Further, Exxon promotes its products in Delaware by regularly updating and actively promoting its mobile device application, "Exxon Mobil Rewards+," throughout the state of Delaware, which encourages Delaware users to consume fuel at Exxon stations in Delaware in exchange for rewards on every fuel purchase.

25. **Hess Corporation**

a. Defendant **Hess Corporation**, formerly known as Amerada Petroleum Corporation and Amerada Hess Corporation, is a multinational fossil fuel company engaged in exploration, development, production, transportation, purchase, sale, marketing, and promotion of crude oil, natural gas liquids, and natural gas. Hess Corporation is incorporated in Delaware and maintains its principal executive office in New York, New York.

b. Hess Corporation controls and has controlled companywide decisions about the quantity and extent of its fossil fuel production and sales, including those of its subsidiaries. Hess Corporation determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

c. Hess Corporation controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

d. Hess Corporation and its predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as “Hess.”

e. Hess wrongfully distributed, marketed, advertised, and promoted its products in Delaware, with knowledge that those products would cause climate

crisis-related injuries in Delaware, including the State's injuries. Hess's statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products both in and outside of Delaware, were intended to conceal and mislead consumers and the public, including the State and its residents, about the serious adverse consequences from continued use of Hess's products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants' fossil fuel products in and outside Delaware, resulting in the State's injuries.

f. A significant amount of Hess's fossil fuel products have been transported, traded, distributed, promoted, marketed, manufactured, sold, and/or consumed in Delaware, from which Hess has derived substantial revenue. For example, during the time relevant to this complaint, Hess owned, operated, and/or franchised Hess-branded service stations in Delaware at which it marketed and sold its fossil fuel products.

26. **Marathon Entities: Marathon Oil Corporation, Marathon Oil Company, Marathon Petroleum Corporation, Marathon Petroleum Company LP, Speedway LLC**

a. Defendant **Marathon Oil Corporation** is engaged in the exploration and production of crude oil, natural gas, and oil sands. Marathon Oil

Corporation is incorporated in Delaware with its corporate headquarters in Houston, Texas.

b. Marathon Oil Corporation controls and has controlled companywide decisions about the quantity and extent of its fossil fuel production and sales, including those of its subsidiaries. Marathon Oil Corporation determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

c. Marathon Oil Corporation controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

d. Defendant **Marathon Oil Company** is a wholly owned subsidiary of Marathon Oil Corporation that acts on Marathon Oil Corporation's behalf and is subject to Marathon Oil Corporation's control. Marathon Oil Company is engaged in the exploration and production of crude oil, natural gas, and oil sands. Marathon Oil Company is incorporated in Delaware with its principal place of business in Houston, Texas.

e. Defendant **Marathon Petroleum Corporation** is a multinational energy company incorporated in Delaware and with its principal place of business in Findlay, Ohio. Marathon Petroleum Corporation was spun off from the operations of Marathon Oil Corporation in 2011. It consists of multiple subsidiaries and affiliates involved in fossil fuel product refining, marketing, retail, and transport, including both petroleum and natural gas products. Marathon Petroleum Corporation merged in October 2018 with Andeavor Corporation, formerly known as Tesoro Corporation.

f. Marathon Petroleum Corporation controls and has controlled companywide decisions about the quantity and extent of its fossil fuel production and sales, including those of its subsidiaries. Marathon Petroleum Corporation determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

g. Marathon Petroleum Corporation controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

h. Defendant **Marathon Petroleum Company LP** is a wholly owned subsidiary of Marathon Petroleum Corporation that acts on Marathon Petroleum Corporation's behalf and is subject to Marathon Petroleum Corporation's control. Marathon Petroleum Company LP is a vertically integrated fossil fuel refining, marketing, and transporting company. Marathon Petroleum Company LP is incorporated in Delaware with its headquarters and principal place of business in Findlay, Ohio.

i. Defendant **Speedway LLC** is a wholly owned subsidiary of Marathon Petroleum Corporation that acts on Marathon Petroleum Corporation's behalf and is subject to Marathon Petroleum Corporation's control. Speedway LLC is incorporated in Delaware with its principal place of business in Enon, Ohio. Speedway LLC is the one of the largest convenience store chains in the country, including a number of stores in Delaware. Speedway LLC was formerly known as, and did or does business as, and/or is the successor in liability to EMC Marketing, LLC and Speedway Superamerica LLC.

j. Defendants Marathon Oil Corporation, Marathon Oil Company, Marathon Petroleum Corporation, Marathon Petroleum Company LP, Speedway LLC, and their predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as "Marathon."

k. Marathon wrongfully distributed, marketed, advertised, and promoted its products in Delaware, with knowledge that those products would cause climate crisis-related injuries in Delaware, including the State's injuries. Marathon's statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products, were intended to conceal and mislead consumers and the public about the serious adverse consequences from continued use of Marathon's products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants' fossil fuel products, resulting in the State's injuries.

l. A significant amount of Marathon's fossil fuel products are or have been transported, traded, distributed, promoted, marketed, manufactured, sold, and/or consumed in Delaware, from which Marathon has derived substantial revenue.

27. **Murphy Oil Entities: Murphy Oil Corporation and Murphy USA, Inc.**

a. Defendant **Murphy Oil Corporation** is a vertically integrated, global oil and natural gas exploration and production company headquartered in Houston, Texas and incorporated in Delaware. Murphy Oil Corporation consists of

numerous divisions, subsidiaries, and affiliates engaged in various aspects of the fossil industry, including exploration and production of crude oil, natural gas and natural gas liquids worldwide.

b. Murphy Oil Corporation controls and has controlled companywide decisions about the quantity and extent of fossil fuel production and sales, including those of its subsidiaries. Murphy Oil Corporation's Board of Directors determines whether and to what extent its subsidiary holdings produce fossil fuel products.

c. Murphy Oil Corporation controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

d. Defendant **Murphy USA Inc.** is a Delaware corporation with its headquarters in El Dorado, Arkansas. Murphy was incorporated in 2013 and holds, through its subsidiaries, the former U.S. retail marketing business of its former parent company, Murphy Oil Corporation, plus other assets and liabilities of Murphy Oil Corporation that supported the activities of the U.S. retail marketing operations.

e. Murphy Oil Corporation and Murphy USA Inc., and their predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as “Murphy.”

f. Murphy has and continues to wrongfully distribute, market, advertise, promote, and supply its products, with knowledge that those products have caused and will continue to cause climate crisis-related injuries in Delaware, including the State’s injuries. Murphy’s statements made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products, were intended to conceal and mislead consumers and the public, including the State and its residents, about the serious adverse consequences from continued use of Murphy’s products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants’ fossil fuel products, resulting in the State’s injuries.

28. **Shell Entities: Royal Dutch Shell PLC, Shell Oil Company**

a. Defendant **Royal Dutch Shell PLC** is a vertically integrated, multinational energy and petrochemical company. Royal Dutch Shell is incorporated in England and Wales, with its headquarters and principal place of business in The Hague, Netherlands. Royal Dutch Shell PLC consists of numerous divisions, subsidiaries and affiliates engaged in all aspects of the fossil fuel industry,

including exploration, development, extraction, manufacturing and energy production, transport, trading, marketing, and sales.

b. Royal Dutch Shell PLC controls and has controlled companywide decisions about the quantity and extent of fossil fuel production and sales, including those of its subsidiaries. Royal Dutch Shell PLC's Board of Directors determines whether and to what extent Shell subsidiary holdings around the globe produce Shell-branded fossil fuel products. For instance, in 2015, a Royal Dutch Shell PLC subsidiary employee admitted in a deposition that Royal Dutch Shell PLC's Board of Directors made the decision about whether to drill a particular oil deposit off the coast of Alaska.

c. Royal Dutch Shell PLC controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities. Overall accountability for climate change within the Shell group of companies lies with Royal Dutch Shell PLC's Chief Executive Officer and Executive Committee. For instance, at least as early as 1988, Royal Dutch Shell PLC, through its subsidiaries, was researching companywide CO₂ emissions and concluded that the Shell group of companies accounted for "4% of the CO₂ emitted

worldwide from combustion,” and that climatic changes could compel the Shell group, as controlled by Royal Dutch Shell PLC, to “examine the possibilities of expanding and contracting [its] business accordingly.”¹⁴ Royal Dutch Shell PLC’s CEO has stated that Royal Dutch Shell PLC would reduce the carbon footprint of its products, including those of its subsidiaries “by reducing the net carbon footprint of the full range of Shell emissions, from our operations and from the consumption of our products.”¹⁵ Additionally, in November 2017, Royal Dutch Shell PLC announced it would reduce the carbon footprint of “its energy products” by “around” half by 2050.¹⁶ Royal Dutch Shell PLC’s effort is inclusive of all fossil fuel products produced under the Shell brand, including those of its subsidiaries.

d. Defendant **Shell Oil Company** is a wholly owned subsidiary of Royal Dutch Shell PLC that acts on Royal Dutch Shell PLC’s behalf and subject to Royal Dutch Shell PLC’s control. Shell Oil Company is incorporated in Delaware and with its principal place of business in Houston, Texas. Shell Oil Company was

¹⁴ HEALTH, SAFETY, & ENVTL. DIV., SHELL INTERNATIONALE PETROLEUM MAATSCHAPPIJ B.B., THE GREENHOUSE EFFECT (REPORT SERIES HSE 88-001) 29 (1988).

¹⁵ Royal Dutch Shell PLC Press Release, *Management Day 2017: Shell Updates Company Strategy and Financial Outlook, and Outlines Net Carbon Footprint Ambition*, SHELL GLOBAL COMPANY WEBSITE (Nov. 28, 2017), <https://www.shell.com/media/news-and-media-releases/2017/management-day-2017-shell-updates-company-strategy.html>.

¹⁶ *Id.*

formerly known as, did or does business as, and/or is the successor in liability to Deer Park Refining LP, Shell Oil, Shell Oil Products, Shell Chemical, Shell Trading US, Shell Trading (US) Company, Shell Energy Services, Texaco Inc., The Pennzoil Company, Shell Oil Products Company LLC, Shell Oil Products Company, Star Enterprise, LLC, and Pennzoil-Quaker State Company.

e. Defendants Royal Dutch Shell PLC, Shell Oil Company, and their predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as “Shell.”

f. The State’s claims against Shell arise out of the acts and omissions of Shell in Delaware and Shell’s actions elsewhere that caused the injuries in Delaware.

g. Shell has and continues to purposefully direct its tortious conduct toward Delaware by intentionally and wrongfully distributing, marketing, advertising, promoting, and supplying its products in Delaware, with knowledge that those products have caused and will continue to cause climate crisis-related injuries in Delaware, including the State’s injuries. Shell’s statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products both in and outside of Delaware, were intended to conceal and mislead consumers and the public, including the State and

its residents, about the serious adverse consequences from continued use of Shell's products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants' fossil fuel products in and outside Delaware, resulting in the State's injuries.

h. Over the last twenty-five years, Shell spent millions of dollars on radio, television, and outdoor advertisements in the Delaware market related to its fossil fuel products. At least as far back as 1970 and as recently as 2020, Shell also advertised in print publications circulated widely to Delaware consumers, including but not limited to *The Atlantic*, *Life Magazine*, *The New York Times*, *People*, *Sports Illustrated*, *Time Magazine*, *The Washington Post*, and *The Wall Street Journal*. These advertisements contained no warning commensurate with the risks of Shell's products. Moreover, these advertisements also contained false or misleading statements, misrepresentations, and/or material omissions obfuscating the connection between Shell's fossil fuel products and climate change, and/or misrepresenting Shell's products or Shell itself as environmentally friendly.

i. A significant amount of Shell's fossil fuel products are or have been transported, traded, distributed, promoted, marketed, manufactured, sold, and/or consumed in Delaware, from which Shell derives and has derived substantial revenue. From approximately 1998–2004, Shell owned and operated the Delaware City Refinery as part of its joint venture Motiva Enterprises LLC. Among other

endeavors, Shell conducts and controls, either directly or through franchise agreements, retail fossil fuel sales at gas station locations throughout Delaware, at which it promotes, markets, and advertises its fossil fuel products under its Shell brand name. During the period relevant to this Complaint, Shell sold a substantial percentage of all retail gasoline sold in Delaware. Shell also supplies, markets, and promotes its Pennzoil line of lubricants at retail and service stations throughout Delaware, including at Target and Walmart.

j. Shell historically directed its fossil fuel product advertising, marketing, and promotional campaigns to Delaware, including maps of Delaware identifying the locations of its service stations. Shell markets and advertises its fossil fuel products in Delaware to Delaware residents by maintaining an interactive website available to prospective customers by which it directs Delaware residents to Shell's nearby retail service stations. Shell offers a proprietary credit card known as the "Shell Fuel Rewards Card," which allows consumers in Delaware to pay for gasoline and other products at Shell-branded service stations, and which encourages consumers to use Shell-branded gas stations by offering various rewards, including discounts on gasoline purchases. Shell further maintains a smartphone application known as the "Shell US App" that offers Delaware consumers a cashless payment method for gasoline and other products at Shell-branded service stations. Delaware consumers utilize the payment method by providing their credit card information

through the application. Delaware consumers can also receive rewards, including discounts on gasoline purchases, by registering their personal identifying information in the Shell US App and using the application to identify and activate gas pumps at Shell service stations during a purchase.

29. **Citgo Petroleum Corporation**

a. Defendant **Citgo Petroleum Corporation** is a multinational energy company that is a direct, wholly owned subsidiary of PDV America, Incorporated, which is a wholly owned subsidiary of PDV Holding, Incorporated. Citgo Petroleum Corporation is incorporated in Delaware and maintains its headquarters in Houston, Texas.

b. Citgo Petroleum Corporation controls and has controlled companywide decisions about the quantity and extent of its fossil fuel production and sales, including those of its subsidiaries. Citgo Petroleum Corporation determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

c. Citgo Petroleum Corporation controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link

between fossil fuel use and climate-related impacts on the environment and communities.

d. Defendant Citgo Petroleum Corporation and its predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as “Citgo.”

e. Citgo has wrongfully distributed, marketed, advertised, and promoted its products in Delaware, with knowledge that those products would cause climate crisis-related injuries in Delaware, including the State’s injuries. Citgo’s statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products both in and outside of Delaware, were intended to conceal and mislead consumers and the public, including the State and its residents, about the serious adverse consequences from continued use of Citgo’s products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants’ fossil fuel products in and outside Delaware, resulting in the State’s injuries.

f. A significant amount of Citgo’s fossil fuel products are or have been transported, traded, distributed, promoted, marketed, manufactured, sold, and/or consumed in Delaware, from which Citgo has derived substantial revenue.

For instance, Citgo has marketed, sold, and/or distributed heating oil in Delaware including through the CITGO – Venezuela Heating Oil program, a heating oil assistance program. Additionally, Citgo markets and/or has marketed gasoline and other fossil fuel products to consumers, including through Citgo-branded petroleum service stations in Delaware. Citgo owns and operates an interactive webpage that allows consumers to locate Citgo-branded gas stations in Delaware.

30. **Total Entities: Total S.A., Total Specialties USA Inc.**

a. Defendant **Total S.A.** is a French energy conglomerate, with its headquarters in Courbevoi, France.

b. Total S.A. controls and has controlled companywide decisions about the quantity and extent of its fossil fuel production and sales, including those of its subsidiaries. Total S.A. determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

c. Total S.A. controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

d. Defendant **Total Specialties USA Inc.** is a wholly owned subsidiary of Total S.A. involved in the marketing and distribution of Total S.A.'s

fossil fuel products. Total Specialties USA Inc. is incorporated in Delaware and headquartered in Houston, Texas.

e. Defendants Total S.A., Total Specialties USA Inc., and their predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as “Total.”

f. The State’s claims against Total arise out of the acts and omissions of Total in Delaware and Total’s actions elsewhere that caused the injuries in Delaware.

g. Total’s statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products, were intended to conceal and mislead consumers and the public about the serious adverse consequences from continued use of Total’s products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants’ fossil fuel products, resulting in the State’s injuries.

31. **Occidental Petroleum Corporation**

a. Defendant **Occidental Petroleum Corporation** is a multinational, vertically integrated energy and chemical company incorporated in Delaware and with its principal place of business in Houston, Texas. Occidental’s

operations consist of three segments: (1) the exploration for, extraction of, and production of oil and natural gas products; (2) the manufacture and marketing of chemicals and vinyls; and (3) processing, transport, storage, purchase, and marketing of oil, natural gas, and power.

b. Occidental Petroleum Corporation controls and has controlled companywide decisions about the quantity and extent of its fossil fuel production and sales, including those of its subsidiaries. Occidental Petroleum Corporation determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

c. Occidental Petroleum Corporation controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

d. The State's claims against Occidental Petroleum Corporation arise out of the acts and omissions of Occidental Petroleum Corporation in Delaware and Occidental Petroleum Corporation's actions elsewhere that caused the injuries in Delaware.

e. Defendant Occidental Petroleum Corporation and its predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as “Occidental.”

f. Occidental’s statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products, were intended to conceal and mislead consumers and the public about the serious adverse consequences from continued use of Occidental’s products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants’ fossil fuel products, resulting in the State’s injuries.

32. **Devon Energy Corporation**

a. Defendant **Devon Energy Corporation** is an independent energy company engaged in the exploration, development, and production of oil, and natural gas. It is incorporated in Delaware and maintains its principal place of business in Oklahoma City, Oklahoma. Devon is engaged in multiple aspects of the fossil fuel industry, including exploration, development, production, and marketing of its fossil fuel products.

b. Devon Energy Corporation controls and has controlled companywide decisions about the quantity and extent of its fossil fuel production

and sales, including those of its subsidiaries. Devon Energy Corporation determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

c. Devon Energy Corporation controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

d. Defendant Devon Energy Corporation and its predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as “Devon.”

e. Devon’s statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products, were intended to conceal and mislead consumers and the public about the serious adverse consequences from continued use of Devon’s products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants’ fossil fuel products, resulting in the State’s injuries.

33. **Apache Corporation**

a. Defendant **Apache Corporation** is a publicly traded Delaware corporation with its principal place of business in Houston, Texas. Apache is an oil and gas exploration and production company, with crude oil and natural gas exploration and extraction operations in the United States, Canada, Egypt, and in the North Sea.

b. Apache Corporation controls and has controlled companywide decisions about the quantity and extent of its fossil fuel production and sales, including those of its subsidiaries. Apache Corporation determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

c. Apache Corporation controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

d. Defendant Apache Corporation and its predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as “Apache.”

e. Apache’s statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn

consumers of global warming-related hazards when it marketed, advertised, and sold its products, were intended to conceal and mislead consumers and the public about the serious adverse consequences from continued use of Apache's products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants' fossil fuel products, resulting in the State's injuries.

34. **CONSOL Entities: CNX Resources Corporation, CONSOL Energy Inc.**

a. Defendant **CNX Resources Corporation** is a vertically integrated energy company that is or has been involved in coal mining, oil and natural gas exploration and production, fossil fuel product distribution, and fossil fuel product marketing. CNX Resources Corporation is incorporated in Delaware, with its principal place of business in Canonsburg, Pennsylvania. CNX Resources Corporation was formerly known as CONSOL Energy Inc. CONSOL Energy Inc. and its predecessors in interest mined and sold coal since the 1860s. In 2017, CNX Resources Corporation split its coal mining and related downstream operations into a new entity, also called CONSOL Energy Inc.

b. CNX Resources Corporation controls and has controlled companywide decisions about the quantity and extent of fossil fuel production, including those of its subsidiaries.

c. CNX Resources Corporation controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

d. Defendant **CONSOL Energy Inc.** is an energy company involved in coal mining and production. CONSOL Energy Inc. is incorporated in Delaware and has its principal place of business in Canonsburg, Pennsylvania. CONSOL Energy Inc. was formerly known as, did or does business as, and/or is the successor in liability to CONSOL Mining Corporation and/or CNX Resources Corporation.

e. CONSOL Energy Inc. controls and has controlled companywide decisions about the quantity and extent of fossil fuel production, including those of its subsidiaries.

f. CONSOL Energy Inc. controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

g. Defendants CNX Resources Corporation, CONSOL Energy Inc., and their predecessors, successors, parents, subsidiaries, affiliates, and divisions are collectively referred to herein as “CONSOL.”

h. CONSOL’s statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products, were intended to conceal and mislead consumers and the public about the serious adverse consequences from continued use of CONSOL’s products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants’ fossil fuel products, resulting in the State’s injuries.

35. **Ovintiv, Inc.**

a. Defendant **Ovintiv, Inc.** is an extractor and marketer of oil and natural gas, headquartered in Denver, Colorado and incorporated in Delaware. Ovintiv, Inc. was formerly known as Encana Corporation, a Canadian corporation with its principal place of business in Calgary, Alberta, Canada. Ovintiv, Inc. has facilities including gas plants and gas wells in Colorado, Texas, Wyoming, Louisiana, and New Mexico. By approximately 2005, Ovintiv, Inc. was the largest independent owner and operator of natural gas storage facilities in North America.

b. Ovintiv, Inc. controls and has controlled companywide decisions about the quantity and extent of its fossil fuel production and sales, including those of its subsidiaries. Ovintiv, Inc. determines whether and to what extent its holdings market, produce, and/or distribute fossil fuel products.

c. Ovintiv, Inc. controls and has controlled companywide decisions, including those of its subsidiaries, related to marketing, advertising, climate change and greenhouse gas emissions from its fossil fuel products, and communications strategies concerning climate change and the link between fossil fuel use and climate-related impacts on the environment and communities.

d. Defendant Ovintiv, Inc. and its predecessors, successors, parents, subsidiaries, affiliates, and divisions, are collectively referred to herein as “Ovintiv.”

e. Ovintiv’s statements in and outside of Delaware made in furtherance of its campaign of deception and denial, and its chronic failure to warn consumers of global warming-related hazards when it marketed, advertised, and sold its products, were intended to conceal and mislead consumers and the public about the serious adverse consequences from continued use of Ovintiv’s products. That conduct was intended to reach and influence the State, as well as its residents, among others, to continue unabated use of Defendants’ fossil fuel products, resulting in the State’s injuries.

36. Defendants BP, Chevron, Conocophillips, Phillips 66, Exxon, Hess, Marathon, Murphy, Shell, Citgo, Total, Occidental, Devon, Apache, CONSOL, and Ovintiv are collectively referred to as “Fossil Fuel Defendants.”

37. **American Petroleum Institute**

a. Defendant American Petroleum Institute (“API”) is a nonprofit corporation based in the District of Columbia and registered to do business in Delaware. API was created in 1919 to represent the American petroleum industry as a whole. With more than 600 members, API is the country’s largest oil trade association. API’s purpose is to advance its individual members’ collective business interests, which includes increasing consumer consumption of oil and gas to the Fossil Fuel Defendants’ financial benefit. Among other functions, API also coordinates among members of the petroleum industry, gathers information of interest to the industry and disseminates that information to its members.

b. Acting on behalf of and under the supervision and control of the Fossil Fuel Defendants, API has participated in and led several coalitions, front groups, and organizations that have promoted disinformation about fossil fuel products to consumers, including the Global Climate Coalition, Partnership for a Better Energy Future, Coalition for American Jobs, Alliance for Energy and Economic Growth, and Alliance for Climate Strategies. These front groups were formed to provide climate disinformation and advocacy from a misleadingly

objective source, when, in fact, they were financed and controlled by Fossil Fuel Defendants. Fossil Fuel Defendants have benefited from the spread of this disinformation, because, among other things, it has ensured a thriving consumer market for oil and gas, resulting in substantial profits for Fossil Fuel Defendants.

c. API's stated mission includes "influenc[ing] public policy in support of a strong, viable U.S. oil and natural gas industry,"¹⁷ which includes increasing consumers' consumption of oil and gas to Fossil Fuel Defendants' financial benefit. In effect, API acts and has acted as a marketing arm for its member companies. Over the last fifteen years, API spent millions of dollars on television, newspaper, radio, and internet advertisements in the Delaware market.

d. Member companies participate in API strategy, governance, and operation through membership dues and by contributing company officers and other personnel to API boards, committees, and task forces. Fossil Fuel Defendants have collectively steered the policies and trade practices of API through membership, Executive Committee roles, and/or budgetary funding of API. Fossil Fuel Defendants used their control over and involvement in API to further their goal of influencing consumer demand for their fossil fuel products through a long-term advertising and communications campaign centered on climate change denialism.

¹⁷ American Petroleum Institute, *About API*, <https://www.api.org/about>.

Fossil Fuel Defendants directly supervised and participated in API's misleading messaging regarding climate change.

e. The following Fossil Fuel Defendants and/or their predecessors-in-interest are and/or have been core API members at times relevant to this litigation: BP, Chevron, ConocoPhillips, Exxon, Hess, Marathon, Murphy, Shell, Citgo, Total, Occidental, Devon Energy, Apache Corporation, and Ovintiv. Executives from some Fossil Fuel Defendants served on the API Executive Committee and/or as API Chairman, which is akin to serving as a corporate officer. For example, Exxon's CEO served on API's Executive Committee for fifteen of 25 years between 1991 and 2016 (1991, 1996–97, 2001, and 2005–2016). BP's CEO served as API's Chairman in 1988, 1989, and 1998. Chevron's CEO served as API Chairman in 1994, 1995, 2003, and 2012. Shell's President served on API's Executive Committee from 2005–06. ConocoPhillips Chairman and CEO Ryan Lance was Board President from 2016 to 2018, and Exxon President and CEO Darren Woods was Board President from 2018 to 2020. In 2020, API elected Phillips 66 Chairman and CEO Greg Garland to serve a two-year term as the Board President. Executives from ConocoPhillips, Hess, Marathon, Citgo, Total, and Occidental also served as members of API's Board of Directors at various times.

f. Relevant information was shared among API and Fossil Fuel Defendants and their predecessors-in-interest through (1) API distributing

information it held to its members and/or (2) participation of officers and other personnel from Fossil Fuel Defendants and their predecessors-in-interest on API boards, committees, and task forces.

C. Relevant Non-Parties: Defendants' Agents and Front Groups

38. As set forth in greater detail below, each Fossil Fuel Defendant had actual knowledge that its fossil fuel products were hazardous. Fossil Fuel Defendants obtained knowledge of the hazards of their products independently and through their membership and involvement in trade associations such as API.

39. Fossil Fuel Defendants employed and financed several industry associations, such as API, and industry-created front groups to serve their climate change disinformation and denial mission. These organizations, acting on behalf of and under the supervision and control of Fossil Fuel Defendants, assisted the deception campaign by implementing public advertising and outreach campaigns to discredit climate science, funding scientists to cast doubt upon climate science, denying the human connection to climate change, and overall engaging in a significant marketing campaign that misrepresented and concealed the dangers of Fossil Fuel Defendants' fossil fuel products with the aim of protecting or enhancing Fossil Fuel Defendants' sales to consumers, including consumers in Delaware. Defendants actively supervised, facilitated, consented to, and/or directly participated in the misleading messaging of these front groups, from which Fossil Fuel

Defendants profited significantly, including in the form of increased sales in Delaware.

40. **The National Mining Association (NMA)** is a national trade association incorporated in Delaware and headquartered in Washington, D.C., representing more than 250 corporations and organizations in the mining industry. NMA was formed in 1995 through the merger of the National Coal Association, which was founded in 1917, and the American Mining Congress, which was founded in 1897. Both predecessor organizations were members of the Global Climate Coalition, and the National Coal Association was linked to the 1991 Information Council for the Environment campaign.

a. The following Fossil Fuel Defendants and/or their predecessors-in-interest are and/or have been NMA members at times relevant to this litigation: CONSOL, the Pittsburg and Midway Coal Mining Company (Chevron), and Island Creek Coal (Occidental Petroleum).

b. CONSOL's president and CEO currently serves as the Vice Chairman of the Board for NMA, and the former president and CEO of Island Creek Coal, previously served as the chairman.

c. NMA and API have been co-members of various organizations that participated in Defendants' campaign of deception, including the Global Climate Coalition (NMA's predecessor, the National Coal Association was a

founding member),¹⁸ Alliance for Climate Strategies,¹⁹ and Partnership for a Better Energy Future.²⁰ Moreover, Jack Gerard, who served as API's president and CEO until 2018, previously served as the CEO for the NMA.²¹

41. **The Information Council for the Environment (ICE)** was formed by coal companies and their allies, including Western Fuels Association and the National Coal Association. Associated companies included Pittsburg and Midway Coal Mining (Chevron) and Occidental's subsidiary, Island Creek Coal.

42. **The Global Climate Coalition (GCC)** was an industry group formed to oppose greenhouse gas emission reduction initiatives. GCC was founded in 1989 shortly after the first meeting of the Intergovernmental Panel on Climate Change ("IPCC"), the United Nations body for assessing the science related to climate

¹⁸ See *Global Climate Coalition Membership*, CLIMATEFILES (1989), <http://www.climatefiles.com/denial-groups/global-climate-coalition-collection/1989-membership>.

¹⁹ Caroline Jones et al., Brown Univ. Climate and Development Lab, *Countermovement Coalitions: Climate Denialist Organizational Profiles* (2018), <http://www.climatedevlab.brown.edu/uploads/2/8/4/0/28401609/covercountermovementcoalitions.2.2019.pdf>.

²⁰ Herman K. Trabish, *Industry asks EPA to reconsider new emissions rule*, UTILITYDIVE (July 24, 2014), <https://www.utilitydive.com/news/industry-asks-epa-to-reconsider-new-emissions-rule/290259>.

²¹ Press Release, American Petroleum Institute, *API President and CEO Jack Gerard To Depart in August* (Jan. 17, 2018), <https://www.api.org/news-policy-and-issues/news/2018/01/17/api-president-and-ceo-jack-gerard-to-depart-in-august>.

change. GCC disbanded in or around 2001. Founding members included API, PMAA, and the National Coal Association, a predecessor of the National Mining Association.²² Over the course of its existence, GCC corporate members included Amoco (BP), API, Chevron, Exxon, Shell Oil, Texaco (Chevron), Occidental, CONSOL (as Consolidation Coal Company), and Phillips Petroleum (ConocoPhillips). Over its existence other members and funders included ARCO (BP), and the Western Fuels Association.

III. JURISDICTION

43. Jurisdiction of this Court is proper under Article IV, Section 7, of the Delaware Constitution, Section 541 of Title 10 of the Delaware Code, and Section 3104 of Title 10 of the Delaware Code.

44. This case qualifies for assignment to the Superior Court Complex Commercial Litigation Division because the amount in controversy exceeds one million dollars (\$1,000,000).

45. This Court has personal jurisdiction over Defendants because each Defendant is, or was during the relevant time, incorporated in Delaware and/or licensed to do business in Delaware; maintained or maintains their principal place

²² *Global Climate Coalition Membership*, CLIMATEFILES (1989), <http://www.climatefiles.com/denial-groups/global-climate-coalition-collection/1989-membership>.

of business in Delaware; is transacting or has transacted business in Delaware; is contracting or has contracted to supply services or things in Delaware; has or does derive substantial revenue from Delaware or engages in a persistent course of conduct in Delaware; had or has interests in, uses, or possess real property in Delaware; and/or caused tortious injury in Delaware and has intentionally engaged in conduct aimed at Delaware, which has caused harm they knew was likely to be incurred in Delaware. Each Defendant has sufficient contacts with Delaware to give rise to the current action, has continuous and systematic contacts with Delaware, or has consented either explicitly or implicitly to the jurisdiction of this Court.

46. Additionally, jurisdiction is proper over non-resident defendants BP plc, Chevron USA, Inc., Exxon Mobil Corporation, ExxonMobil Oil Corporation, Royal Dutch Shell, and Total S.A.:

a. With respect to its subsidiaries, each non-resident defendant parent²³ controls and has controlled decisions about the quantity and extent of its fossil fuel production and sales; determines whether and to what extent to market, produce, and/or distribute its fossil fuel products; and controls and has controlled decisions related to its marketing and advertising, and specifically communications strategies concerning climate change and the link between fossil fuel use and impacts

²³ Except Chevron USA, Inc., which is itself a subsidiary.

on the environment. Each non-resident defendant parent has the power to direct and control the resident subsidiaries named here. Thus, the subsidiaries are agents of the parent. As agents, the subsidiaries of each non-resident defendant conducted activities in Delaware at the direction of their parent companies and for the parent companies' benefit. Specifically, the subsidiaries furthered the parents' campaign of deception and denial through misrepresentations, omissions, and failures to warn, which resulted in climate injuries in the State and increased sales to the parents. Therefore, the subsidiaries' jurisdictional activities are properly attributed to the parents, and serve as a basis to assert jurisdiction over the non-resident defendant parents.

b. All Fossil Fuel Defendants, by and through API and other organizations like NMA, ICE, and GCC, conspired to conceal and misrepresent the known dangers of fossil fuels, to knowingly withhold information regarding the effects of using fossil fuel products, to discredit climate change science and create the appearance such science is uncertain, and to engage in massive campaigns to promote heavy use of their fossil fuel products, which they knew would result in injuries to the State. Through their own actions and through their membership and participation in organizations like API and NMA, each Defendant was and is a member of that conspiracy. Defendants committed substantial acts to further the conspiracy in Delaware by making misrepresentations and omissions to Delaware

consumers and failing to warn them about the disastrous effects of fossil fuel use. A substantial effect of the conspiracy has also and will also occur in Delaware, as the State has suffered and will suffer injuries from Defendants' wrongful conduct including, but not limited to, sea level rise, flooding, erosion, loss of wetlands and beaches, ocean acidification, and other social and economic consequences of these environmental changes. Defendants knew or should have known, based on information passed to them from their internal research divisions and affiliates, trade associations and industry groups, that their actions in Delaware and elsewhere would result in these injuries in and to Delaware. Finally, the climate effects described herein are direct and foreseeable results of Defendants' conduct in furtherance of the conspiracy.

IV. FACTUAL BACKGROUND

A. Defendants Are Responsible for Causing and Accelerating Climate Change.

47. Human-caused warming of the Earth is unequivocal. As a result, the atmosphere and oceans are warming, sea level is rising, snow and ice cover is diminishing, oceans are acidifying, and hydrologic systems have been altered, among other environmental changes.

48. The mechanism by which human activity causes global warming and climate disruption is well established: ocean and atmospheric warming is

overwhelmingly caused by anthropogenic greenhouse gas emissions.

49. Greenhouse gases are largely byproducts of humans combusting fossil fuels to produce energy and using fossil fuels to create petrochemical products.

50. Prior to World War II, most anthropogenic CO₂ emissions were caused by land-use practices, such as forestry and agriculture, which altered the ability of the land and global biosphere to absorb CO₂ from the atmosphere; the impacts of such activities on Earth's climate were relatively minor. Since that time, however, both the annual rate and total volume of anthropogenic CO₂ emissions have increased enormously following the advent of major uses of oil, gas, and coal.

51. The graph below illustrates that fossil fuel emissions are the dominant source of increases in atmospheric CO₂ since the mid-twentieth century:

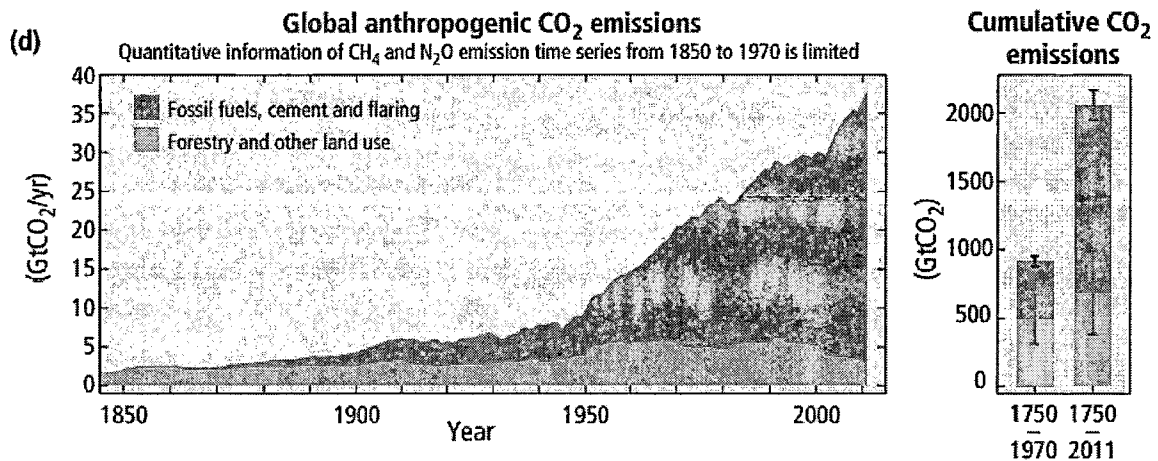


Figure 1: Global Anthropogenic CO₂ Emissions²⁴

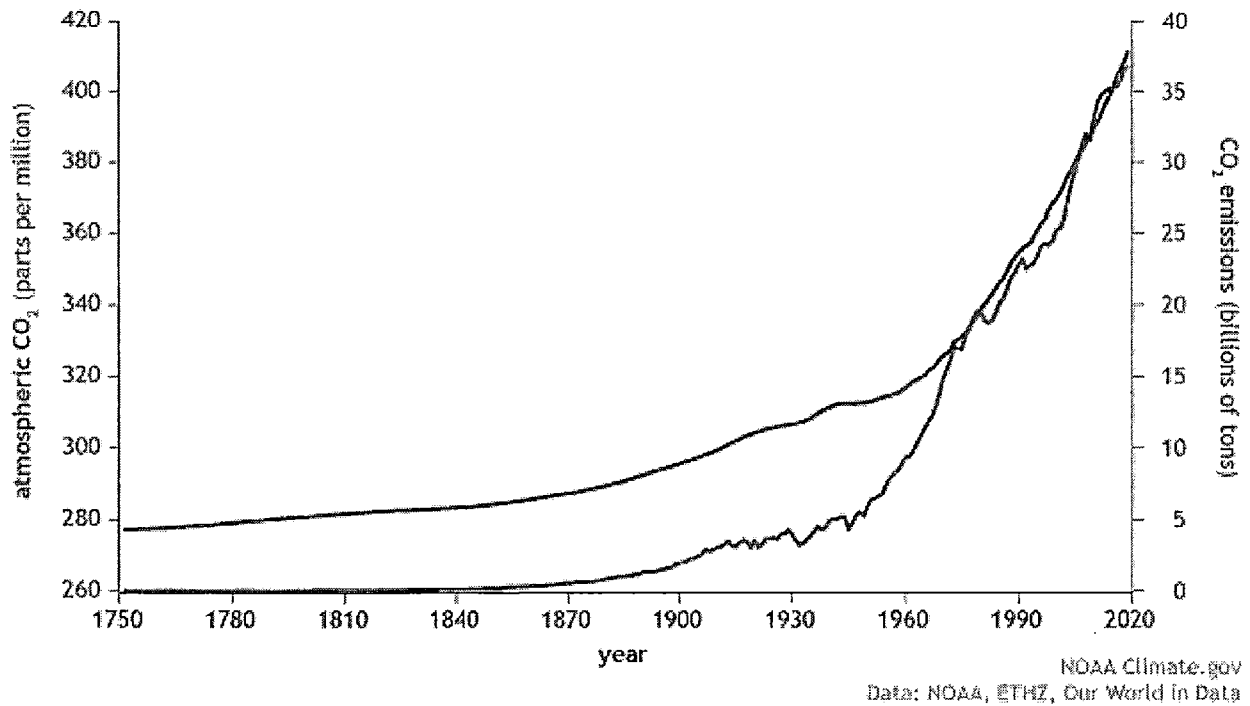
²⁴ IPCC 2014 SYNTHESIS REPORT, *supra* note 3, at 3.

52. The recent acceleration of fossil fuel emissions has led to a correspondingly sharp spike in atmospheric concentration of CO₂. Since 1960, the concentration of CO₂ in the atmosphere has gone from under 320 parts per million (“ppm”) to approximately 415 ppm.²⁵ The rate of growth of atmospheric CO₂ is also accelerating. From 1960 to 1970, atmospheric CO₂ increased by an average of approximately 1 ppm per year; in the last five years, it has increased by more than 2.5 ppm per year.²⁶

53. The graph below indicates the tight nexus between the sharp increase in emissions from the combustion of fossil fuels and the steep rise of atmospheric concentrations of CO₂.

²⁵ Global Monitoring Laboratory, *Trends in Atmospheric Carbon Dioxide*, NOAA (last visited Sept. 4, 2020), <https://www.esrl.noaa.gov/gmd/ccgg/trends>.

²⁶ *Id.*

CO₂ in the atmosphere and annual emissions (1750-2019)**Figure 2: Atmospheric CO₂ Concentration and Annual Emissions²⁷**

54. Because of the increased burning of fossil fuel products, concentrations of greenhouse gases in the atmosphere are now at a level unprecedented in at least 3 million years.²⁸

55. As greenhouse gases accumulate in the atmosphere, the Earth radiates less energy back to space. This accumulation and associated disruption of the

²⁷ Rebecca Lindsey, *Climate Change: Atmospheric Carbon Dioxide*, NOAA (Aug. 14, 2020), <https://www.climate.gov/news-features/understanding-climate/climate-change-atmospheric-carbon-dioxide>.

²⁸ *More CO₂ than ever before in 3 million years, shows unprecedented computer simulation*, SCIENCE DAILY (Apr. 3, 2019), <https://www.sciencedaily.com/releases/2019/04/190403155436.htm>.

Earth's energy balance have myriad environmental and physical consequences, including, but not limited to, the following:

- a. Warming of the Earth's average surface temperature both locally and globally, and increased frequency and intensity of heatwaves; to date, global average air temperatures have risen approximately 1 degree C (1.8 degrees F) above preindustrial temperatures; temperatures in particular locations have risen more;
- b. Sea level rise, due to the thermal expansion of warming ocean waters and runoff from melting glaciers and ice sheets;
- c. Flooding and inundation of land and infrastructure, increased erosion, higher wave run-up and tides, increased frequency and severity of storm surges, saltwater intrusion, and other impacts of higher sea levels;
- d. Changes to the global climate, and generally toward longer periods of drought interspersed with fewer and more severe periods of precipitation, and associated impacts on the quantity and quality of water resources available to both human and ecological systems;
- e. Ocean acidification, due to the increased uptake of atmospheric carbon dioxide by the oceans;
- f. Increased frequency and intensity of extreme weather events due to the increase in the atmosphere's ability to hold moisture and increased evaporation;

g. Changes to terrestrial and marine ecosystems, and consequent impacts on the range of flora and fauna; and

h. Adverse impacts on human health associated with extreme weather, extreme heat, decreased air quality, and vector-borne illnesses.

56. As discussed below, these consequences of Defendants' conduct and its exacerbation of the climate crisis are already impacting Delaware, its communities, and its resources, and will continue to increase in severity in Delaware.

57. Without Defendants' exacerbation of global warming caused by their conduct as alleged herein, the current physical and environmental changes caused by global warming would have been far less than those observed to date. Similarly, effects that will occur in the future would also be far less, or would be avoided entirely.²⁹

58. Defendants' efforts between 1965 and the present to deceive about the consequences of the normal use of their fossil fuel products; conceal the hazards of those products from consumers; promote use of their fossil fuel products despite knowing the dangers associated with those products; doggedly campaign against

²⁹ See, e.g., Peter U. Clark, et al., *Consequences of Twenty-First-Century Policy for Multi-Millennial Climate and Sea-Level Change*, 6 NATURE CLIMATE CHANGE 360, 365 (2016) ("Our modelling suggests that the human carbon footprint of about [470 billion tons] by 2000 . . . has already committed Earth to a [global mean sea level] rise of ~1.7m (range of 1.2 to 2.2 m).").

regulation of those products based on falsehoods, omissions, and deceptions; and failure to pursue less hazardous alternative products available to them; unduly inflated the market for fossil fuel products. Consequently, substantially more anthropogenic greenhouse gases have been emitted into the environment than would have been absent that conduct.

59. By quantifying greenhouse gas pollution attributable to Fossil Fuel Defendants' products and conduct, climatic and environmental responses to those emissions are also calculable, and can be attributed to Fossil Fuel Defendants on an individual and aggregate basis.

60. Defendants' conduct caused a substantial portion of global atmospheric greenhouse gas concentrations, and the attendant historical, projected, and committed disruptions to the environment—and consequent injuries to Delaware, its communities, and its resources—associated therewith.

61. Defendants, individually and together, have substantially and measurably contributed to Delaware's climate crisis-related injuries.

B. Defendants Went to Great Lengths to Understand, and Either Knew or Should Have Known About, the Dangers Associated with Their Fossil Fuel Products.

62. The fossil fuel industry has known about the potential warming effects of greenhouse gas emissions since as early as the 1950s. In 1954, geochemist Harrison Brown and his colleagues at the California Institute of Technology wrote

to API, informing the trade association that preliminary measurements of natural archives of carbon in tree rings indicated that fossil fuels had caused atmospheric carbon dioxide levels to increase by about 5% since 1840.³⁰ API funded the scientists for various research projects, and measurements of carbon dioxide continued for at least one year and possibly longer, although the results were never published or otherwise made available to the public.³¹

63. In 1957, H.R. Brannon of Humble Oil (predecessor-in-interest to ExxonMobil) measured an increase in atmospheric carbon dioxide similar to that measured by Harrison Brown. Brannon communicated this information to API. Brannon knew of Brown's measurements, compared them with his, and found they agreed. Brannon published his results in the scientific literature, which was available to Fossil Fuel Defendants and/or their predecessors-in-interest.³²

³⁰ See Benjamin Franta, *Early Oil Industry Knowledge of CO₂ and Global Warming*, 8 NATURE CLIMATE CHANGE 1024, 1024–25 (2018).

³¹ *Id.*

³² H.R. Brannon, Jr. et al., *Radiocarbon Evidence on the Dilution of Atmospheric and Oceanic Carbon by Carbon from Fossil Fuels*, 38 AMERICAN GEOPHYSICAL UNION TRANSACTIONS 643, 643–50 (1957).

64. In 1959, API organized a centennial celebration of the American oil industry at Columbia University in New York City.³³ High-level representatives of Fossil Fuel Defendants were in attendance. One of the keynote speakers was the nuclear physicist Edward Teller. Teller warned the industry that “a temperature rise corresponding to a 10 per cent increase in carbon dioxide will be sufficient to melt the icecap and submerge . . . [a]ll the coastal cities.” Teller added that since “a considerable percentage of the human race lives in coastal regions, I think that this chemical contamination is more serious than most people tend to believe.”³⁴

65. Following his speech, Teller was asked to “summarize briefly the danger from increased carbon dioxide content in the atmosphere in this century.” He responded that “there is a possibility the icecaps will start melting and the level of the oceans will begin to rise.”³⁵

66. By 1965, concern over the potential for fossil fuel products to cause disastrous global warming reached the highest levels of the United States’ scientific community. In that year, President Lyndon B. Johnson’s Science Advisory

³³ See ALLAN NEVINS & ROBERT G. DUNLOP, *ENERGY AND MAN: A SYMPOSIUM* (Appleton-Century-Crofts, New York 1960). See also Franta, *supra* note 30, at 1024–25.

³⁴ Edward Teller, *Energy patterns of the future*, in *ENERGY AND MAN: A SYMPOSIUM* 53–72 (1960).

³⁵ *Id.*

Committee's Environmental Pollution Panel reported that a 25% increase in carbon dioxide concentrations could occur by the year 2000, that such an increase could cause significant global warming, that melting of the Antarctic ice cap and rapid sea level rise could result, and that fossil fuels were the clearest source of the pollution.³⁶

67. Three days after President Johnson's Science Advisory Committee report was published, the president of API, Frank Ikard, addressed leaders of the petroleum industry in Chicago at the trade association's annual meeting. Ikard relayed the findings of the report to industry leaders, saying,

The substance of the report is that there is still time to save the world's peoples from the catastrophic consequence of pollution, but time is running out.³⁷

Ikard also relayed that "by the year 2000 the heat balance will be so modified as possibly to cause marked changes in climate beyond local or even national efforts" and quoted the report's finding that "the pollution from internal combustion engines is so serious, and is growing so fast, that an alternative nonpolluting means of powering automobiles, buses, and trucks is likely to become a national necessity."³⁸

³⁶ PRESIDENT'S SCIENCE ADVISORY COMMITTEE, *Restoring the Quality of Our Environment: Report of the Environmental Pollution Panel* 9, 119–24 (Nov. 1965), <https://hdl.handle.net/2027/uc1.b4315678>.

³⁷ See Franta, *supra* note 30, at 1024–25.

³⁸ *Id.*

68. Thus, by 1965, Defendants and their predecessors-in-interest were aware that the scientific community had found that fossil fuel products, if used profligately, would cause global warming by the end of the century, and that such global warming would have wide-ranging and costly consequences.

69. In 1968, API received a report from the Stanford Research Institute, which it had hired to assess the state of research on environmental pollutants, including carbon dioxide.³⁹ The assessment endorsed the findings of President Johnson's Scientific Advisory Council from three years prior, stating, "Significant temperature changes are almost certain to occur by the year 2000, and . . . there seems to be no doubt that the potential damage to our environment could be severe." The scientists warned of "melting of the Antarctic ice cap" and informed API that "[p]ast and present studies of CO₂ are detailed and seem to explain adequately the present state of CO₂ in the atmosphere." What was missing, the scientists said, was work on "air pollution technology and . . . systems in which CO₂ emissions would be brought under control."⁴⁰

³⁹ Elmer Robinson & R.C. Robbins, *Sources, Abundance, and Fate of Gaseous Atmospheric Pollutants*, STANFORD RESEARCH INSTITUTE (Feb. 1968), <https://www.smokeandfumes.org/documents/document16>.

⁴⁰ *Id.*

70. In 1969, the Stanford Research Institute delivered a supplemental report on air pollution to API, projecting with alarming particularity that atmospheric CO₂ concentrations would reach 370 parts per million (“ppm”) by 2000⁴¹—almost exactly what it turned out to be (369 ppm).⁴² The report explicitly connected the rise in CO₂ levels to the combustion of fossil fuels, finding it “unlikely that the observed rise in atmospheric CO₂ has been due to changes in the biosphere.”

71. By virtue of their membership and participation in API at that time, Fossil Fuel Defendants received or should have received the Stanford Research Institute reports and were on notice of their conclusions.

72. In 1972, API members, including Fossil Fuel Defendants, received a status report on all environmental research projects funded by API. The report summarized the 1968 SRI report describing the impact of fossil fuel products, including Defendants’, on the environment, including global warming and attendant consequences. Fossil Fuel Defendants and/or their predecessors-in-interest that received this report include, but were not limited to: American Standard of Indiana (BP), Asiatic (Shell), Ashland (Marathon), Atlantic Richfield (BP), British

⁴¹ Elmer Robinson & R.C. Robbins, *Sources, Abundance, and Fate of Gaseous Atmospheric Pollutants Supplement*, STANFORD RESEARCH INSTITUTE (June 1969).

⁴² NASA GODDARD INSTITUTE FOR SPACE STUDIES, *Global Mean CO₂ Mixing Ratios (ppm): Observations*, <https://data.giss.nasa.gov/modelforce/ghgases/Fig1A.ext.txt>.

Petroleum (BP), Chevron Standard of California (Chevron), Esso Research (ExxonMobil), Ethyl (formerly affiliated with Esso, which was subsumed by ExxonMobil), Getty (ExxonMobil), Gulf (Chevron, among others), Humble Standard of New Jersey (ExxonMobil/Chevron/BP), Marathon, Mobil (ExxonMobil), Pan American (BP), Shell, Standard of Ohio (BP), Texaco (Chevron), Union (Chevron), Skelly (ExxonMobil), Colonial Pipeline (ownership has included BP, ExxonMobil, and Chevron entities, among others), Continental (ConocoPhillips), Dupont (former owner of Conoco), Phillips (ConocoPhillips), and Caltex (Chevron).⁴³

73. In 1977, James Black of Exxon's Products Research Division presented to the Exxon Corporation Management Committee on the greenhouse effect. The next year, in 1978, Black presented to another internal Exxon group, PERCC. In a letter to the Vice President of Exxon Research and Engineering, Black summarized his presentations.⁴⁴ He reported that "current scientific opinion overwhelmingly favors attributing atmospheric carbon dioxide increase to fossil fuel consumption,"

⁴³ AMERICAN PETROLEUM INSTITUTE, COMMITTEE FOR AIR AND WATER CONSERVATION, ENVIRONMENTAL RESEARCH: A STATUS REPORT (Jan. 1972), <http://files.eric.ed.gov/fulltext/ED066339.pdf>.

⁴⁴ Letter from J.F. Black, Exxon Research and Engineering Co., to F.G. Turpin, Exxon Research and Engineering Co., *The Greenhouse Effect*, CLIMATEFILES (June 6, 1978), <http://www.climatefiles.com/exxonmobil/1978-exxon-memo-on-greenhouse-effect-for-exxon-corporation-management-committee>.

and that doubling atmospheric carbon dioxide, according to the best climate model available, would “produce a mean temperature increase of about 2°C to 3°C over most of the earth,” with two- to three-times as much warming at the poles. The figure below, reproduced from Black’s memo, illustrates Exxon’s understanding of the timescale and magnitude of global warming its products would cause.

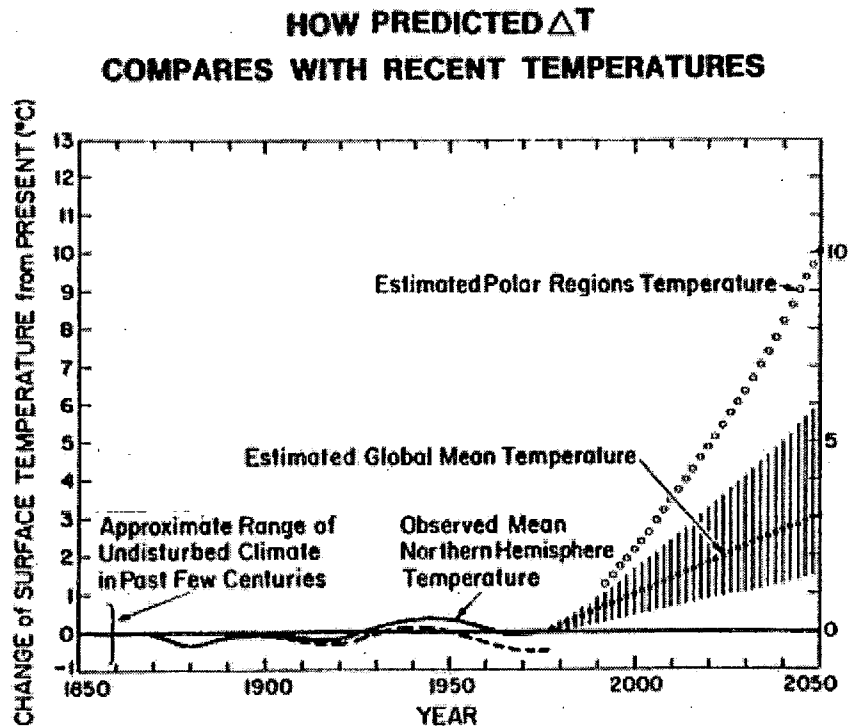


Figure 3: Future global warming predicted internally by Exxon in 1977.⁴⁵

74. The impacts of such global warming, Black reported, would include “more rainfall,” which would “benefit some areas and would harm others.” “Some

⁴⁵ *Id.* The company predicted global warming of 3°C by 2050, with 10°C warming in polar regions. The difference between the dashed and solid curves prior to 1977 represents global warming that Exxon believed may already have been occurring.

countries would benefit, but others could have their agricultural output reduced or destroyed.” “Even those nations which are favored, however, would be damaged for a while since their agricultural and industrial patterns have been established on the basis of the present climate.” Black reported that “[i]t is currently estimated that mankind has a 5–10 yr. time window to obtain the necessary information” and “establish what must be done,” at which time, “hard decisions regarding changes in energy strategies might become critical.”⁴⁶

75. Also in 1977, Henry Shaw of the Exxon Research and Engineering Technology Feasibility Center attended a meeting of scientists and governmental officials in Atlanta, Georgia, on developing research programs to study carbon dioxide and global warming. Shaw’s internal memo to Exxon’s John W. Harrison reported that “[t]he climatic effects of carbon dioxide release may be the primary limiting factor on energy production from fossil fuels[.]”⁴⁷

76. In 1979, Exxon’s W. L. Ferrall distributed an internal memorandum.⁴⁸ The memo reported that “The most widely held theory [about global warming] is

⁴⁶ *Id.*

⁴⁷ Henry Shaw, *Environmental Effects of Carbon Dioxide*, CLIMATE INVESTIGATIONS CENTER (Oct. 31, 1977), <https://www.industrydocuments.ucsf.edu/docs/tpwl0228>.

⁴⁸ Letter from W.L. Ferrall, Exxon Research and Engineering Co., to Dr. R.L. Hirsch, *Controlling Atmospheric CO₂*, CLIMATE INVESTIGATIONS CENTER (Oct. 16, 1979), <https://www.industrydocuments.ucsf.edu/docs/mqwl0228>.

that: The increase [in carbon dioxide] is due to fossil fuel combustion; [i]ncreasing CO₂ concentration will cause a warming of the earth's surface; [and t]he present trend of fossil fuel consumption will cause dramatic environmental effects before the year 2050. [...] The potential problem is great and urgent.” The memo stated that if limits were not placed on fossil fuel production:

Noticeable temperature changes would occur around 2010 as the [carbon dioxide] concentration reaches 400 ppm [parts per million]. Significant climatic changes occur around 2035 when the concentration approaches 500 ppm. A doubling of the pre-industrial concentration [*i.e.*, 580 ppm] occurs around 2050. The doubling would bring about dramatic changes in the world's environment[.]⁴⁹

Those projections proved remarkably accurate: annual average atmospheric CO₂ concentrations surpassed 400 parts per million in 2015 for the first time in millions of years.⁵⁰ Limiting the carbon dioxide concentration in the atmosphere to 440 ppm, or a 50% increase over preindustrial levels, which the memo said was “assumed to be a relatively safe level for the environment,” would require fossil fuel emissions to peak in the 1990s and non-fossil energy systems to be rapidly deployed. Eighty percent of fossil fuel resources, the memo calculated, would have to be left in the

⁴⁹ *Id.*

⁵⁰ Nicola Jones, *How the World Passed a Carbon Threshold and Why It Matters*, YALE ENVIRONMENT 360 (Jan. 26, 2017), <http://e360.yale.edu/features/how-the-world-passed-a-carbon-threshold-400ppm-and-why-it-matters>.

ground to avoid doubling atmospheric carbon dioxide concentrations. Certain fossil fuels, such as shale oil, could not be substantially exploited at all.

77. In November 1979, Exxon's Henry Shaw wrote to Exxon's Harold Weinberg urging "a very aggressive defensive program in . . . atmospheric science and climate because there is a good probability that legislation affecting our business will be passed."⁵¹ Shaw stated that an expanded research effort was necessary to "influence possible legislation on environmental controls" and "respond" to environmental groups, which had already opposed synthetic fuels programs based on carbon dioxide emissions. Shaw suggested the formation of a "small task force" to evaluate a potential program in carbon dioxide and climate, acid rain, carcinogenic particulates, and other pollution issues caused by fossil fuels.⁵²

78. In 1979, API and its members, including Fossil Fuel Defendants, convened a Task Force to monitor and share cutting edge climate research among the oil industry. The group was initially called the CO₂ and Climate Task Force, but in 1980 changed its name to the Climate and Energy Task Force (hereinafter referred to as "CO₂ Task Force"). Membership included senior scientists and engineers from

⁵¹ Memorandum from H. Shaw to H.N. Weinberg, *Research in Atmospheric Science*, CLIMATE INVESTIGATIONS CENTER (Nov. 19, 1979), <https://www.industrydocuments.ucsf.edu/docs/yqwl0228>.

⁵² *Id.*

nearly every major U.S. and multinational oil and gas company, including Exxon, Mobil (ExxonMobil), Amoco (BP), Phillips (ConocoPhillips), Texaco (Chevron), Shell, Sunoco, Sohio (BP), as well as Standard Oil of California (BP) and Gulf Oil (Chevron), among others. The Task Force was charged with monitoring government and academic research, evaluating the implications of emerging science for the petroleum and gas industries, and identifying where reductions in greenhouse gas emissions from Defendants' fossil fuel products could be made.⁵³

79. In 1979, API prepared a background paper on carbon dioxide and climate for the CO₂ Task Force, stating that CO₂ concentrations were rising steadily in the atmosphere, and predicting when the first clear effects of global warming might be detected.⁵⁴ The API reported to its members that although global warming would occur, it would likely go undetected until approximately the year 2000, because, the API believed, its effects were being temporarily masked by a natural

⁵³ Neela Banerjee, *Exxon's Oil Industry Peers Knew About Climate Dangers in the 1970s, Too*, INSIDE CLIMATE NEWS (Dec. 22, 2015), <https://insideclimatenews.org/news/22122015/exxon-mobil-oil-industry-peers-knew-about-climate-change-dangers-1970s-american-petroleum-institute-api-shell-chevron-texaco>.

⁵⁴ Memorandum from R.J. Campion to J.T. Burgess, *The API's Background Paper on CO₂ Effects*, CLIMATE INVESTIGATIONS CENTER (Sep. 6, 1979), <https://www.industrydocuments.ucsf.edu/docs/lqw10228>.

cooling trend. However, this cooling trend, the API warned its members, would reverse around 1990, adding to the warming caused by carbon dioxide.

80. In 1980, API's CO₂ Task Force invited Dr. John Laurmann, "a recognized expert in the field of CO₂ and climate," to present to its members.⁵⁵ The meeting lasted for seven hours and included a "complete technical discussion" of global warming caused by fossil fuels, including "the scientific basis and technical evidence of CO₂ buildup, impact on society, methods of modeling and their consequences, uncertainties, policy implications, and conclusions that can be drawn from present knowledge." Representatives from Standard Oil of Ohio (predecessor to BP), Texaco (now Chevron), Exxon, and the API were present, and the minutes of the meeting were distributed to the entire API CO₂ Task Force. Laurmann informed the Task Force of the "scientific consensus on the potential for large future climatic response to increased CO₂ levels" and that there was "strong empirical evidence that [the carbon dioxide] rise [was] caused by anthropogenic release of CO₂, mainly from fossil fuel burning." Unless fossil fuel production and use were

⁵⁵ Letter from Jimmie J. Nelson, American Petroleum Institute, to AQ-9 Task Force, *The CO₂ Problem; Addressing Research Agenda Development*, CLIMATE INVESTIGATIONS CENTER (Mar. 18, 1980), <https://www.industrydocuments.ucsf.edu/docs/gffl0228>.

controlled, atmospheric carbon dioxide would be twice preindustrial levels by 2038, with “likely impacts” along the following trajectory:

1°C RISE (2005): BARELY NOTICEABLE

2.5°C RISE (2038): MAJOR ECONOMIC CONSEQUENCES,
STRONG REGIONAL DEPENDENCE

5°C RISE (2067): GLOBALLY CATASTROPHIC EFFECTS

Laurmann warned the CO₂ Task Force that global warming of 2.5°C would “bring[] world economic growth to a halt[.]” Laurmann also suggested that action should be taken immediately, asking, “Time for action?” and noting that if achieving high market penetration for new energy sources would require a long time (e.g., decades), then there would be “no leeway” for delay. The minutes of the CO₂ Task Force’s meeting show that one of the Task Force’s goals was “to help develop ground rules for [...] the cleanup of fuels as they relate to CO₂ creation,” and the Task Force discussed the requirements for a worldwide “energy source changeover” away from fossil fuels.⁵⁶

81. In 1980, Imperial Oil Limited (a Canadian ExxonMobil subsidiary) reported to managers and environmental staff at multiple affiliated Esso and Exxon companies that there was “no doubt” that fossil fuels were aggravating the build-up

⁵⁶ *Id.*

of CO₂ in the atmosphere.⁵⁷ Imperial noted that “[t]echnology exists to remove CO₂ from stack gases but removal of only 50% of the CO₂ would double the cost of power generation.”⁵⁸

82. In December 1980, Exxon’s Henry Shaw distributed a memorandum on the “CO₂ Greenhouse Effect.”⁵⁹ Shaw stated that the future buildup of carbon dioxide was a function of fossil fuel use, and that internal calculations performed at Exxon indicated that atmospheric carbon dioxide would double around the year 2060. According to the “most widely accepted” climate models, Shaw reported, such a doubling of carbon dioxide would “most likely” result in global warming of approximately 3°C, with a greater effect in polar regions. Calculations predicting a lower temperature increase, such as 0.25°C, were “not held in high regard by the scientific community,” Shaw said. Shaw also noted that the ability of the oceans to absorb heat could delay (but not prevent) the temperature increase “by a few decades,” and that natural, random temperature fluctuations would hide global

⁵⁷ IMPERIAL OIL LTD., REVIEW OF ENVIRONMENTAL PROTECTION ACTIVITIES FOR 1978–1979 (Aug. 6, 1980), <http://www.documentcloud.org/documents/2827784-1980-Imperial-Oil-Review-of-Environmental.html#document/p2>.

⁵⁸ *Id.*

⁵⁹ Memorandum from Henry Shaw to T.K. Kett, *Exxon Research and Engineering Company’s Technological Forecast: CO₂ Greenhouse Effect* (Dec. 18, 1980), <https://www.documentcloud.org/documents/2805573-1980-Exxon-Memo-Summarizing-Current-Models-And.html>.

warming from CO₂ until around the year 2000. The memo included the Figure below illustrates global warming anticipated by Exxon, as well as the company's understanding that significant global warming would occur before exceeding the range of natural variability and being detected.

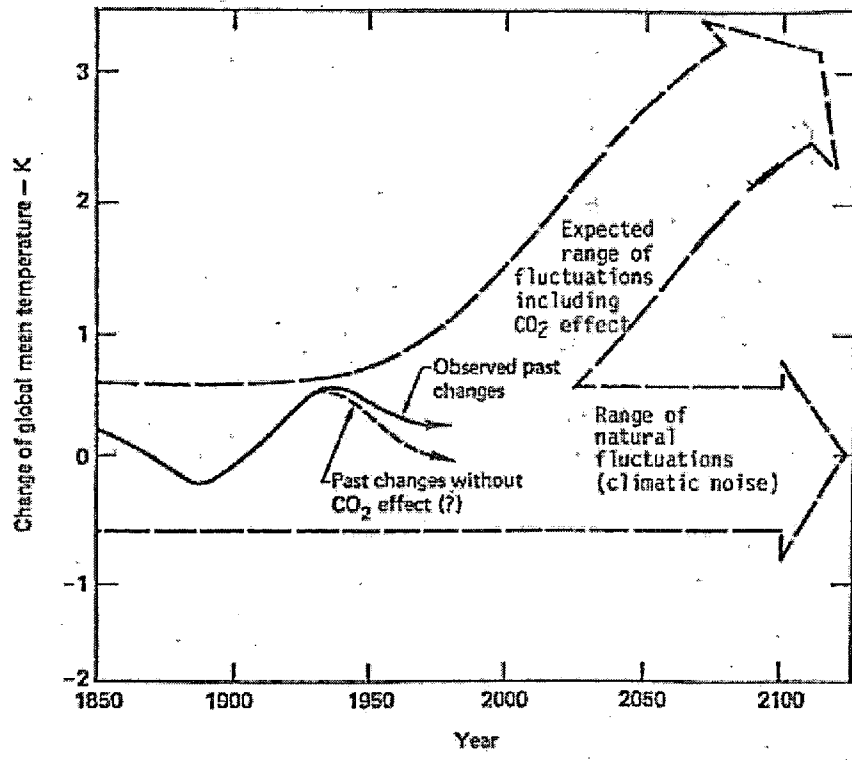


Figure 4: Future global warming predicted internally by Exxon in 1980.⁶⁰

The memo reported that such global warming would cause “increased rainfall[] and increased evaporation,” which would have a “dramatic impact on soil moisture, and

⁶⁰ *Id.* The company anticipated a doubling of carbon dioxide by around 2060 and that the oceans would delay the warming effect by a few decades, leading to approximately 3°C warming by the end of the century.

in turn, on agriculture.” Some areas would turn to desert, and the American Midwest would become “much drier.” “[W]eeds and pests,” the memo reported, “would tend to thrive with increasing global average temperature.” Other “serious global problems” could also arise, such as the melting of the West Antarctic ice sheet, which “could cause a rise in the sea level on the order of 5 meters.” The memo called for “society” to pay the bill, estimating that some adaptive measures would cost no more than “a few percent” of Gross National Product (i.e., \$400 billion in 2018).⁶¹ Exxon predicted that national policy action would not occur until around 1989, when the Department of Energy would finish a ten-year study of carbon dioxide and global warming.⁶² Shaw also reported that Exxon had studied various responses for avoiding or reducing a carbon dioxide build-up, including “stopping all fossil fuel combustion at the 1980 rate” and “investigat[ing] the market penetration of non-fossil fuel technologies.” The memo estimated that such non-fossil energy technologies “would need about 50 years to penetrate and achieve roughly half of the total [energy] market.”⁶³

⁶¹ *Id.*; see *Gross National Product*, FEDERAL RESERVE BANK OF ST. LOUIS (updated Mar. 26, 2020), <https://fred.stlouisfed.org/series/GNPA>.

⁶² Memorandum from Henry Shaw to T.K. Kett, *Exxon Research and Engineering Company's Technological Forecast: CO₂ Greenhouse Effect* (Dec. 18, 1980), <https://www.documentcloud.org/documents/2805573-1980-Exxon-Memo-Summarizing-Current-Models-And.html>.

⁶³ *Id.*

83. In February 1981, Exxon's Contract Research Office prepared and distributed a "Scoping Study on CO₂" to the leadership of Exxon Research and Engineering Company.⁶⁴ The study reviewed Exxon's current research on carbon dioxide and considered whether to expand Exxon's research on carbon dioxide or global warming further at that time. The study recommended against expanding Exxon's research activities in those areas, because its current research programs were sufficient for achieving the company's goals of closely monitoring federal research, building credibility and public relations value, and developing in-house expertise with regard to carbon dioxide and global warming. However, the study recommended that Exxon centralize its activities in monitoring, analyzing, and disseminating outside research being done on carbon dioxide and global warming. The study stated that Exxon's James Black was actively monitoring and keeping the company apprised of outside research developments, including those on climate modeling and "CO₂-induced effects." The study also noted that other companies in the fossil fuel industry were "auditing Government meetings on the subject." In discussing "options for reducing CO₂ build-up in the atmosphere," the study noted that although capturing CO₂ from flue gases was technologically possible, the cost

⁶⁴ Letter from G.H. Long, Exxon Research and Engineering Co., to P.J. Lucchesi et al., *Atmospheric CO₂ Scoping Study*, CLIMATE INVESTIGATIONS CENTER (Feb. 5, 1981), <https://www.industrydocuments.ucsf.edu/docs/yxfl0228>.

was high, and “energy conservation or shifting to renewable energy sources[] represent the only options that might make sense.”⁶⁵

84. Thus, by 1981, Exxon and other fossil fuel companies were actively monitoring all aspects of carbon dioxide and global warming research both nationally and internationally, and Exxon had recognized that a shift to renewable energy sources would be necessary to avoid a large carbon dioxide build-up in the atmosphere and resultant global warming.

85. Exxon scientist Roger Cohen warned his colleagues in a 1981 internal memorandum that “future developments in global data gathering and analysis, along with advances in climate modeling, may provide strong evidence for a delayed CO₂ effect of a truly substantial magnitude,” and that under certain circumstances it would be “very likely that we will unambiguously recognize the threat by the year 2000.”⁶⁶ Cohen had expressed concern that the memorandum understated the potential effects of unabated CO₂ emissions from Defendants’ fossil fuel products, saying, “it is distinctly possible that [Exxon Planning Division’s] . . . scenario will

⁶⁵ *Id.*

⁶⁶ Memorandum from R.W. Cohen to W. Glass, CLIMATEFILES (Aug. 18, 1981), <http://www.climatefiles.com/exxonmobil/1981-exxon-memo-on-possible-emission-consequences-of-fossil-fuel-consumption>.

produce effects which will indeed be catastrophic (at least for a substantial fraction of the world's population)."⁶⁷

86. In 1981, Exxon's Henry Shaw, the company's lead climate researcher at the time, prepared a summary of Exxon's current position on the greenhouse effect for Edward David Jr., president of Exxon Research and Engineering, stating in relevant part:

- "Atmospheric CO₂ will double in 100 years if fossil fuels grow at 1.4%/a²
- 3°C global average temperature rise and 10°C at poles if CO₂ doubles
 - Major shifts in rainfall/agriculture
 - Polar ice may melt"⁶⁸

87. In 1982, another report prepared for API by scientists at the Lamont-Doherty Geological Observatory at Columbia University recognized that atmospheric CO₂ concentration had risen significantly compared to the beginning of the industrial revolution from about 290 parts per million to about 340 parts per million in 1981 and acknowledged that despite differences in climate modelers' predictions, there was scientific consensus that "a doubling of atmospheric CO₂ from [] pre-industrial revolution value would result in an average global temperature rise

⁶⁷ *Id.*

⁶⁸ Memorandum from Henry Shaw to Dr. E.E. David, *CO₂ Position Statement*, INSIDE CLIMATE NEWS (May 15, 1981), <https://insideclimatenews.org/documents/exxon-position-co2-1981>.

of $(3.0 \pm 1.5)^{\circ}\text{C}$ [$5.4 \pm 2.7^{\circ}\text{F}$].” It went further, warning that “[s]uch a warming can have serious consequences for man’s comfort and survival since patterns of aridity and rainfall can change, the height of the sea level can increase considerably and the world food supply can be affected.”⁶⁹ Exxon’s own modeling research confirmed this, and the company’s results were later published in at least three peer-reviewed scientific papers.⁷⁰

88. Also in 1982, Exxon’s Environmental Affairs Manager distributed a primer on climate change to a “wide circulation [of] Exxon management [...] intended to familiarize Exxon personnel with the subject.”⁷¹ The primer was “restricted to Exxon personnel and not to be distributed externally.” The primer compiled science on climate change, confirmed fossil fuel combustion as a primary anthropogenic contributor to global warming, and estimated a CO₂ doubling [i.e.,

⁶⁹ AMERICAN PETROLEUM INSTITUTE, CLIMATE MODELS AND CO₂ WARMING: A SELECTIVE REVIEW AND SUMMARY (Columbia University, Mar. 1982), <https://assets.documentcloud.org/documents/2805626/1982-API-Climate-Models-and-CO2-Warming-a.pdf>.

⁷⁰ See Memorandum from Roger W. Cohen, Exxon Research and Engineering Co., to A.M. Natkin, Exxon Corp. Office of Science and Technology, CLIMATEFILES (Sept. 2, 1982), <http://www.climatefiles.com/exxonmobil/1982-exxon-memo-summarizing-climate-modeling-and-co2-greenhouse-effect-research> (discussing research articles and summarizing the findings of research in climate modeling).

⁷¹ Memorandum from M.B. Glaser, CO₂ “Greenhouse” Effect, Exxon Research and Engineering Company (Nov. 12, 1982), <https://insideclimatenews.org/sites/default/files/documents/1982%20Exxon%20Primer%20on%20CO2%20Greenhouse%20Effect.pdf>.

580 ppm] by 2070 with a “Most Probable Temperature Increase” of more than 2°C over the 1979 level, as shown in the Figure below.

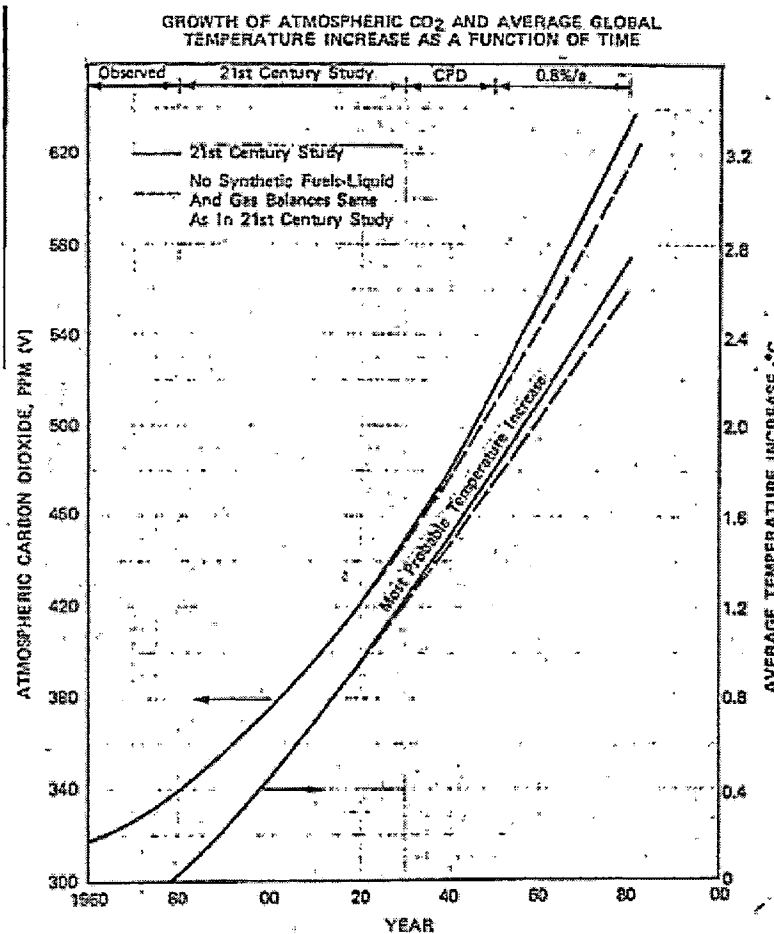


Figure 5: Exxon’s internal prediction of future carbon dioxide increase and global warming from 1982.⁷²

⁷² *Id.* The company predicted a doubling of atmospheric carbon dioxide concentrations above pre-industrial levels by around 2070 (left curve), with a temperature increase of more than 2°C over the 1979 level (right curve). The same document indicated that Exxon estimated that by 1979 a global warming effect of approximately 0.25°C may already have occurred.

The report also warned of “uneven global distribution of increased rainfall and increased evaporation,” that “disturbances in the existing global water distribution balance would have dramatic impact on soil moisture, and in turn, on agriculture,” and that the American Midwest would dry out. In addition to effects on global agriculture, the report stated, “there are some potentially catastrophic effects that must be considered.” Melting of the Antarctic ice sheet could result in global sea level rise of five meters, which would “cause flooding on much of the U.S. East Coast, including the state of Florida and Washington, D.C.” Weeds and pests would “tend to thrive with increasing global temperature.” The primer warned of “positive feedback mechanisms” in polar regions, which could accelerate global warming, such as deposits of peat “containing large reservoirs of organic carbon” becoming “exposed to oxidation” and releasing their carbon into the atmosphere. “Similarly,” the primer warned, “thawing might also release large quantities of carbon currently sequestered as methane hydrates” on the sea floor. “All biological systems would be affected,” and “the most severe economic effects could be on agriculture.” The report recommended studying “soil erosion, salinization, or the collapse of irrigation systems” in order to understand how society might be affected and might respond to global warming, as well as “[h]ealth effects” and “stress associated with climate related famine or migration[.]” The report estimated that undertaking “[s]ome adaptive measures” (not all of them) would cost “a few percent of the gross national

product estimated in the middle of the next century” (i.e., \$400 billion in 2018).⁷³ To avoid such impacts, the report discussed an analysis from the Massachusetts Institute of Technology and Oak Ridge National Laboratory, which studied energy alternatives and requirements for introducing them into widespread use, and which recommended that “vigorous development of non-fossil energy sources be initiated as soon as possible.”⁷⁴ The primer also noted that other greenhouse gases related to fossil fuel production, such as methane, would contribute significantly to global warming, and that concerns over carbon dioxide would be reduced if fossil fuel use were decreased due to “high price, scarcity, [or] unavailability.” “Mitigation of the ‘greenhouse effect’ would require major reductions in fossil fuel combustion,” the primer stated. The primer was widely distributed to Exxon leadership.

89. In September 1982, the Director of Exxon’s Theoretical and Mathematical Sciences Laboratory, Roger Cohen, wrote Alvin Natkin of Exxon’s Office of Science and Technology to summarize Exxon’s internal research on

⁷³ See *Gross National Product*, FEDERAL RESERVE BANK OF ST. LOUIS (updated Mar. 26, 2020), <https://fred.stlouisfed.org/series/GNPA>.

⁷⁴ Memorandum from M.B. Glaser, *CO₂ “Greenhouse” Effect*, Exxon Research and Engineering Company (Nov. 12, 1982), <https://insideclimatenews.org/sites/default/files/documents/1982%20Exxon%20Primer%20on%20CO2%20Greenhouse%20Effect.pdf>.

climate modeling.⁷⁵ Cohen reported:

[O]ver the past several years a clear scientific consensus has emerged regarding the expected climatic effects of increased atmospheric CO₂. The consensus is that a doubling of atmospheric CO₂ from its pre-industrial revolution value would result in an average global temperature rise of (3.0 ± 1.5) °C. [...] The temperature rise is predicted to be distributed nonuniformly over the earth, with above-average temperature elevations in the polar regions and relatively small increases near the equator. There is unanimous agreement in the scientific community that a temperature increase of this magnitude would bring about significant changes in the earth's climate, including rainfall distribution and alterations of the biosphere. The time required for doubling of atmospheric CO₂ depends on future world consumption of fossil fuels.

Cohen described Exxon's own climate modeling experiments, reporting that they produced "a global average temperature increase that falls well within the range of the scientific consensus," were "consistent with the published predictions of more complex climate models," and were "also in agreement with estimates of the global temperature distribution during a certain prehistoric period when the earth was much warmer than today." "In summary," Cohen wrote, "the results of our research are in accord with the scientific consensus on the effect of increased atmospheric CO₂ on climate." Cohen noted that the results would be presented to the scientific

⁷⁵ Memorandum from Roger W. Cohen, Exxon Research and Engineering Co., to A.M. Natkin, Exxon Corp. Office of Science and Technology, CLIMATEFILES (Sept. 2, 1982), <http://www.climatefiles.com/exxonmobil/1982-exxon-memo-summarizing-climate-modeling-and-co2-greenhouse-effect-research>.

community by Exxon's collaborator Martin Hoffert at a Department of Energy meeting, as well as by Exxon's Brian Flannery at the Exxon-supported Ewing Symposium, later that year.

90. In October 1982, at the fourth biennial Maurice Ewing Symposium at the Lamont-Doherty Geophysical Observatory which was attended by members of API and Exxon Research and Engineering Company, the Observatory's president E.E. David delivered a speech titled: "Inventing the Future: Energy and the CO₂ 'Greenhouse Effect.'" ⁷⁶ His remarks included the following statement: "Few people doubt that the world has entered an energy transition away from dependence upon fossil fuels and toward some mix of renewable resources that will not pose problems of CO₂ accumulation." He went on, discussing the human opportunity to address anthropogenic climate change before the point of no return:

It is ironic that the biggest uncertainties about the CO₂ buildup are not in predicting what the climate will do, but in predicting what people will do. . . . It appears we still have time to generate the wealth and knowledge we will need to invent the transition to a stable energy system.

⁷⁶ Dr. E.E. David, Jr., President, Exxon Research and Engineering Co., Remarks at the Fourth Annual Ewing Symposium, Tenafly, NJ, CLIMATEFILES (Oct. 26, 1982), <http://www.climatefiles.com/exxonmobil/inventing-future-energy-co2-greenhouse-effect>.

91. Throughout the early 1980s, at Exxon's direction, Exxon climate scientist Henry Shaw forecasted emissions of CO₂ from fossil fuel use. Those estimates were incorporated into Exxon's 21st century energy projections and were distributed among Exxon's various divisions. Shaw's conclusions included an expectation that atmospheric CO₂ concentrations would double in 2090 per the Exxon model, with an attendant 2.3–5.6°F average global temperature increase. Shaw compared his model results to those of the EPA, the National Academy of Sciences, and the Massachusetts Institute of Technology, indicating that the Exxon model predicted a longer delay than any of the other models, although its temperature increase prediction was in the mid-range of the four projections.⁷⁷

92. During the 1980s, many Defendants formed their own research units focused on climate modeling. API, including the API CO₂ Task Force, provided a forum for Fossil Fuel Defendants to share their research efforts and corroborate their findings related to anthropogenic greenhouse gas emissions.⁷⁸

⁷⁷ Neela Banerjee, *More Exxon Documents Show How Much It Knew About Climate 35 Years Ago*, INSIDE CLIMATE NEWS (Dec. 1, 2015), <https://insideclimatenews.org/news/01122015/documents-exxons-early-co2-position-senior-executives-engage-and-warming-forecast>.

⁷⁸ Neela Banerjee, *Exxon's Oil Industry Peers Knew About Climate Dangers in the 1970s, Too*, INSIDE CLIMATE NEWS (Dec. 22, 2015), <https://insideclimatenews.org/news/22122015/exxon-mobil-oil-industry-peers-knew-about-climate-change-dangers-1970s-american-petroleum-institute-api-shell-chevron-texaco>.

93. During this time, Defendants' statements expressed an understanding of their obligation to consider and mitigate the externalities of unabated promotion, marketing, and sale of their fossil fuel products. For example, in 1988, Richard Tucker, the president of Mobil Oil, presented at the American Institute of Chemical Engineers National Meeting, the premier educational forum for chemical engineers, where he stated:

[H]umanity, which has created the industrial system that has transformed civilization, is also responsible for the environment, which sometimes is at risk because of unintended consequences of industrialization. . . . Maintaining the health of this life-support system is emerging as one of the highest priorities. . . . [W]e must all be environmentalists.

The environmental covenant requires action on many fronts . . . the low-atmosphere ozone problem, the upper-atmosphere ozone problem and the greenhouse effect, to name a few. . . . Our strategy must be to reduce pollution before it is ever generated—to prevent problems at the source.

Prevention means engineering a new generation of fuels, lubricants and chemical products. . . . Prevention means designing catalysts and processes that minimize or eliminate the production of unwanted byproducts. . . . Prevention on a global scale may even require a dramatic reduction in our dependence on fossil fuels—and a shift towards solar, hydrogen, and safe nuclear power. It may be possible that—just possible—that the energy industry will transform itself so completely that observers will declare it a new industry. . . . Brute

force, low-tech responses and money alone won't meet the challenges we face in the energy industry.⁷⁹

94. Also in 1988, the Shell Greenhouse Effect Working Group issued a confidential internal report, "The Greenhouse Effect," which acknowledged global warming's anthropogenic nature: "Man-made carbon dioxide released into and accumulated in the atmosphere is believed to warm the earth through the so-called greenhouse effect." The authors also noted the burning of fossil fuels as a primary driver of CO₂ buildup and warned that warming would "create significant changes in sea level, ocean currents, precipitation patterns, regional temperature and weather." They further pointed to the potential for "direct operational consequences" of sea level rise on "offshore installations, coastal facilities and operations (e.g. platforms, harbors, refineries, depots)."⁸⁰

95. Similar to early warnings by Exxon scientists, the Shell report notes that "by the time the global warming becomes detectable it could be too late to take effective countermeasures to reduce the effects or even to stabilise the situation."

⁷⁹ Richard E. Tucker, *High Tech Frontiers in the Energy Industry: The Challenge Ahead*, AIChE National Meeting (Nov. 30, 1988), <https://hdl.handle.net/2027/pur1.32754074119482?urlappend=%3Bseq=522>.

⁸⁰ SHELL INTERNATIONALE PETROLEUM, GREENHOUSE EFFECT WORKING GROUP, *THE GREENHOUSE EFFECT* (May 1988), <https://www.documentcloud.org/documents/4411090-Documents3.html#document/p9/a411239>.

The authors mention the need to consider policy changes on multiple occasions, noting that “the potential implications for the world are . . . so large that policy options need to be considered much earlier” and that research should be “directed more to the analysis of policy and energy options than to studies of what we will be facing exactly.”

96. In 1989, Esso Resources Canada (ExxonMobil) commissioned a report on the impacts of climate change on existing and proposed natural gas facilities in the Mackenzie River Valley and Delta, including extraction facilities on the Beaufort Sea and a pipeline crossing Canada’s Northwest Territory.⁸¹ It reported that “large zones of the Mackenzie Valley could be affected dramatically by climatic change” and that “the greatest concern in Norman Wells [oil town in North West Territories, Canada] should be the changes in permafrost that are likely to occur under conditions of climate warming.”⁸² The report concluded that, in light of climate models showing a “general tendency towards warmer and wetter climate,” operation of those facilities would be compromised by increased precipitation, increase in air temperature, changes in permafrost conditions, and significantly, sea level rise and

⁸¹ See Stephen Lonergan & Kathy Young, *An Assessment of the Effects of Climate Warming on Energy Developments in the Mackenzie River Valley and Delta, Canadian Arctic*, 7 ENERGY EXPLORATION & EXPLOITATION 359–81 (1989).

⁸² *Id.* at 369, 376.

erosion damage.⁸³ The authors recommended factoring those eventualities into future development planning and also warned that “a rise in sea level could cause increased flooding and erosion damage on Richards Island.”

97. Ken Croasdale, a senior ice researcher for Exxon’s subsidiary Imperial Oil, stated to an audience of engineers in 1991 that greenhouse gases are rising “due to the burning of fossil fuels. Nobody disputes this fact.”⁸⁴

98. Also in 1991, Shell produced a film called “Climate of Concern.” The film advises that while “no two [climate change projection] scenarios fully agree, . . . [they] have each prompted the same serious warning. A warning endorsed by a uniquely broad consensus of scientists in their report to the UN at the end of 1990.” The warning was an increasing frequency of abnormal weather, and of sea level rise of about one meter over the coming century. Shell specifically described the impacts of anthropogenic sea level rise on tropical islands, “barely afloat even now, . . . [f]irst made uninhabitable and then obliterated beneath the waves. Wetland habitats destroyed by intruding salt. Coastal lowlands suffering pollution of precious groundwater.” It warned of “greenhouse refugees,” people who abandoned homelands inundated by the sea, or displaced because of catastrophic changes to the

⁸³ *Id.* at 360, 377–78.

⁸⁴ RONALD C. KRAMER, CARBON CRIMINALS, CLIMATE CRIMES 66 (1st ed. 2020).

environment. The video concludes with a stark admonition: “Global warming is not yet certain, but many think that the wait for final proof would be irresponsible. Action now is seen as the only safe insurance.”⁸⁵

99. Also in 1991, BP released a short film called “The Earth – What Makes Weather?” In it, a narrator states: “Our . . . dependence on carbon-based fuels is now a cause for concern. When coal, oil or gas are burned, they release carbon dioxide and other reactive gases.” The narrator then goes on to explain:

As the earth gives off heat, carbon dioxide, together with water vapor, absorbs and radiates it back, acting like a blanket. . . . If world population growth is matched by energy consumption, even more carbon dioxide will be released, making this greenhouse effect even stronger. An overall increase in temperature of even a few degrees could disrupt our climate with devastating consequences. If the oceans got warmer and the ice sheets began to melt, sea levels would rise, encroaching on coastal lowlands. From warmer seas, more water would evaporate, making storms and the havoc they cause more frequent. . . . Catastrophic floods could become commonplace, and low-lying countries like Bangladesh would be defenseless against them. Too much water or too little. Away from the coasts we could see a return to the conditions which devastated America’s Midwest in the 1930s. Global warming could repeat on a more disastrous scale the dustbowl phenomenon which virtually destroyed farming on the Great

⁸⁵ Jelmer Mommers, *Shell Made a Film About Climate Change in 1991 (Then Neglected To Heed Its Own Warning)*, DE CORRESPONDENT (Feb. 27, 2017), <https://thecorrespondent.com/6285/shell-made-a-film-about-climate-change-in-1991-then-neglected-to-heed-its-own-warning>.

Plains. . . . The threat of such climatic change is now one of our most urgent concerns.⁸⁶

The film was not widely distributed.

100. The fossil fuel industry was at the forefront of carbon dioxide research for much of the latter half of the 20th century. It developed cutting edge and innovative technology and worked with many of the field's top researchers to produce exceptionally sophisticated studies and models. For instance, in the mid-nineties Shell began using scenarios to plan how the company could respond to various global forces in the future. In one scenario published in a 1998 internal report, Shell paints an eerily prescient scene:

In 2010, a series of violent storms causes extensive damage to the eastern coast of the U.S. Although it is not clear whether the storms are caused by climate change, people are not willing to take further chances. The insurance industry refuses to accept liability, setting off a fierce debate over who is liable: the insurance industry or the government. After all, two successive IPCC reports since 1993 have reinforced the human connection to climate change . . . Following the storms, a coalition of environmental NGOs brings a class-action suit against the US government and fossil-fuel companies on the grounds of neglecting what scientists (including their own) have been saying for years: that something must be done. A social reaction to the use of fossil fuels grows, and individuals become 'vigilante environmentalists' in the same way, a generation earlier, they had

⁸⁶ Vatan Hüzeir, *BP Knew the Truth About Climate Change 30 Years Ago*, FOLLOW THE MONEY (May 26, 2020), <https://www.ftm.nl/artikelen/bp-video-climate-change-1990-engels>; see also BP Video Library, *This Earth – What Makes Weather?* (1991), <https://www.bpvideolibrary.com/record/463>.

become fiercely anti-tobacco. Direct-action campaigns against companies escalate. Young consumers, especially, demand action.⁸⁷

101. Fossil fuel companies did not just consider climate change impacts in scenarios. In the mid-1990s, ExxonMobil, Shell, and Imperial Oil (ExxonMobil) jointly undertook the Sable Offshore Energy Project in Nova Scotia. The project's own Environmental Impact Statement declared: "The impact of a global warming sea-level rise may be particularly significant in Nova Scotia. The long-term tide gauge records at a number of locations along the N.S. coast have shown sea level has been rising over the past century. . . . For the design of coastal and offshore structures, an estimated rise in water level, due to global warming, of 0.5 m [1.64 feet] may be assumed for the proposed project life (25 years)."⁸⁸

102. Climate change research conducted by Defendants and their industry associations frequently acknowledged uncertainties in their climate modeling—those uncertainties, however, were merely with respect to the magnitude and timing of climate impacts resulting from fossil fuel consumption, not that significant changes would eventually occur. Defendants' researchers and the researchers at

⁸⁷ ROYAL DUTCH/SHELL GROUP, GROUP SCENARIOS 1998–2020 115, 122 (1998), <http://www.documentcloud.org/documents/4430277-27-1-Compiled.html>.

⁸⁸ EXXONMOBIL, SABLE PROJECT DEVELOPMENT PLAN, vol. 3, 4-77, <http://soep.com/about-the-project/development-plan-application>.

their industry associations harbored little doubt that climate change was occurring and that fossil fuel products were, and are, the primary cause.

103. Despite the overwhelming information about the threats to people and the planet posed by continued unabated use of their fossil fuel products, Fossil Fuel Defendants failed to act as they reasonably should have to mitigate or avoid those dire adverse impacts. Fossil Fuel Defendants instead adopted the position, as described below, that they had a license to continue the unfettered pursuit of profits from those products. This position was an abdication of Fossil Fuel Defendants' responsibility to consumers and the public, including the State, to act on their unique knowledge of the reasonably foreseeable hazards of unabated production and consumption of their fossil fuel products.

C. Defendants Did Not Disclose Known Harms Associated with the Extraction, Promotion, and Consumption of Their Fossil Fuel Products, and Instead Affirmatively Acted to Obscure Those Harms and Engaged in a Campaign to Deceptively Protect and Expand the Use of their Fossil Fuel Products.

104. By 1988, Defendants had amassed a compelling body of knowledge about the role of anthropogenic greenhouse gases, and specifically those emitted from the normal use of Defendants' fossil fuel products, in causing global warming and its cascading impacts, including disruptions to the hydrologic cycle, extreme precipitation and drought, heatwaves, and associated consequences for human communities and the environment. On notice that their products were causing global

climate change and dire effects on the planet, Defendants faced the decision of whether or not to take steps to limit the damages their fossil fuel products were causing and would continue to cause Earth's inhabitants, including the people of Delaware.

105. Before or thereafter, Fossil Fuel Defendants could and reasonably should have taken any number of steps to mitigate the damages caused by their fossil fuel products, and their own comments reveal an awareness of what some of those steps should have been. Fossil Fuel Defendants should have warned the public, regulators, and Delaware consumers of the dangers known to Defendants of the unabated consumption of their fossil fuel products, and they could and should have taken reasonable steps to limit the potential greenhouse gas emissions arising out of their fossil fuel products.

106. But several key events during the period 1988–1992 appear to have prompted Defendants to change their tactics from general research and internal discussion on climate change to a public campaign aimed at deceiving consumers and the public, including those in Delaware, and evading regulation of their fossil fuel products and/or emissions therefrom. These include:

a. In 1988, National Aeronautics and Space Administration (NASA) scientists confirmed that human activities were actually contributing to

global warming.⁸⁹ On June 23rd of that year, NASA scientist James Hansen's presentation of this information to Congress engendered significant news coverage and publicity for the announcement, including coverage on the front page of the New York Times.

b. On July 28, 1988, Senator Robert Stafford and four bipartisan co-sponsors introduced S. 2666, "The Global Environmental Protection Act," to regulate CO₂ and other greenhouse gases. Four more bipartisan bills to significantly reduce CO₂ pollution were introduced over the following ten weeks, and in August, U.S. Presidential candidate George H.W. Bush pledged that his presidency would combat the greenhouse effect with "the White House effect."⁹⁰ Political will in the United States to reduce anthropogenic greenhouse gas emissions and mitigate the harms associated with Defendants' fossil fuel products was gaining momentum.

c. In December 1988, the United Nations formed the Intergovernmental Panel on Climate Change (IPCC), a scientific panel dedicated to providing the world's governments with an objective, scientific analysis of climate change and its environmental, political, and economic impacts.

⁸⁹ See Peter C. Frumhoff et al., *The Climate Responsibilities of Industrial Carbon Producers*, 132 CLIMATIC CHANGE 161 (2015).

⁹⁰ *The White House and the Greenhouse*, N.Y. TIMES (May 9, 1989), <http://www.nytimes.com/1989/05/09/opinion/the-white-house-and-the-greenhouse.html>.

d. In 1990, the IPCC published its First Assessment Report on anthropogenic climate change,⁹¹ in which it concluded that (1) “there is a natural greenhouse effect which already keeps the Earth warmer than it would otherwise be,” and (2) that

emissions resulting from human activities are substantially increasing the atmospheric concentrations of the greenhouse gases carbon dioxide, methane, chlorofluorocarbons (CFCs) and nitrous oxide. These increases will enhance the greenhouse effect, resulting on average in an additional warming of the Earth’s surface. The main greenhouse gas, water vapour, will increase in response to global warming and further enhance it.⁹²

The IPCC reconfirmed those conclusions in a 1992 supplement to the First Assessment report.⁹³

e. The United Nations began preparing for the 1992 Earth Summit in Rio de Janeiro, Brazil, a major, newsworthy gathering of 172 world governments, of which 116 sent their heads of state. The Summit resulted in the United Nations Framework Convention on Climate Change (UNFCCC), an international environmental treaty providing protocols for future negotiations aimed at

⁹¹ See IPCC, *Reports*, ipcc.ch/reports.

⁹² IPCC, CLIMATE CHANGE: THE IPCC SCIENTIFIC ASSESSMENT xi (1990), <https://www.ipcc.ch/report/climate-change-the-ipcc-1990-and-1992-assessments>.

⁹³ IPCC, 1992 IPCC SUPPLEMENT TO THE FIRST ASSESSMENT REPORT (1992), <https://www.ipcc.ch/report/climate-change-the-ipcc-1990-and-1992-assessments>.

“stabiliz[ing] greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.”⁹⁴

107. Those world events marked a shift in public discussion of climate change, and the initiation of international efforts to curb anthropogenic greenhouse emissions—developments that had stark implications for, and would have diminished the profitability of, Defendants’ fossil fuel products.

108. Rather than collaborating with the international community by acting to forestall, or at least decrease, their fossil fuel products’ contributions to global warming, and its impacts, including sea level rise, disruptions to the hydrologic cycle, and associated consequences to Delaware and other communities, Defendants embarked on a decades-long campaign designed to maximize continued dependence on their products and undermine national and international efforts to rein in greenhouse gas emissions.

109. Defendants’ campaign, which focused on concealing, discrediting, and/or misrepresenting information that tended to support restricting consumption of (and thereby decreasing demand for) Defendants’ fossil fuel products, took several forms. The campaign enabled Defendants to accelerate their business

⁹⁴ UNITED NATIONS, UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE Art. 2 (1992), <https://unfccc.int/resource/docs/convkp/conveng.pdf>.

practice of exploiting fossil fuel reserves, and concurrently externalize the social and environmental costs of their fossil fuel products. Those activities stood in direct contradiction to Defendants' own prior recognition that the science of anthropogenic climate change was clear and that action was needed to avoid or mitigate dire consequences to the planet and communities like the State's.

110. Defendants—on their own and jointly through industry and front groups such as API and the GCC—funded, conceived, planned, and carried out a sustained and widespread campaign of denial and disinformation about the existence of climate change and their products' contribution to it. The campaign included a long-term pattern of direct misrepresentations and material omissions to consumers, as well as a plan to influence consumers indirectly by affecting public opinion through the dissemination of misleading research to the press, government, and academia. Although Fossil Fuel Defendants were competitors in the marketplace, they combined and collaborated on this public campaign to misdirect and stifle public knowledge in order to increase sales and protect profits. The effort included promoting their hazardous products through advertising campaigns that failed to warn of the existential risks associated with the use of those products, and were designed to influence consumers to continue using Defendants' fossil fuel products irrespective of those products' damage to communities and the environment.

111. For example, in 1988, Joseph Carlson, an Exxon public affairs manager, stated in an internal memo that Exxon “is providing leadership through API in developing the petroleum industry position” on “the greenhouse effect.”⁹⁵ He then went on to describe the “Exxon Position,” which included two important messaging tenets among others: (1) “[e]mphasize the uncertainty in scientific conclusions regarding the potential enhanced Greenhouse Effect”; and (2) “[r]esist the overstatement and sensationalization [sic] of potential greenhouse effect which could lead to noneconomic development of non-fossil fuel resources.”⁹⁶

112. Reflecting on his time as an Exxon consultant in the 1980s, Professor Martin Hoffert, a former New York University physicist who researched climate change, expressed regret over Exxon’s “climate science denial program campaign” in his sworn testimony before Congress:

[O]ur research [at Exxon] was consistent with findings of the United Nations Intergovernmental Panel on Climate Change on human impacts of fossil fuel burning, which is that they are increasingly having a perceptible influence on Earth’s climate. . . . If anything, adverse climate change from elevated CO₂ is proceeding faster than the average of the prior IPCC mild projections and fully consistent with what we knew back in the early 1980’s at Exxon. . . . I was greatly distressed by the climate science denial program campaign that Exxon’s front office launched around the time I stopped working as a consultant—but not

⁹⁵ Memorandum from Joseph M. Carlson, *The Greenhouse Effect* (Aug. 3, 1988), <https://assets.documentcloud.org/documents/3024180/1998-Exxon-Memo-on-the-Greenhouse-Effect.pdf>.

⁹⁶ *Id.*

collaborator—for Exxon. The advertisements that Exxon ran in major newspapers raising doubt about climate change were contradicted by the scientific work we had done and continue to do. Exxon was publicly promoting views that its own scientists knew were wrong, and we knew that because we were the major group working on this.⁹⁷

113. A 1994 Shell report entitled “The Enhanced Greenhouse Effect: A Review of the Scientific Aspects” by Royal Dutch Shell environmental advisor Peter Langcake stands in stark contrast to the company’s 1988 report on the same topic. Whereas before, the authors recommended consideration of policy solutions early on, Langcake warned of the potentially dramatic “economic effects of ill-advised policy measures.” While the report recognized the IPCC conclusions as the mainstream view, Langcake still emphasized scientific uncertainty, noting, for example, that “the postulated link between any observed temperature rise and human activities has to be seen in relation to natural variability, which is still largely unpredictable.” The Shell Group position is stated clearly in the report: “Scientific uncertainty and the evolution of energy systems indicate that policies to curb

⁹⁷ *Examining the Oil Industry’s Efforts to Suppress the Truth About Climate Change, Hearing Before the Subcomm. on Civil Rights and Civil Liberties of the Comm. on Oversight and Reform*, 116th Cong. 7–8 (Oct. 23, 2019) (statement of Martin Hoffert, Former Exxon Consultant, Professor Emeritus, Physics, New York University), <https://oversight.house.gov/legislation/hearings/examining-the-oil-industry-s-efforts-to-suppress-the-truth-about-climate-change>.

greenhouse gas emissions beyond ‘no regrets’ measures could be premature, divert resources from more pressing needs and further distort markets.”⁹⁸

114. In 1991, for example, the Information Council for the Environment (“ICE”), whose members included affiliates, predecessors and/or subsidiaries of Defendants, launched a national climate change science denial campaign with full-page newspaper ads, radio commercials, a public relations tour schedule, “mailers,” and research tools to measure campaign success. Included among the campaign strategies was to “reposition global warming as theory (not fact).” Its target audience included older less-educated males who are “predisposed to favor the ICE agenda, and likely to be even more supportive of that agenda following exposure to new info.”⁹⁹

115. A goal of ICE’s advertising campaign was to change public opinion and avoid regulation. A memo from Richard Lawson, president of the National Coal Association, a predecessor to the National Mining Association, asked members to

⁹⁸ P. LANGCAKE, SHELL INTERNATIONALE PETROLEUM, THE ENHANCED GREENHOUSE EFFECT: A REVIEW OF THE SCIENTIFIC ASPECTS (Dec. 1994), <https://www.documentcloud.org/documents/4411099-Documents11.html#document/p15/a411511>.

⁹⁹ Union of Concerned Scientists, *Deception Dossier #5: Coal’s “Information Council on the Environment” Sham* (1991), http://www.ucsusa.org/sites/default/files/attach/2015/07/Climate-Deception-Dossier-5_ICE.pdf.

contribute to the ICE campaign with the justification that “policymakers are prepared to act [on global warming]. Public opinion polls reveal that 60% of the American people already believe global warming is a serious environmental problem. Our industry cannot sit on the sidelines in this debate.”¹⁰⁰

116. The following images are examples of ICE-funded print advertisements challenging the validity of climate science and intended to obscure the scientific consensus on anthropogenic climate change and induce political inertia to address it.¹⁰¹

¹⁰⁰ Naomi Oreskes, *My Facts Are Better Than Your Facts: Spreading Good News About Global Warming* (2010), in PETER HOWLETT ET AL., *HOW WELL DO FACTS TRAVEL?: THE DISSEMINATION OF RELIABLE KNOWLEDGE* 136–66 (Cambridge University Press, 2011).

¹⁰¹ Union of Concerned Scientists, *Deception Dossier #5: Coal’s “Information Council on the Environment” Sham* at 47-49 (1991), http://www.ucsusa.org/sites/default/files/attach/2015/07/Climate-Deception-Dossier-5_ICE.pdf.



Figure 6: Information Council for the Environment Advertisements

117. In 1996, Exxon released a publication called “Global Warming: Who’s Right? Facts about a debate that’s turned up more questions than answers.” In the publication’s preface, Exxon CEO Lee Raymond inaccurately stated that “taking drastic action immediately is unnecessary since many scientists agree there’s ample time to better understand the climate system.” The publication described the greenhouse effect as “unquestionably real and definitely a good thing,” while ignoring the severe consequences that would result from the influence of the increased CO₂ concentration on the Earth’s climate. Instead, it characterized the greenhouse effect as simply “what makes the earth’s atmosphere livable.” Directly contradicting Exxon’s own knowledge and peer-reviewed science, the publication ascribed the rise in temperature since the late 19th century to “natural fluctuations

that occur over long periods of time” rather than to the anthropogenic emissions that Exxon itself and other scientists had confirmed were responsible. The publication also falsely challenged the computer models that projected the future impacts of unabated fossil fuel product consumption, including those developed by Exxon’s own employees, as having been “proved to be inaccurate.” The publication contradicted the numerous reports prepared by and circulated among Exxon’s staff, and by the API, stating that “the indications are that a warmer world would be far more benign than many imagine . . . moderate warming would reduce mortality rates in the US, so a slightly warmer climate would be more healthful.” Raymond concluded his preface by attacking advocates for limiting the use of his company’s fossil fuel products as “drawing on bad science, faulty logic, or unrealistic assumptions”—despite the important role that Exxon’s own scientists had played in compiling those same scientific underpinnings.¹⁰²

118. API published an extensive report in the same year warning against concern over CO₂ buildup and any need to curb consumption or regulate the fossil fuel industry. The introduction stated that “there is no persuasive basis for forcing Americans to dramatically change their lifestyles to use less oil.” The authors

¹⁰² EXXON CORP., GLOBAL WARMING: WHO’S RIGHT? (1996), <https://www.documentcloud.org/documents/2805542-Exxon-Global-Warming-Whos-Right.html>.

discouraged the further development of certain alternative energy sources, writing that “government agencies have advocated the increased use of ethanol and the electric car, without the facts to support the assertion that either is superior to existing fuels and technologies” and that “policies that mandate replacing oil with specific alternative fuel technologies freeze progress at the current level of technology, and reduce the chance that innovation will develop better solutions.” The paper also denied the human connection to climate change, by falsely stating that no “scientific evidence exists that human activities are significantly affecting sea levels, rainfall, surface temperatures or the intensity and frequency of storms.” The report’s message was false but clear: “Facts don’t support the arguments for restraining oil use.”¹⁰³

119. In a speech presented at the World Petroleum Congress in Beijing in 1997 at which many of the Defendants were present, Exxon CEO Lee Raymond reiterated those views. This time, he presented a false dichotomy between stable energy markets and abatement of the marketing, promotion, and sale of fossil fuel products Defendants knew to be hazardous. He stated:

¹⁰³ SALLY BRAIN GENTILE ET AL., AMERICAN PETROLEUM INSTITUTE, REINVENTING ENERGY: MAKING THE RIGHT CHOICES (1996), <http://www.climatefiles.com/trade-group/american-petroleum-institute/1996-reinventing-energy>.

Some people who argue that we should drastically curtail our use of fossil fuels for environmental reasons . . . my belief [is] that such proposals are neither prudent nor practical. With no readily available economic alternatives on the horizon, fossil fuels will continue to supply most of the world's and this region's energy for the foreseeable future.

Governments also need to provide a stable investment climate . . . They should avoid the temptation to intervene in energy markets in ways that give advantage to one competitor over another or one fuel over another.

We also have to keep in mind that most of the greenhouse effect comes from natural sources . . . Leaping to radically cut this tiny sliver of the greenhouse pie on the premise that it will affect climate defies common sense and lacks foundation in our current understanding of the climate system.

Let's agree there's a lot we really don't know about how climate will change in the 21st century and beyond . . . It is highly unlikely that the temperature in the middle of the next century will be significantly affected whether policies are enacted now or 20 years from now. It's bad public policy to impose very costly regulations and restrictions when their need has yet to be proven.¹⁰⁴

120. Imperial Oil (ExxonMobil) CEO Robert Peterson falsely denied the established connection between Defendants' fossil fuel products and anthropogenic climate change in the Summer 1998 Imperial Oil Review, "A Cleaner Canada:"

[T]his issue [referring to climate change] has absolutely nothing to do with pollution and air quality. Carbon dioxide is not a pollutant but an essential ingredient of life on this planet. . . . [T]he question of whether

¹⁰⁴ Lee R. Raymond, Chairman and Chief Executive Officer, Exxon Corp., Address at the World Petroleum Congress (Oct. 13, 1997), <https://assets.documentcloud.org/documents/2840902/1997-Lee-Raymond-Speech-at-China-World-Petroleum.pdf>.

or not the trapping of ‘greenhouse’ gases will result in the planet’s getting warmer . . . has no connection whatsoever with our day-to-day weather.

There is absolutely no agreement among climatologists on whether or not the planet is getting warmer, or, if it is, on whether the warming is the result of man-made factors or natural variations in the climate. . . . I feel very safe in saying that the view that burning fossil fuels will result in global climate change remains an unproved hypothesis.¹⁰⁵

121. Mobil (ExxonMobil) paid for a series of “advertorials,” advertisements located in the editorial section of the New York Times and meant to look like editorials rather than paid ads. Those ads discussed various aspects of the public discussion of climate change and sought to undermine the justifications for tackling greenhouse gas emissions as unsettled science. The 1997 advertorial below¹⁰⁶ argued that economic analysis of emissions restrictions was faulty and inconclusive and therefore a justification for delaying action on climate change.

¹⁰⁵ Robert Peterson, *A Cleaner Canada* in IMPERIAL OIL REVIEW (1998), <https://www.desmogblog.com/sites/beta.desmogblog.com/files/A%20Cleaner%20Canada%20Imperial%20Oil.pdf>.

¹⁰⁶ Mobil, *When Facts Don’t Square with the Theory, Throw Out the Facts*, N.Y. TIMES, A31 (Aug.14, 1997), <https://www.documentcloud.org/documents/705550-mob-nyt-1997-aug-14-whenfactsdonsquare.html>.

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But when we no longer allow those
choices, both civil and common
sense will have been diminished. [3]

who was dragged from his sister's
car by police officers and shot in the
face at point-blank range. The cops

who have the power to do something
about those officers, but choose not
to. [3]

When facts don't square with the theory, throw out the facts



That seems to characterize the admin-
istration's attitude on two of its own
studies which show that international
efforts to curb global warming could spark a big
run-up in energy prices.

For months, the administration—playing its
cards close to the vest—has promised to provide
details of the emission reduction plan it will put on
the table at the climate change meeting in Kyoto,
Japan, later this year. It also promised to evaluate
the economic impact of that policy and measure its
impact. Those results are important because the
proposals submitted by other countries thus
far would be disruptive and costly to the U.S.
economy.

Yet, when the results from its own eco-
nomic models were finally generated, the admin-
istration started distancing itself from the findings
and models that produced them. The adminis-
tration's top economic advisor said that economic
models can't provide a "definitive answer" on the
impact of controlling emissions. The effort, she
said, was "futile." At best, the models can only
provide a "range of potential impacts."

Frankly, we're puzzled. The White House
has promised to lay the economic facts before
the public. Yet, the administration's top advisor
said such an analysis won't be based on models
and it will "preclude... detailed numbers." If you
don't provide numbers and don't rely on models,
what kind of rigorous economic examination can
Congress and the public expect?

We're also puzzled by ambivalence over
models. The administration downplays the utility
of economic models to forecast cost impacts
10-15 years from now, yet its negotiators accept
as gospel the 50-100-year predictions of global
warming that have been generated by climate
models—many of which have been criticized as
seriously flawed.

The second study, conducted by Argonne
National Laboratory under a contract with
the Energy Department, examined what would

happen if the U.S. had to commit to higher
energy prices under the emission reduction
plans that several nations had advanced last
year. Such increases, the report concluded,
would result in "significant reductions in output
and employment" in six industries—aluminum,
cement, chemical, paper and pulp, petroleum
refining and steel.

But hardest, the study noted, would be the
chemical industry, with estimates that up to 30
percent of U.S. chemical manufacturing capacity
would move offshore to developing countries.
Job losses could amount to some 200,000 in
that industry, with another 100,000 in the steel
sector. And despite the substantial loss of U.S.
jobs and manufacturing capacity, the net emis-
sion reduction could be insignificant since de-
veloping countries will not be bound by the
emission targets of a global warming treaty.

Downplaying Argonne's findings, the
Energy Department noted that the study used
outdated energy prices (mid-1990s), didn't reflect
the gains that would come from international
emissions trading and failed to factor in the
benefits of accelerated developments in energy
efficiency and low-carbon technologies.

What it failed to mention is just what these
new technologies are and when we can expect
their benefits to kick in. As for emissions trading,
many economists have theorized about the role
they could play in reducing emissions, but few
have grappled with the practicality of implement-
ing and policing such a scheme.

We applaud the goals the U.S. wants to
achieve in these upcoming negotiations—namely,
that a final agreement must be "flexible, cost-
effective, realistic, achievable and ultimately
global in scope." But until we see the details of
the administration's policy, we are concerned that
plans are being developed in the absence of
rigorous economic analysis. Too much is at stake
to simply ignore facts that don't square with
preconceived theories.

Mobil The energy
to make a difference.

<http://www.mobil.com>

©1997 Mobil Corporation

Figure 7: 1997 Mobil Advertorial

122. In 1998, API convened a Global Climate Science Communications Team (“GCSCT”) whose members included Exxon’s senior environmental lobbyist, an API public relations representative, and representatives from Chevron. There were no scientists on the “Global Climate Science Team.” Steve Milloy (a key player in the tobacco industry’s front group) and his organization The Advancement of Sound Science Coalition (“TASSC”) were founding members of the GCSCT. TASSC was a fake grassroots citizen group created by the tobacco industry to sow uncertainty by discrediting the scientific link between exposure to second-hand cigarette smoke and increased rates of cancer and heart disease. Philip Morris launched TASSC on the advice of its public relations firm, which advised Philip Morris that the tobacco company itself would not be a credible voice on the issue of smoking and public health. TASSC, through API and with the approval of Fossil Fuel Defendants, also became a front group for the fossil fuel industry, using the same tactics it had honed while operating on behalf of tobacco companies to spread doubt about climate science. Although TASSC posed as a grassroots group of concerned citizens, it was funded by Defendants. For example, between 2000 and 2004, Exxon donated \$50,000 to Milloy’s Advancement of Sound Science Center; and an additional \$60,000 to the Free Enterprise Education Institute and \$50,000 to the Free Enterprise Action Institute, both of which were registered to Milloy’s home

address.¹⁰⁷ The GC SCT represented a continuation of Defendants’ concerted actions to sow doubt and confusion about climate change in order to further Defendants’ business interests.

123. Starting in 1998, the GC SCT continued Defendants’ efforts to deceive the public about the dangers of fossil fuel use by launching a campaign to convince the public that the scientific basis for climate change was in doubt. The multi-million-dollar, multi-year plan included, among other elements, plans to: (a) “[d]evelop and implement a national media relations program to inform the media about uncertainties in climate science to generate national, regional, and local media coverage on the scientific uncertainties”; (b) “[d]evelop a global climate science information kit for media including peer-reviewed papers that undercut the ‘conventional wisdom’ on climate science”; (c) “[p]roduce . . . a steady stream of op-ed columns”; and (d) “[d]evelop and implement a direct outreach program to inform and educate members of Congress . . . and school teachers/students about uncertainties in climate science” to “begin to erect a barrier against further efforts to

¹⁰⁷ UNION OF CONCERNED SCIENTISTS, SMOKE, MIRRORS & HOT AIR: HOW EXXONMOBIL USES BIG TOBACCO’S TACTICS TO MANUFACTURE UNCERTAINTY ON CLIMATE SCIENCE (July 16, 2007), <https://www.ucsusa.org/resources/smoke-mirrors-hot-air>.

impose Kyoto-like measures in the future”¹⁰⁸—a blatant attempt to disrupt international efforts to negotiate any treaty curbing greenhouse gas emissions to ensure a continued and unimpeded market for their fossil fuel products.

124. Exxon, Chevron, and API contributed to the development of the plan, which plainly set forth the criteria by which the contributors would know when their efforts to manufacture doubt had been successful. “Victory,” they wrote, “will be achieved when . . . average citizens ‘understand’ (recognize) uncertainties in climate science” and “recognition of uncertainties becomes part of the ‘conventional wisdom.’”¹⁰⁹ In other words, the plan was part of Defendants’ goal to use disinformation to plant doubt about the reality of climate change in an effort to maintain consumer demand for their fossil fuel products and their large profits.

125. Soon after, API distributed a memo to its members illuminating API’s and Fossil Fuel Defendants’ concern over the potential regulation of their fossil fuel products: “Climate is at the center of the industry’s business interests. Policies limiting carbon emissions reduce petroleum product use. That is why it is API’s

¹⁰⁸ Email from Joe Walker to Global Climate Science Team, *Draft Global Climate Science Communications Plan* (Apr. 3, 1998), <https://assets.documentcloud.org/documents/784572/api-global-climate-science-communications-plan.pdf>.

¹⁰⁹ *Id.*

highest priority issue and defined as ‘strategic.’”¹¹⁰ Further, the API memo stressed many of the strategies that Defendants collectively utilized to combat the perception of their fossil fuel products as hazardous. They included:

a. Influencing the tenor of the climate change “debate” as a means to establish that greenhouse gas reduction policies like the Kyoto Protocol were not necessary to responsibly address climate change;

b. Maintaining strong working relationships between government regulators and communications-oriented organizations like the Global Climate Coalition, the Heartland Institute, and other groups carrying Defendants’ message minimizing the hazards of the unabated use of their fossil fuel products and opposing regulation thereof;

c. Building the case for (and falsely dichotomizing) Defendants’ positive contributions to a “long-term approach” (ostensibly for regulation of their products) as a reason for society to reject short term fossil fuel emissions regulations, and engaging in climate change science uncertainty research; and

¹¹⁰ *Allegations of Political Interference with Government Climate Change Science, Hearing Before the Comm. on Oversight and Government Reform*, 110th Cong. 324 (Mar. 19, 2007) <https://ia601904.us.archive.org/25/items/gov.gpo.fdsys.CHRG-110hhr37415/CHRG-110hhr37415.pdf>.

d. Presenting Defendants' positions on climate change in domestic and international forums, including by preparing rebuttals to IPCC reports.

126. In furtherance of the strategies described in these memoranda, Defendants made misleading statements about climate change, the relationship between climate change and their fossil fuel products, and the urgency of the problem. Defendants made these statements in public fora and in advertisements published in newspapers and other media with substantial circulation to Delaware, including national publications such as the *New York Times*, *Wall Street Journal*, and *Washington Post*.

127. Phillip Cooney, an attorney at API from 1996 to 2001, testified at a 2007 Congressional hearing that it was "typical" for API to fund think tanks and advocacy groups that minimized fossil fuels' role in climate change. Among the groups to which API provided funding were the Heartland Institute, Competitive Enterprise Institute ("CEI"), and the American Council on Capital Formation, each of which issued publications challenging the scientific consensus that fossil fuels were causing climate change and opposed restrictions on Fossil Fuel Defendants' extraction, production, and sale of fossil fuels.¹¹¹

¹¹¹ *Id.*

128. Defendants, individually and through trade associations and front groups like API and GCC, mounted a deceptive public campaign against regulation of their business practices in order to continue wrongfully promoting and marketing their fossil fuel products, despite their own knowledge and the growing national and international scientific consensus about the hazards of doing so.

129. The Global Climate Coalition (GCC), on behalf of Defendants and other fossil fuel companies, funded deceptive advertising campaigns and distributed misleading material to generate public uncertainty around the climate debate, with the specific purpose of preventing U.S. adoption of the Kyoto Protocol, despite the leading role that the U.S. had played in the Protocol negotiations.¹¹² Despite an internal primer stating that various “contrarian theories” (i.e., climate change skepticism) do not “offer convincing arguments against the conventional model of greenhouse gas emission-induced climate change,” GCC excluded this section from the public version of the backgrounder¹¹³ and instead funded and promoted some of

¹¹² *Id.*

¹¹³ Memorandum from Gregory J. Dana, Assoc. of Int’l Auto. Mfrs., to AIAM Technical Committee, *Global Climate Coalition (GCC) - Primer on Climate Change Science - Final Draft* (Jan. 18, 1996), <http://www.webcitation.org/6FyqHawb9>.

those same contrarian theories. Between 1989 and 1998, the GCC spent \$13 million on advertisements as part of a campaign to cast doubt on climate science.¹¹⁴

130. For example, in a 1994 report, the GCC stated that “observations have not yet confirmed evidence of global warming that can be attributed to human activities,” that “[t]he claim that serious impacts from climate change have occurred or will occur in the future simply has not been proven,” and “[c]onsequently, there is no basis for the design of effective policy action that would eliminate the potential for climate change.”¹¹⁵ In 1995, the GCC published a booklet called “Climate Change: Your Passport to the Facts,” which stated, “While many warnings have reached the popular press about the consequences of a potential man-made warming of the Earth’s atmosphere during the next 100 years, there remains no scientific evidence that such a dangerous warming will actually occur.”¹¹⁶

¹¹⁴ Wendy E. Franz, Kennedy School of Government, Harvard University, *Science, Skeptics and Non-State Actors in the Greenhouse*, ENRP Discussion Paper E-98-18, at 13 (Sept. 1998), <https://www.belfercenter.org/sites/default/files/legacy/files/Science%20Skeptics%20and%20Non-State%20Actors%20in%20the%20Greenhouse%20-%20E-98-18.pdf>.

¹¹⁵ GCC, ISSUES AND OPTIONS: POTENTIAL GLOBAL CLIMATE CHANGE, CLIMATE FILES (1994), <http://www.climatefiles.com/denial-groups/global-climate-coalition-collection/1994-potential-global-climate-change-issues>.

¹¹⁶ GCC, CLIMATE CHANGE: YOUR PASSPORT TO THE FACTS, CLIMATE FILES (1995), <http://www.climatefiles.com/denial-groups/global-climate-coalition-collection/1995-climate-change-facts-passport>.

131. A key strategy in Defendants' efforts to discredit scientific consensus on climate change and the IPCC was to bankroll scientists who, although accredited, held fringe opinions that were even more questionable given the sources of their research funding. Those scientists obtained part or all of their research budget from Fossil Fuel Defendants directly or through Fossil Fuel Defendant-funded organizations like API,¹¹⁷ but they frequently failed to disclose their fossil fuel industry underwriters.¹¹⁸ Defendants intended for the research of scientists they funded to be distributed to and relied on by consumers when buying Defendants' products, including by consumers in Delaware.

132. Creating a false sense of disagreement in the scientific community (despite the consensus that its own scientists, experts, and managers had previously acknowledged) has had an evident impact on public opinion. A 2007 Yale University-Gallup poll found that while 71 percent of Americans personally believed global warming was happening, only 48 percent believed that there was a consensus

¹¹⁷ *E.g.*, Willie Soon & Sallie Baliunas, *Proxy Climatic and Environmental Changes of the Past 1000 Years*, 23 CLIMATE RESEARCH 88, 105 (Jan. 31, 2003), <http://www.int-res.com/articles/cr2003/23/c023p089.pdf>.

¹¹⁸ *E.g.*, *Smithsonian Statement: Dr. Wei-Hock (Willie) Soon*, SMITHSONIAN (Feb. 26, 2015), <https://web.archive.org/web/20181105223030/https://www.si.edu/newsdesk/releases/smithsonian-statement-dr-wei-hock-willie-soon>.

among the scientific community, and 40 percent believed there was a lot of disagreement among scientists over whether global warming was occurring.¹¹⁹

133. 2007 was the same year the IPCC published its Fourth Assessment Report, in which it concluded that “there is *very high confidence* that the net effect of human activities since 1750 has been one of warming.”¹²⁰ The IPCC defined “very high confidence” as at least a 9 out of 10 chance.¹²¹

134. Defendants, individually and through their trade association memberships, worked directly, and often in a deliberately obscured manner, to evade regulation of the emissions resulting from use of their fossil fuel products and to conceal and misrepresent their products’ known dangers.

135. Defendants have funded dozens of think tanks, front groups, and dark money foundations pushing climate change denial. These include CEI, the Heartland Institute, Frontiers for Freedom, Committee for a Constructive Tomorrow, and Heritage Foundation. From 1998 to 2014 ExxonMobil spent almost

¹¹⁹ *American Opinions on Global Warming: A Yale/Gallup/Clearvision Poll*, Yale Program on Climate Change Communication (July 31, 2007), <http://climatecommunication.yale.edu/publications/american-opinions-on-global-warming>.

¹²⁰ IPCC, SUMMARY FOR POLICYMAKERS: A REPORT OF WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT 3 (2007), <https://www.ipcc.ch/site/assets/uploads/2018/02/ar4-wg1-spm-1.pdf>.

¹²¹ *Id.*

\$31 million funding numerous organizations misrepresenting the scientific consensus that Defendants' fossil fuel products were causing climate change, sea level rise, and injuries to Delaware, among other communities.¹²² Several Defendants have been linked to other groups that undermine the scientific basis linking Defendants' fossil fuel products to climate change and sea level rise, including the Frontiers of Freedom Institute and the George C. Marshall Institute.

136. Exxon acknowledged its own previous success in sowing uncertainty and slowing mitigation through funding of climate denial groups. In its 2007 Corporate Citizenship Report, Exxon declared: "In 2008, we will discontinue contributions to several public policy research groups whose position on climate change could divert attention from the important discussion on how the world will secure the energy required for economic growth in an environmentally responsible manner."¹²³ Despite this pronouncement, Exxon remained financially associated with several such groups after the report's publication.

137. In September 2015, journalists at *InsideClimate News* reported the fact that Exxon Mobil had superior knowledge of the causes and potential consequences

¹²² ExxonSecrets.org, *ExxonMobil Climate Denial Funding 1998–2014*, <http://exxonsecrets.org/html/index.php>.

¹²³ EXXONMOBIL, 2007 CORPORATE CITIZENSHIP REPORT 41 (Dec. 31, 2007), <http://www.documentcloud.org/documents/2799777-ExxonMobil-2007-Corporate-Citizenship-Report.html>.

of climate change and the role its products played in causing climate change as far back as the 1970s.¹²⁴ These journalists uncovered ExxonMobil's superior knowledge through an exhaustive investigation of thousands of archived documents and through interviews with former ExxonMobil employees.

138. Between October and December 2015, several journalists at the Energy and Environment Reporting Project at Columbia University's Graduate School of Journalism and the *Los Angeles Times* also exposed the fact that ExxonMobil and others had superior knowledge of the causes and potential consequences of climate change and the role their products played in causing climate change as far back as the 1970s.¹²⁵ These journalists uncovered ExxonMobil's superior knowledge through an exhaustive investigation of archived documents, through interviews with former ExxonMobil employees, and through a review of scientific journals.

¹²⁴ Neela Banerjee et al., *Exxon: The Road Not Taken*, INSIDECLIMATE NEWS (Sept. 16, 2015), <https://insideclimatenews.org/content/Exxon-The-Road-Not-Taken>.

¹²⁵ The *Los Angeles Times* published a series of three articles between October and December 2015. See Katie Jennings et al., *How Exxon went from leader to skeptic on climate change research*, L.A. TIMES (Oct. 23, 2015), <https://graphics.latimes.com/exxon-research>; Sara Jerving et al., *What Exxon knew about the Earth's melting Arctic*, L.A. TIMES (Oct. 9, 2015), <https://www.latimes.com/nation/la-na-what-exxon-knew-20151009-story.html>; Amy Lieberman & Susanne Rust, *Big Oil braced for global warming while it fought regulations*, L.A. TIMES (Dec. 31, 2015), <https://graphics.latimes.com/oil-operations>.

139. In November 2017, the Center for International Environmental Law issued a report that revealed that Defendants, including API, had superior knowledge of the causes and potential consequences of climate change and the role their products played in causing climate change.¹²⁶

140. Defendants could have contributed to the global effort to mitigate the impacts of greenhouse gas emissions by, for example, delineating practical technical strategies, policy goals, and regulatory structures that would have allowed them to continue their business ventures while reducing greenhouse gas emissions and supporting a transition to a lower carbon future. Instead, Defendants undertook a momentous effort to evade international and national regulation of greenhouse gas emissions to enable them to continue unabated fossil fuel production.

141. As a result of Defendants' tortious, false, and misleading conduct, consumers of Defendants' fossil fuel products and policy-makers, in Delaware as elsewhere, have been deliberately and unnecessarily deceived about: the role of fossil fuel products in causing global warming, sea level rise, disruptions to the hydrologic cycle, and increased extreme precipitation, heatwaves, drought and other

¹²⁶ CAROLL MUFFETT & STEVEN FEIT, CTR. FOR INT'L ENVTL. LAW, SMOKE AND FUMES: THE LEGAL AND EVIDENTIARY BASIS FOR HOLDING BIG OIL ACCOUNTABLE FOR THE CLIMATE CRISIS 10 (2017), <https://www.ciel.org/reports/smoke-and-fumes>.

consequences of the climate crisis; the acceleration of global warming since the mid-20th century and the continuation thereof; and the fact that the continued increase in fossil fuel product consumption creates severe environmental threats and significant economic costs for coastal communities, including Delaware. Reasonable consumers and policy makers have also been deceived about the depth and breadth of the state of the scientific evidence on anthropogenic climate change, and in particular, about the strength of the scientific consensus demonstrating the role of fossil fuels in causing both climate change and a wide range of potentially destructive impacts, including sea level rise, disruptions to the hydrologic cycle, extreme precipitation, heatwaves, drought, and associated consequences.

D. In Contrast to Their Public Statements, Defendants' Internal Actions Demonstrate Their Awareness of and Intent to Profit from the Unabated Use of Fossil Fuel Products.

142. In contrast to their public-facing efforts challenging the validity of the scientific consensus about anthropogenic climate change, Defendants' acts and omissions evidence their internal acknowledgement of the reality of climate change and its likely consequences. Those actions include, but are not limited to, making multi-billion-dollar infrastructure investments for their own operations that acknowledge the reality of coming anthropogenic climate-related change. Those investments included (among others), raising offshore oil platforms to protect against sea level rise; reinforcing offshore oil platforms to withstand increased wave

strength and storm severity; and developing and patenting designs for equipment intended to extract crude oil and/or natural gas in areas previously unreachable because of the presence of polar ice sheets.¹²⁷

143. For example, in 1973 Exxon obtained a patent for a cargo ship capable of breaking through sea ice¹²⁸ and for an oil tanker¹²⁹ designed specifically for use in previously unreachable areas of the Arctic.

144. In 1974, Chevron obtained a patent for a mobile arctic drilling platform designed to withstand significant interference from lateral ice masses,¹³⁰ allowing for drilling in areas with increased ice floe movement due to elevated temperature.

145. That same year, Texaco (Chevron) worked toward obtaining a patent for a method and apparatus for reducing ice forces on a marine structure prone to being frozen in ice through natural weather conditions,¹³¹ allowing for drilling in previously unreachable Arctic areas that would become seasonally accessible.

¹²⁷ Lieberman & Rust, *supra* note 125.

¹²⁸ ExxonMobil Research Engineering Co., *Patent US3727571A: Icebreaking cargo vessel* (granted Apr. 17, 1973), <https://www.google.com/patents/US3727571>.

¹²⁹ ExxonMobil Research Engineering Co., *Patent US3745960A: Tanker vessel* (granted July 17, 1973), <https://www.google.com/patents/US3745960>.

¹³⁰ Chevron Research & Technology Co., *Patent US3831385A: Arctic offshore platform* (granted Aug. 27, 1974), <https://www.google.com/patents/US3831385>.

¹³¹ Texaco Inc., *Patent US3793840A: Mobile, arctic drilling and production platform* (granted Feb. 26, 1974), <https://www.google.com/patents/US3793840>.

146. Shell obtained a patent similar to Texaco's (Chevron) in 1984.¹³²

147. In 1989, Norske Shell, Royal Dutch Shell's Norwegian subsidiary, altered designs for a natural gas platform planned for construction in the North Sea to account for anticipated sea level rise. Those design changes were ultimately carried out by Shell's contractors, adding substantial costs to the project.¹³³

a. The Troll field, off the Norwegian coast in the North Sea, was proven to contain large natural oil and gas deposits in 1979, shortly after Norske Shell was approved by Norwegian oil and gas regulators to operate a portion of the field.

b. In 1986, the Norwegian parliament granted Norske Shell authority to complete the first development phase of the Troll field gas deposits, and Norske Shell began designing the "Troll A" gas platform, with the intent to begin operation of the platform in approximately 1995. Based on the very large size of the gas deposits in the Troll field, the Troll A platform was projected to operate for approximately 70 years.

¹³² Shell Oil Co., *Patent US4427320A: Arctic offshore platform* (granted Jan. 24, 1984), <https://www.google.com/patents/US4427320>.

¹³³ *Greenhouse Effect: Shell Anticipates a Sea Change*, N.Y. TIMES (Dec. 20, 1989), <http://www.nytimes.com/1989/12/20/business/greenhouse-effect-shell-anticipates-a-sea-change.html>.

c. The platform was originally designed to stand approximately 100 feet above sea level—the amount necessary to stay above waves in a once-in-a-century strength storm.

d. In 1989, Shell engineers revised their plans to increase the above-water height of the platform by 3–6 feet, specifically to account for higher anticipated average sea levels and increased storm intensity due to global warming over the platform’s 70-year operational life.¹³⁴

e. Shell projected that the additional 3–6 feet of above-water construction would increase the cost of the Troll A platform by as much as \$40 million.

E. Defendants’ Actions Have Exacerbated the Costs of Adapting to and Mitigating the Adverse Impacts of the Climate Crisis.

148. As greenhouse gas pollution accumulates in the atmosphere, some of which does not dissipate for potentially thousands of years (namely CO₂), climate changes and consequent adverse environmental changes compound, and their frequencies and magnitudes increase. As those adverse environmental changes compound and their frequencies and magnitudes increase, so too do the physical, environmental, economic, and social injuries resulting therefrom.

¹³⁴ *Id.*; Lieberman & Rust, *supra* note 125.

149. Delayed efforts to curb anthropogenic greenhouse gas emissions have therefore increased environmental harms and increased the magnitude and cost to address harms, including to Delaware, that have already occurred or are locked in by previous emissions.

150. Therefore, Defendants' campaign to obscure the science of climate change so as to protect and expand the use of fossil fuels greatly increased and continues to increase the harms and rate of harms suffered by Delaware and its residents.

151. The costs of inaction on anthropogenic climate change and its adverse environmental effects were not lost on Defendants. In a 1997 speech by John Browne, Group Executive for BP America, at Stanford University, Browne described Defendants' and the entire fossil fuel industry's responsibility and opportunities to reduce use of fossil fuel products, reduce global CO₂ emissions, and mitigate the harms associated with the use and consumption of such products:

A new age demands a fresh perspective of the nature of society and responsibility.

We need to go beyond analysis and to take action. It is a moment for change and for a rethinking of corporate responsibility. . . .

[T]here is now an effective consensus among the world's leading scientists and serious and well informed people outside the scientific community that there is a discernible human influence on the climate, and a link between the concentration of carbon dioxide and the increase in temperature.

The prediction of the IPCC is that over the next century temperatures might rise by a further 1 to 3.5 degrees centigrade [1.8°—6.3° F], and that sea levels might rise by between 15 and 95 centimetres [5.9 and 37.4 inches]. Some of that impact is probably unavoidable, because it results from current emissions. . . .

[I]t would be unwise and potentially dangerous to ignore the mounting concern.

The time to consider the policy dimensions of climate change is not when the link between greenhouse gases and climate change is conclusively proven ... but when the possibility cannot be discounted and is taken seriously by the society of which we are part. . . .

We [the fossil fuel industry] have a responsibility to act, and I hope that through our actions we can contribute to the much wider process which is desirable and necessary.

BP accepts that responsibility and we're therefore taking some specific steps.

To control our own emissions.

To fund continuing scientific research.

To take initiatives for joint implementation.

To develop alternative fuels for the long term.

And to contribute to the public policy debate in search of the wider global answers to the problem.¹³⁵

¹³⁵ John Browne, *BP Climate Change Speech to Stanford*, CLIMATEFILES (May 19, 1997), <http://www.climatefiles.com/bp/bp-climate-change-speech-to-stanford>.

152. Despite Defendants' knowledge of the foreseeable, measurable, and significant harms associated with the unabated consumption and use of their fossil fuel products, in Delaware as elsewhere, and despite Defendants' knowledge of technologies and practices that could have helped to reduce the foreseeable dangers associated with their fossil fuel products, Defendants continued to misleadingly and wrongfully market and promote heavy fossil fuel use and mounted a campaign to obscure the connection between their fossil fuel products and the climate crisis, dramatically increasing the cost of abatement. This campaign was intended to and did reach and influence Delaware consumers, along with consumers elsewhere. At all relevant times, Defendants were deeply familiar with opportunities to reduce the use of their fossil fuel products, reduce global greenhouse gas emissions associated therewith, and mitigate the harms associated with the use and consumption of such products. Examples of that recognition include, but are not limited to the following:

a. In 1961, Phillips Petroleum Company filed a patent application for a method to purify gas, among other things, as "natural gas containing gasoline hydrocarbons can contain undesirable amounts of sulfur and other compounds such as carbon dioxide which are undesirable in the finished gasoline product."¹³⁶

¹³⁶ Phillips Petroleum Co., *Patent US3228874A: Method for recovering a purified component from a gas* (filed Aug. 22, 1961), <https://patents.google.com/patent/US3228874>.

b. In 1963, Esso (Exxon Mobil) obtained multiple patents on technologies for fuel cells, including on the design of a fuel cell and necessary electrodes,¹³⁷ and on a process for increasing the oxidation of a fuel, specifically methanol, to produce electricity in a fuel cell.¹³⁸

c. In 1970, Esso (Exxon Mobil) obtained a patent for a “low-polluting engine and drive system” that used an interburner and air compressor to reduce pollutant emissions, including CO₂ emissions, from gasoline combustion engines (the system also increased the efficiency of the fossil fuel products used in such engines, thereby lowering the amount of fossil fuel product necessary to operate engines equipped with this technology).¹³⁹

d. In 1980, Imperial Oil wrote in its “Review of Environmental Protection Activities for 1978–79: “There is no doubt that increases in fossil fuel usage and decreases in forest cover are aggravating the potential problem of increased CO₂ in the atmosphere. Technology exists to remove CO₂ from stack

¹³⁷ ExxonMobil Research Engineering Co., *Patent US3116169A: Fuel cell and fuel cell electrodes* (granted Dec. 31, 1963), <https://www.google.com/patents/US3116169>.

¹³⁸ ExxonMobil Research Engineering Co., *Patent US3113049A: Direct production of electrical energy from liquid fuels* (granted Dec. 3, 1963), <https://www.google.com/patents/US3113049>.

¹³⁹ ExxonMobil Research Engineering Co., *Patent US3513929A: Low-polluting engine and drive system* (granted May 26, 1970), <https://www.google.com/patents/US3513929>.

gases but removal of only 50% of the CO₂ would double the cost of power generation.”¹⁴⁰

e. A 1987 company briefing produced by Shell on “Synthetic Fuels and Renewable Energy” noted that while “immediate prospects” were “limited,” “nevertheless it is by pursuing commercial opportunities now and in the near future that the valuable experience needed for further development will be gained.” The brief also noted that “the task of replacing oil resources is likely to become increasingly difficult and expensive and there will be a growing need to develop lean, convenient alternatives. Initially these will supplement and eventually replace valuable oil products. Many potential energy options are as yet unknown or at very early stages of research and development. New energy sources take decades to make a major global contribution. Sustained commitment is therefore needed during the remainder of this century to ensure that new technologies and those currently at a relatively early stage of development are available to meet energy needs in the next century.”¹⁴¹

¹⁴⁰ IMPERIAL OIL LTD., REVIEW OF ENVIRONMENTAL PROTECTION ACTIVITIES FOR 1978–1979 2 (Aug. 6, 1980), <http://www.documentcloud.org/documents/2827784-1980-Imperial-Oil-Review-of-Environmental.html#document/p2>.

¹⁴¹ *Synthetic Fuels and Renewable Energy*, SHELL SERVICE BRIEFING, no. 2, 1987, <https://assets.documentcloud.org/documents/4411089/Document2.pdf>.

f. A 1989 article in a publication from Exxon Corporate Research for company use only stated: “CO2 emissions contribute about half the forcing [sic] leading to a potential enhancement of the Greenhouse Effect. Since energy generation from fossil fuels dominates modern CO2 emissions, strategies to limit CO2 growth focus near term on energy efficiency and long term on developing alternative energy sources. Practiced at a level to significantly reduce the growth of greenhouse gases, these actions would have substantial impact on society and our industry—near-term from reduced demand for current products, long term from transition to entirely new energy systems.”¹⁴²

g. In 1996, more than thirty years after API’s president warned that “time is running out” for the world to address the “catastrophic consequences of pollution,” API published the book “Reinventing Energy: Making the Right Choices” to refute this very conclusion. Contradicting the scientific consensus known by its members for decades, the book claims: “Currently, no conclusive—or even strongly suggestive—scientific evidence exists that human activities are

¹⁴² Brian Flannery, *Greenhouse Science*, CONNECTIONS: CORPORATE RESEARCH, EXXON RESEARCH AND ENGINEERING COMPANY, Fall 1989, <http://www.climatefiles.com/exxonmobil/1989-exxon-mobil-article-technologys-place-marketing-mix>.

significantly affecting sea levels, rainfall, surface temperatures, or the intensity and frequency of storms.”¹⁴³

h. The book downplayed nearly every aspect of established climate science. API baldly claimed that scientists do not understand how carbon flows in and out of the atmosphere and whether fossil fuels are even responsible for increasing concentrations of atmospheric CO₂. It then explained that even if some warming does occur, such warming “would present few if any problems” because, for example, farmers could be “smart enough to change their crop plans” and low-lying areas would “likely adapt” to sea level rise.¹⁴⁴

i. As Delaware’s vulnerability demonstrates, however, such adaptations, made necessary by Defendants’ conduct, are enormously expensive. Defendants’ strategy merely transferred the significant costs and externalities of their actions onto the State, and in the process, they reaped billions of dollars in profit.

j. In the publication, API also contended that “the state of the environment does not justify the call for the radical lifestyle changes Americans

¹⁴³ AMERICAN PETROLEUM INSTITUTE, REINVENTING ENERGY: MAKING THE RIGHT CHOICES 79 (1996), <http://www.climatefiles.com/trade-group/american-petroleum-institute/1996-reinventing-energy>.

¹⁴⁴ *Id.* at 86–87.

would have to make to substantially reduce the use of oil and other fossil fuels” and that the “benefits of alternatives aren’t worth the cost of forcing their use.” “Some jobs definitely will be created in making, distributing and selling alternatives. But they will come at the expense of lost jobs in the traditional automobile and petroleum industries,” the authors continued. “Alternatives will likely be more expensive than conventional fuel/vehicle technology. Consumers, obviously, will bear these increased expenses, which means they will have less to spend on other products and cost jobs.”¹⁴⁵

k. API published this book in service of one goal—ensuring its members could continue to produce and sell fossil fuels in massive quantities that it knew would devastate the planet. The book’s final section reveals this purpose. API concluded: “[S]evere reduction in greenhouse gas emissions by the United States or even all developed countries would impose large costs on countries but yield little in the way of benefits—even under drastic climate change scenarios.”¹⁴⁶

153. Fossil Fuel Defendants could have made major inroads to mitigate the State’s injuries through technology by developing and employing technologies to capture and sequester greenhouse gases emissions associated with conventional use

¹⁴⁵ *Id.* at 59, 68, 69.

¹⁴⁶ *Id.* at 89.

of their fossil fuel products. Fossil Fuel Defendants had knowledge dating at least back to the 1960s, and indeed, internally researched and perfected many such technologies. For instance:

a. Phillips Petroleum Company (ConocoPhillips) obtained a patent in 1966 for a “Method for recovering a purified component from a gas” outlining a process to remove carbon from natural gas and gasoline streams;¹⁴⁷ and

b. In 1973, Shell was granted a patent for a process to remove acidic gases, including CO₂, from gaseous mixtures.¹⁴⁸

154. Despite this knowledge, Fossil Fuel Defendants’ later forays into the alternative energy sector were largely pretenses. For instance, in 2001, Chevron developed and shared a sophisticated information management system to gather greenhouse gas emissions data from its explorations and production to help regulate and set reduction goals.¹⁴⁹ Beyond this technological breakthrough, Chevron touted

¹⁴⁷ Phillips Petroleum Co., *Patent US3228874A: Method for recovering a purified component from a gas* (granted Jan. 11, 1966), <https://patents.google.com/patent/US3228874>.

¹⁴⁸ Shell Oil Co., *Patent US3760564A: Process for the removal of acidic gases from a gas mixture*, (granted Sept. 25, 1973), <https://www.google.com/patents/US3760564A>.

¹⁴⁹ Press Release, Chevron, *Chevron Introduces New System to Manage Energy Use* (Sept. 25, 2001), <https://web.archive.org/web/20170207205638/https://www.chevron.com/stories/chevron-introduces-new-system-to-manage-energy-use>.

“profitable renewable energy” as part of its business plan for several years and launched a 2010 advertising campaign promoting the company’s move towards renewable energy. Despite all this, Chevron rolled back its renewable and alternative energy projects in 2014.¹⁵⁰

155. Similarly, ConocoPhillips’s 2012 Sustainable Development report declared developing renewable energy a priority in keeping with their position on sustainable development and climate change.¹⁵¹ Their 10-K filing from the same year told a different story: “As an independent E&P company, we are solely focused on our core business of exploring for, developing and producing crude oil and natural gas globally.”¹⁵²

156. Likewise, while Shell orchestrated an entire public relations campaign around energy transitions towards net zero emissions, a fine-print disclaimer in its

¹⁵⁰ Ben Elgin, *Chevron Dims the Lights on Green Power*, BLOOMBERG (May 29, 2014), <https://www.bloomberg.com/news/articles/2014-05-29/chevron-dims-the-lights-on-renewable-energy-projects>.

¹⁵¹ CONOCOPHILLIPS, SUSTAINABLE DEVELOPMENT (2012), <http://static.conocophillips.com/files/resources/2012-sd-report.pdf>.

¹⁵² CONOCOPHILLIPS, FORM 10-K: ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934 23 (Dec. 31, 2012), <https://www.sec.gov/Archives/edgar/data/1163165/000119312513065426/d452384d10k.htm>.

2017 sustainability report reads: “we have no immediate plans to move to a net-zero emissions portfolio over our investment horizon of 10–20 years.”¹⁵³

157. BP, appearing to abide by the representations Lord Browne made in his speech described above, engaged in a rebranding campaign to convey an air of environmental stewardship and renewable energy to its consumers. This included renouncing its membership in the GCC in 2007, changing its name from “British Petroleum” to “BP” while adopting the slogan “Beyond Petroleum,” and adopting a conspicuously green corporate logo. However, BP’s self-touted “alternative energy” investments during this turnaround included investments in natural gas, which is a fossil fuel, and in 2007 the company reinvested in Canadian tar sands, a particularly high-carbon source of oil.¹⁵⁴ The company ultimately abandoned its wind and solar assets in 2011 and 2013, respectively, and even the “Beyond Petroleum” moniker in 2013.¹⁵⁵

¹⁵³ Shell, *Sustainability Report 2017: Definitions and Cautionary Note*, <https://reports.shell.com/sustainability-report/2017/servicepages/about.html>.

¹⁵⁴ Fred Pearce, *Greenwash: BP and the Myth of a World ‘Beyond Petroleum,’* THE GUARDIAN, (Nov. 20, 2008), <https://www.theguardian.com/environment/2008/nov/20/fossilfuels-energy>.

¹⁵⁵ Javier E. David, *‘Beyond Petroleum’ No More? BP Goes Back to Basics*, CNBC (Apr. 20, 2013), <http://www.cnbc.com/id/100647034>.

158. After posting a \$10 billion quarterly profit, Exxon in 2005 stated that “We’re an oil and gas company. In times past, when we tried to get into other businesses, we didn’t do it well. We’d rather re-invest in what we know.”¹⁵⁶

159. Even if Fossil Fuel Defendants did not adopt technological or energy source alternatives that would have reduced use of fossil fuel products, reduced global greenhouse gas pollution, and/or mitigated the harms associated with the use and consumption of such products, Fossil Fuel Defendants could have taken other practical, cost-effective steps to reduce the use of their fossil fuel products, reduce global greenhouse gas pollution associated therewith, and mitigate the harms associated with the use and consumption of such products. Those alternatives could have included, among other measures:

a. Acknowledging and sharing the validity of scientific evidence on anthropogenic climate change and the damages it will cause people; communities, including the State; and the environment. Acceptance of that evidence along with associated warnings and actions would have altered the debate from *whether* to combat climate change and sea level rise to *how* to combat it; and avoided much of the public confusion that has ensued over more than 30 years, since at least 1988;

¹⁵⁶ James R. Healy, *Alternate Energy Not in Cards at ExxonMobil*, USA TODAY (Oct. 27, 2005), https://usatoday30.usatoday.com/money/industries/energy/2005-10-27-oil-invest-usat_x.htm.

b. Forthrightly communicating with Defendants' stockholders, banks, insurers, consumers, the public, regulators, and the State and warning them about the global warming hazards of Defendants' fossil fuel products that were known to Defendants, which would have enabled those groups to make material, informed decisions about whether and how to address climate change and sea level rise vis-à-vis Defendants' products;

c. Refraining from affirmative efforts, whether directly, through coalitions, or through front groups, to distort public debate, and to cause many consumers and business and political leaders to think the relevant science was far less certain than it actually was;

d. Sharing their internal scientific research with consumers and the public, and with other scientists and business leaders, so as to increase public understanding of the scientific underpinnings of climate change and its relation to Defendants' fossil fuel products;

e. Supporting and encouraging policies to avoid dangerous climate change, and demonstrating corporate leadership in addressing the challenges of transitioning to a low-carbon economy;

f. Prioritizing alternative sources of energy through sustained investment and research on renewable energy sources to replace dependence on Defendants' hazardous fossil fuel products; and

g. Adopting their stockholders' concerns about Fossil Fuel Defendants' need to protect their businesses from the inevitable consequences of profiting from their fossil fuel products. Over the period of 1990–2015, Fossil Fuel Defendants' stockholders proposed hundreds of resolutions to change Fossil Fuel Defendants' policies and business practices regarding climate change. Those included increasing renewable energy investment, cutting emissions, and performing carbon risk assessments, among others.

160. Despite their knowledge of the foreseeable harms associated with the consumption of Defendants' fossil fuel products, and despite the existence and fossil fuel industry knowledge of opportunities that would have reduced the foreseeable dangers associated with those products, Defendants wrongfully and falsely promoted, campaigned against regulation of, and concealed the hazards of use of their fossil fuel products.

F. Defendants Continue to Mislead About the Impact of Their Fossil Fuel Products on Climate Change Through Greenwashing Campaigns and Other Misleading Advertisements in Delaware and Elsewhere.

161. Defendants' coordinated campaign of disinformation and deception continues today, even as the scientific consensus about the cause and consequences of climate change has strengthened. Fossil Fuel Defendants have falsely claimed through advertising campaigns in Delaware and/or campaigns intended to reach

Delaware, that their businesses are substantially invested in lower carbon technologies and renewable energy sources. In truth, each Fossil Fuel Defendant has invested minimally in renewable energy while continuing to expand its fossil fuel production. They have also claimed that certain of their fossil fuel products are “green” or “clean,” and that using these products will sufficiently reduce or reverse the dangers of climate change. None of Fossil Fuel Defendants’ fossil fuel products are “green” or “clean” because they all continue to ultimately warm the planet.

162. Instead of widely disseminating this information, reducing their pollution, and transitioning to non-polluting products, Defendants placed profits over people. In connection with selling gasoline and other fossil fuel products to consumers in Delaware, Defendants have failed to inform or warn those consumers about the foreseeable effects of their fossil fuel products in causing and accelerating the climate crisis.

163. Defendants’ advertising and promotional materials fail to disclose the extreme safety risk associated with the use of Defendants’ dangerous fossil fuel products, which are causing “catastrophic” climate change, as understood by Defendants’ and the industry’s own scientists decades ago and with the effects of global warming now being felt in Delaware. They continue to omit that important information to this day.

164. Defendants have not just failed to disclose the catastrophic danger their products cause. After having engaged in a long campaign to deceive consumers and the public about the science behind climate change, Defendants are now engaging in “greenwashing” by employing false and misleading advertising campaigns promoting themselves as sustainable energy companies committed to finding solutions to climate change, including by investing in alternative energy. These campaigns were intended to and did reach and influence the public and consumers, including in Delaware.

165. These misleading “greenwashing” campaigns are intended to capitalize on consumers’ concerns for climate change and lead Delaware consumers to believe that Defendants are actually substantially diversified energy companies making meaningful investments in low carbon energy compatible with avoiding catastrophic climate change.

166. Contrary to this messaging, however, Fossil Fuel Defendants’ spending on low carbon energy is substantially and materially less than Fossil Fuel Defendants indicate to consumers. According to a recent analysis, between 2010 and 2018, BP spent 2.3% of total capital spending on low carbon energy sources, Shell spent 1.2%,

and Chevron and Exxon just 0.2% each.¹⁵⁷ Meanwhile, Fossil Fuel Defendants continue to expand fossil fuel production and typically do not even include non-fossil energy systems in their key performance indicators or reported annual production statistics.¹⁵⁸

167. Ultimately, although Defendants currently claim to support reducing greenhouse gas emissions, their conduct belies these statements. Defendants have continued to ramp up fossil fuel production globally, to invest in new fossil fuel development—including in tar sands crude and shale gas fracking, some of the most carbon-intensive extraction projects—and to plan for unabated oil and gas exploitation indefinitely into the future.

168. For example, Exxon is projected to increase oil production by more than 35% between 2018 and 2030—a sharper rise than over the previous 12 years.¹⁵⁹ Shell is forecast to increase output by 38% by 2030, by increasing its crude oil

¹⁵⁷ Anjali Raval & Leslie Hook, *Oil and Gas Advertising Spree Signals Industry's Dilemma*, FINANCIAL TIMES (Mar. 6, 2019), <https://www.ft.com/content/5ab7edb2-3366-11e9-bd3a-8b2a211d90d5>.

¹⁵⁸ See, e.g., BP ANNUAL REPORT AND FORM 20-F 24 (2017), <https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/investors/bp-annual-report-and-form-20f-2017.pdf>.

¹⁵⁹ Jonathan Watts et al., *Oil Firms to Pour Extra 7m Barrels Per Day Into Markets, Data Shows*, THE GUARDIAN (Oct. 10, 2019), <https://www.theguardian.com/environment/2019/oct/10/oil-firms-barrels-markets>.

production by more than half and its gas production by over a quarter.¹⁶⁰ BP is projected to increase production of oil and gas by 20% by 2030.¹⁶¹ Chevron set an oil production record in 2018 of 2.93 million barrels per day, and the company predicts further significant growth in oil production this year.¹⁶² Like the other Fossil Fuel Defendants, it sees the next 20 years—the crucial window in which the world must reduce greenhouse gas emissions to avert the most catastrophic effects of the climate crisis—as a time of increased investment and production in its fossil fuel operations. For example, a 2019 investor report touts Chevron’s “significant reserve additions in 2018” in the multiple regions in North America and around the world, as well as significant capital projects involving construction of refineries worldwide.¹⁶³ Similarly, Marathon Petroleum has stated, “We have invested billions of dollars to make our operations more energy efficient[and] reduce our

¹⁶⁰ *Id.*

¹⁶¹ *Id.*

¹⁶² Kevin Crowley & Eric Roston, *Chevron Aligns Strategy with Paris Deal But Won’t Cap Output*, BLOOMBERG (Feb. 7, 2019), <https://www.bloomberg.com/news/articles/2019-02-07/chevron-pledges-alignment-with-paris-accord-but-won-t-cap-output>.

¹⁶³ CHEVRON, CHEVRON 2019 INVESTOR PRESENTATION (Feb. 2019), <https://chevroncorp.gcs-web.com/static-files/c3815b42-4deb-4604-8c51-bde9026f6e45>.

emissions[.]”¹⁶⁴ Yet only 1% of the company’s capital spend from 2010–2018 was on low carbon energy sources, all of which was in carbon capture and storage.¹⁶⁵

169. Defendants’ greenwashing campaigns deceptively minimize their role in causing climate change, including by suggesting that small changes in consumer choice and behavior can adequately address climate change. These campaigns misleadingly portray Defendants as part of the solution to climate change and distract from the fact that Defendants’ fossil fuel products are the primary driver of global warming.

170. For instance: natural gas, as a fossil fuel, emits greenhouse gases at all phases of its lifecycle, including significant methane releases from extraction and transportation, CO₂ releases when gas is flared at the well, and CO₂ releases at the point of combustion. Methane is a greenhouse gas with a global warming potential many times higher than carbon dioxide. Methane traps more heat in the atmosphere and accelerates climate disruption at a faster rate than carbon dioxide. Methane has a powerful impact on global temperature and the climate system, particularly over short time horizons. For example, methane has a warming impact that is 86 times

¹⁶⁴ MARATHON PETROLEUM CORP., PERSPECTIVES ON CLIMATE-RELATED SCENARIOS (Oct. 2018), <https://www.marathonpetroleum.com/content/documents/Responsibility/MPC-ClimateReport-2018.pdf>.

¹⁶⁵ Raval & Hook, *supra* note 157.

that of carbon dioxide over a twenty-year time horizon. During that time, major changes will need to be made to address climate impacts that have already been caused by Defendants' campaign of deception. Yet, in Defendants' greenwashing advertisements, they misleadingly portray natural gas as "sustainable" in an effort to paint themselves as working to solve climate change by making energy "cleaner."¹⁶⁶ In reality, however, as the main drivers of greenhouse gas emissions and climate impacts, they are doing the exact opposite.

171. Below are representative excerpts from Defendants' greenwashing campaigns, which present a false image of Defendants as clean energy innovators taking meaningful action to address climate change. Defendants' actions to further entrench fossil fuel production and consumption squarely contradict their public affirmations of corporate responsibility and support for reducing global greenhouse gas emissions. Functionally, Defendants have cut fossil fuels from their brand but not their business. Their greenwashing advertisements to the contrary are deceptive to Delaware consumers.

¹⁶⁶ See, e.g., *The Mobility Quandary* (Content from Shell), WASH. POST, <https://www.washingtonpost.com/brand-studio/shell/the-mobility-quandary> ("Another critical component of a sustainable energy mix in transportation is further investment in natural gas, a cleaner-burning fossil fuel . . .").

i. Exxon's Misleading and Deceptive Greenwashing Campaigns

172. Exxon is currently running a series of full-page advertisements in print editions and posts in the electronic edition of the *New York Times*, as well as on Exxon's YouTube channel, in which Exxon misleadingly promotes its efforts to develop energy from alternative sources such as algae and plant waste—efforts that are vanishingly small in relation to the investments Exxon continues to make in fossil fuel production.

173. For example, an online advertisement in the New York Times, accessible to and marketed toward Delaware consumers, promotes the company's development of algae biofuels, but omits that it is extremely resource intensive to produce algae for biofuel on a large scale due to the massive amounts of land and fertilizer needed. The advertisement also misleadingly tells consumers that Exxon is “working to decrease [its] overall carbon footprint,” and that the company's “sustainable and environmentally friendly” biodiesel fuel could reduce “carbon emissions from transportation” by greater than 50%.¹⁶⁷

¹⁶⁷ *The Future of Energy? It May Come From Where You Least Expect* (ExxonMobil Paid Post), N.Y. TIMES, <https://www.nytimes.com/paidpost/exxonmobil/the-future-of-energy-it-may-come-from-where-you-least-expect.html>.

174. Exxon’s advertisements promoting its investments in “sustainable and environmentally friendly” energy sources further fail to mention that the company’s investment in alternative energy is miniscule compared to its ongoing “business as usual” ramp-up in global fossil fuel exploration, development, and production activities. From 2010 to 2018, Exxon spent only 0.2% of its capital expenditures on low-carbon energy systems, with nearly the totality of its spending (99.8%) focused on maintaining and expanding fossil fuel production. The company has simultaneously invested billions of dollars into development of Canadian tar sands projects, some of the most carbon intensive oil extraction projects in the world.¹⁶⁸

175. Exxon’s investment is not nearly enough to produce alternative energy on the scale falsely implied and touted by Exxon in its advertisements. A 2019 report by InfluenceMap documents that Exxon’s advertised goal of producing 10,000 barrels of biofuel per day by 2025 would equate to only 0.2% of its current refinery capacity—an amount the report referred to as “a rounding error.”¹⁶⁹ This is in sharp

¹⁶⁸ Raval & Hook, *supra* note 157. Exxon has invested more than \$20 billion in capital expenditures at its open-pit tar sands mining operation at Kearl Lake in Alberta, Canada.

¹⁶⁹ INFLUENCEMAP, BIG OIL’S REAL AGENDA ON CLIMATE CHANGE (Mar. 2019), <https://influencemap.org/report/How-Big-Oil-Continues-to-Oppose-the-Paris-Agreement-38212275958aa21196dae3b76220bddd>.

contrast to Exxon's projected increases in oil production by more than 35%, meaning any alternative fuel efforts are offset by massive oil emissions.¹⁷⁰

176. Exxon's claim that its biodiesel fuel could reduce carbon emissions from transportation by greater than 50% is also highly misleading. For example, biodiesel fuel is typically a blend of only 5 to 20% biofuel, with the remainder coming from fossil fuel.¹⁷¹ Because biodiesel is produced predominantly from fossil fuel, it is not "sustainable" nor "environmentally friendly" as claimed in Exxon's advertisement.

177. Supplementing these misleading campaigns, Exxon has promoted dozens of multimedia advertisements on platforms such as Instagram, Twitter, Facebook, and LinkedIn, where Exxon has millions of social media followers and its content has received hundreds of thousands of "likes" and "views." These advertisements overwhelmingly emphasize its claimed leadership in research on lowering emissions, algae biofuel, climate change solutions, and clean energy research. These advertisements were intended to and did reach the public and consumers in Delaware.

¹⁷⁰ Watts et al., *supra* note 159.

¹⁷¹ See U.S. Department of Energy, Alternative Fuels Data Center, *Biodiesel Blends*, https://afdc.energy.gov/fuels/biodiesel_blends.html.

ii. Shell's Misleading and Deceptive Greenwashing Campaigns

178. Like Exxon, Shell has misleadingly promoted itself to Delaware consumers as environmentally conscientious through advertisements in publications such as the *New York Times*. The advertisements are targeted to and read by Delaware consumers and intended to influence consumer demand for Shell's products.

179. As part of Shell's "Make the Future" campaign, the company has published numerous advertisements currently viewable on the *New York Times*¹⁷² website, in which the company touts its investment in "alternative energy sources," including liquified natural gas ("LNG"), natural gas, and biofuel, which Shell repeatedly refers to as "cleaner sources."

180. One Shell advertisement in the *Washington Post*, "The Making of Sustainable Mobility," refers to LNG as "a critical component of a sustainable energy mix" and a "lower-carbon fuel" that could "help decrease" CO₂ emissions.¹⁷³ The ad emphasizes Shell's leadership in "setting the course" for a "lower-carbon

¹⁷² See, e.g., *Moving Forward: A Path To Net-Zero Emissions By 2070* (Shell Paid Post), N.Y. TIMES, <https://www.nytimes.com/paidpost/shell/ul/moving-forward-a-path-to-net-zero-emissions-by-2070.html>.

¹⁷³ See, e.g., *The Making of Sustainable Mobility* (Content from Shell), WASH. POST, <https://www.washingtonpost.com/brand-studio/shell/the-making-of-sustainable-mobility>.

mobility future.” Similarly, another Shell advertisement in the *Washington Post*, “The Mobility Quandary,” emphasizes Shell’s role in working to counteract climate change through investments in alternative energy: “Shell is a bigger player than you might expect in this budding movement to realize a cleaner and more efficient transportation future.”¹⁷⁴

181. Shell’s statements emphasizing its involvement in these many areas of energy-related research, development, and deployment are misleading; the company’s investments and activities are substantially smaller than its advertisements lead consumers to believe. In reality, only 1.2% of Shell’s capital spending from 2010 to 2018 was in low-carbon energy sources, and that number continues to be heavily outweighed by Shell’s continued expansion of its fossil fuel business.¹⁷⁵ Additionally, Shell’s promotion of natural gas as a “critical component” of sustainable energy for transportation because it is “cleaner-burning” omits critical information about additional emissions from the extraction and transportation of natural gas, which include significant amounts of the potent greenhouse gas methane. LNG also produces significant greenhouse gas emissions at all stages of its lifecycle: in addition to the underlying natural gas production, processing, and

¹⁷⁴ *The Mobility Quandary* (Content from Shell), WASH. POST., <https://www.washingtonpost.com/brand-studio/shell/the-mobility-quandary>.

¹⁷⁵ Raval & Hook, *supra* note 157.

transportation, liquefaction of natural gas to produce LNG requires cooling it to approximately -260°F, regasification, and combustion at the ultimate end use.

iii. BP's Misleading and Deceptive Greenwashing Campaigns

182. BP also has misleadingly portrayed itself as diversifying its energy portfolio and reducing its reliance on fossil fuel sales, when its alternative energy portfolio is negligible compared to the company's ever-expanding fossil fuel portfolio. To this end, BP has employed a series of misleading greenwashing advertisements, which are intended to influence consumer demand for its products, including consumers in Delaware.

183. BP ran its extensive "Beyond Petroleum" advertising and rebranding campaign from 2000 to 2008 and even changed its logo to a sunburst, evoking the renewable resource of the sun. BP uses the sunburst logo to advertise at its Delaware gas stations, where consumers purchase BP's gas. The "Beyond Petroleum" advertising campaign falsely portrayed the company as heavily engaged in low-carbon energy sources and no longer investing in but rather moving "beyond" petroleum and other fossil fuels. In truth, BP invested a small percentage of its total capital expenditure during this period on alternative energy research. The vast

majority of its capital expenditure was focused on fossil fuel exploration, production, refining, and marketing.¹⁷⁶

184. In 2019, BP launched an advertising campaign called “Possibilities Everywhere.” These advertisements were misleading both in their portrayal of BP as heavily involved in non-fossil energy systems, including wind, solar, and electric vehicles, as well as in their portrayal of natural gas as environmentally friendly.

185. One Possibilities Everywhere advertisement, called “Better fuels to power your busy life,” stated:

We [] want—and need—[] energy to be kinder to the planet. At BP, we’re working to make our energy cleaner and better. [...] At BP, we’re leaving no stone unturned to provide [the] extra energy the world needs while finding new ways to produce and deliver it with 53 fewer emissions. [...] We’re bringing solar and wind energy to homes from the US to India. We’re boosting supplies of cleaner burning natural gas. [...] More energy with fewer emissions? We see possibilities everywhere to help the world keep advancing.¹⁷⁷

¹⁷⁶ See BP, ANNUAL REPORTS AND ACCOUNTS 2008, <https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/investors/bp-annual-report-accounts-2008.pdf>.

¹⁷⁷ See BP, *Better fuels to power your busy life*, <https://web.archive.org/web/20191130155554/https://www.bp.com/en/global/corporate/who-we-are/possibilities-everywhere/energy-for-busy-lives.html>.

The accompanying video showed a busy household while a voiceover said, “We all want more energy, but with less carbon footprint. That’s why at BP we’re working to make energy that’s cleaner and better.”¹⁷⁸

186. But BP’s claim that non-fossil energy systems constitute a substantial portion of BP’s business was materially false and misleading. For example, BP owns only approximately 1 gigawatt (“GW”) of wind capacity, which is dwarfed by other companies including GE, Siemens, and Vestas (with about 39 GW, 26 GW, and 23 GW capacities, respectively).¹⁷⁹ Overall, installed wind capacity in the United States is approximately 100 GW, meaning BP’s installed capacity is a mere 1% of the market.¹⁸⁰ Yet, “Blade runners,” another advertisement in BP’s “Possibilities Everywhere” campaign, described the company as “one of the major

¹⁷⁸ *Id.*

¹⁷⁹ For BP’s wind capacity, see Press Release, *BP restructures U.S. Wind Energy Business for growth* (Dec. 21, 2018), <https://www.bp.com/en/global/corporate/news-and-insights/press-releases/bp-restructures-us-wind-energy-business-for-growth.html>. For wind capacity of GE, Siemens, and Vestas, see Greg Zimmerman, *Who’s Powering the Wind Industry in 2019? Top 10 Wind Power Companies*, ENERGY ACUITY (Jan. 7, 2019), <https://energyacuity.com/blog/top-wind-power-companies>.

¹⁸⁰ See Elizabeth Ingram, *U.S. wind capacity grew 8% in 2019, AWEA says*, RENEWABLE ENERGY WORLD (Apr. 10, 2019), <https://www.renewableenergyworld.com/articles/2019/04/u-s-wind-capacity-grew-8-in-2018-awea-says.html>.

wind energy businesses in the US.”¹⁸¹ In short, BP’s relatively small wind power portfolio is materially smaller than that conveyed in the company’s advertisements.

187. The same is true for BP’s activities in solar energy, which consist predominantly of its purchase of a minority interest in the solar company Lightsource (rebranded Lightsource BP).¹⁸² The purchase price for this interest represents only 0.4% of BP’s annual capital expenditure of approximately \$16 billion, nearly all of which focuses on fossil fuels.¹⁸³ This is a far cry from BP’s claim that it was “leaving no stone unturned” to find “new” ways to produce lower-emissions energy and playing a “leading role” in “advancing a low carbon future.”

iv. Chevron’s Misleading and Deceptive Greenwashing Campaigns

188. Chevron also engaged in greenwashing campaigns designed to deceive consumers about Chevron’s products and its commitment to address climate change.

189. Chevron’s 2007 “Will You Join Us?” campaign and its 2008 “I Will” campaign both misleadingly portrayed the company as a leader in renewable energy.

¹⁸¹ See BP, *Blade runners*, <https://web.archive.org/web/20191130192545/https://www.bp.com/en/global/corporate/who-we-are/possibilities-everywhere/wind-and-natural-gas.html>.

¹⁸² BP ANNUAL REPORT AND FORM 20-F 42 (2017), <https://www.bp.com/content/dam/bp/business-sites/en/global/corporate/pdfs/investors/bp-annual-report-and-form-20f-2017.pdf>.

¹⁸³ See BP to maintain reduced capital spending through 2021, OIL & GAS JOURNAL (Feb. 28, 2017), <https://www.ogj.com/general-interest/article/17290398/bp-to-maintain-reduced-capital-spending-through-2021>.

The campaigns' advertisements, portrayed minor changes in consumer choices (e.g., changing light bulbs) as sufficient to address environmental problems such as climate change.¹⁸⁴

190. The overall thrust of the campaigns was to shift the perception of fault and responsibility for global warming to consumers and make Chevron's role and that of the broader fossil fuel industry appear small. The misleading solution promoted to consumers was not to switch away from fossil fuels, but instead to implement small changes in consumer behavior with continued reliance on fossil fuel products. By portraying greenhouse gas emissions as deriving from numerous sources in addition to fossil fuels, Chevron's ads obfuscated the fact that fossil fuels are the primary cause of increased greenhouse gas emissions and the primary driver of climate change.

191. Misleading messages were emblazoned over images of everyday Americans, as in the example highlighted below:

¹⁸⁴ See Duncan MacLeod, *Chevron Will You Join Us?*, INSPIRATION ROOM (Oct. 9, 2007), <http://theinspirationroom.com/daily/2007/chevron-will-you-join-us>; see also Jean Halliday, *Chevron: We're Not Big Bad Oil*, ADAGE (Sept. 28, 2007), <https://adage.com/article/news/chevron-big-bad-oil/120785>.

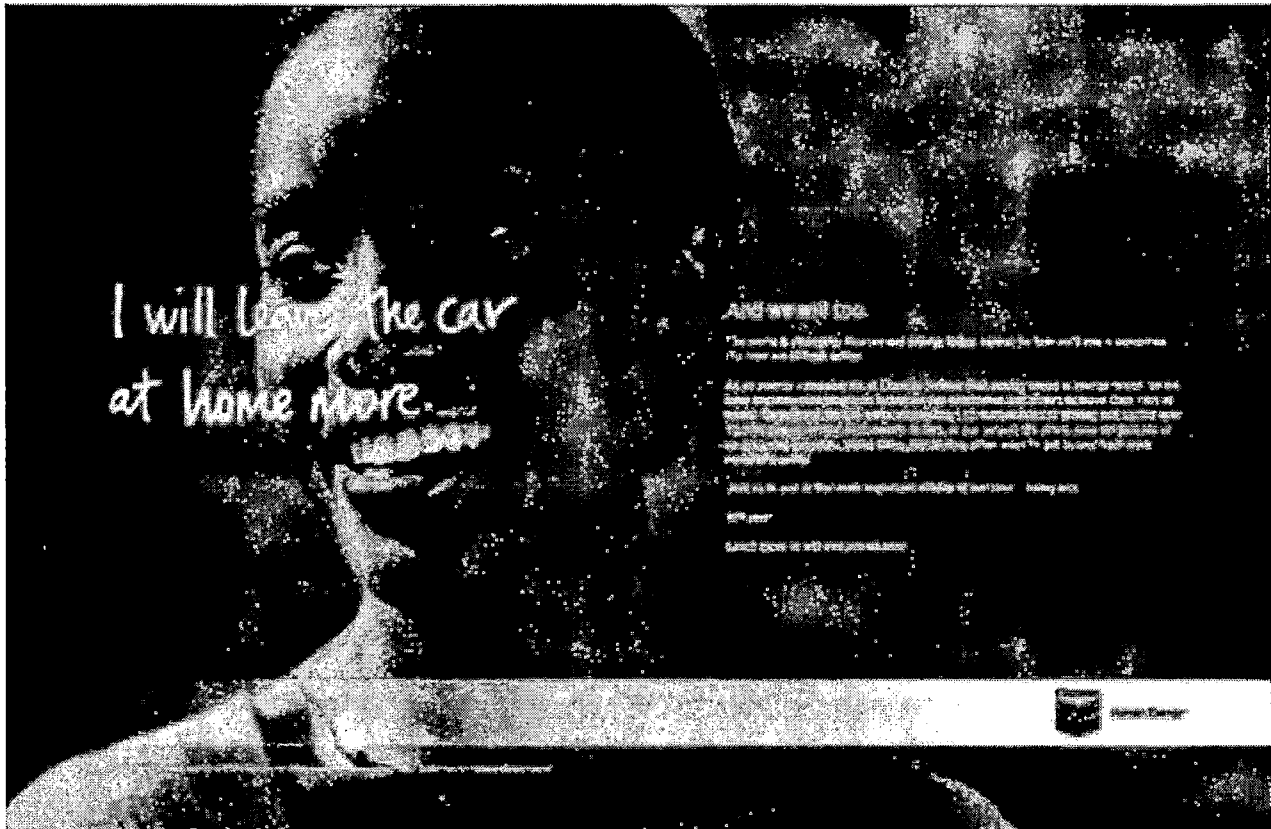


Figure 8: “Will You Join Us?” Chevron advertisement

192. In 2010, Chevron launched an advertising campaign titled “We Agree.” The print, internet, and television ad campaign expanded across the United States and internationally. For example, the ad below highlighted Chevron’s supposed commitment to the development of renewable energy, stating in large letters next to a photo of a young girl, “It’s time oil companies get behind the development of renewable energy. We agree.” The ad emphasized: “We’re not just behind renewables. We’re tackling the challenge of making them affordable and reliable on a large scale.”

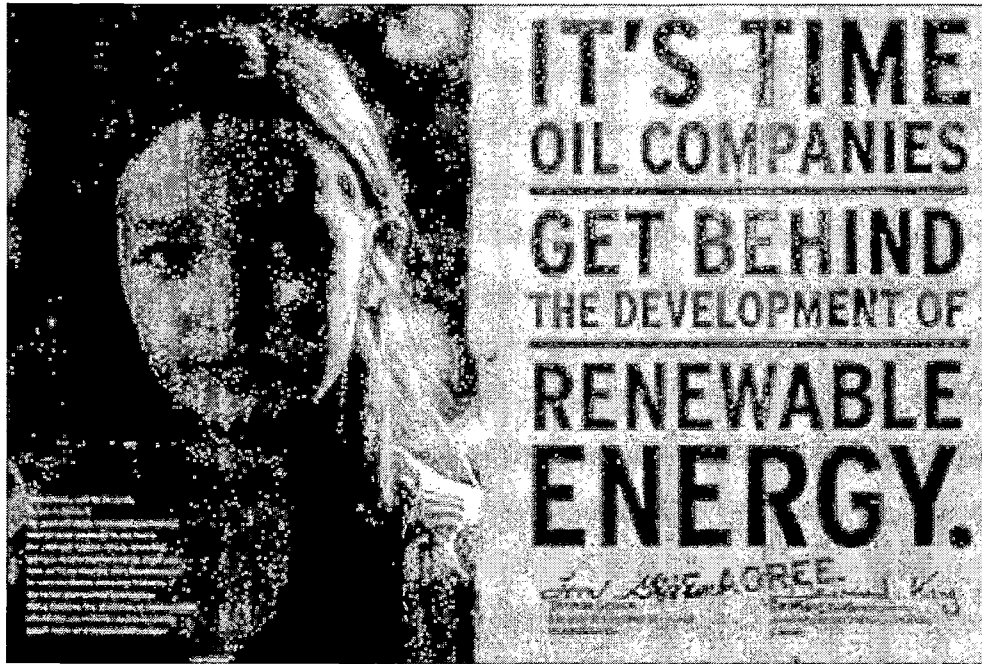


Figure 9: “We Agree” Chevron advertisement

193. Chevron’s portrayal of itself as a renewable energy leader was false and misleading. In reality, only 0.2% of Chevron’s capital spending from 2010 to 2018 was in low-carbon energy sources and 99.8% was in continued fossil fuel exploration and development—a stark contrast to the message communicated to consumers through the company’s advertisements.¹⁸⁵

194. Chevron’s “We Agree” campaign also featured misleading television advertisements. In one focused on renewable energy, a teacher says, “Ok, listen. Somebody has got to get serious. We need renewable energy.” To which a Chevron environmental operations employee responds, “At Chevron we’re investing millions

¹⁸⁵ Raval & Hook, *supra* note 157.

in solar and biofuel technologies to make it work.” In reality, Chevron has continued to overwhelmingly focus on fossil fuel extraction and development, and its investment of “millions” in renewables is miniscule in comparison to its investment of billions in fossil fuels.

195. A 2019 Chevron advertisement currently available on the *New York Times* website similarly touts the supposed benefits of expanded natural gas production for “unprecedented reductions in U.S. energy-related carbon emissions.”¹⁸⁶ But this statement is misleading because the reference to “emissions” relies on studies that measure only CO₂ and ignore other important greenhouse gases, including methane, thereby painting an inaccurate and incomplete picture of natural gas’s climate impacts.

v. Marathon’s Misleading and Deceptive Greenwashing Campaigns

196. Like other Fossil Fuel Defendants, Marathon has sought to project an environmentally friendly public image in its advertising, stating, “We have invested billions of dollars to make our operations more energy efficient [and] reduce our

¹⁸⁶ Chevron, *How Abundant Energy Is Fueling U.S. Growth* (Chevron Paid Post), N.Y. TIMES (2019), <https://www.nytimes.com/paidpost/chevron/how-abundant-energy-is-fueling-us-growth.html>.

emissions.”¹⁸⁷ Yet only 1% of the company’s capital spend from 2010 to 2018 was on low carbon energy sources, all of which was in carbon capture and storage.¹⁸⁸

vi. ConocoPhillips’s Misleading and Deceptive Greenwashing Campaigns

197. ConocoPhillips ran hundreds of ads in Delaware as part of its “Power in Cooperation” ad campaign, including an advertisement that stated: “Natural Gas: Efficient. Affordable. Environmentally-friendly. Learn how natural gas is meeting global energy demand while reducing climate-related risks.”¹⁸⁹ However, the production and transportation of natural gas results in significant emissions of methane, which can warm the planet more than 80 times as much as carbon dioxide over a 20-year period.¹⁹⁰

¹⁸⁷ MARATHON PETROLEUM CORP., PERSPECTIVES ON CLIMATE-RELATED SCENARIOS (Oct. 2018), <https://www.marathonpetroleum.com/content/documents/Responsibility/MPC-ClimateReport-2018.pdf>.

¹⁸⁸ Raval & Hook, *supra* note 157.

¹⁸⁹ Facebook Ad Library, <https://www.facebook.com/ads/library/?id=144267019769620>.

¹⁹⁰ Jonah Kessel & Hiroko Tabuchi, *It’s a Vast, Invisible Climate Menace. We Made It Visible*. N.Y. TIMES (Dec. 12, 2019), <https://www.nytimes.com/interactive/2019/12/12/climate/texas-methane-super-emitters.html>.

vii. API's Misleading and Deceptive Greenwashing Campaigns

198. API has also devoted considerable resources to deceiving consumers throughout the country about fossil fuels' role in climate change. During the 2017 Super Bowl, the most-watched television program in the United States, API debuted its "Power Past Impossible" campaign, with advertisements that told Americans that the petroleum industry could help them "live better lives." A 2018 study of the advertisements by Kim Sheehan, a Professor at the University of Oregon, concluded that the "campaign provides evidence of greenwashing through both explicit communications (such as unsubstantiated claims that 'gas comes cleaner' and 'oil runs cleaner') and implicit communications (the use of green imagery)."¹⁹¹

199. In lockstep with its member companies, API has also shifted its messaging from climate denial to greenwashing in the last decade. API touts its members' purported commitments to reducing their carbon footprint while continuing its core mission of promoting its members' extraction, production, and sale of fossil fuels to consumers in Delaware and throughout the United States at unprecedented rates.

¹⁹¹ Kim Sheehan, *This Ain't Your Daddy's Greenwashing: An Assessment of the American Petroleum Institute's Power Past Impossible Campaign*, in INTELLECTUAL PROPERTY AND CLEAN ENERGY 301–21 (Matthew Rimmer ed., 2018).

200. Many of API's television, radio, and internet advertisements, including those directed at Delaware consumers, lead to a website run by API entitled "America's Natural Gas and Oil: Energy for Progress." Among many articles and images promoting fossil fuel companies' claimed contributions to clean energy, the website advertises "5 Ways We're Helping to Cut Emissions" and "4 Ways We're Protecting Wildlife."¹⁹² These messages are not meant to encourage consumers to transition to low carbon energy sources—just the opposite. By obfuscating the reality that fossil fuels are the driving force behind anthropogenic climate change, they are designed to increase consumers' use of fossil fuels in order to advance API's core mission of growing its member companies' oil and natural gas businesses.

201. As part of its "Energy for Progress" campaign, API has run a series of Facebook advertisements, many of which have reached a substantial number of Delaware consumers, that falsely paint the fossil fuel industry as a leader on climate change action. For example, in 2020, API ran advertisements with statements such as:

¹⁹² See American Petroleum Institute, *5 Ways We're Using Energy for Progress*, ENERGY FOR PROGRESS, <https://energyforprogress.org/the-basics>.

- “We can tackle climate change and meet the world’s energy needs by embracing new innovations together.”¹⁹³
- “Through innovative partnerships, we’ve reduced CO₂ emissions to the lowest in a generation—and now we’re working to reduce methane, too.”¹⁹⁴
- “How are natural gas and oil companies helping cars emit less CO₂? They’ve developed engine oils that improve fuel efficiency. See the science.”¹⁹⁵

G. Defendants Also Made Misleading Claims About Specific “Green” or “Greener” Fossil Fuel Products.

202. Defendants also have engaged in extensive and highly misleading marketing efforts aimed at promoting certain of their fossil fuel products as “green” and environmentally beneficial.

203. Defendants’ advertising and promotional materials fail to disclose the extreme safety risk associated with the use of fossil fuel products, which are causing “catastrophic” climate change, as understood by Defendants for decades.

¹⁹³ See Facebook Ad Library, <https://www.facebook.com/ads/library/?id=281395386281089>.

¹⁹⁴ See Facebook Ad Library, <https://www.facebook.com/ads/library/?id=640075440224515>.

¹⁹⁵ See Facebook Ad Library, <https://www.facebook.com/ads/library/?id=1883177471814564>.

Defendants continue to omit that important information to this day, consistent with their goal of maintaining consumer demand for their fossil fuel products despite the risks they pose for the planet and its people.

204. Defendants misleadingly represent that consumer use of certain fossil fuel products actually helps customers reduce emissions and gain increased fuel economy. But hyping relative climate and “green” benefits while concealing the dangerous effects of continued high rates of fossil fuel use creates an overall misleading picture that hides the dire climate impacts resulting from normal consumer use of Defendants’ fossil fuel products. Contrary to Defendants’ “green” claims, the development, production, refining, and consumer use of Defendants’ fossil fuel products (even products that may yield relatively more efficient engine performance) *increase* greenhouse gas emissions to the detriment of public health and consumer welfare.

205. In addition, at the same time Fossil Fuel Defendants have been actively promoting their “greener” gasoline products at Delaware gas stations and on their company websites, Fossil Fuel Defendants have been massively expanding fossil fuel production and increasing emissions. If consumers understood the full degree to which Fossil Fuel Defendants’ products contributed to climate change and that Fossil Fuel Defendants had not in fact materially invested in alternative energy

sources or were otherwise environmentally cautious, they likely would have acted differently, e.g., by not purchasing Defendants' products or purchasing less of them.

206. In the promotion of these and other fossil fuel products, including at their branded gas stations in Delaware, Defendants fail to disclose the fact that fossil fuels are a leading cause of climate change and that current levels of fossil fuel use—even purportedly “cleaner” or more efficient products—represent a direct threat to Delawareans and the environment. Defendants' omissions in this regard are consistent with their goal of influencing consumer demand for their fossil fuel products through greenwashing. Defendants also fail to require their vendors and third-party retail outlets to disclose facts pertaining to the impact the consumption of fossil fuels and their “cleaner” alternatives have on climate change when selling Defendants' products.

207. Defendants' marketing of these fossil fuel products to Delaware consumers as “safe,” “clean,” emissions-reducing,” and impliedly beneficial to the climate—when production and use of such products is the leading cause of climate change—is reminiscent of the tobacco industry's effort to promote “low-tar” and “light” cigarettes as an alternative to quitting smoking after the public became aware of the life-threatening health harms associated with smoking.

208. Defendants' product promotions are positioned to reassure consumers that purchase and use of their products is beneficial in addressing climate change,

when in truth, continued use of such fossil fuels is extremely harmful, just as the tobacco companies' misleadingly promoted "low tar" and "light" cigarettes as a healthier, less harmful choice, when the tobacco companies knew any use of cigarettes was harmful.

209. As with tobacco companies' misleading use of scientific and engineering terms in advertising to enhance the credibility of their representations, Defendants' promotional materials for their fossil fuel products also misleadingly invoke similar terminology to falsely convey to Delaware consumers that the use of these products benefits the environment. For example, Exxon's advertisements of its Synergy™ and "green" Mobil 1™ products similarly reference "meticulous[] engineer[ing]," "breakthrough technology," "rigorously tested in the lab," "proprietary formulation," "test data," "engineers," "innovat[ion]," and the claim that "Scientists Deliver [] Unexpected Solution[s]."¹⁹⁶ Shell advertises that its Shell Nitrogen Enriched Cleaning System and V-Power Nitro+ Premium "produce[] fewer emissions" and that not using them can lead to "higher emissions."¹⁹⁷ BP markets

¹⁹⁶ See, e.g., EnergyFactor by ExxonMobil, *Green motor oil? ExxonMobil scientists deliver an unexpected solution* (July 19, 2016), <https://energyfactor.exxonmobil.com/science-technology/green-motor-oil-exxonmobil-scientists-deliver-unexpected-solution>; Exxon Mobil, *Fuels*, <https://www.exxon.com/en/fuels>.

¹⁹⁷ See, e.g., Shell, *Shell Nitrogen Enriched Gasolines*, <https://www.shell.us/motorist/shell-fuels/shell-nitrogen-enriched-gasolines.html>.

its Invigorate gasoline as a “cleaning agent that helps ... give you more miles per tank,” and “help[s] cars become clean, mean, driving machines,” and its bp Diesel as “a powerful, reliable, and efficient fuel made ... to help reduce emissions.”¹⁹⁸ Chevron advertises its Techron fuel with claims that emphasize its supposed positive environmental qualities, such as: “less is more,” “minimizing emissions,” and “up to 50% cleaner.”¹⁹⁹ In a Q and A on Chevron’s website, one question says, “I care for the environment. Does Techron impact my car’s emissions?” Chevron answers that “[g]asolines with Techron” clean up carburetors, fuel injectors, and intake valves, “giving you reduced emissions.”²⁰⁰

210. These misrepresentations, which were intended to and did in fact reach and influence Delaware consumers, were misleading because they emphasize the fuels’ supposedly environmentally beneficial qualities without disclosing the key role fossil fuels play in causing climate change.

¹⁹⁸ See, e.g., BP, *Our Fuels*, https://www.bp.com/en_us/united-states/home/products-and-services/fuels.html.

¹⁹⁹ See, e.g., Chevron, *Techron*, <https://www.techron.com>.

²⁰⁰ *Id.*

H. Defendants Intended for Consumers to Rely on their Concealments and Omissions Regarding the Dangers of Their Fossil Fuel Products.

211. Consumer use of fossil fuel products, particularly by driving gasoline-powered cars and other vehicles, is a significant contributor to climate change.

212. By misleading Delaware consumers about the climate impacts of using fossil fuel products, even to the point of claiming that certain of their products may benefit the environment, and by failing to disclose to consumers the climate risks associated with their purchase and use of those products, Defendants have deprived and are continuing to deprive consumers of information about the consequences of their purchasing decisions.

213. In addition to Defendants misleading Delaware consumers by affirmatively misrepresenting the state of their and the scientific community's knowledge of climate change and by failing to disclose the dangerous effects of using their products, Defendants have sought to mislead consumers, and induce purchases and brand affinity, with greenwashing advertisements designed to represent Defendants as environmentally responsible companies developing innovative green technologies and products. In reality, Defendants' investment in renewable energy sources is miniscule and their business models continue to center on developing, producing, and selling more of the very same fossil fuel products driving climate change.

214. Defendants intended for Delaware consumers to rely on their omissions and concealments and to continue purchasing Defendants' fossil fuel products without regard for the damage such products cause.

215. Knowledge of the risks associated with the routine use of fossil fuel products is material to Delaware consumers' decisions to purchase and use those products.

216. As in the case of cigarettes, history demonstrates that when consumers are made aware of the harmful effects or qualities of the products they purchase, they often choose not to purchase them, to reduce their purchases, or to make different purchasing decisions. This phenomenon holds especially true when products have been shown to harm public health or the environment. For example, increased consumer awareness of the role of pesticides in harming human health, worker health, and the environment has spurred a growing market for food grown organically and without the use of pesticides. With access to information about how their food is grown, consumers have demanded healthier choices, and the market has responded.

217. There are now various local government initiatives to require climate change warning labels on gasoline pumps based on the principle that consumers will change their purchasing decisions when they have direct access to accurate information about the connection between their consumption of fossil fuels and

climate change. Similar to health warnings on tobacco products, which aim to educate consumers and thereby reduce public health risks, governments recognize that fossil fuel warning labels that accurately relay risk can educate consumers and thereby reduce the risks and costs associated with climate change.

218. For example, a consumer who received accurate information that fossil fuel use was a primary driver of climate change and the resultant dangers to the environment and people might purchase less fossil fuel products, or decide to buy none at all. Consumers might opt to avoid or combine car travel trips; carpool; switch to more fuel-efficient vehicles, hybrid vehicles, or electric vehicles; use a car-sharing service; seek transportation alternatives all or some of the time, if available (e.g., public transportation, biking, or walking); or adopt any combination of these choices. In addition, informed consumers contribute toward solving environmental problems by supporting companies that they perceive to be developing “green” or more environmentally friendly products.

I. Defendants’ Deceit Only Recently Became Discoverable, and Their Misconduct Is Ongoing.

219. The fact that Defendants and their proxies knowingly provided incomplete and misleading information to the public, including Delaware consumers, only recently became discoverable due to, among other things: Defendants’ above-described campaign of deception, which continues to this day;

Defendants' efforts to discredit climate change science and create the appearance such science is uncertain; Defendants' concealment and misrepresentations regarding the fact that their products, including natural gas, cause catastrophic harms; and the fact that Defendants used front groups such as API, the Global Climate Coalition, and the National Mining Association to obscure their involvement in these actions, which put the State off the trail of inquiry.

220. Moreover, Defendants' tortious misconduct, in the form of misrepresentations, omissions, and deceit, began decades ago and continues to this day. As described above, Defendants continue to misrepresent their own activities, the fact that their products cause climate change, and/or the danger presented by climate change, directly and/or through membership in other organizations. Exemplars of Defendants' continuing misrepresentations, omissions, and deceit follow below.

221. As recently as June 2018, a post on the official Shell blog stated: "... the potential extent of change in the climate itself could now be limited. In other words, the prospect of runaway climate change might have passed."²⁰¹ However, this

²⁰¹ David Hone, *Has climate change run its course??*, Shell Climate Change Blog (June 14, 2018), <https://blogs.shell.com/2018/06/14/has-climate-change-run-its-course>.

statement is not supported by valid scientific research, and was and is contradicted by various studies.²⁰²

222. In March 2018, Chevron issued a report entitled “Climate Change Resilience: A Framework for Decision Making,” which misleadingly stated that “[t]he IPCC Fifth Assessment Report concludes that there is warming of the climate system and that warming is due in part to human activity.”²⁰³ In reality, the Fifth Assessment report concluded that “[i]t is *extremely likely* [defined as 95–100% probability] that human influence has been the *dominant cause* of the observed warming since the mid-20th century.”²⁰⁴

²⁰² See, e.g., Fiona Harvey, *Carbon emissions from warming soils could trigger disastrous feedback loop*, THE GUARDIAN (Oct. 5, 2017), <https://www.theguardian.com/environment/2017/oct/05/carbon-emissions-warming-soils-higher-than-estimated-signalling-tipping-points>; Jonathan Watts, *Domino-effect of climate events could move Earth into a ‘hothouse’ state*, THE GUARDIAN (Aug. 7, 2018), <https://www.theguardian.com/environment/2018/aug/06/domino-effect-of-climate-events-could-push-earth-into-a-hothouse-state>; Fiona Harvey, *‘Tipping points’ could exacerbate climate crisis, scientists fear*, THE GUARDIAN (Oct. 9, 2018), <https://www.theguardian.com/environment/2018/oct/09/tipping-points-could-exacerbate-climate-crisis-scientists-fear>.

²⁰³ CHEVRON, CLIMATE CHANGE RESILIENCE: A FRAMEWORK FOR DECISION MAKING 20 (Mar. 2018), <https://www.chevron.com/-/media/shared-media/documents/climate-change-resilience.pdf>.

²⁰⁴ IPCC, SUMMARY FOR POLICYMAKERS: WORKING GROUP I CONTRIBUTION TO THE FIFTH ASSESSMENT REPORT 17 (2013), https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_SPM_FINAL.pdf.

223. Despite this fact, in April 2017, Chevron CEO and Chairman of the Board John Watson said on a podcast, “There’s no question there’s been some warming; you can look at the temperatures data and see that. The question and debate is around how much, and how much is caused by humans.”²⁰⁵

224. Similarly, ConocoPhillips’s “Climate Change Position” as it currently appears on the company’s website states that human activity is “contributing to” climate change and emphasizes “uncertainties,” even though the science is clear: “ConocoPhillips recognizes that human activity, including the burning of fossil fuels, is contributing to increased concentrations of greenhouse gases (GHG) in the atmosphere that can lead to adverse changes in global climate. While uncertainties remain, we continue to manage greenhouse gas emissions in our operations and to integrate climate change related activities and goals into our business planning.”²⁰⁶

225. In 2015, then-Exxon Mobil CEO Rex Tillerson argued that climate models were not strong enough to justify a shift away from fossil fuels, saying: “What if everything we do, it turns out our models are lousy, and we don’t get the

²⁰⁵ Columbia Energy Exchange Podcast, *John Watson, CEO, Chevron* (Apr. 10, 2017), available at <https://www.energypolicy.columbia.edu/us-energy-markets-policy>.

²⁰⁶ ConocoPhillips, *Climate Change Position*, <http://www.conocophillips.com/sustainability/integrating-sustainability/sustainable-development-governance/policies-positions/climate-change-position>.

effects we predict? Mankind has this enormous capacity to deal with adversity, and those solutions will present themselves as those challenges become clear.”²⁰⁷

J. The State Has Suffered, Is Suffering, and Will Suffer Injuries from Defendants’ Wrongful Conduct.

226. Defendants’ individual and collective conduct, including, but not limited to, their failures to warn of the threats their fossil fuel products posed to the world’s climate; their wrongful promotion of their fossil fuel products and concealment of known hazards associated with use of those products; their public deception campaigns designed to obscure the connection between their products and global warming and its environmental, physical, social, and economic consequences; is a direct and proximate cause that brought about or helped bring about global warming and consequent sea level rise and attendant flooding, erosion, and loss of wetlands and beaches in Delaware; increased frequency and intensity of extreme weather events in Delaware, including coastal storms, flooding, drought, extreme heat, extreme precipitation events, and others; ocean warming and acidification; and the cascading social, economic, and other consequences of these environmental

²⁰⁷ Dallas Morning News, *Exxon CEO: Let’s wait for science to improve before solving problem of climate change* (May 27, 2015), <https://www.dallasnews.com/business/energy/2015/05/28/exxon-ceo-let-s-wait-for-science-to-improve-before-solving-problem-of-climate-change>.

changes. These adverse impacts will continue to increase in frequency and severity in Delaware.²⁰⁸

227. As actual and proximate results of Defendants' conduct, which caused the aforementioned environmental changes, the State has suffered and will continue to suffer severe harms and losses, including, but not limited to: injury or destruction of State-owned or operated facilities and property deemed critical for operations, utility services, and risk management, as well as other assets that are essential to community health, safety, and well-being; increased planning and preparation costs for community adaptation and resiliency to global warming's effects; and increased costs associated with public health impacts.

228. The State already has incurred, and will foreseeably continue to incur, injuries and damages due to Defendants' conduct, their contribution to the climate crisis, and the environmental, physical, social, and economic consequences of the climate crisis's impact on the environment. As a result of Defendants' wrongful conduct described in this Complaint, Delaware, has, is, and will experience significant adverse impacts including, but not limited to the following:

a. Delaware has already experienced over one foot of sea level rise and associated impacts, and will experience significant additional and accelerating

²⁰⁸ See, e.g., ALL-HAZARD MITIGATION PLAN, *supra* note 9.

sea level rise over the coming decades, which would cause severe harm to the State.²⁰⁹ Delaware is the state with the lowest mean elevation in the nation, and over five percent of Delaware's land area lies within the 100-year coastal floodplain.²¹⁰ Indeed, 22,000 Delaware residents are already at risk of coastal flooding, and many thousands more will face flooding risk in the coming decades.²¹¹ For instance, substantial flooding from climate change is expected in east and south Wilmington, an area whose poverty rates reach up to 32 percent. Saltwater intrusion into groundwater will also contaminate the State's drinking water supply, with thousands of domestic wells and thousands of septic systems potentially inundated by a 1.5 meter sea level rise. Large areas of Delaware's agricultural industry, which contributes more than a billion dollars in economic impact to the State, could also be impacted by saltwater intrusion from sea level rise and suffer the resulting loss of productivity of those areas. Sea level rise will threaten over \$1 billion in property value,²¹² and the loss of Delaware's beaches, or need for continual, expensive beach

²⁰⁹ Delaware Geological Survey, University of Delaware, *Determination of Future Sea-Level Rise Planning Scenarios for Delaware*, <https://www.dgs.udel.edu/projects/determination-future-sea-level-rise-planning-scenarios-delaware>.

²¹⁰ *See States at Risk, Delaware Coastal Flooding*, <https://statesatrisk.org/delaware/coastal-flooding>.

²¹¹ *Id.*

²¹² ClimateCentral Risk Finder, *Delaware: What is at Risk?*, <https://riskfinder.climatecentral.org/state/delaware.us>.

replenishment, combined with the risk to coastal transportation and other infrastructure, will harm the State's \$3.5 billion tourism industry and the 44,000 people who work in tourism.²¹³ The State-owned Port of Wilmington, an economic driver, faces severe structural damage due to sea level rise. Much of the land currently used in the State for heavy industry will likely also be inundated, potentially releasing contaminated material. Sea level rise will likely affect 89 EPA-listed contamination sites, including 10 brownfields, three oil facilities, one sewage plant, four extreme hazmat facilities, and 54 hazardous waste sites.²¹⁴ Many publicly owned roads and highways in the State are already prone to flooding, including Delaware Route 9, which is designated as a hurricane evacuation route. In the coming decades, sea level rise will threaten over 400 miles of roadway, including 62 miles of state roads, and many miles of evacuation routes.²¹⁵ Higher sea levels are already submerging lowlands, exacerbating coastal flooding, and inundating natural resources and the State's property and infrastructure, causing damage and preventing its normal use. The destructive force and flooding potential from storm surges during coastal storms and other weather events have increased as the mean sea level

²¹³ See DELAWARE TOURISM OFFICE, 2018 VALUE OF TOURISM REPORT 3, *available at* <https://www.visitdelaware.com/industry/tourism-statistics>.

²¹⁴ ClimateCentral Risk Finder, *Delaware: What is at Risk?*, <https://riskfinder.climatecentral.org/state/delaware.us>.

²¹⁵ *Id.*

of Delaware has increased, and the combined effects of storm surge and sea level rise will continue to exacerbate flooding impacts on the State. Even if all carbon emissions were to cease immediately, Delaware would continue to experience sea level rise due to the “locked in” greenhouse gases already emitted and the lag time between emissions and sea level rise.

b. The State has incurred significant costs on projects to address sea level rise, including, but not limited to, by conducting comprehensive surveys of sea level rise threats to the State, conducting sea level rise analysis in certain transportation infrastructure projects, by raising roads and highways such as Route 1, a section of which was raised to reduce coastal flooding, reconstructing and reinforcing levees and dikes, and restoring dams. Sea level rise and coastal storms have also exacerbated erosion. Delaware frequently spends significant resources on beach nourishment and other projects to combat erosion and protect natural, economic, and cultural resources. For example, in 2019 alone, Delaware announced beach nourishment projects for the communities of Pickering Beach, Kitts Hummock, and Bowers Beach, and the City of Rehoboth costing the State millions of dollars.²¹⁶ The State of Delaware All-Hazard Mitigation Plan estimated shoreline

²¹⁶ See, e.g., Press Release, State of Delaware, *DNREC Shoreline & Waterway Management beach replenishment projects set for Pickering, Kitts Hummock and*

protection measures, including inlet stabilization, beach nourishment and dune restoration to address coastal riverine and storm surge flooding to cost \$10 to 20 million annually.²¹⁷

c. Global warming is causing more extreme weather events in Delaware, with attendant physical and environmental consequences, including coastal flooding, coastal erosion, inland flooding, extreme heat events, dam and levee failures, and drought.²¹⁸ Coastal storms have already caused tens of millions of dollars in damages in Delaware, along with floods, power outages, sewage spills, and other disasters. Low-income Delawareans who depend on public transportation to access their employment are particularly vulnerable to flooding that accompanies coastal storms and other extreme weather events, as such flooding often disrupts delivery of public transportation services. In the coming decades, increased rainfall and windspeeds during already-destructive coastal storms will cause even more severe damage to public and private property and infrastructure in Delaware.

Bowers beaches (Jan. 4, 2019), <https://news.delaware.gov/2019/01/04/dnrec-shoreline-waterway-management-beach-replenishment-projects-set-pickering-kitts-hummock-bowers-beaches>; Press Release, State of Delaware, *Rehoboth Beach nourishment project to begin under direction of DNREC, US Army Corps of Engineers* (Oct. 21, 2019), <https://news.delaware.gov/2019/10/21/rehoboth-beach-nourishment-project-to-begin-under-direction-of-dnrec-us-army-corps-of-engineers>.

²¹⁷ ALL-HAZARD MITIGATION PLAN, *supra* note 9, at § 6.2, p. 20.

²¹⁸ *Id.* at § 4.1.

d. Oceans are acidifying at an alarming rate because of fossil-fuel burning, endangering Delaware's coastal ecosystems and economy. Acidity levels have already increased by roughly 30 percent since the Industrial Revolution, and they are expected to rise at a faster rate over time.²¹⁹ This radical change in ocean chemistry has serious and far reaching consequences. For example, the accumulation of carbonic acid in coastal waters threatens the survival of organisms that build shells and skeletons from calcium carbonate—such as coral, crabs, oysters, and shrimp.²²⁰ It also risks destabilizing whole marine ecosystems by altering the behavior, growth, reproduction, and migration patterns of critical aquatic organisms.²²¹ Delaware is particularly vulnerable to the effects of human-caused ocean acidification, as its identity, industries, and economy are closely intertwined with its coastal waters, saltwater wetlands, bays, and estuaries. Indeed, the Chesapeake Bay alone is responsible for nearly 13,000 Delawarean jobs, and the

²¹⁹ JEAN BRODEUR, UNIVERSITY OF DELAWARE & DELAWARE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL, DELAWARE AND OCEAN ACIDIFICATION: PREPARING FOR A CHANGING OCEAN 12 (2015), <http://www.dnrec.delaware.gov/coastal/Documents/OceanAcidification.pdf>.

²²⁰ *Id.* at 4.

²²¹ *Id.* at 14–15.

economic value of commercial and recreational fishing in the State totals to more than \$100 million each year.²²²

e. The average air temperature has increased and will continue to increase in Delaware due to climate change. By 2050, parts of Delaware are expected to endure up to 40 days per year of temperatures with a heat index above 105°F.²²³ Warming air temperatures have and will led to poorer air quality, more heat waves, expanded pathogen and pest ranges, impacts on agricultural production, greater need for irrigation of agricultural production, increased costs of cooling and other expenses to poultry industry, thermal stress for native flora and fauna, increased electricity demand, and threats to human health such as from heat stroke and dehydration, due to increased evaporation and demand, and increased allergen exposure. Higher average and more frequent extreme temperatures are expected to drive up energy use due to increased air-conditioning use. By 2060, Delaware is projected to see up to a 70 percent increase in demand for cooling.²²⁴ More than 20,000 Delawareans are especially vulnerable to extreme heat due to their age or

²²² *Id.* at 24–25.

²²³ See States at Risk, *Delaware Extreme Heat*, <https://statesatrisk.org/delaware/extreme-heat>.

²²⁴ DCCIA at 4-20.

economic status.²²⁵ Due to systemic inequities, communities of color and low-income communities are particularly vulnerable to extreme heat events. “Pregnant women exposed to high temperatures or air pollution are more likely to have children who are premature, underweight or stillborn, and African-American mothers and babies are harmed at a much higher rate than the population at large.”²²⁶ The urban heat island effect, which affects cities including Wilmington, exacerbates the health impacts of extreme heat on communities of color and low-income communities in urban areas. Delawareans who face housing insecurity are also more vulnerable to the extreme temperatures and air pollution exacerbated by climate change.

f. Climate change is stressing important natural and cultural resources in Delaware.²²⁷ Nearly a quarter of Delaware’s land consists of wetlands, which will face significant damage due to climate change by the end of the century. Delaware’s beaches and marshes provide habitat for fish, reptiles, and birds, such as horseshoe crabs, Atlantic sturgeon, and red knots. Delaware’s marshes also provide valuable ecosystem services to the State, including by filtering water contaminants,

²²⁵ See States at Risk, *Delaware Extreme Heat*, <https://statesatrisk.org/delaware/extreme-heat>.

²²⁶ Christopher Flavelle, *Climate Change Tied to Pregnancy Risks, Affecting Black Mothers Most*, N.Y. TIMES (June 18, 2020), <https://www.nytimes.com/2020/06/18/climate/climate-change-pregnancy-study.html>.

²²⁷ DNREC, SEA LEVEL RISE VULNERABILITY ASSESSMENT at 89–90.

mitigating storm damage, and supporting the State's fishing and hunting industries. Delaware is a hemispherically important area to migratory birds, with harm to Delaware wetlands and coastal areas impacting the reproductive success of many migratory birds, such as red knots. Delaware is likewise a particular center for horseshoe crab spawning, with harm to their habitat impacting food chains, numerous migratory bird species, and potentially significant impacts on human health given the role of horseshoe crabs in medical and biomedical research.

g. Agriculture is an essential driving force of Delaware's economy. Almost 40 percent of Delaware's land is dedicated to agricultural production, and sole or family proprietorship account for the vast majority of the State's farms.²²⁸ By exacerbating extreme weather and rising seas, climate change has already and will continue to have major impacts on agriculture in Delaware. Delaware's agricultural industry has already suffered significantly because of extreme weather. The 2018 State of Delaware All-Hazard Mitigation Plan estimated nearly \$8 million in annualized expected losses from drought events across the State, primarily due to crop and farmland damage.²²⁹ In low-lying areas, soil may become too salty for

²²⁸ Delaware Department of Agriculture, *Delaware Agricultural History*, <https://agriculture.delaware.gov/agricultural-history>.

²²⁹ ALL-HAZARD MITIGATION PLAN, *supra* note 9, at § 4.2, p. 62–63.

crops as saltwater intrusion progresses due to sea level rise.²³⁰ Higher temperatures and changing rainfall patterns are likely to have negative effects on crops and livestock, such as crop losses; reduced yield from heavy precipitation, heat, or drought; heat stress on livestock; increased difficulty of nutrient management; and higher infrastructure, irrigation, and energy costs. For example, hotter summers are expected to reduce corn yields. Warmer winters may also increase competition for crops from weeds and insect pests.²³¹ Severe rainstorms, expected to increase in frequency, can also have serious consequences for crop production, delaying planting or washing out planted crops and increasing disease. In terms of livestock, increased heat stress, extreme weather, and drought are likely to affect animal health and reduce feed and growth efficiency for poultry and dairy cows.²³²

h. Climate change has caused and will cause significant public health-related injuries to Delaware and its residents.²³³ Greater numbers of extreme

²³⁰ U.S. Environmental Protection Agency, *What Climate Change Means for Delaware* (Aug. 2016), <https://19january2017snapshot.epa.gov/sites/production/files/2016-09/documents/climate-change-de.pdf>.

²³¹ DCCIA at 7-16.

²³² *Id.*

²³³ *See, e.g.*, DIV. OF ENERGY AND CLIMATE, DELAWARE DEPT. OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL, DELAWARE CLIMATE HEALTH CONFERENCE SUMMARY REPORT (2017), <https://dnrec.alpha.delaware.gov/climate-coastal-energy/climate-change/climate-health-conference>.

heat events in Delaware will result in increased risk of heat-related illnesses (from mild heat stress to fatal heat stroke) and the exacerbation of pre-existing conditions in the medically fragile, chronically ill, and vulnerable. Changes in air temperature, rain and carbon dioxide concentrations in air can lead to more ozone, pollen, mold spores, fine particles and chemicals that can irritate and damage the lungs and airways, particularly of those with pre-existing respiratory problems and conditions. Increased extreme temperatures and heat waves has and will contribute to and exacerbate, allergies, respiratory disease, and other health issues in children and adults. Vulnerable populations such as the disabled, the elderly, those with prior health issues, children, people who live alone, people of color, and less-resourced communities are more likely to suffer health effects from higher air temperatures, flooding, and air pollution. As pest seasons and ranges expand, vector-borne illnesses will increase in Delaware's population. The State has borne and will continue to bear costs associated with mitigating and responding to these public health threats.

229. Compounding these physical and environmental impacts are cascading social and economic impacts that cause injuries to the State and that have and will continue to arise out of localized climate change-related conditions.

230. Delaware's low-income communities and communities of color are particularly at risk from the impacts of climate change. Climate change is

exacerbating, and will continue to exacerbate, underlying inequities faced by low-income communities and communities of color, who are disproportionately exposed to environmental hazards and at risk for many health conditions. The racial and ethnic disparities in Delaware's poverty rate²³⁴ further compound the increased risk that Black and brown Delawareans face from climate change, because low-income communities and communities of color are often unable to prepare in advance for events caused or exacerbated by climate change, and are forced to use a bigger proportion of their resources to rebuild in the aftermath - or are unable to rebuild at all. Climate change will also likely increase food insecurity in Delaware, which more than 12 percent of Delawareans already experience.²³⁵

231. The State has already incurred damages as a direct and proximate result of Defendants' conduct. The State has planned and is planning, at significant expense, adaptation and mitigation strategies to address climate change-related impacts in order to preemptively mitigate and/or prevent injuries to itself and its citizens. These efforts include, but are not limited to, capital projects such as

²³⁴ Black Delawareans are more than twice as likely to experience poverty than white Delawareans, and Hispanics are approximately three times as likely to live in poverty than non-Hispanic whites. CTR. FOR CMTY. RESEARCH & SERV., AN OVERVIEW OF POVERTY IN DELAWARE 2 (2018), <http://udspace.udel.edu/handle/19716/23128>.

²³⁵ *Food Insecurity Rate*, Delaware Health Tracker, <http://www.delawarehealthtracker.com> (last visited Sept. 7, 2020).

improving its drainage system and raising roadways, reconstructing and reinforcing levees and dikes, and restoring dams; partnership initiatives to prepare cities and towns across Delaware for the effects of climate change; and planning efforts such as the development of the DelDOT Strategic Implementation Plan for Climate Change and²³⁶ the creation of a flood avoidance guide for State agencies²³⁷ pursuant to Executive Order 41,²³⁸ through which former Governor Markell took steps to prepare Delaware for emerging climate impacts. Additionally, the State has incurred and will incur significant expense in educating and engaging the public on climate change issues, and implementing policies to mitigate and adapt to climate change impacts, including through clean transportation programs, electric vehicle incentive programs, assisting Delaware residents with home weatherization, providing incentives for building energy efficiency, restoring plant life to lessen heat impacts and reduce tidal flooding, mapping vulnerable populations and disease patterns. The

²³⁶ DELAWARE DEPT. OF TRANSPORTATION, STRATEGIC IMPLEMENTATION PLAN FOR CLIMATE CHANGE, SUSTAINABILITY & RESILIENCE FOR TRANSPORTATION (2017), https://deldot.gov/Publications/reports/SIP/pdfs/SIP_FINAL_2017-07-28.pdf.

²³⁷ DELAWARE FLOOD AVOIDANCE WORKGROUP, AVOIDING AND MINIMIZING RISK OF FLOOD DAMAGE TO STATE ASSETS: A GUIDE FOR DELAWARE STATE AGENCIES (2016), <http://www.dnrec.delaware.gov/energy/Documents/DE%20Flood%20Avoidance%20Guide%20For%20State%20Agencies.pdf>.

²³⁸ Exec. Order No. 41 (2013), https://archivesfiles.delaware.gov/Executive-Orders/Markell/Markell_EO41.pdf.

State has already allocated funds to climate adaptation through the Strategic Opportunity Fund for Adaptation, among other sources, and future climate adaptation will come at a substantial cost to the State. The State has incurred costs in responding to incidents such as impacts to water, wastewater, and stormwater infrastructure; flooding; groundwater inundation of infrastructure; erosion; and storm events that injure persons and property within Delaware and/or that the State owns or bears responsibility. The State's property and resources,²³⁹ such as the Port of Wilmington, State Route 9, Red Lion Dike, the St. Jones Reserve, Mispillion Nature Center, Gordon's Pond Trail, Pea Patch Island, various state parks, and the DelDOT Bridgeville Maintenance Yard, have been and will continue be inundated and/or flooded by sea water and extreme precipitation, among other climate-change related intrusions, causing injury and damages thereto and to improvements thereon, and preventing free passage on, use of, and normal enjoyment of that real property, or permanently destroying it.

232. But for Defendants' conduct, the State would have suffered no or far less serious injuries and harms than it has endured, and foreseeably will endure, due to the climate crisis and its physical, environmental, social, and economic consequences.

²³⁹ Plaintiff disclaims injuries arising on federal property in Delaware.

233. Defendants' conduct as described herein is therefore an actual, direct, and proximate cause of the State's climate crisis-related injuries, and was necessary to those injuries and brought about or helped to bring about those injuries.

V. CAUSES OF ACTION

FIRST CAUSE OF ACTION (Negligent Failure to Warn) (Against All Fossil Fuel Defendants)

234. The State realleges each and every allegation contained above, as though set forth herein in full.

235. Fossil Fuel Defendants, and each of them, at all times had a duty to issue adequate warnings to the State, the public, consumers, and public officials, of the reasonably foreseeable or knowable severe risks posed by their fossil fuel products.

236. Throughout the times at issue, Fossil Fuel Defendants breached their duty of care by failing to adequately warn any consumers, including, but not limited to, the State, its residents, and any other party, of the climate effects that inevitably flow from the intended or foreseeable use of their fossil fuel products.

237. Fossil Fuel Defendants knew or should have known, based on information passed to them from their internal research divisions and affiliates, trade associations and industry groups, and/or from the international scientific community, of the climate effects inherently caused by the normal use and operation

of their fossil fuel products, including the likelihood and likely severity of global warming, global and local sea level rise, more frequent and extreme drought, more frequent and extreme precipitation events, increased frequency and severity of heat waves and extreme temperatures, other adverse environmental changes, and the associated consequences of those physical and environmental changes, including the harms and injuries described herein.

238. Fossil Fuel Defendants knew or should have known, based on information passed to them from their internal research divisions and affiliates, trade associations and industry groups, and/or from the international scientific community, that the climate effects described herein rendered their fossil fuel products dangerous, or likely to be dangerous, when used as intended or in a reasonably foreseeable manner.

239. Throughout the times at issue, Fossil Fuel Defendants individually and in concert widely disseminated marketing materials in and outside of Delaware, refuted the scientific knowledge generally accepted at the time, advanced pseudo-scientific theories of their own, and developed misleading public relations materials that prevented reasonable consumers, including, but not limited to, the State and its residents, from recognizing the risk that fossil fuel products would cause grave climate changes, undermining and rendering ineffective any warnings that Fossil Fuel Defendants may have also disseminated. By virtue of this disinformation

campaign, Fossil Fuel Defendants had and have reason to believe that the users of their fossil fuel products are not aware of the risk of harm.

240. Throughout the times at issue, the risks posed by the use of Fossil Fuel Defendants' fossil fuel products were not obvious or generally known and recognized, and users of said products did not have actual knowledge of the danger, because, among other reasons, Fossil Fuel Defendants actively sought to conceal these risks by disseminating marketing materials in and outside of Delaware, refuting the scientific knowledge generally accepted at the time, advancing pseudo-scientific theories of their own, and developing misleading public relations materials.

241. Fossil Fuel Defendants knew or should have known that consumers, including but not limited to the State and its residents, were not aware of the risks posed by the use of Fossil Fuel Defendants' fossil fuel products because, among other reasons, Fossil Fuel Defendants actively sought to conceal these risks by disseminating marketing materials in and outside of Delaware, refuting the scientific knowledge generally accepted at the time, advancing pseudo-scientific theories of their own, and developing misleading public relations materials.

242. Given the grave dangers presented by the climate effects that inevitably flow from the normal or foreseeable use of fossil fuel products, a reasonable manufacturer, seller, or other participant responsible for introducing fossil fuel

products into the stream of commerce, would have warned of those known, inevitable climate effects.

243. Fossil Fuel Defendants' conduct in and outside of Delaware was a direct and proximate cause of the State's injuries, and the harms suffered by the State as alleged herein would not have occurred but for Fossil Fuel Defendants' conduct. Fossil Fuel Defendants' concealment and misrepresentation of their products' known dangers, Fossil Fuel Defendants' failure to warn of those dangers, and Fossil Fuel Defendants' simultaneous promotion of the unrestrained use of their products drove consumption, and thus greenhouse gas pollution, and thus climate change. Fossil Fuel Defendants' conduct brought about the State's injuries and was necessary in bringing about the State's injuries.

244. As a direct and proximate result of Fossil Fuel Defendants' and each of their acts and omissions, the State has sustained and will sustain substantial expenses and damages as set forth in this Complaint, including damage to publicly owned infrastructure and real property, and injuries to public resources that interfere with the rights of the State and its residents.

245. Fossil Fuel Defendants' acts and omissions as alleged herein are indivisible causes of the State's injuries and damage as alleged herein, because, *inter alia*, it is not possible to determine the source of any particular individual molecule of CO₂ in the atmosphere attributable to anthropogenic sources, because such

greenhouse gas molecules do not bear markers that permit tracing them to their source, and because greenhouse gasses quickly diffuse and comingle in the atmosphere.

246. Fossil Fuel Defendants' wrongful conduct as set forth herein was particularly reprehensible and exhibited a wanton or willful disregard for the rights of the State, and was committed with actual malice. Fossil Fuel Defendants had actual knowledge that their products were and are causing and contributing to the injuries complained of, and acted with conscious indifference to the probable dangerous consequences of their conduct's and products' foreseeable impact upon the rights of others, including the State and its residents, motivated primarily by unreasonable financial gain. Fossil Fuel Defendants engaged in persistent distribution of an inherently dangerous product with knowledge of its injury-causing effect among the consuming public. Fossil Fuel Defendants' outrageous conduct exhibits a wanton or willful disregard for the rights of the State. Therefore, the State requests an award of punitive damages in an amount reasonable, appropriate, and sufficient to punish Fossil Fuel Defendants for the good of society and deter Fossil Fuel Defendants from ever committing the same or similar acts.

SECOND CAUSE OF ACTION
(Trespass)
(Against All Fossil Fuel Defendants)

247. The State realleges each and every allegation contained above, as though set forth herein in full.

248. The State has actual and exclusive possession of real property throughout the State of Delaware.

249. Fossil Fuel Defendants, and each of them, have intentionally, recklessly, or negligently caused flood waters, extreme precipitation, saltwater, and other materials, to enter the State's real property, by distributing, merchandising, advertising, promoting, marketing, and/or selling fossil fuel products, knowing with substantial certainty that greenhouse gas emissions from those products would cause global and local sea levels to rise and more frequent and extreme precipitation events to occur, among other adverse environmental changes, as well as the associated consequences of those physical and environmental changes, including the invasion of saltwater onto State properties.

250. The State did not give permission for Fossil Fuel Defendants, or any of them, to cause floodwaters, extreme precipitation, saltwater encroachment, and other materials to enter its property as a result of the use of Fossil Fuel Defendants' fossil fuel products.

251. The State has been and will continue to be actually injured and continues to suffer damages as a result of Fossil Fuel Defendants and each of their having caused flood waters, extreme precipitation, saltwater, and other materials, to enter its real property, by *inter alia* submerging real property owned by the State, causing flooding that has invaded real property owned the State and rendered it unusable, causing storm surges and heightened waves which have invaded and threatened to invade real property owned by the State, and in so doing rendering the State's property unusable.

252. The State has and will continue to spend funds to plan for, prevent, and rectify sea level-rise related damages as a result of Fossil Fuel Defendants and each of their having caused saltwater and other materials to enter and inundate the State's real property.

**THIRD CAUSE OF ACTION
(Nuisance)
(Against All Fossil Fuel Defendants)**

253. The State realleges each and every allegation contained above, as though set forth herein in full.

254. The Attorney General is authorized to bring suit on behalf of the State and its citizens to address a public nuisance.

255. Fossil Fuel Defendants, individually and in concert with each other, by their affirmative acts and omissions, have created, contributed to, and/or assisted in

creating, conditions that significantly interfere with rights general to the public, including the public health, public safety, the public peace, the public comfort, and the public convenience.

256. The nuisance created and contributed to by Fossil Fuel Defendants is substantial and unreasonable. It has caused, continues to cause, and will continue to cause far into the future, significant harm to the community as alleged herein, and that harm outweighs any offsetting benefit. The health and safety of Delawareans is a matter of great public interest and of legitimate concern.

257. Fossil Fuel Defendants specifically created, contributed to, and/or assisted, and/or were a substantial contributing factor in the creation of the public nuisance by, *inter alia*:

a. Controlling every step of the fossil fuel product supply chain, including the extraction of raw fossil fuel products, including crude oil, coal, and natural gas from the Earth; the refining and marketing of those fossil fuel products, and the placement of those fossil fuel products into the stream of commerce;

b. Affirmatively and knowingly promoting the sale and use of fossil fuel products that Fossil Fuel Defendants knew to be hazardous and knew would cause or exacerbate global warming and related consequences, including, but not limited to, sea level rise, drought, extreme precipitation events, and extreme heat events;

c. Affirmatively and knowingly concealing the hazards that Fossil Fuel Defendants knew would result from the normal use of their fossil fuel products by misrepresenting and casting doubt on the integrity of scientific information related to climate change;

d. Disseminating and funding the dissemination of information intended to mislead customers, consumers, and regulators regarding known and foreseeable risk of climate change and its consequences, which follow from the normal, intended use of Fossil Fuel Defendants' fossil fuel products;

e. Affirmatively and knowingly campaigning against the regulation of their fossil fuel products, despite knowing the hazards associated with the normal use of those products, in order to continue profiting from use of those products by externalizing those known costs onto people, the environment, and communities, including residents of Delaware; and failing to warn the public about the hazards associated with the use of fossil fuel products.

258. Because of their superior knowledge of fossil fuel products, and their position controlling the extraction, refining, development, marketing, and sale of fossil fuel products, Fossil Fuel Defendants were in the best position to prevent the nuisance, but failed to do so, including by failing to warn customers, retailers, regulators, public officials, or the State of the risks posed by their fossil fuel

products, and failing to take any other precautionary measures to prevent or mitigate those known harms.

259. The public nuisance caused, contributed to, maintained, and/or participated in by Fossil Fuel Defendants has caused and/or imminently threatens to cause special injury to the State. The State has suffered unique harms of a kind that are different from Delaware citizens at large, namely, that the State has been harmed in its proprietary interests. The public nuisance has caused and/or imminently threatens to cause substantial injury to real and personal property directly owned by the State for the cultural, historic, and economic benefit of the Delaware's residents, and for their health, safety, and general welfare.

260. Fossil Fuel Defendants' actions were, at the least, a substantial contributing factor in the unreasonable violation of public rights enjoyed by the State and its residents as set forth above, because Fossil Fuel Defendants knew or should have known that their conduct would create a continuing problem with long-lasting significant negative effects on the rights of the public, and absent Fossil Fuel Defendants' conduct the violations of public rights described herein would not have occurred, or would have been less severe.

261. Fossil Fuel Defendants controlled the instrumentality of the nuisance at the time of the nuisance by flooding the marketplace with disinformation concerning

their products, and by controlling every step of the fossil fuel product supply chain from extraction, to marketing, to consumer sales.

262. Fossil Fuel Defendants' wrongful conduct as set forth herein exhibited a wanton or willful disregard for the rights of the State, and was committed with actual malice. Fossil Fuel Defendants had actual knowledge that their products were defective and dangerous and were and are causing and contributing to the nuisance complained of, and acted with conscious disregard for the probable dangerous consequences of their conduct's and products' foreseeable impact upon the rights of others, including Delaware and its residents. Therefore, the State requests an award of punitive damages in an amount reasonable, appropriate, and sufficient to punish these Fossil Fuel Defendants for the good of society and deter Fossil Fuel Defendants from ever committing the same or similar acts.

263. The State seeks an order that provides for abatement of the public nuisance Fossil Fuel Defendants have created, enjoins Fossil Fuel Defendants from creating future common-law nuisances, and awards the State damages in an amount to be determined at trial. The State pursues these remedies in its sovereign capacity for the benefit of the general public.

**FOURTH CAUSE OF ACTION
(Delaware Consumer Fraud Act)**

(Against American Petroleum Institute, BP America Inc., BP plc, Chevron Corporation, Chevron U.S.A. Inc., Exxon Mobil Corporation, ExxonMobil Oil Corporation, XTO Energy, Inc., Hess Corporation, Royal Dutch Shell PLC, Shell Oil Company, Citgo Petroleum Corporation, CNX Resources Corporation, Marathon Oil Company, Marathon Petroleum Corporation, Marathon Oil Corporation, Marathon Petroleum Company LP, and Speedway LLC)

264. The State realleges each and every allegation contained above, as though set forth herein in full.

265. In marketing and selling fossil fuel products, American Petroleum Institute, BP America Inc., BP plc, Chevron Corporation, Chevron U.S.A. Inc., Exxon Mobil Corporation, ExxonMobil Oil Corporation, XTO Energy, Inc., Hess Corporation, Royal Dutch Shell PLC, Shell Oil Company, Citgo Petroleum Corporation, CNX Resources Corporation, Marathon Oil Company, Marathon Petroleum Corporation, Marathon Oil Corporation, Marathon Petroleum Company LP, and Speedway LLC (“CFA Defendants”) have persistently misrepresented material facts, or suppressed, concealed, or omitted material facts, with the intent that consumers will rely thereon.

266. CFA Defendants have marketed fossil fuels through misstatements and omissions of material facts regarding: (i) the reasonably foreseeable or knowable severe risks posed by their fossil fuel products; (ii) the purported environmental benefits of their fossil fuel products; (iii) the actions they have taken to reduce their

carbon footprint, invest in more renewables, or lower their fossil fuel production; and/or (iv) their purportedly diversified energy portfolio with meaningful renewable and low-carbon fuel components.

267. CFA Defendants have misrepresented material facts, or used concealment, suppression, or omission of material facts with the intent that others rely upon such concealment, suppression, or omission, in connection with the advertisement and sale of fossil fuels, whether or not any person has been misled, deceived, or damaged thereby, in violation of Section 2513(a) of the Delaware Consumer Fraud Act, 6 *Del. C.* § 2511, *et seq.*, by misrepresenting, suppressing, concealing, or omitting the material facts set forth in the preceding paragraph.

268. Based on information passed to them from their internal research divisions and affiliates, trade associations and industry groups, and/or from the international scientific community, CFA Defendants knew of or recklessly disregarded the climate effects inherently caused by the normal use and operation of their fossil fuel products, including the likelihood and likely severity of global warming, global and local sea level rise, more frequent and extreme drought, more frequent and extreme precipitation events, increased frequency and severity of heat waves and extreme temperatures, and the associated consequences of those physical and environmental changes, including the harms and injuries described herein by the State. CFA Defendants had a duty to disclose this information to Delaware

consumers in order to prevent their advertising and marketing statements from being misleading, and their failure to do so constituted a misrepresentation and/or omission in violation of the CFA.

269. Based on information passed to them from their internal research divisions and affiliates, trade associations and industry groups, and/or from the international scientific community, CFA Defendants knew or recklessly disregarded the fact that the climatic effects described herein rendered their fossil fuel products dangerous, or likely to be dangerous, when used as intended or in a reasonably foreseeable manner. CFA Defendants had a duty to disclose this information to Delaware consumers in order to prevent their advertising and marketing statements from being misleading, and their failure to do so constituted a misrepresentation and/or omission in violation of the CFA.

270. Throughout the times at issue, CFA Defendants individually and in concert, in and outside of Delaware, widely disseminated marketing materials, refuted the scientific knowledge generally accepted at the time, advanced and promoted pseudo-scientific theories of their own, and developed public relations materials that prevented reasonable consumers, including those in Delaware, from recognizing or discovering the latent risk that CFA Defendants' fossil fuel products would cause grave climate changes. In addition, CFA Defendants deceitfully represented themselves as leaders in renewable energy and made misleading claims

that their businesses were substantially invested in lower carbon technologies and renewable energy sources. These practices had a tendency to deceive consumers and the public, including the State and Delaware residents.

271. In advertising and selling their fossil fuel products, CFA Defendants misrepresented material facts to Delaware consumers about the environmental impacts of their products, including through CFA Defendants' misleading "greenwashing" advertisements, as outlined in Parts IV(F) and IV(G) of this Complaint. CFA Defendants' misrepresentations in advertising and selling their fossil fuel products occurred in Delaware and elsewhere.

272. CFA Defendants omitted, suppressed, or concealed from Delaware consumers their knowledge of the material fact that the use of their fossil fuel products contributes to climate change. CFA Defendants intended for consumers, including those in Delaware, to rely on these omissions to continue purchasing and using CFA Defendants' fossil fuel products without altering their behavior. CFA Defendants' omissions occurred in Delaware and elsewhere.

273. As a direct and proximate result of CFA Defendants' acts and omissions—i.e., marketing and selling fossil fuels and promoting their unchecked use while concealing and misrepresenting their dangers—the State of Delaware and Delaware consumers have sustained and will sustain substantial expenses and damages set forth in this Complaint and to be proven at trial, including damage to

publicly owned infrastructure and real property, and injuries to public resources that interfere with the rights of the State and its residents. These injuries have occurred as the direct and natural consequence of Delaware consumers' and other consumers' reliance upon CFA Defendants' misleading statements and omissions to continue purchasing and using fossil fuel products.

274. Each instance in which the CFA Defendants have advertised or sold fossil fuel products and either misrepresented material facts or suppressed, concealed, or omitted material facts related to the harms caused by the intended use of these products was with the intent that consumers, including those in Delaware, would rely upon such suppressions, concealments, or omissions, and constitutes a violation of Section 2513(a) of the Delaware Consumer Fraud Act.

275. Neither the State nor Delaware consumers were on notice of CFA Defendants' misrepresentations and omissions until recently. CFA Defendants, including Exxon, have made misleading statements to the public, including Delaware consumers, since at least 1977 and continuing through today, minimizing and contradicting the scientific consensus that use of fossil fuels directly contributes to climate change, while CFA Defendants' contemporaneous internal communications and studies demonstrated their knowledge of this scientific

consensus.²⁴⁰ Thus, although CFA Defendants were on notice that they were making misrepresentations and omissions to the public, Delaware consumers were not.

276. For decades, CFA Defendants have engaged in a campaign of deception to hide their knowledge of the harmful effects of the intended use of their fossil fuel products on climate change, as alleged in Parts V(C)–(H) of this Complaint. The State and Delaware consumers were not merely ignorant of CFA Defendants’ wrongful acts over the past several decades; rather, CFA Defendants affirmatively concealed their fraud by issuing misleading advertorials and other statements diminishing the harmful effects of their products’ use on climate change without disclosing their own knowledge to the contrary—conduct that continues to this day. Neither the State nor its consumers were on inquiry or actual notice to investigate the CFA Defendants’ campaign of deception until recently, nor should a reasonable person have been, because CFA Defendants’ campaign of deception was so effective at concealing their lies from the public. As alleged in Part V(I) of this Complaint, CFA Defendants’ deceit only recently became discoverable, and is continuing.

²⁴⁰ See generally Geoffrey Supran & Naomi Oreskes, *Assessing ExxonMobil’s climate change communications (1977–2014)*, ENVIRON. RES. LETT. 12 (2017), <https://iopscience.iop.org/article/10.1088/1748-9326/aa815f/pdf> (finding that ExxonMobil’s climate change communications, including its paid advertorials, from 1977 to 2014, “misled the public” and sowed doubt about climate change).

277. CFA Defendants fraudulently concealed their unlawful acts and omissions from the State, Delaware consumers, and the general public through their affirmative acts of implementing a campaign of deception about the harms posed by their fossil fuel products. CFA Defendants intentionally and deliberately acted to misled the State, Delaware consumers, and the public at large about the true impact of their products' use on climate change, and continue to do so today. CFA Defendants intended to induce consumers to rely on their misrepresentations and concealment of material facts about their products' contribution to climate change in order to continue purchasing and using CFA Defendants' fossil fuel products. Through CFA Defendants' misleading public statements in the media and funding of climate disinformation and denial campaigns, they intended to prevent the State and its consumers from gaining knowledge of the facts that the intended use of their products posed grave dangers to Delaware. CFA Defendants intended to mislead the public, consumers, and the State through this campaign of deception to prevent them from uncovering the truth. Because of this fraudulent concealment, the State and Delaware consumers could not have known with reasonable diligence that CFA Defendants were engaging in deceptive practices to conceal and mislead the public about the harmful effects of the use of their fossil fuel products.

278. CFA Defendants' continuing material misrepresentations and omissions, including greenwashing advertisements and public statements denying

the scientific consensus that use of fossil fuel products directly causes climate change, are not time-barred by the Consumer Fraud Act's five-year statute of limitations for actions brought by the Attorney General.

279. CFA Defendants' wrongful conduct as set forth herein was gross, oppressive, aggravated, exhibited a wanton or willful disregard for the rights of the State, and was committed with actual malice and involved the breach of the public's trust and confidence. CFA Defendants had actual knowledge that their products were and are causing and contributing to the injuries complained of, and acted with conscious disregard for the probable dangerous consequences of their conduct's and products' foreseeable impact upon the rights of others, including the State and Delaware residents, motivated primarily by unreasonable financial gain. Therefore, the State requests an award of punitive damages in an amount reasonable, appropriate, and sufficient to punish CFA Defendants for the good of society and deter CFA Defendants from ever committing the same or similar acts.

280. Wherefore, the State prays for relief as set forth below.

VI. PRAYER FOR RELIEF

The **STATE OF DELAWARE** seeks judgment against these Defendants for:

1. Compensatory damages, jointly and severally, in an amount according to proof;
2. Penalties against CFA Defendants, jointly and severally, in the amount of \$10,000 for each instance in which CFA Defendants willfully violated the Delaware Consumer Fraud Act;
3. Reasonable attorneys' fees as permitted by law;
4. Punitive damages;
5. Costs of suit; and
6. For such and other relief as the Court may deem proper.

VII. REQUEST FOR JURY TRIAL

Delaware respectfully requests that all issues presented by its above Complaint be tried by a jury, with the exception of those issues that, by law, must be tried before the Court.

Dated: September 10, 2020

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EXHIBIT 2

Long-Inactive Oilfield Is Open — for Now

By Steven Rattner Special to The New York Times

Oct. 31, 1977



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October 31, 1977, Page 49 Buy Reprints

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TAFT, Calif.—Just over a year ago, with great fanfare, oil began to trickle out of the ground at the Federal Government's vast Elk Hills Petroleum Reserve near here. It had been closed most of the time since the Teapot Dome Scandal of the 1920's.

The opening of Elk Hills, ordered by Congress in the aftermath of the Arab oil embargo, was hailed as a step toward achieving energy independence for America and as help for ending the thirst for foreign oil.

Since then — and even before last week's well fire that killed three workers — the outlook for the reserve has been a sort of settled uncertainty. The President wants to shut it down, citing the torrent of Alaskan oil. Critics say the oil should be hoarded for use during an emergency. Plans to upgrade and expand facilities here are already more than a year behind schedule. And the oil companies have been willing to buy less oil than the Government had hoped — and at substantially lower prices.

“We hear all kinds of rumors out here,” said Comdr. Roger Martin, who runs the operation. “But right now, we're still under a mandate to produce Elk Hills at its maximum efficient rate.”

Current Daily Output

At present, that means 128,000 barrels of oil a day—two-thirds of 1 percent of the nation's current appetite for oil. Eventually, these gentle foothills on the edge of the San Joaquin Valley could yield 300,000 barrels of oil a day, compared with United States Oil imports that are running to 8 million barrels a days

Not only is this limited amount of oil not expected to do much to solve the nation's energy problems, it has actually added to California's oil woes, since California is in the midst of an oil glut, the unintended consequence of the opening of the Alaskan reserves at Prudhoe Bay.

More than 700,000 barrels a day of that oil is now being loaded onto tankers at Valdez, with the figure expected to rise to 1.2 million barrels a day eventually. But because no oil pipelines exist to carry the flow from West Coast to East, an excessive amount is getting no farther than the Pacific Coast.

At the same time, a more general reaction has set in against draining the 1.2-billion-barrel field—perhaps the continental United States' largest onshore oil field. Instead, critics say, the production should be halted and the oil kept as a strategic reserve against the time when

foreign supplies, currently readily available, run short.

Carter Retracts Demand

Apparently persuaded by these considerations, President Carter called on Congress last April to retract its demand that full production be pressed. This would probably have resulted in continued production but at a lower level, Administration officials say.

But in an as-yet-unannounced development, Congressional leaders told Administration officials privately over the summer that the proposed legislation could not be passed at present; as a result, the idea was quietly dropped.

Therefore, despite the cloudy future, despite the first change in management in half a century (from the Standard Oil Company of California to the Williams Brothers Engineering Companies) and despite the transfer of responsibility for the reserve from the Navy to the new Department of Energy, a \$500 million development goes forward.

A shiny glass and concrete administration building is nearing completion on a small rise by the main gate here. Eleven rigs are at work now on the 100-square-mile reserve—an unusually high number for such a small area—two of them engaged in deep exploratory drilling below 20,000 feet that has as yet found nothing. New storage tanks have been built and a new gas processing plant and a new pipeline are on the way.

But slowly. A route has yet to be chosen for the pipeline, which Congress insisted he built by April 1979 but which is now at least a year and a half late.

The choice of pipeline route will be an important factor in the effort to move part of the Elk Hills oil out of California. One possibility is to build a spur 120 miles south to Redlands, Calif., to connect with the proposed line from Long Beach to Midland, Tex., being sponsored by the Standard Oil company (Ohio).

For Elk Hills, uncertainty is hardly a new experience. Set aside as a Naval oil reserve in 1912, the oilfield suffered guilt by association in 1922, when another naval oil field, Teapot Dome, became the center of a national scandal involving kickbacks to the Secretary of the Interior, who had taken over responsibility for the oil a year earlier.

The subservient political fallout resulted in the return of both oil reserves to the Navy in 1927. The Navy promptly shut them down and kept them shut, except for wartime use in the 1940's. Production has now resumed at Teapot Dome as well, although at a far lower rate.

“It took us several months just to get the equipment going again,” said Edward F. Gialdini, a production manager here. “The gas processing plant was built in the early 1950's and had ?? ver been used.”

EXHIBIT 3

Elk Hills Reserve Oil Will Flow Again

By Robert Lindsey Special to The New York Times

July 3, 1976



See the article in its original context from
July 3, 1976, Page 39 Buy Reprints

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TAFT. Calif., July 2—After more than 50 years of controversy and intrigue, Congressional bickering and an epimode of chicanery in high places, commercial production of the Government's long-husbanded oil in the Elk Hills naval petroleum reserves will begin tomorrow.

The New York Times/Robert Lindsey

An oil rig at the Elk Hills naval petroleum reserve

The New York Times/July 3, 1976

Final steps to de-mothball more than 160 oil wells were completed today in preparation for a move that, at least for now is more symbolic than substantive for efforts by the United States to reduce its dependence upon imported oil.

President Ford and, before him, former President Richard NI. Nixon both battled Congress for authority to give commercial producers access to the oil, one of the richest fields remaining in the lower 48 states. The rationale was that it was no longer needed as a national security reserve.

Congressional Approval

Congress finally gave its approval this spring, authorizing production for six years and stipulating it must begin before July 4.

Only 31,000 barrels of oil a day will flow initially from beneath the chalk-colored hills on the western edge of the San Jacinto Valley—a droplet compared with the nation's current, appetite for more than 6 million barrels of imported oil daily.; Interest in the oil by private companies was less than expected, at least, initially, by the Government.

„However, Comdr. Roger Martin, the naval officer in charge of the facility, said this modest beginning would be followed by more and more production.

“We expect to reach a level of about 100,000 barrels daily in a few months, and 300,000 by the end of the 1970's,” he said.

Production of 100,000 barrels daily would amount to about 5 percent of current imports and, at current world prices, be translated into a balance-of-payments saving of about \$1 billion annually.

Meanwhile, the rich oilfields in Prudhoe Bay, Alaska, will be moving into production, further lessening the need for foreign oil.

There still appears to be sharp resistance in some sectors of the Defense Department to opening Elk Hills. Some officials criticize the action as a political move by which the Administration gives the appearance of acting to deal with the energy crisis without tackling its underlying problems and meanwhile depleting what they see as a necessary reserve.

“Some people think we're selling the family jewels,” one Navy officer said. “This is political oilfield,” another said.

The long-sought oil production here has already touched off an economic boomlet in this town of 4,800, which in a way is the classic oil-boom town. Before much of the oil was depleted, it grew wildly during the first 25 years of the century because of oil strikes in the region around Elk Hills. Because of its history, the 1940 movie, “Boom Town” starring Clark Gable and Spencer Tracy, was filmed here.

“Right now, we've already got a terrible housing shortage,” said Jack George, manager of the local Chamber of Commerce. “We could use 300' houses right now. People come to the chamber begging for housing. But, we're building a 110-unit mobile home park, and they just started a 40-unit housing subdivision.

“As the Navy builds up production, it's going to have a tremendous impact on Taft. It will affect everybody—people who supply equipment, people who sell services. ‘

A few of the town's formerly boarded — up business places have already reopened, he noted—including, in a touch of irony, two abandoned gasoline service stations that have reopened as a hamburger stand and a delicatessen.

Federal Program Starts

A \$500 million federally financed program is under way to further develop resources in the 72-square-mile Elk Hills preserve.

Nine drilling rigs are punching holes into the mostly barren, rattlesnake and jackrabbitpopulated hills. One is being bored 20,000 feet in search of oil in what Navy officers refer to as “the basement.” Previously, the deepest drilling of the approximately 1,000 wells on the reservation was 12,000 feet.

Eventually, Commander Martin said, 600 to 700 additional wells will be ‘provided, adding that there was general optimism among oilmen that the Elk Hills’ proven reserves of about a billion barrels could be substantially increased.

“We don't know what the full extent of the reserves are,” he said. “Depending on who you talk to, some people say the total may be upwards of 1.5 billion, although it is more likely to be 1.2 billion to 1.3 billion, plus whatever we find below 12,000 feet.”

Oil companies have tried periodically for decades to get access to the oil here. Yet when the Navy put the initial output up for bid in May, the industry spurned about one-third of the offering. And, prices hid were than expected.

The relatively poor response is attributed by oil-industry experts to a number of factors. Among them are the current inadequacy of transportation facilities from the fields, especially for non-California oil producers, until more pipelines are provided; a surplus on the West Coast currently of lowergrade crude oil that constituted much of the oil that was sold, and uncertainty about the Government's decision to confine sales to a year-to-year basis rather than on the longterm plan.

Teapot Dome Recalled

Commercial production of oil on a much smaller scale—about 2,000 barrels daily—will also begin tomorrow at the Government's naval reserve at Teapot Dome, Wyo., whose oil —along with that beneath the Elk Hills—was the illicit prize of the Teapot Dome scandal that rocked the nation during the 1920's.

The Elk Hills facility had been assigned by order of President William Howard Taft, for whom the town is named, in 1912, as a reserve that could be drawn upon during future wars to fuel naval ships, then shifting from coal to oil. President Woodrow Wilson established the Teapot Dome reserve in 1915.

in 1921, President Harding ordered the transfer of the reserves from the control of the Navy to the Department of the Interior. And in 1922, the Secretary of the Interior, Albert D. Fall, secretly and without competitive bidding, leased the facilities to oilmen, Harry F. Sinclair and Edward L. Doheny. Mr. Fall later admitted receiving \$385,000 from the two men.

Official Imprisoned

The ensuing political storm led to Mr. Fall's jading, ad eventually transfer of the oil reserves back to the Navy in 1927. Except for a period during World War II, Elk Hills has been virtually untouched. However, the Standard Oil Company of California, which owned 20 percent of the field before it was taken over by the Government in 1912, has been taking 2,000 to 3,000 barrels of oil annually recently under program necessary to protect the oil resources from water seepage.

Commenting on the relatively lukewarm response so far by oil companies in the initial bidding, Commander Martin predicted that, as more processing and pipeline facilities were added, interest would grow. “And you can bet if the Arabs put on another embargo,” he said, “interest in Elk Hills will go up very fast.”

EXHIBIT 4

UNITED STATES
DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE

**MINERAL LEASE OF SUBMERGED LANDS UNDER THE
OUTER CONTINENTAL SHELF LANDS ACT**

This form does not constitute an information collection as defined by 44 U.S.C. 3502 and, therefore, does not require approval by the Office of Management and Budget.

Office	Serial Number
Cash Bonus	Annual rental Dollars - Dollars/block-acre-hectare or fraction thereof
Minimum royalty- Dollars/year Dollars/block-acre-hectare or fraction thereof	Royalty rate Dollars/unit of product % amount or value of product % gross proceeds

This lease is effective as of _____ (hereinafter called the "Effective Date") and shall continue for an initial period of _____ years (hereinafter called the "Initial Period") by and between the United States of America (hereinafter called the "Lessor"), by the Minerals Management Service, its authorized officer, and

(hereinafter called the "Lessee"). In consideration of any cash payment heretofore made by the Lessee to the Lessor and in consideration of the promises, terms, conditions, and covenants contained herein, including the Stipulation(s) numbered _____ attached hereto, the Lessee and Lessor agree as follows:

Sec. 1. Statutes and Regulations. This lease is issued pursuant to the Outer Continental Shelf (OCS) Lands Act of August 7, 1953, as amended (43 U.S.C. 1331-1356), (hereinafter called the "Act"), and the regulations issued thereunder (30 CFR 281). This lease is issued subject to the Act, all regulations and orders issued pursuant to the Act and in existence upon the Effective Date of this lease, all regulations and orders, subsequently issued pursuant to the Act, that provide for the prevention of waste and conservation of the natural resources of the OCS and the protection of correlative rights therein, and all other applicable statutes and regulations.

Sec. 2. Rights of Lessee. The Lessor hereby grants and leases to the Lessee the exclusive right and privilege to prospect for, mine, extract, remove, and dispose of all _____ (hereinafter referred to as the "Leased Mineral(s)") in the submerged lands of the OCS containing approximately _____ acres or _____ hectares (hereinafter referred to as the "Leased Area"), described as follows:

These rights include:

(a) the nonexclusive right to conduct within the Leased Area geological and geophysical explorations including core sampling activities in accordance with applicable regulations;

(b) the nonexclusive right to drill water wells within the Leased Area, unless the water is part of geopressured-geothermal and associated resources, and to use the water produced therefrom for operations pursuant to the Act free of cost, on the condition that the drilling is conducted in accordance with procedures approved by the Director of the Minerals Management Service or the Director's delegate (hereinafter called the "Director"); and

(c) the right to construct or erect and to maintain within the Leased Area artificial islands, equipment, installations, and other devices permanently or temporarily attached to the seabed and other works and structures necessary to the full enjoyment of the lease, subject to compliance with applicable laws and regulations.

Sec. 3. Term. This lease shall continue from the Effective Date of the lease for the Initial Period and so long thereafter as the Leased Mineral is produced (sold, transferred, used, or otherwise disposed of) from the Leased Area in accordance with an approved mining operation, or the Lessee is otherwise in compliance with provisions of the lease and the regulations under which the Lessee can earn continuance of the lease.

Sec. 4. Rental.

(a) The Lessee shall pay the Lessor an annual rental in the amount shown on the face of the lease or in accordance with the rental adjustment schedule (attached, if applicable) pursuant to the leasing notice not later than the last day prior to the commencement of the rental year.

(b) Unless otherwise specified in the leasing notice, the lessee is exempt from paying annual rental during the first 5 years in the life of the lease.

(c) No rental shall be due or payable under a lease commencing with the first lease anniversary date following the commencement of royalty payments on leasehold production.

Sec. 5. Royalty on Production. The royalty due the Lessor on Leased Mineral(s) produced (sold, transferred, used, or otherwise disposed of) shall be as specified in the schedule attached to this lease.

Sec. 6. Minimum Royalty. The Lessee shall pay the Lessor a minimum annual royalty in the amount specified on the face of the lease, beginning with the year in which OCS minerals are produced (sold, transferred, used, or otherwise disposed of) from the leasehold. The minimum royalty prescribed shall be offset by royalty paid on production during the lease year. Minimum royalty payments are payable within 30 days following the end of the lease year for which they are due.

Sec. 7. Payments. The Lessee shall identify one responsible party who shall make all payments (rentals, royalties, and any other payments required by this lease) to the Lessor by electronic transfer of funds, check, draft on a solvent bank, or money order unless otherwise provided by regulations or by direction of the Lessor. Rentals, royalties, and any other payments required by this lease shall be made payable to the Minerals Management Service and tendered to the Director in accordance with applicable regulations. Determinations made by the Lessor as to the amount of payment due shall be presumed to be correct and paid as due.

Sec. 8. Bonds. The Lessee shall maintain the bond(s) coverage required by regulation prior to the commencement of any activity on the lease and shall furnish such additional security as may be required by the Lessor if, after operations have begun, the Lessor deems such additional security to be necessary.

Sec. 9. Plans. The Lessee shall conduct all operations on the Leased Area in accordance with the provisions of an approved delineation, testing, or mining plan, this lease, and the applicable governing regulations. Modifications to approved plans shall be submitted by the Lessee to the Lessor and must be authorized as provided for under applicable regulations.

Sec. 10. Performance. The Lessee shall comply with all applicable regulations, orders, written instructions and the terms and conditions set forth in this lease. After due notice in writing, the Lessee shall conduct such OCS mining activities at such rates as the Lessor may require in order that the Leased Area or any part thereof may be properly and timely developed and produced in accordance with sound operating principles.

Sec. 11. Safety Requirements. The Lessee shall:

(a) maintain all places of employment within the Leased Area in compliance with occupational safety and health standards and, in addition, free from recognized hazards to employees of the Lessee or of a contractor or subcontractor operating within the Leased Area;

(b) maintain all operations within the Leased Area in compliance with regulations or orders intended to protect persons, property, and the environment, including mineral deposits and formations of mineral deposits not leased hereunder; and

(c) allow prompt access, at the site of any operation subject to safety regulations, to any authorized Federal inspector and shall provide any documents and records that are pertinent to occupational or public health, safety, or environmental protection as may be requested.

Sec. 12. Suspension and Cancellation.

(a) The Lessor may suspend or cancel this lease pursuant to Section 5 of the Act, and compensation shall be paid provided by the Act.

(b) The Lessor may, upon recommendation of the Secretary of Defense during a state of war or national emergency declared by Congress or the President of the United States, suspend operations under the lease, as provided in Section 12(c) of the Act, and just compensation shall be paid the Lessee for such suspension.

Sec. 13. Indemnification. The Lessee shall indemnify the Lessor for and hold it harmless from, any claim, including claims for loss or damage to property or injury to persons caused by or resulting from any operation on the Leased Area conducted by or on behalf of the Lessee. However, the Lessee shall not be held responsible to the Lessor under this section for any loss, damage, or injury caused by or resulting from:

(a) negligence of the Lessor other than the commission or omission of a discretionary function or duty on the part of a Federal Agency, whether or not the discretion involved is abused; or

(b) the Lessee's compliance with an order or directive of the Lessor against which an administrative appeal by the Lessee is filed before the cause of action from the claim arises and is pursued diligently thereafter.

Sec. 14. Purchase of Production. In time of war or when the President of the United States shall so prescribe, the Lessor shall have the right of first refusal to purchase at the market price all or any portion of the Leased Mineral produced from the Leased Area, as provided in Section 12(b) of the Act.

Sec. 15. Mining Unit Agreement. The Lessee may request to operate under a mining unit agreement within such time as the Lessor may prescribe, embracing all or part of the lands subject to this lease as the Lessor may determine is in the interest of conservation of the natural resources of the OCS or the prevention of waste. Where any provision of a mining unit agreement,

approved by the Lessor, is inconsistent with a provision of this lease, the provision of the agreement shall govern so long as the lease remains committed to the mining unit. If the mining unit of which this lease is a part is dissolved, the lease shall then be subject to the lease terms that would have been applied if the lease had not been included in the mining unit.

Sec. 16. Equal Opportunity Clause. During the performance of this lease, the Lessee shall fully comply with paragraphs (1) through (7) of Section 202 of Executive Order 11246, as amended (reprinted in 41 CFR 60-1.4(a)), and the implementing regulations that are for the purpose of preventing employment discrimination against persons on the basis of race, color, religion, sex, national origin, age, or disability. Paragraphs (1) through (7) of Section 202 of Executive Order 11246, as amended, are incorporated in this lease by reference.

Sec. 17. Certification of Nonsegregated Facilities. By entering into this lease, the Lessee certifies, as specified in 41 CFR 60-1.8, that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. As used in this certification, the term "segregated facilities" means, but is not limited to, any waiting rooms, work areas, rest rooms and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees that are segregated by explicit directive or are, in fact, segregated on the basis of race, color, religion, sex, national origin, age, or disability, because of habit, local custom, or otherwise. The Lessee further agrees that it will obtain identical certifications from proposed contractors and subcontractors prior to award of contracts or subcontracts, unless they are exempt under 41 CFR 60-1.5.

Sec. 18. Reservations to Lessor. All rights in the Leased Area not expressly granted to the Lessee by the Act, the regulations, or this lease are hereby reserved to the Lessor. Without limiting the generality of the foregoing, reserved rights include:

- (a) the rights to all source materials essential to production of fissionable materials as specified under 43 U.S.C. 1341(e);
- (b) the right to authorize geological and geophysical exploration in the Leased Area that does not unreasonably interfere with or endanger actual operations under the lease, and the right to grant such easements or rights-of-way upon, through, or in the Leased Area as may be necessary or appropriate to the working of other lands that may or may not be leased or to the treatment and shipment of products thereof by or under authority of the Lessor;
- (c) the right to grant leases for any minerals (including oil, gas, and sulphur) other than the Leased Mineral(s), except that operations under such leases shall not unreasonably interfere with or endanger operations under this lease; and
- (d) the right, as provided in Section 12(d) of the Act, to restrict operations in the Leased Area or any part thereof that may be designated by the Secretary of Defense, with approval of the President, as being within an area needed for national defense and, so long as such designation remains in effect, no operations may be conducted on the surface of the Leased Area or the part thereof included within the designation except with the concurrence of the Secretary of Defense. If operations or production under this lease within any designated area are suspended pursuant to this paragraph, any payments of rentals and royalty prescribed by this lease likewise shall be suspended during such period of suspension of operations and production, the term of this lease shall be

extended by adding thereto any such suspension period, and the Lessor shall be liable to the Lessee for such compensation as is required to be paid under the Constitution of the United States.

Sec. 19. Transfer of Lease. The Lessee shall file for approval with the appropriate field office of the Minerals Management Service any instrument of assignment or other transfer of this lease, or any interest therein, in accordance with applicable laws and regulations.

Sec. 20. Surrender of Lease. The Lessee may surrender this entire lease or any officially designated subdivision of the Leased Area by filing with the appropriate field office of the Minerals Management Service a written relinquishment, in triplicate, that shall be effective as of the date of filing. No surrender of this lease or any portion of the Leased Area shall relieve the Lessee or its surety of the obligation to pay all accrued rentals, royalties, and other financial obligations or to abandon all operations and remove all facilities on the area to be surrendered in a manner satisfactory to the Director.

Sec. 21. Removal of Property on Termination of Lease. Within a period of 1 year after termination of this lease in whole or in part, the Lessee shall remove all devices, works, and structures from the premises no longer subject to the lease, in accordance with applicable regulations and orders of the Director. However, the Lessee may, with the approval of the Director, continue to maintain devices, works, and structures on the Leased Area for operations on other leases, provided the Lessee continues to maintain the level of bond coverage required by the Director.

Sec. 22. Remedies in Case of Default.

- (a) Whenever the Lessee fails to comply with any of the provisions of the Act, the regulations or orders issued pursuant to the Act, or the terms of this lease, the lease shall be subject to cancellation in accordance with the provisions of Section 5(c) and (d) of the Act and the Lessor may exercise any other remedies which the Lessor may have, including the penalty provisions of Section 24 of the Act. Furthermore, pursuant to Section 8(o) of the Act, the Lessor may cancel the lease if it is obtained by fraud or misrepresentation.
- (b) Nonenforcement by the Lessor of a remedy for any particular violation of the provisions of the Act, the regulations or orders issued pursuant to the Act, or the terms of this lease shall not prevent the cancellation of this lease or the exercise of any other remedies under paragraph (a) of this section for any other violation or for the same violation occurring at any other time.

Sec. 23. Heirs and Successors in Interest. Each obligation hereunder shall extend to be binding upon and every benefit hereof shall inure to the heirs or devisees.

Sec. 24. Unlawful Interest. No member of or delegate to Congress, or Resident Commissioner, after election or appointment, or either before or after they have qualified, and during their continuance in office, and no officer, agent, or employee of the Department of the Interior, except as provided in 43 CFR Part 20, shall be admitted to any share or part in this lease or derive any benefit that may arise therefrom. The provisions of Section 3741 of the Revised Statutes, as amended, 41 U.S.C. 22, and the Act of June 25, 1948, 62 Stat. 702, as amended, 18 U.S.C. 431-433, relating to contracts made or entered into or accepted by or on behalf of the United States, form a part of this lease insofar as they may be applicable.

(Lessee)

(Lessee)

(Signature of Authorized Officer)

(Signature of Authorized Officer)

(Name of Signatory)

(Name of Signatory)

(Title)

(Title)

(Date)

(Date)

(Address of Lessee)

(Address of Lessee)

(Lessee)

(Lessee)

(Signature of Authorized Officer)

(Signature of Authorized Officer)

(Name of Signatory)

(Name of Signatory)

(Title)

(Title)

(Date)

(Date)

(Address of Lessee)

(Address of Lessee)

If this lease is executed by a corporation, it must bear the corporate seal.

(Lessee)

THE UNITED STATES OF AMERICA, Lessor

(Signature of Authorized Officer)

(Signature of Authorized Officer)

(Name of Signatory)

(Name of Signatory)

(Title)

(Title)

(Date)

(Date)

(Address of Lessee)

If this lease is executed by a corporation, it must bear the corporate seal.

EXHIBIT 5

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF OCEAN ENERGY MANAGEMENT
**OIL AND GAS LEASE OF SUBMERGED LANDS
UNDER THE OUTER CONTINENTAL SHELF LANDS ACT**

Office

Serial number

Cash bonus

Rental rate per acre, hectare or fraction thereof

Minimum royalty rate per acre, hectare or fraction thereof

Royalty rate

Profit share rate

Paperwork Reduction Act of 1995 statement: *This form does not constitute an information collection as defined by 44 U.S.C. 3501 et seq., and therefore does not require approval by the Office of Management and Budget.*

This lease is effective as of
for a primary term of
America (hereinafter called the “Lessor”), by the
authorized officer, and

(hereinafter called the “Effective Date”) and shall continue
years (hereinafter called the “Primary Term”) by and between the United States of
Bureau of Ocean Energy Management (BOEM), its

(hereinafter called the “Lessee”). In consideration of any cash payment heretofore made by the Lessee to the Lessor and in consideration of the promises, terms, conditions, and covenants contained herein, including the Stipulation(s) numbered attached hereto, the Lessee and Lessor agree as follows:

Sec. 1. Statutes and Regulations. This lease is issued pursuant to the Outer Continental Shelf Lands Act of August 7, 1953; 43 U.S.C. 1331 *et seq.*, as amended, (hereinafter called “the Act”). This lease is subject to the Act, regulations promulgated pursuant thereto, and other statutes and regulations in existence upon the Effective Date of the lease, and those statutes enacted (including amendments to the Act or other statutes) and regulations promulgated thereafter, except to the extent they explicitly conflict with an express provision of this lease. It is expressly understood that amendments to existing statutes and regulations, including but not limited to the Act, as well as the enactment of new statutes and promulgation of new regulations, which do not explicitly conflict with an express provision of this lease may be made and that the Lessee bears the risk that such may increase or decrease the Lessee’s obligations under the lease.

In accordance with the regulations at 2 CFR, parts 180 and 1400, the Lessee must comply with the U.S. Department of the Interior's debarment and suspension (nonprocurement) requirements and must communicate this requirement to comply with these regulations to all persons with whom the Lessee does business as it relates to this lease by including this term as a condition when entering into contracts and transactions with others.

Sec. 2. Rights of Lessee. The Lessor hereby grants and leases to the Lessee the exclusive right and privilege to drill for, develop, and produce oil and gas resources, except helium gas, in the submerged lands of the Outer Continental Shelf containing approximately _____ acres or _____ hectares (hereinafter referred to as the “leased area”), described as follows:

These rights include:

- (a) the nonexclusive right to conduct within the leased area geological and geophysical explorations in accordance with applicable regulations;
- (b) the nonexclusive right to drill water wells within the leased area, unless the water is part of geopressured-geothermal and associated resources, and to use the water produced therefrom for operations pursuant to the Act free of cost, on the condition that the drilling is conducted in accordance with procedures approved by the Secretary of the Interior or the Secretary's delegate (hereinafter called the "Secretary"); and
- (c) the right to construct or erect and to maintain within the leased area artificial islands, installations, and other devices permanently or temporarily attached to the seabed and other works and structures necessary to the full enjoyment of the lease, subject to compliance with applicable laws and regulations.

Sec. 3. Term. This lease shall continue from the Effective Date of the lease for the Primary Term and so long thereafter as oil or gas is produced from the leased area in paying quantities, or drilling or well reworking operations, as approved by the Lessor, are conducted thereon, or as otherwise provided by regulation.

Sec. 4. Rentals. The Lessee shall pay the Lessor on or before the first day of each lease year before the discovery of oil or gas on the lease, then on or before the last day of each full lease year in which royalties on production are not due, a rental as shown on the face hereof.

Sec. 5. Minimum Royalty. The Lessee shall pay the Lessor on or before the last day of each lease year beginning with the year in which royalty-bearing production commences, and notwithstanding any royalty suspension that may apply, a minimum royalty as shown on the face hereof, with credit applied for actual royalty paid during the lease year. If actual royalty paid exceeds the minimum royalty requirement, then no minimum royalty payment is due.

Sec. 6. Royalty on Production.

- (a) The Lessee shall pay a royalty as shown on the face hereof in amount or value of production saved, removed, or sold from the leased area. Gas (except helium) and oil of all kinds are subject to royalty. All helium produced shall remain the property of the United States. The Lessee is liable for royalty payments on oil or gas lost or wasted from a lease site when such loss or waste is due to negligence on the part of the operator of the lease, or due to the failure to comply with any rule or regulation, order, or citation issued under the Federal Oil and Gas Royalty Management Act of 1982 or the Act. The Lessor shall determine whether production royalty shall be paid in amount or value.
- (b) The value of production for purposes of computing royalty shall be the reasonable value of the production as determined by the Lessor. The value upon which royalty will be paid is established under 30 CFR Chapter XII or applicable successor regulations.
- (c) When paid in value, royalties on production shall be due and payable monthly on the last day of the month next following the month in which the production is obtained, unless the Lessor designates a later time. When paid in amount, such royalties shall be delivered at pipeline connections or in tanks provided by the Lessee. Such deliveries shall be made at reasonable times and intervals and, at the Lessor's option, shall be effected either (i) on or immediately adjacent to the leased area, without cost to the Lessor, or (ii) at a more convenient point closer to shore or on shore, in which event the Lessee shall be entitled to reimbursement for the reasonable cost of transporting the royalty production to such delivery point.

Sec. 7. Payments. The Lessee shall make all payments (rentals, royalties and any other payments required by this lease) to the Lessor by electronic transfer of funds unless otherwise provided by regulations or by direction of the Lessor. Rentals, royalties, and any other payments required by this lease shall be made payable to the Office of Natural Resources Revenue and tendered to the Lessor. Determinations made by the Lessor as to the amount of payment due shall be presumed to be correct and payable as due.

Sec. 8. Bonds. The Lessee shall at all times maintain the bond(s) required by regulation prior to the issuance of the lease. The Lessee shall furnish such additional security as may be required by the Lessor if, after operations have begun, the Lessor determines additional security is necessary to ensure compliance with Lessee's obligations under this lease and the regulations.

Sec. 9. Plans. The Lessee shall conduct all operations on the lease or unit in accordance with an approved exploration plan (EP), development and production plan (DPP) or development operations coordination document (DOCD), approval conditions, and any other applicable requirements provided by law or regulation. The Lessee may depart from an approved plan only as provided by applicable regulations.

Sec. 10. Diligence and Prevention of Waste.

- (a) The Lessee must exercise diligence in the development of the leased area and in the production of wells located thereon and must prevent unnecessary damage to, loss of, or waste of leased resources.
- (b) The Lessee shall comply with all applicable laws, regulations and orders related to diligence, sound conservation practices and prevention of waste. EPs, DPPs and DOCDs, are to conform to sound conservation practices to preserve, protect, and develop minerals resources and maximize the ultimate recovery of hydrocarbons from the leased area.

Sec. 11. Directional Drilling. A directional well drilled under the leased area from a surface location on nearby land not covered by this lease shall be deemed to have the same effect for all purposes of the lease as a well drilled from a surface location on the leased area. Drilling shall be considered to have been commenced on the leased area when drilling is commenced on the nearby land for the purpose of directionally drilling under the leased area, and production of oil or gas from the leased area through any directional well surfaced on nearby land or drilling or reworking of any such directional well shall be considered production or drilling or reworking operations on the leased area for all purposes of the lease. Nothing contained in this Section shall be construed as granting to the Lessee any interest, license, easement, or other right in any nearby land.

Sec. 12. Safety and Inspection Requirements. The Lessee shall:

- (a) maintain all places of employment within the leased area in compliance with occupational safety and health standards and, in addition, free from recognized hazards to employees of the Lessee or of any contractor or subcontractor operating within the lease area;
- (b) maintain all operations within the leased area in compliance with regulations or orders intended to protect persons, property and the environment on the Outer Continental Shelf; and
- (c) allow prompt access, at the site of any operation subject to safety regulations, to any authorized Federal inspector and provide any documents and records that are pertinent to occupational or public health, safety, or environmental protection as may be requested.

Sec. 13. Suspension or Cancellation.

(a) The Lessor may suspend or cancel this lease pursuant to section 5 of the Act, and compensation shall be paid when provided by the Act.

(b) The Lessor may, upon recommendation of the Secretary of Defense, during a state of war or national emergency declared by Congress or the President of the United States, suspend operations under the lease, as provided in section 12(c) of the Act, and just compensation shall be paid to the Lessee for such suspension.

Sec. 14. Indemnification. The Lessee shall indemnify the Lessor for, and hold it harmless from, any claim, including claims for loss or damage to property or injury to persons caused by or resulting from any operation on the leased area conducted by or on behalf of the Lessee. However, the Lessee shall not be responsible to the Lessor under this section for any loss, damage, or injury caused by or resulting from:

(a) negligence of the Lessor other than the commission or omission of a discretionary function or duty on the part of a Federal Agency whether or not the discretion involved is abused; or

(b) the Lessee's compliance with an order or directive of the Lessor against which an administrative appeal by the Lessee is filed before the cause of action for the claim arises and is pursued diligently thereafter.

Sec. 15. Disposition of Production.

(a) As provided in section 27(a)(2) of the Act, the Lessor shall have the right to purchase not more than 16 2/3 percent by volume of the oil and gas produced pursuant to the lease at the regulated price or, if no regulated price applies, at the fair market value at the wellhead of the oil and gas saved, removed, or sold, except that any oil or gas obtained by the Lessor as royalty or net profit share shall be credited against the amount that may be purchased under this subsection.

(b) Pursuant to section 27(b) and (c) of the Act, the Lessor may offer and sell certain oil and gas obtained or purchased pursuant to a lease. As provided in section 27(d) of the Act, the Lessee shall take any Federal oil or gas for which no acceptable bids are received, as determined by the Lessor, and which is not transferred to a Federal Agency pursuant to section 27(a)(3) of the Act, and shall pay to the Lessor a cash amount equal to the regulated price or, if no regulated price applies, the fair market value of the oil or gas so obtained.

(c) As provided in section 8(b)(7) of the Act, the Lessee shall offer 20 percent of the crude oil, condensate, and natural gas liquids produced on the lease, at the market value and point of delivery as provided by regulations applicable to Federal royalty oil, to small or independent refiners as defined in the Emergency Petroleum Allocation Act of 1973.

(d) In time of war or when the President of the United States shall so prescribe, the Lessor shall have the right of first refusal to purchase at the market price all or any portion of the oil or gas produced from the leased area, as provided in section 12(b) of the Act.

Sec. 16. Unitization, Pooling, and Drilling Agreements. Within such time as the Lessor may prescribe, the Lessee shall subscribe to and operate under a unit, pooling, or drilling agreement embracing all or part of the lands subject to this lease as the Lessor may determine to be appropriate or necessary. Where any provision of a unit, pooling, or drilling agreement, approved by the Lessor, is inconsistent with a provision of this lease, the provision of the agreement shall govern.

Sec. 17. Equal Opportunity Clause. During the performance of this lease, the Lessee shall fully comply with paragraphs (1) through (7) of section 202 of Executive Order 11246, as amended (reprinted in 41 CFR 60-1.4(a)), and the implementing regulations, which are for the purpose of preventing employment discrimination against persons on the basis of race, color, religion, sex, or national origin. Paragraphs (1) through (7) of section 202 of Executive Order 11246, as amended, are incorporated in this lease by reference.

Sec. 18. Certification of Nonsegregated Facilities. By entering into this lease, the Lessee certifies, as specified in 41 CFR 60-1.8, that it does not and will not maintain or provide for its employees any segregated facilities at any of its establishments and that it does not and will not permit its employees to perform their services at any location under its control where segregated facilities are maintained. As used in this certification, the term "facilities" means, but is not limited to, any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees. Segregated facilities include those that are segregated by explicit directive or those that are in fact segregated on the basis of race, color, religion, sex, or national origin, because of habit, local custom, or otherwise; provided, that separate or single-user restrooms and necessary dressing or sleeping areas shall be provided to assure privacy as appropriate. The Lessee further agrees that it will obtain identical certifications from proposed contractors and subcontractors prior to awarding contracts or subcontracts unless they are exempt under 41 CFR 60-1.5.

Sec. 19. Reservations to Lessor. All rights in the leased area not expressly granted to the Lessee by the Act, the regulations, or this lease are hereby reserved to the Lessor. Without limiting the generality of the foregoing, reserved rights included:

(a) the right to authorize geological and geophysical exploration in the leased area that does not unreasonably interfere with or endanger actual operations under the lease, and the right to grant such easements or rights-of-way upon, through, or in the leased area as may be necessary or appropriate to the working of other lands or to the treatment and shipment of products thereof by or under authority of the Lessor;

(b) the right to grant leases for any minerals other than oil and gas, and to issue leases or grants for renewable energy or alternative uses within the leased area, except that operations under such leases or grants shall not unreasonably interfere with or endanger operations under this lease; and

(c) the right, as provided in section 12(d) of the Act, to restrict operations in the leased area or any part thereof, which may be designated by the Secretary of Defense, with approval of the President, as being within an area needed for national defense and, so long as such designation remains in effect, no operations may be conducted on the surface of the leased area or the part thereof included within the designation except with the concurrence of the Secretary of Defense. If operations or production under this lease within any designated area are suspended pursuant to this paragraph, any payments of rentals and royalty prescribed by this lease likewise shall be suspended. During such period of suspension of operations and production, the term of this lease shall be extended by adding thereto any such suspension period, and the Lessor shall be liable to the Lessee for such compensation as is required to be paid under the Constitution of the United States.

Sec. 20. Assignment of Lease. The Lessee shall file for approval with the appropriate regional BOEM OCS office any instrument of assignment or other transfer of any rights or ownership interest in this lease in accordance with applicable regulations.

Sec. 21. Relinquishment of Lease. The Lessee may relinquish this lease or any officially designated subdivision thereof by filing with the appropriate regional BOEM OCS office a written relinquishment, in triplicate, that shall be effective on the date it is filed. No relinquishment of this lease or of any portion of the leased area shall relieve the Lessee of the continuing obligation to pay all accrued rentals, royalties, and other financial obligations or to plug all wells and remove

all platforms and other facilities on the area to be relinquished in accordance with applicable regulations.

Sec. 22. Decommissioning.

(a) When wells, platforms, pipelines or other facilities are no longer useful for operations, the Lessee shall permanently plug such wells, remove such platforms and other facilities, decommission such pipelines, and clear the seafloor of all associated obstructions created by the lease operations.

(b) The Secretary may determine that a well, platform, pipeline or other facility is no longer useful and require its immediate decommissioning.

(c) All platforms and other facilities shall be removed within 1 year after the lease terminates unless the Lessor grants approval to conduct other activities.

(d) All decommissioning operations shall be conducted in accordance with applicable laws and regulations and in a manner that is safe, does not unreasonably interfere with other uses of the OCS, and does not cause undue or serious harm or damage to the human, marine, or coastal environment.

Sec. 23. Remedies in Case of Default.

(a) Whenever the Lessee fails to comply with any of the provisions of the Act, the regulations issued pursuant to the Act, or the terms of this lease, the lease shall be subject to cancellation in accordance with the provisions of section 5(c) and (d) of the Act and the Lessor may

exercise any other remedies that the Lessor may have, including, but not limited to the penalty provisions of section 24 of the Act. Furthermore, pursuant to section 8(o) of the Act, the Lessor may cancel the lease if it is obtained by fraud or misrepresentation.

(b) Nonenforcement by the Lessor of a remedy for any particular violation of the provisions of the Act, the regulations issued pursuant to the Act, or the terms of this lease shall not prevent the cancellation of this lease or the exercise of any other remedies under paragraph (a) of this section for any other violation or for the same violation occurring at any other time.

Sec. 24. Unlawful Interest. No member of, or delegate to, Congress, or Resident Commissioner, after election or appointment, or either before or after they have qualified and during their continuance in office, and no officer, agent, or employee of the Department of the Interior, except as provided in 43 CFR Part 20, shall be admitted to any share or part in this lease or derive any benefit that may arise therefrom, except to the extent that such benefit is obtained by the general public as well. The provisions of Section 3741 of the Revised Statutes, as amended, 41 U.S.C. 22, and the Act of June 25, 1948, 62 Stat. 702, as amended, 18 U.S.C. 431-433, relating to contracts made or entered into, or accepted by or on behalf of the United States, form a part of this lease insofar as they may be applicable.

THE UNITED STATES OF AMERICA, Lessor

(Lessee)

(Signature of Authorized Officer)

(Name of Signatory)

(Title)

(Date)

(Address of Lessee)

(Signature of Authorized Officer)

(Name of Signatory)

(Title)

(Date)

If this lease is executed by a corporation, it must comply with BOEM's corporate seal requirements at 30 CFR 556.107.

(Lessee)

(Signature of Authorized Officer)

(Name of Signatory)

(Title)

(Date)

(Address of Lessee)

(Lessee)

(Signature of Authorized Officer)

(Name of Signatory)

(Title)

(Date)

(Address of Lessee)

(Lessee)

(Signature of Authorized Officer)

(Name of Signatory)

(Title)

(Date)

(Address of Lessee)

(Lessee)

(Signature of Authorized Officer)

(Name of Signatory)

(Title)

(Date)

(Address of Lessee)

If this lease is executed by a corporation, it must comply with BOEM's corporate seal requirements at 30 CFR 556.107.

(Lessee)

(Signature of Authorized Officer)

(Name of Signatory)

(Title)

(Date)

(Address of Lessee)

(Lessee)

(Signature of Authorized Officer)

(Name of Signatory)

(Title)

(Date)

(Address of Lessee)

(Lessee)

(Signature of Authorized Officer)

(Name of Signatory)

(Title)

(Date)

(Address of Lessee)

(Lessee)

(Signature of Authorized Officer)

(Name of Signatory)

(Title)

(Date)

(Address of Lessee)

If this lease is executed by a corporation, it must comply with BOEM's corporate seal requirements at 30 CFR 556.107.

(Lessee)

(Signature of Authorized Officer)

(Name of Signatory)

(Title)

(Date)

(Address of Lessee)

(Lessee)

(Signature of Authorized Officer)

(Name of Signatory)

(Title)

(Date)

(Address of Lessee)

(Lessee)

(Signature of Authorized Officer)

(Name of Signatory)

(Title)

(Date)

(Address of Lessee)

(Lessee)

(Signature of Authorized Officer)

(Name of Signatory)

(Title)

(Date)

(Address of Lessee)

If this lease is executed by a corporation, it must comply with BOEM's corporate seal requirements at 30 CFR 556.107.

EXHIBIT 6

CONTRACT NO. NOD-4219

UNIT PLAN CONTRACT
BETWEEN
NAVY DEPARTMENT AND STANDARD OIL COMPANY OF CALIFORNIA
RELATING TO
NAVAL PETROLEUM RESERVE NO. 1 (ELK HILLS)
JUNE 19, 1944

UNIT PLAN CONTRACT

This contract made and entered into this 19th day of June, 1944, by and between the United States of America, acting herein by and through the Secretary of the Navy, (hereinafter referred to as "Navy"), and Standard Oil Company of California, a corporation organized and existing under the laws of the State of Delaware, (hereinafter referred to as "Standard"),

W I T N E S S E T H :

Recitals

(1) This contract covers and relates to all of the lands lying within the boundaries of Naval Petroleum Reserve No. 1, located in Kern County, California, (hereinafter referred to as the "Reserve"), comprising 43,815 acres, more or less, and indicated by the area embraced within the heavy black line on the map attached hereto, marked Exhibit "A" and hereby made a part hereof:

(2) Standard owns lands and interests in lands lying within the boundaries of the Reserve, as follows:

(a) It is the owner in fee simple of the following described lands, comprising 8297.4 acres:

All of Section Thirteen (13), Township Thirty (30) South, Range Twenty-Three (23) East, M.D.B. & M.

Northwest Quarter (NW $\frac{1}{4}$) of Section Seventeen (17), Township Thirty (30) South, Range Twenty-Three (23) East, M.D.B. & M.

Northwest Quarter (NW $\frac{1}{4}$) of Section Nineteen (19), Township Thirty (30) South, Range Twenty-Three (23) East, M.D.B. & M.

South Half (S $\frac{1}{2}$) of Section Thirteen (13), Township Thirty-One (31) South, Range Twenty-Three (23) East, M.D.B. & M.

All of Section Seventeen (17), Township Thirty (30) South, Range Twenty-Four (24) East, M.D.B. & M.

All of Section Nineteen (19), Township Thirty (30) South, Range Twenty-Four (24) East, M.D.B. & M.

All of Section Twenty-One (21), Township Thirty (30) South, Range Twenty-Four (24) East, M.D.B. & M.

All of Section Twenty-Five (25), Township Thirty (30) South, Range Twenty-Four (24) East, M.D.B. & M.

All of Section Twenty-Seven (27), Township Thirty (30) South, Range Twenty-Four (24) East, M.D.B. & M.

All of Section Twenty-Nine (29), Township Thirty (30) South, Range Twenty-Four (24) East, M.D.B. & M.

All of Section Thirty-One (31), Township Thirty (30) South, Range Twenty-Four (24) East, M.D.B. & M.

All of Section Thirty-Three (33), Township Thirty (30) South, Range Twenty-Four (24) East, M.D.B. & M.

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All of Section Thirty-Five (35), Township Thirty (30) South,
Range Twenty-Four (24) East, M.D.B. & M.

All of Section Thirty-Six (36), Township Thirty (30) South,
Range Twenty-Four (24) East, M.D.B. & M.

Northwest Quarter (NW $\frac{1}{4}$) of the Northwest Quarter (NW $\frac{1}{4}$) of
Section Twenty-Three (23), Township Thirty (30) South,
Range Twenty-Four (24) East, M.D.B. & M.

South half (S $\frac{1}{2}$) of the Northwest Quarter (NW $\frac{1}{4}$) of Section
Twenty-Three (23), Township Thirty (30) South, Range
Twenty-Four (24) East, M.D.B. & M.

Southwest Quarter (SW $\frac{1}{4}$) of the Northeast Quarter (NE $\frac{1}{4}$) of
Section Twenty-Three (23), Township Thirty (30) South,
Range Twenty-Four (24) East, M.D.B. & M.

South half (S $\frac{1}{2}$) of Section Twenty-Three (23), Township Thirty
(30) South, Range Twenty-Four (24) East, M.D.B. & M.

Southwest Quarter (SW $\frac{1}{4}$) of the Southwest Quarter (SW $\frac{1}{4}$) of Section
Twenty-Four (24), Township Thirty (30) South, Range Twenty-Four
(24) East, M.D.B. & M., (according to the Official Plat of the
survey of the said land returned to the General Land Office
by the Surveyor General), EXCEPTING THEREFROM, that portion
thereof conveyed to Elk Hills School District by deed recorded
November 20, 1933 in Book 411, Page 312 of Official Records of
Kern County, California, described as follows: Commencing at a
point in the East line of the Southwest Quarter (SW $\frac{1}{4}$) of the Southwest
Quarter (SW $\frac{1}{4}$) of said Section Twenty-Four (24) which point is
distant three hundred thirty feet (330') North of the Southeast
corner of said Southwest Quarter (SW $\frac{1}{4}$) of the Southwest Quarter
(SW $\frac{1}{4}$) of said Section; running thence North along said East
line a distance of six hundred sixty feet (660'); thence at right
angles West, a distance of six hundred sixty feet (660'); thence
at right angles South, a distance of six hundred sixty feet (660');
thence at right angles East, a distance of six hundred sixty feet
(660') to the point of beginning; Also, EXCEPTING THEREFROM,
all oil and gas in said lands as reserved in that certain United
States of America Land Patent Number 692254 dated the first
day of July 1919, being Land Office Serial Number Visalia 07529.

All that portion of the Southwest Quarter (SW $\frac{1}{4}$) of the Southeast
Quarter (SE $\frac{1}{4}$) of Section Twenty-Four (24), Township Thirty (30)
South, Range Twenty-Four (24) East, M.D.B. & M., (according to the
Official map of the survey of said land returned to the General
Land Office by the Surveyor General), lying South and West of the
so-called "Outlet Canal" as same existed on June 14, 1932, date
of the deed of said land from Commercial Land Company, a corpora-
tion to Kern Investment Company, a corporation, recorded June 14,
1932 in Book 446, Page 63 of Official Records of Kern County,
California; EXCEPTING THEREFROM, that portion thereof lying
within the townsite of Tupman as shown by map of said townsite,
recorded September 2, 1923 in Book 3, Page 94 of Maps in the Office
of the County Recorder; ALSO EXCEPTING a parcel of land one hundred
feet (100') by one hundred fifty feet (150') comprising 0.34 acres more
or less, particularly described as beginning at the Northwest corner of the
Southwest Quarter (SW $\frac{1}{4}$) of the Southeast Quarter (SE $\frac{1}{4}$) of said Section, and
running thence North 89°34' East along the North line of the Southwest

Quarter (SW 1/4) of the Southeast Quarter (SE 1/4) of said Section Two Hundred Forty feet (240'); thence South 51° 36' East one hundred fifty feet (150') to the true point of beginning of said excepted parcel; thence South 38° 24' West one hundred feet (100'); thence South 51° 36' East One Hundred Fifty feet (150'); thence North 38° 24' East one hundred feet (100'); thence North 51° 36' West one hundred fifty feet (150') to the true point of beginning; also, EXCEPTING THEREFROM all oil and gas in said lands as reserved in Patent from the United States of America dated June 29, 1923 recorded July 16, 1923 in Book 21, Page 445 of Patents; AND SUBJECT to right-of-way for pipe line granted to Commercial Land Company, a corporation, by deed recorded November 4, 1935 in book 625, Page 236 of Official Records of Kern County, California.

Southwest Quarter (SW 1/4) of Section 7, Township Thirty-One South (31), Range Twenty-Four (24) East, M.D.B.&M.

- (b) It is the owner of oil and gas leasehold interests in the West Half (W $\frac{1}{2}$) of Section 31, Township 30 South, Range 25 East, M.D.B.&M., comprising 335.6 acres, under two certain oil and gas leases dated March 10, 1920, and September 16, 1941, respectively, from Kern County Land Company, as lessor, to Standard, as lessee.

The above described fee lands, and Standard's leasehold interest under the aforementioned oil and gas lease, dated March 10, 1920, from Kern County Land Company, are hereinafter collectively referred to as "Standard's lands."

(3) Navy owns the full right, title and interest in and to all of the remaining lands in the Reserve, with the following exceptions and subject to the following outstanding interests:

- (a) West Half (W $\frac{1}{2}$) of Section Thirty-One (31), Township Thirty (30) South, Range Twenty-Five (25) East, M.D.B.&M., comprising 335.6 acres, owned in fee by Kern County Land Company and subject to two certain oil and gas leases dated March 10, 1920 and September 16, 1941, respectively, to Standard, as lessee.

- (b) Southwest Quarter (SW 1/4) of Section Twenty-Six (26), Township Thirty (30) South, Range Twenty-Four (24) East, M.D.B.&M., owned in fee by the United States of America and subject to a certain oil and gas lease, numbered Sac. 019525, to Union Oil Company, as lessee.

South Half (S $\frac{1}{2}$) of the Northeast Quarter (NE $\frac{1}{4}$) of the Southeast Quarter (SE $\frac{1}{4}$), West Half (W $\frac{1}{2}$) of the Southeast Quarter (SE $\frac{1}{4}$), and Southeast Quarter (SE $\frac{1}{4}$) of the Southeast Quarter (SE $\frac{1}{4}$) of Section Twenty-Six (26), Township Thirty (30) South, Range Twenty-Four (24) East, M.D.B.&M., owned in fee by the United States of America and subject to a certain oil and gas lease, numbered Sac. 019527, to B.M. Oil Company, as lessee.

Northwest Quarter (NW 1/4) of Section Six (6), Township Thirty-One (31) South, Range Twenty-Five (25) East, M.D.B.&M., owned in fee by the United States of America and subject to a certain oil and gas lease, numbered Sac. 019516, to Richfield Oil Corporation, as lessee.

- (c) East Half (E $\frac{1}{2}$) of the East Half (E $\frac{1}{2}$), Northwest Quarter (NW 1/4) of the Northeast Quarter (NE 1/4), and Southwest Quarter (SW 1/4) of the Southeast Quarter (SE 1/4) of Section Twenty-Two (22), Township Thirty (30) South, Range Twenty-Four (24) East, M.D.B.&M., owned in fee by the United States of America and subject to a certain oil and gas lease, numbered Sac. 019265, to Exeter Oil Company, as lessee.

South Half (S $\frac{1}{2}$) of the Northwest Quarter (NW 1/4), and Northwest Quarter (NW 1/4) of the Northwest Quarter (NW 1/4) of Section Twenty-Six (26), Township Thirty (30) South, Range Twenty-Four (24) East, M.D.B.&M., owned in fee by the United States of America and subject to a certain oil and gas lease, numbered Sac. 019569, to Gibson Oil Company, as lessee.

North Half (N $\frac{1}{2}$) of the Northeast Quarter (NE 1/4) of the Southeast Quarter (SE 1/4) of Section Twenty-Six (26), Township Thirty (30) South, Range Twenty-Four (24) East, M.D.B.M., owned in fee by the United States of America and subject to a certain oil and gas lease, numbered Sac. 020998, to F. G. Munser, as lessee.

West Half (W $\frac{1}{2}$) of the West Half (W $\frac{1}{2}$), and Northeast Quarter (NE 1/4) of the Northwest Quarter (NW 1/4) of Section Twenty-Two (22), Township Thirty (30) South, Range Twenty-Four (24) East, M.D.B.M., owned in fee by the United States of America and subject to a certain oil and gas lease, numbered Sac. 019264, to Pacific Western Oil Company, as lessee.

Southwest Quarter (SW 1/4) of Section Six (6), Township Thirty-One (31) South, Range Twenty-Five (25) East, M.D.B.M., owned in fee by the United States of America and subject to a certain oil and gas lease, numbered Sac. 019491, to Richfield Oil Corporation, as lessee.

Northeast Quarter (NE 1/4) of Section Twenty-Six (26), Township Thirty (30) South, Range Twenty-Four (24) East, M.D.B.M., owned in fee by the United States of America and subject to a certain oil and gas lease, numbered Sac. 019654, to Transport Oil Company, as lessee.

Northeast Quarter (NE 1/4) of the Northwest Quarter (NW 1/4) of Section Twenty-Six (26), Township Thirty (30) South, Range Twenty-Four (24) East, M.D.B.M., owned in fee by the United States of America and subject to a certain oil and gas lease, numbered Sac. 019459, to Transport Oil Company, as lessee.

South Half (S $\frac{1}{2}$) of the Southwest Quarter (SW 1/4), and Southwest Quarter (SW 1/4) of the Southeast Quarter (SE 1/4) of Section Twenty-Four (24), Township Thirty (30) South, Range Twenty-Four (24) East, M.D.B.M., the mineral rights to which are owned by the United States of America subject to a certain oil and gas lease, numbered Sac. 031888, to Mary C. Ragood, as lessee.

The lands, leases, and interests in land referred to in this paragraph (3), including the interest now owned by Kern County Land Company in the above described 335.6-acre tract under the aforementioned oil and gas lease, dated March 10, 1920, to Standard, and any interests in lands in the Reserve acquired by Navy, are hereinafter collectively referred to as "Navy's lands."

(4) Standard is presently operating the lands of Navy and Standard in the Reserve under an agreement, dated September 8, 1943, between Navy and Standard entitled "Rescission and Temporary Operating Agreement," as extended by agreements respectively dated December 8, 1943, March 7, 1944, and June 5, 1944, which rescinded an earlier agreement, dated November 20, 1942, between Navy and Standard relating to the Reserve.

(5) Certain of the lands of Navy and Standard, respectively, have heretofore been developed in varying degrees. Petroleum engineers and geologists representing Navy and Standard, respectively, have prepared an engineering report, dated September 28, 1942, pertaining to the subsurface conditions underlying a portion of the lands in the Reserve. Such report is entitled "Revised Estimate of Commercially Productive Acres Feet of Formation Proved Zones Elk Hills by United States Navy and Standard Oil Company of California Representatives," (hereinafter referred to as the "Engineering Report"), and is incorporated herein by reference.

(6) The following considerations have led Navy and Standard to conclude that the most desirable and effective means of protecting the Reserve and of assuring the maximum ultimate recovery of oil, gas, natural gasoline and associated hydrocarbons from the Reserve is to develop and operate all lands in the Reserve as a unit:

- (a) The Reserve is a part of a single geologic structure; and the practice of offset drilling has not proved to be an effective means of assuring to Navy its proper share of oil produced from the Reserve and does not conserve Navy's oil in the ground.
- (b) The independent development and operation of privately-owned lands in the Reserve, from which oil may be freely produced without control or restraint by Navy, would constitute a grave threat to the security of the Reserve and would impair Navy's power to conserve oil in the ground.

(c) Navy deems it inadvisable to shut in the wells on Navy's lands forthwith in view of possible permanent damage to the wells or to the national interest in the ultimate economical production of oil therefrom, and in view of the probable drainage of oil from Navy's lands in the event lands not controlled by Navy are developed and operated without simultaneous protective development and operation of Navy's lands.

(d) The unit plan of development and operation as set out herein will:

- (i) Afford Navy a means of acquiring complete control over the development of the entire Reserve and the production of oil therefrom in order that Navy may protect the Reserve and conserve in the ground all of Navy's share of the oil in the Reserve as well as a substantial portion of Standard's share of oil in the Reserve.
- (ii) Make available to Standard a limited quantity of oil from one of its most important sources at a time when it is needed by Standard to meet its war requirements for refined petroleum products in the West Coast area.
- (iii) Place the Reserve in a condition of readiness whereby it will be able promptly to produce oil in substantial quantities whenever the strategic situation of the United States in the future may so require.
- (iv) Result in the eventual receipt by Navy and Standard, respectively, from the various commercially productive zones underlying the Reserve of the quantities of recoverable oil, gas, natural gasoline and associated hydrocarbons underlying their respective lands as of November 20, 1942.
- (v) Provide for the economical and efficient development and operation of the Reserve.
- (vi) Result in securing the maximum ultimate recovery of oil, gas, natural gasoline and associated hydrocarbons from the Reserve.

(7) The authority for the Secretary of the Navy to enter into this contract for the development and operation of the Reserve as a unit is to be found in an Act of Congress approved June 4, 1920, relating to the conservation, care, custody, protection and operation of the Naval petroleum and oil shale reserves (41 Stat. 813), as amended by an Act of Congress approved June 30, 1938 (52 Stat. 1252), and as further amended by an Act of Congress approved June 17, 1944 (Public Law No. 343, 78th Congress, 2d Session).

(8) It is expressly recognized by Navy and Standard that this contract does not and cannot, in and of itself, authorize the production of any of Navy's share of the oil, gas, natural gasoline and associated hydrocarbons in the Reserve, as distinct from that portion of Standard's share hereinafter permitted to be produced and received by Standard under the terms of paragraphs (d) and (f) of Section 5. The production of the remainder of Standard's share and of all of Navy's share must, except for the purpose of protecting, conserving, maintaining, or testing the Reserve, be preceded by and based upon an authorization by joint resolution of the Congress as provided in the Act of June 4, 1920, as amended; and references hereinafter to an authorization or election by Navy to order the production of any of such oil are intended to be limited to action by the Navy within the terms of any such joint resolution. The production of that portion of Standard's share hereinafter permitted to be produced and charged to its account under paragraphs (d) and (f) of Section 5, including the oil so produced and charged from November 20, 1942 to the date of this contract, is authorized under the provision of the Act of June 4, 1920, as amended, directing the use and operation of the Reserve for its protection, conservation, maintenance and testing; and the production and receipt of such portion by Standard is intended to, and does in fact, represent a consideration moving to Standard under the contract for its agreement hereinafter to relinquish to Navy the control over the time and rate of production from its lands. (See H. R. Report No. 1529, 78th Congress, 2d Session.)

NOW, THEREFORE, Navy and Standard, in consideration of the premises and of the mutual undertakings herein contained, do hereby agree as follows:

Section 2. Development and Operation of the Reserve as a Unit.

- (a) Navy's lands and Standard's lands shall be developed and operated as a unit for the protection of the Reserve and, to the extent herein provided or hereafter authorized by

Navy, for the production of oil, gas, natural gasoline and associated hydrocarbons therefrom. All operations on the Reserve shall be in accordance with the provisions of this contract.

- b) The ownership interests of Navy and Standard, respectively, in the lands within the Reserve shall not, as between themselves, be regarded as changed or altered hereby in any manner, except to the extent that they are to be developed and operated as a unit for the purposes of this contract. The rights and obligations of Standard under the lease, dated March 10, 1920, from Kern County Land Company, referred to in sub-paragraph (b) of paragraph (2) of the Recitals, shall, subject to the acquisition by Navy of the interest of Kern County Land Company subject to such lease, be governed by this contract.
- (c) The duly authorized representatives of Navy and Standard, respectively, shall have the right to go upon the lands of the other, freely and without liability for trespass, for the purpose of carrying on the functions contemplated by this contract.
- (d) Any and all wells, equipment and facilities (including gathering lines and stock tanks), owned or hereafter acquired by either Navy or Standard and located on the lands of Navy and Standard in the Reserve on November 20, 1942, shall be held for use, and may be used, by Navy or by any operator selected by Navy in the development and operation of the Reserve hereunder without charge for such use or for depreciation occasioned by such use. Any and all wells drilled on such lands after November 20, 1942, and any and all equipment and facilities acquired pursuant to this contract after November 20, 1942, shall be similarly available for use by Navy or any operator selected by Navy in the development and operation of the Reserve hereunder. The foregoing undertakings by Navy and Standard with respect to equipment and facilities shall not, however, be deemed to extend to (i) automatic, drilling or other equipment placed on the Reserve for merely temporary use or (ii) trunk pipe lines, including any tranches thereof and any pump stations and telephone or telegraph poles and lines used in connection therewith.

Section 2. Relative Participations in Production.

(a) The following terms and references are defined and identified as follows:

(1) "Acre-foot"

One acre, one foot thick, of oil and/or gas bearing formations which, in the opinion of the Engineering Committee, are capable of being produced in paying quantities.

(2) "Commercially productive zones"

Geologic strata beneath the surface of the earth which, in the opinion of the Engineering Committee, contain oil and/or gas bearing formations capable of producing oil or gas in paying quantities.

(3) "Engineering Committee"

A committee which shall consist of six members, two of whom shall be the members of the Operating Committee hereinafter described. The other four members shall be petroleum engineers or geologists, two of whom shall be appointed by and shall represent Navy, and two of whom shall be appointed by and shall represent Standard; each member so appointed shall have had at least ten (10) years' experience as a petroleum geologist or petroleum engineer, or if a graduate geologist or engineer, at least five (5) years' such experience. Navy and Standard shall appoint their respective representatives on the Engineering Committee within thirty (30) days after the date of this contract, and shall each have the right at any time and from time to time to remove any one or more of its representatives on such Committee and to appoint a new representative or representatives in substitution therefor.

(4) "Estimated Limiting Line of Commercial Productivity"

Surface boundary line or lines, fixed heretofore by the Engineering Report or hereafter by the Engineering Committee, which mark out the geographical surface areas underlain by the various commercially productive zones.

- (b) Navy and Standard shall, subject to the further provisions of this contract, share in the oil, gas, natural gasoline and associated hydrocarbons produced from each commercially productive zone underlying the Reserve upon the basis of the percentages representing the ratio between (1) the estimated acre-feet (heretofore determined in the manner provided in the Engineering Report or hereafter determined by the Engineering Committee applying weighting factors in accordance with sound oil field engineering principles) of oil and/or gas bearing formations within the Estimated Limiting Line of Commercial Productivity for each such commercially productive zone underlying the respective lands of Navy and Standard as of November 20, 1942, and (2) the total of such estimated acre-feet within the Estimated Limiting Line of Commercial Productivity for such zone as of November 20, 1942. These percentages are initially established for each known commercially productive zone in paragraph (d) of this Section 2. Such percentages may be revised as hereinafter provided and when so revised shall be retroactive to November 20, 1942.

- (c) The known commercially productive zones identified by the Engineering Report are as follows:

Dry Gas Zone: All dry gas bearing formations above the top of the Lower Scales marker bed.

Shallow Oil Zone: All oil and gas bearing formations of Pliocene Age above the Reef Ridge Shale.

Stevens Zone: All oil and gas bearing formations of Upper Miocene Age within the stratigraphic interval between the top of the Reef Ridge Shale and the top of Valvulineria Californica or associated faunas of Middle Miocene Age.

- (d) The percentage participations of Navy and Standard in the production from the known commercially productive zones underlying the lands in the Reserve are, as set out in the Engineering Report, initially established as follows:

<u>Dry Gas Zone</u>	
Navy	77.0492 %
Standard	22.9508 %

<u>Shallow Oil Zone</u>	
Navy	63.9301 %
Standard	36.0699 %

<u>Stevens Zone</u>	
Navy	65.4517 %
Standard	34.5483 %

- (e) As any other prospective zone is proved by development to be commercially productive, an Estimated Limiting Line of Commercial Productivity for such zone shall be established by the Engineering Committee and a determination made of (1) the estimated acre-feet of oil and/or gas bearing formations in such zone underlying the respective lands of Navy and Standard, and (2) the total of such estimated acre-feet within the Estimated Limiting Line of Commercial Productivity for such zone. The initial percentages of participation in production from such zone shall then be determined in accordance with the formula described in paragraph (b) of this Section 2. Such determination shall be made by the Engineering Committee after examination of all available data, provided the members of such Committee agree unanimously thereon. Such determination shall be set forth in a written report to be furnished Navy and Standard and shall be binding upon Navy and Standard. If the Engineering Committee is unable to agree unanimously upon such determination, the Secretary of the Navy shall make such determination, as hereinafter provided in Section 9.
- (f) The initial or any subsequently established percentage participations in the production from any commercially productive zone underlying lands in the Reserve shall be subject to revision from time to time in the manner hereinafter set forth. Whenever Navy or Standard is of the opinion that consideration should be given to the revision of such percentages, it shall

notify the other thereof in writing. The Engineering Committee shall promptly examine and review all available data, and if the Committee finds that any one or more of the following exist:

- (1) The presence, as of November 20, 1942, of commercially productive oil and/or gas bearing formations extending beyond the Estimated Limiting Line of Commercial Productivity for any zone;
- (2) The absence or exhaustion, as of November 20, 1942, of commercially productive oil and/or gas bearing formations within the Estimated Limiting Line of Commercial Productivity for any zone;
- (3) A variation, as of November 20, 1942, from the acre-feet of commercially productive oil and/or gas bearing formations previously estimated to be contained within the Estimated Limiting Line of Commercial Productivity for any zone;
- (4) A variation, as of November 20, 1942, from the acre-feet of commercially productive oil and/or gas bearing formations previously estimated to underlie the respective lands of Navy and Standard; or
- (5) Any condition, fact or circumstance which will aid in a more accurate determination of such percentages as of November 20, 1942;

said Committee shall thereupon determine, in accordance with the formula described in paragraph (b) of this Section 2, the revision, if any, to be made. Any revision unanimously agreed upon by the members of the Engineering Committee shall be set forth and explained in a written report to be furnished Navy and Standard, and such revision shall be binding upon both Navy and Standard. If the Engineering Committee is unable to agree unanimously upon any such proposed revision, the Secretary of the Navy, as hereinafter provided in Section 9, shall determine what revision, if any, shall be made.

- (g) Revisions of percentage participations under this Section 2 shall be retroactive to November 20, 1942, and all necessary adjustments shall be made in future allocations of production between Navy and Standard in order to give effect to such revisions of percentage participations.

Section 3. Control by Navy of Exploration, Prospecting, Development, and Operation of the Reserve.

- (a) Navy shall, subject to the provisions hereof, have the exclusive control over the exploration, prospecting, development, and operation of the Reserve, and Navy may, in its discretion, explore, prospect, develop, and/or operate the Reserve directly with its own personnel or it may contract for all or any part of such exploration, prospecting, development and/or operation with competent and responsible parties. Such contracts may be awarded by Navy either upon the basis of competitive bids or by direct negotiation, in its sole discretion, subject to applicable law, but Navy shall always use its best efforts to secure as economical an operation as is consistent with sound oil field engineering practices. If any such contract is awarded to Standard at any time, it shall provide for the performance of the work thereunder at the actual cost thereof to Standard. Subject to the other provisions hereof, Navy and Standard shall each be obligated to bear its respective share of all costs and expenses incurred or contracted for by Navy in the exploration, prospecting, development and operation of the Reserve as a unit under this contract.
- (b) All exploration, prospecting, development, and producing operations on the Reserve shall be carried on under the supervision and direction of an Operating Committee consisting of two petroleum engineers, one of whom shall be appointed by and shall represent Navy and the other shall be appointed by and shall represent Standard. Each appointee shall have had at least ten (10) years' experience as a petroleum engineer, or if a graduate engineer, at least five (5) years' such experience. Navy and Standard shall each have the right at any time and from time to time to remove its representative on such Committee and to appoint a new representative in substitution therefor. Subject to the other provisions hereof, the Operating Committee shall perform the following functions:

- (1) Determine the number of wells to be drilled on the Reserve necessary to secure and to maintain production under this contract, and the location and depth of each well.
- (2) Determine the rate at which each well should be produced in accordance with sound oil field engineering practices.
- (3) Inspect and supervise all exploration, prospecting, development and producing operations on the Reserve.
- (4) Require the use of sound oil field engineering practices designed to achieve the maximum economic recovery of oil from the Reserve.
- (5) Act with respect to such other matters as may be elsewhere herein provided or as may hereafter be referred to the Committee from time to time by both Navy and Standard.

Section 4. Control by Navy of Rate of Exploration, Prospecting, Development, and Production.

- (a) Except as otherwise limited or provided in this contract, and subject always to the limitations described above in paragraph (8) of the Recitals, Navy shall have full and absolute power to determine from time to time the rate of prospecting and development on, and the quantity and rate of production from, the Reserve, and may from time to time shut in wells on the Reserve if it so desires.
- (b) Until Standard shall have received from its share of production from the Shallow Oil Zone the quantity of oil it is permitted to receive under the provisions of paragraph (d) of Section 5, the Reserve shall be developed and operated in such manner and to such extent as will, so far as practicable, permit production from the Shallow Oil Zone to be maintained at a rate sufficient to produce therefrom not less than 15,000 barrels of oil per day, averaged over each quarterly period, or such lesser amount as may be fixed by the Secretary of the Navy under the terms of paragraph (d) of Section 5. Navy may, however, at any time and at its election, increase such rate of production. After Standard shall have received the quantity of production permitted to be received by it under the provisions of paragraph (d) of Section 5, production from the Shallow Oil Zone shall be maintained at a rate no greater than that required to insure the delivery to Standard of the quantity of oil which Standard is permitted, under the provisions of paragraph (f) of Section 5, to receive from the Reserve, unless Navy determines to increase such rate of production.
- (c) The drilling of wells hereafter for exploratory purposes shall be governed by the following provisions of this paragraph:
 - (1) Either Navy or Standard may at any time advise the Engineering Committee of its desire to have an exploratory well drilled at a given location for the purpose of securing additional data for possible revision of the percentage participations of Navy and Standard (then obtaining under Section 2) in the production from any established commercially productive zone or zones in the Reserve. If the Engineering Committee unanimously determines that such well should be drilled for such purpose, then such well shall be drilled and the cost of drilling and equipping such well shall be borne by Navy and Standard in proportion to their percentage participations (then obtaining under Section 2) applicable to the zone to which such well is drilled. In the event of the failure of the Engineering Committee to reach such a unanimous determination, the matter shall be referred to the Secretary of the Navy for determination in the manner herein-after provided in paragraph (b) of Section 9. If the Secretary determines that such well shall be drilled for such purpose, the cost of drilling and equipping such well shall be borne by Navy and Standard in proportion to their percentage participations (then obtaining under Section 2) applicable to the zone to which such well is drilled. If upon such reference the Secretary determines that such well should not be drilled for such purpose, or if the Engineering Committee shall in the first instance unanimously make the same determination, the party proposing the drilling of such well shall, notwithstanding such determination, be entitled to have such well drilled but the cost of drilling and equipping such well shall be borne solely by such party.
 - (2) If either Navy or Standard desires at any time to have an exploratory well drilled for the purpose of establishing the existence of any additional commercially productive zone in the Reserve, it shall so advise the other party. If Navy and Standard agree that

such well shall be drilled, fifty percent (50%) of the cost of drilling and equipping such well shall initially be paid by Navy and fifty percent (50%) by Standard. If such well establishes the existence of a commercially productive zone, a subsequent adjustment of such initial equal division of cost shall be made between Navy and Standard on the basis of their respective percentage participations in the production from such additional zone when such percentages are initially determined pursuant to paragraph (c) of Section 2. If Navy and Standard do not agree upon the drilling of such well, then the party desiring to drill such well shall be entitled to have such well drilled but at its sole cost and expense.

- (3) The production taken from any exploratory well drilled pursuant to this paragraph (c) shall, irrespective of the manner in which the costs of initially drilling and equipping such well are borne by Navy and/or Standard under the foregoing sub-paragraphs (1) and (2), be allocated between Navy and Standard as provided hereinafter in Section 5 with respect to production from the zone to which such well is drilled.

Section 5. Allocation of Production.

- (a) Standard shall be charged with the quantity of production which it shall have received from the Shallow Oil Zone underlying the Reserve (whether produced from Navy's lands or Standard's lands) during the period from November 20, 1942 to the date of this contract. Such quantity shall be retained by Standard and charged against Standard's interest in the total production from such zone. Standard shall, notwithstanding any provision of the Reversion and Temporary Operating Agreement, dated September 8, 1943, as extended, be under no obligation to account to Navy for that portion of such production which came from Navy's lands.
- (b) Standard shall account in cash to Navy for Navy's share (based upon Navy's percentage participations then obtaining under Section 2) of all production which Standard shall have received from the Dry Gas Zone and from the Stevens Zone during the period from November 20, 1942 to the date of this contract, and such total production from each such zone shall be charged against the respective interests of Navy and Standard in the total production from such zone.
- (c) All production from any of the tracts of land referred to in sub-paragraphs (b) and (c) of paragraph (3) of the Recitals, but which are not now owned or controlled by Navy (although included in the calculation of Navy's percentage participations set forth in paragraph (d) of Section 2), during the period from November 20, 1942 to the date upon which Navy shall acquire or otherwise gain control of any such tract, shall be charged against Navy's interest, as of November 20, 1942, in the total production from the zone or zones from which such production came.
- (d) Standard shall be permitted to receive from production from the Shallow Oil Zone after the date of this contract 15,000 barrels of oil per day, averaged over each calendar quarterly period, together with associated hydrocarbons, or such lesser quantity as the Secretary of the Navy in his absolute discretion (provided that he is not then causing petroleum to be produced pursuant to a joint resolution of Congress) may, after not less than 90 days' written notice to Standard, fix as the average daily quantity which Standard will thereafter be permitted to receive under this paragraph (d), until either
 - (1) such time as the Secretary of the Navy in his absolute discretion (provided that he is not then causing petroleum to be produced pursuant to a joint resolution of Congress) may, after not less than 90 days' written notice to Standard, suspend such production; or
 - (2) the total quantity of oil received by Standard from production from the Shallow Oil Zone from and after November 20, 1942 equals 25,000,000 barrels of oil, together with associated hydrocarbons; or
 - (3) the total quantity of oil received by Standard from production from the Shallow Oil Zone from and after November 20, 1942 equals one-third (1/3) of Standard's share of the estimated recoverable oil, determined by the Engineering Committee, within the Estimated Limiting Line of Commercial Productivity for the Shallow Oil Zone, as of November 20, 1942;

whichever of said events shall first occur. The period of time during which Standard is permitted to receive production from the Shallow Oil Zone under this paragraph (d) is hereinafter sometimes referred to as the "primary period." All oil so received by Standard during the primary period shall be charged against Standard's interest in the total production from the Shallow Oil Zone. The Engineering Committee shall convene within thirty (30) days after the date of this contract for the purpose of determining, as provided in subparagraph (3) of this paragraph (d), the estimated recoverable oil within the Estimated Limiting Line of Commercial Productivity for the Shallow Oil Zone as of November 20, 1942. Such determination shall be completed, or notification of disagreement given as provided in paragraph (b) of Section 9, not later than six (6) months after the date of this contract. Consideration shall be given by the Engineering Committee to the revision of such determination whenever, in the opinion of either Navy or Standard and upon notice in writing to the other, developments in the field warrant such re-examination.

- (e) If, during the primary period, Navy shall elect to require production from the Shallow Oil Zone at a rate in excess of the average daily quantity which Standard is permitted to receive under the provisions of paragraph (d) of this Section 3, Navy shall take all of such excess production until such time as the total quantity of production received by Navy from the Shallow Oil Zone, together with any production charged to Navy's interest in the production from such zone under the provisions of paragraph (c) of this Section 3, shall equal Navy's share (based upon the percentage participations then obtaining under Section 2) of all production from the Shallow Oil Zone from and after November 20, 1942. Thereafter, all production from the Shallow Oil Zone shall be allocated to and received by Navy and Standard, respectively, in accordance with the percentage participations then obtaining under Section 2 applicable to such zone, provided, however, that Standard's right to receive production from the Shallow Oil Zone during the primary period under paragraph (d) of this Section 3 shall not be impaired or lessened except in the manner and on the conditions provided in such paragraph (d). All production received by Navy and Standard, respectively, under this paragraph (e) shall be charged against their respective interests in the total production from the Shallow Oil Zone.
- (f) If, at any time, Navy shall elect (see paragraph (8) of the Recitals) to suspend or to reduce production from the Reserve, Standard shall nevertheless, subject to the other provisions of this paragraph (f), be permitted to receive a daily quantity of production from the Reserve, the value of which, averaged over each quarterly period, shall equal the sum of (1) Standard's share of the current expenses of protecting, conserving, testing, and maintaining the Reserve in good oil-field condition, and (2) the real and personal taxes levied or assessed against Standard's lands and equipment and/or its rights and interests under this contract. In determining the quantity of such production, the value of crude oil and natural gasoline shall be measured by the average posted market price offered and paid for crude oil and natural gasoline of similar gravity, quality and grade in Kern County, California by the major oil purchasing companies, excluding Standard, at the time such crude oil and natural gasoline are run, (the price so used to be in no event less than Standard's posted price), and the value of dry gas shall be measured by the average price per thousand cubic feet paid in Kern County, California by gas purchasing companies, or the highest price paid to Standard by such companies for gas produced from the Reserve, whichever is higher at the time such gas is run. The production to be received by Standard under this paragraph (f) shall be taken from such zone or zones as may be determined from time to time by Navy, and all such production shall be charged against Standard's interest in the total production from the zone from which produced. If the total quantity of production received by Standard under this paragraph (f) from any zone, together with the quantity theretofore received by Standard from such zone from and after November 20, 1942, shall at any time equal one-third (1/3) of Standard's share of the estimated recoverable oil, determined by the Engineering Committee, within the Estimated Limiting Line of Commercial Productivity for such zone, as of November 20, 1942, then Standard shall not be permitted to receive any further production from such zone under this paragraph (f). In such event Standard shall be permitted to receive production under this paragraph (f) from any other zone or zones (to be determined by Navy), provided that Standard shall not be permitted to receive production under this paragraph (f) from any such other zone at any time when the total quantity of oil received by Standard therefrom since November 20, 1942 shall equal one-third (1/3) of its share of the estimated recoverable oil, determined by the Engineering Committee, within the Estimated Limiting Line of Commercial Productivity for such zone, as of November 20, 1942.

- (g) If, during the primary period, Navy shall elect to permit production from any zone other than the Shallow Oil Zone, or if, after the expiration of the primary period, Navy shall elect to permit production from the Reserve in excess of the production which Standard may then be receiving under the provisions of paragraph (f) of this Section 5, then and in either such event Navy and Standard, respectively, shall take and share in such production from the respective zones as follows:

Standard shall take and receive only one-third (1/3) of what its percentage participations in the production from the respective zone would have been if the quantities of oil received by Navy and Standard, respectively, from such zone were in balance with the percentage participations (then obtaining under Section 2) in the total production from such zone, and Navy shall take and receive the remainder of the production from such zone until such time as such allocations have had the effect of bringing the quantities of oil received by Navy and Standard, respectively, from the respective zones from and after November 20, 1942, (including any production charged to Navy's interest in production from the respective zones under the provisions of paragraph (c) of this Section 5), into balance with their respective percentage participations (then obtaining under Section 2) in the total production from such respective zones. Thereafter, subject always to the provisions of paragraph (f) of this Section 5, all production from each zone shall be allocated to and received by Navy and Standard, respectively, in accordance with the percentage participations then obtaining under Section 2 applicable to such zone. The quantities of production received by Navy and Standard, respectively, from the respective zones under this paragraph (g) shall be charged against their respective interests in the total production from such respective zones.

- (h) Neither Navy nor Standard shall be permitted ultimately to receive, so far as is feasible, a proportion of the total production withdrawn from any zone in excess of its percentage participation in such zone. If, however, at the time when any zone shall become exhausted or substantially so, the quantities of production received by Navy and Standard, respectively, from such zone shall not, for any reason, be in balance with their respective percentage participations (then obtaining under Section 2) in the total production from such zone, then an adjustment shall be made in future allocations of production from other zones in order to bring such quantities into balance. If, on the termination of this contract under paragraph (a) of Section 11, the quantities of production received by Navy and Standard, respectively, from all zones shall not be in balance with their respective percentage participations (then obtaining under Section 2) in the total production from all zones, an appropriate cash adjustment shall be made.

Section 5. Costs of Exploration, Prospecting, Development and Operation.

- (a) Ultimate Sharing of Costs. The costs of exploring, prospecting, developing and operating the Reserve, incurred by Navy and/or Standard (including any costs which Navy may hereafter incur, directly or indirectly, by reason and in respect of the development of "Navy's lands", as defined in subparagraphs (a), (b) and (c) of paragraph (3) of the Recitals, by Navy's predecessors in title, after November 20, 1942 and prior to acquisition by Navy) from and after November 20, 1942 and throughout the life of this contract with respect to each zone underlying the Reserve, and, in the case of the Stevens Zone, certain additional exploratory, prospecting and development costs incurred prior to November 20, 1942, as shown on Exhibit B annexed hereto and hereby made a part hereof, and which disclosed the existence of commercial production in the Stevens Zone, shall be borne ultimately by Navy and Standard in accordance with their respective percentage participations under Section 2 of this contract in the total production from such zone, except as otherwise provided in paragraph (c) of Section 4 with respect to exploratory wells. The cost to Navy or Standard of any and all wells, equipment and facilities (including gathering lines and stock tanks), owned or hereafter acquired by either Navy or Standard and located on the lands of Navy and Standard in the Reserve, after November 20, 1942, shall be borne by either Navy or Standard alone, as the case may be, and shall not, with the exception of the Stevens Zone costs referred to in Exhibit B, be included within the costs to be borne ultimately by Navy and Standard under this paragraph. All taxes levied or assessed against Standard's lands and equipment and/or its rights and interests under this contract shall be borne by Standard alone and shall not be included within the costs to be borne ultimately by Navy and Standard under this paragraph.
- (b) Current Payment of Costs. Subject to the ultimate sharing of responsibility as specified in paragraph (a) of this Section 5, the respective liabilities of Navy and Standard for current costs under the preceding paragraph (a) shall accrue and be paid at the times and in the manner hereinafter set forth:

- (1) Navy and Standard shall each pay currently at least once each month that proportion of the total costs accruing during the period for which payment is made with respect to each zone which the quantity of production currently received by it from such zone during such period bears to the total quantity of production currently received by both Navy and Standard from such zone during such period, except in the following instances:

(i) Additional production from the Shallow Oil Zone during the primary period.

If, at any time during the primary period, Navy shall determine, under Section 4, to require production from the Shallow Oil Zone at a rate in excess of that permitted to be received by Standard under paragraph (d) of Section 5, and, in order to accomplish such purpose, it becomes necessary, in the opinion of the Operating Committee, to drill or recondition and to equip wells to achieve such increased rate of production, and to install tanks and other equipment to receive and handle the production at such increased rate, the cost thereof shall be currently paid by Navy at least once each quarter until such increased rate has been obtained. For this purpose the Operating Committee shall determine, as soon as practicable after the expiration of each quarter during the primary period, the proportion of the costs accruing during such period which are properly to be paid currently by Navy under the provisions of this subparagraph (i). When such increased rate of production has been attained, the cost of such development as may thereafter be needed to maintain the total production at the increased rate shall be paid by Navy and Standard as hereinbefore provided in paragraph (1) of this Section 6.

(ii) Exploratory Wells in the Shallow Oil Zone.

If, at any time during the primary period, there shall be drilled to the Shallow Oil Zone an exploratory well, the cost of which is (pursuant to paragraph (c) of Section 4) to be borne ultimately by Navy and Standard in the proportions of their respective percentage participations applicable to such Zone under Section 2, the costs of drilling such well and of testing it for production shall be paid currently by Navy and Standard in the same proportions; provided that, if any such well is drilled and completed when, under Section 4, Navy has not determined to require production from the Shallow Oil Zone in excess of that permitted to be received by Standard under paragraph (d) of Section 5, and if Standard elects to utilize such well for production (beyond that necessary for test purposes) in order to maintain the rate of production to which it is entitled under paragraph (d) of Section 5, Standard shall thereupon currently pay the full cost of drilling and equipping such well; and provided, further, that if any such well is drilled and completed when, under Section 4, Navy has determined to require production from the Shallow Oil Zone at a rate in excess of that permitted to be received by Standard under paragraph (d) of Section 5, but prior to the time the increased rate is attained, and if Navy elects to utilize such well for production (beyond that necessary for test purposes), the full cost of drilling and equipping such well shall be currently paid by Navy in the same manner as provided in subparagraph (i) of paragraph (b) of this Section 6.

(iii) Exploratory Wells in the Stevens Zone.

If, at any time, Navy shall suspend or reduce production from the Reserve as contemplated in paragraph (f) of Section 5 and shall elect to permit production from the Stevens Zone under such paragraph, and as a result thereof the quantity of production received by Standard from such zone is greater than its share (based upon the percentage participations then obtaining under Section 2) of all production from such zone from and after November 20, 1942, then, notwithstanding that Navy and Standard are not in balance in production received from such zone, the costs of drilling and equipping any exploratory wells in the Stevens Zone which, pursuant to the provisions of paragraph (c) of Section 4, are to be borne by Navy and Standard in proportion to their percentage participations (then obtaining under Section 2) applicable to such zone, shall be currently paid by Navy until such time as the total payments by Navy and Standard, respectively, of the costs of exploration, prospecting, development and operation referred to in paragraph (a) of this Section 6 with respect to such zone have been brought into balance with their respective percentage participations (then obtaining under Section 2) in the total production from such zone.

(iv) Development for readiness purposes.

If, at any time during the life of this contract, Navy shall drill and equip, or cause to be drilled and equipped, wells (other than exploratory wells drilled pursuant to paragraph (c) of Section 4) for the purpose, not of immediate production, but of having productive capacity available and ready to produce in the future as Navy shall determine, the cost thereof shall be currently paid by Navy.

(v) Equilibrium in receipt of production.

If, as to the Shallow Oil Zone, at any time after the primary period, and, as to any other zone, at any time during the life of this contract, the quantities of production received by, or charged to, Navy and Standard, respectively, from any zone since November 20, 1942 shall be in balance with their percentage participations (then obtaining under Section 2) in the total production from such zone, and if at such time the payments of the costs of exploration, prospecting, development and operation referred to in paragraph (a) of this Section 6 theretofore made by Navy and Standard, respectively, with respect to such zone shall not be in the same proportions as the respective quantities of production received by, or charged to, each from such zone since November 20, 1942, thereafter current payment of all costs accruing in respect of such zone, except those costs provided for in subparagraph (vi) below, shall be made by either Navy or Standard, as the case may be, in such manner and for such period of time as may be necessary to bring the total payments of such costs by Navy and Standard, respectively, in balance with their percentage participations (then obtaining under Section 2) in the total production from such zone.

(vi) Suspension of production by Navy.

If, at any time, Navy shall suspend or reduce production from the Reserve as contemplated in paragraph (f) of Section 5, thereafter the costs incurred in producing the limited quantity of production provided in paragraph (f) of Section 5 shall be paid currently by Standard. All other costs of protecting, maintaining and operating the Reserve shall be currently paid by Navy (subject to appropriations by Congress) and Standard in accordance with the percentage participations then obtaining under Section 2. The Operating Committee shall determine, as soon as practicable after the expiration of each quarterly period referred to in paragraph (f) of Section 5, the proportions of the costs accruing during such period which are properly to be paid currently by Navy and Standard, respectively, under the terms of this subparagraph (vi).

- (c) The costs referred to in paragraph (a) of this Section 6 with respect to the Stevens Zone incurred prior to the date of this contract have been paid by Standard and shall, therefore, be deemed to have accrued against Standard at the time so paid; and Standard's ultimate liability for the costs referred to in said paragraph (a) in respect of the Stevens Zone shall, to that extent, be deemed to have been satisfied. It is recognized by Navy and Standard that the quantities of production received by each since November 20, 1942 from the Stevens Zone are, by reason of paragraph (b) of Section 3, in balance, as of the date of this contract, with their respective percentage participations in the Stevens Zone (initially obtaining under Section 2); and, further, that the costs so paid by Standard shall be taken into account in determining, under subparagraph (v) of paragraph (b) of this Section 6, the liability for current payment of costs in respect of the Stevens Zone incurred after the date of this contract.
- (d) This contract shall supersede the provisions of the Rescission and Temporary Operating Agreement, dated September 8, 1943, as extended, relating to the costs incurred by Standard in the development of, and operations on, Navy's lands.

Section 7. Disposition of Production.

Navy (subject to applicable law) and Standard shall each have the right to take delivery, and make such disposition, of the production allocated to it hereunder as it may desire, and each party shall make prompt disposition thereof or provide its own storage over and above such storage facilities as may be available for use under the provisions of paragraph (d) of Section 1. Neither Navy nor Standard shall have any preferential right to purchase any portion of the other's share of such production.

Section 8. Helium.

The right to extract helium from any gas produced from the Reserve shall belong exclusively to Navy, and Navy shall not be compelled to account to Standard in any degree for such helium as it may elect to take hereunder. Navy shall bear all costs directly attributable to the extraction of such helium.

Section 9. Determination of Disputes.

- (a) In the event the Operating Committee is unable to agree upon any matter arising in the performance of its functions, such matter shall be referred to the Secretary of the Navy for determination; and his decision in each such instance shall be final and shall be binding upon Navy and Standard.
- (b) In the event the Engineering Committee is unable to agree unanimously upon any matter subject to determination by it, said Committee shall notify both Navy and Standard thereof and shall refer such matter to the Secretary of the Navy for determination. Thereupon the Secretary of the Navy on his own initiative may, and upon the request of Standard shall, submit the matter to an independent petroleum engineer, to be selected by him, for the purpose of securing an advisory report thereon from such engineer. The compensation and expenses of such engineer shall be borne by Navy and Standard in the respective percentages then obtaining under Section 2, and a copy of such report shall be supplied to Standard. After consideration of the matter, the Secretary of the Navy shall render his decision thereon and such decision in each such instance shall be final and shall be binding upon Navy and Standard.

Section 10. Accounting.

Navy shall cause to be kept complete and accurate records of all matters and transactions affecting the Reserve or its development and operation hereunder, and such records shall be available at all reasonable times for inspection by Standard's accredited representatives. Navy shall, within a reasonable time after the end of each calendar month throughout the term of this contract, cause to be furnished to Standard a detailed statement of account setting forth the quantity of production from the Reserve during such month and the costs of development and operation incurred therein. The expenses incurred or contracted for by Navy under this Section 10 shall be deemed a part of the costs of operating the Reserve hereunder and, as such, shall be borne and paid by Navy and Standard under the provisions of Sections 3 and 6. All records of Standard pertaining to the exploration, prospecting, development and operation of the Reserve, either prior to or after the date of this contract, and all data obtained from wells on lands owned in fee by Standard outside the Reserve but contiguous thereto, shall be available at all reasonable times for inspection by Navy's accredited representatives.

Section 11. Term.

- (a) Unless sooner terminated as provided in paragraph (b) of this Section, this contract shall continue and remain in full force and effect as long as oil, gas, natural gasoline and/or associated hydrocarbons can be produced from the Reserve in paying quantities.
- (b) This contract may be terminated at any time by the Secretary of the Navy in his discretion and subject to the approval of the President on six (6) months' written notice to Standard. Such termination shall be effective as of the date fixed therefor and shall not operate retroactively or to impair the rights and obligations of Navy or Standard under this contract accruing to the termination date. Termination shall be followed by an adjustment of all such rights and obligations, including the rights and obligations growing out of the costs incurred, and the respective quantities of production received, by Navy and Standard, respectively, under the contract, on a fair and equitable basis.

Section 12. Notices.

All notices required or permitted to be given under this contract shall be directed to the parties as follows:

Secretary of the Navy,
Navy Department,
Washington, D. C.

Standard Oil Company of California
225 Bush Street
San Francisco, California

Any such notice shall be in writing and may be personally delivered or sent by registered mail or telegraph to the party for whom intended at the address of such party as specified above. Either party may by notice given as aforesaid change its address for notices thereafter.

Section 13. Unlawful Interest.

No Member or Delegate to Congress or Resident Commissioner, after his election or appointment, or either before or after he has qualified and during his continuance in office, and no officer, agent or employee of the Department of the Navy, shall be admitted to any share or part of this contract or derive any benefit that may arise therefrom but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit; and the provisions of Section 3741 of the Revised Statutes of the United States, and Sections 114, 115 and 116 of the Codification of the Penal Laws of the United States approved March 4, 1909 (35 Stat. 1109), relating to contracts, enter into and form a part of this contract so far as the same may be applicable.

Section 14. Covenant Against Contingent Fees.

Standard warrants that it has not employed any person to solicit or secure this contract upon any agreement for a commission, percentage, brokerage or contingent fee. Breach of this warranty shall give Navy the right to annul this contract or, in its discretion, to deduct from any amounts which may become owing to Standard by Navy hereunder the amount of such commission, percentage, brokerage or contingent fee.

Section 15. Inclusion of Additional Lands.

- (a) Navy and Standard have expressly excluded from this contract Standard's leasehold interest under an oil and gas lease, dated September 16, 1941, from Kern County Land Company, covering the 335.6-acre tract owned in fee by Kern County Land Company in the W 1/2 of Section 31, T. 30 S., R. 25 E., M.D.B.M., within the Reserve. This exclusion has resulted from uncertainty, due to the present lack of adequate information, as to whether or not the Stevens Zone underlying all or any part of such tract is part of the same Stevens Zone structure underlying the remainder of the Reserve and covered by this contract. It is contemplated by Navy and Standard that an exploratory program will be carried on, independently of this contract, to determine the relationship of these structures. If it is established that the Stevens Zone underlying all or any part of such tract is a part of the same Stevens Zone structure underlying the remainder of the Reserve, Standard's leasehold interest in the area affected will, upon the acquisition by Navy of control over the Kern County Land Company's interest in the area affected, be included within the unit operation created hereby.
- (b) It is contemplated that it may hereafter be desirable to include under the terms of this contract other lands located outside of the present limits of the Reserve but which lie on the same geologic structure underlying the present limits of the Reserve. If and when any such situation shall arise, Navy and Standard will endeavor to agree upon the terms and conditions on which such additional lands may be included under this contract upon the basis of the estimated acre-feet of commercially productive formations in each commercially productive zone underlying such additional lands. If Navy and Standard shall be unable to agree upon the terms and conditions on which such additional lands may be included, the Secretary of the Navy shall decide such terms and conditions upon a fair and equitable basis, and such decision in each such instance shall be final and shall be binding upon Navy and Standard. In determining the estimated acre-feet of commercially productive formation underlying such additional lands, the Secretary shall, at Standard's request or on his own initiative, secure and consider an advisory report from an independent petroleum engineer in the manner provided in paragraph (b) of Section 9.

IN WITNESS WHEREOF, the parties hereto have executed this contract in triplicate as of the day and year first above written.

THE UNITED STATES OF AMERICA

By /s/ JAMES FORRESTAL
Secretary of the Navy

STANDARD OIL COMPANY OF CALIFORNIA

By /s/ H. D. COLLIER
President

[SEAL]

Attest:

/s/ G. M. FOSTER
Assistant Secretary

I, FRANKLIN D. ROOSEVELT, President of the United States of America, on the 28th day of June, 1944, do hereby approve the execution of the foregoing contract by the Secretary of the Navy.

/s/ FRANKLIN D. ROOSEVELT
President of the United States

City and County of San Francisco

On this 26th day of June in the year one thousand nine hundred and forty-four, before me, FRANK L. OWEN, a Notary Public in and for the City and County of San Francisco, State of California, residing therein, duly commissioned and sworn, personally appeared

G. M. FOSTER

known to me to be

President and Assistant Secretary, respectively

of Standard Oil Company of California, the corporation described in and that executed the within instrument, and also known to me to be the persons who executed the within instrument on behalf of said corporation and acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, in the City and County of San Francisco, the day and year in this certificate first above written.

/s/ FRANK L. OWEN

/s/ FRANK L. OWEN
Notary Public in and for the City and County of San Francisco, State of California.

My Commission Expires Nov. 22, 1945

EXHIBIT 7

Form 3100-11
(October 2008)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Serial Number

OFFER TO LEASE AND LEASE FOR OIL AND GAS

The undersigned (page 2) offers to lease all or any of the lands in Item 2 that are available for lease pursuant to the Mineral Lands Leasing Act of 1920, as amended and supplemented (30 U.S.C. 181 et seq.), the Mineral Leasing Act for Acquired Lands of 1947, as amended (30 U.S.C. 351-359), or _____ (other).

READ INSTRUCTIONS BEFORE COMPLETING

1. Name

Street

City, State, Zip Code

2. This application/offer/lease is for: (Check Only One) ☐ PUBLIC DOMAIN LANDS ☐ ACQUIRED LANDS (percent U.S. interest _____)

Surface managing agency if other than Bureau of Land Management (BLM): _____ Unit/Project _____

Legal description of land requested: *Parcel No.: _____ *Sale Date (mm/dd/yyyy): _____

***See Item 2 in Instructions below prior to completing Parcel Number and Sale Date.**

T.

R.

Meridian

State

County

Amount remitted: Filing fee \$ _____ Rental fee \$ _____ Total acres applied for _____
Total \$ _____

DO NOT WRITE BELOW THIS LINE

3. Land included in lease:

T.

R.

Meridian

State

County

Total acres in lease _____

Rental retained \$ _____

This lease is issued granting the exclusive right to drill for, mine, extract, remove and dispose of all the oil and gas (except helium) in the lands described in Item 3 together with the right to build and maintain necessary improvements thereupon for the term indicated below, subject to renewal or extension in accordance with the appropriate leasing authority. Rights granted are subject to applicable laws, the terms, conditions, and attached stipulations of this lease, the Secretary of the Interior's regulations and formal orders in effect as of lease issuance, and to regulations and formal orders hereafter promulgated when not inconsistent with lease rights granted or specific provisions of this lease.

NOTE: This lease is issued to the high bidder pursuant to his/her duly executed bid form submitted under 43 CFR 3120 and is subject to the provisions of that bid and those specified on this form.

THE UNITED STATES OF AMERICA

Type and primary term:

☐ Noncompetitive lease (ten years)by _____
(BLM)☐ Competitive lease (ten years)

(Title)

(Date)

☐ Other _____ EFFECTIVE DATE OF LEASE _____

(Continued on page 2)

4. (a) Undersigned certifies that (1) offeror is a citizen of the United States; an association of such citizens; a municipality; or a corporation organized under the laws of the United States or of any State or Territory thereof, (2) all parties holding an interest in the offer are in compliance with 43 CFR 3100 and the leasing authorities; (3) offeror's chargeable interests, direct and indirect, in each public domain and acquired lands separately in the same State, do not exceed 246,080 acres in oil and gas leases (of which up to 200,000 acres may be in oil and gas options or 300,000 acres in leases in each leasing District in Alaska of which up to 200,000 acres may be in options, (4) offeror is not considered a minor under the laws of the State in which the lands covered by this offer are located; (5) offeror is in compliance with qualifications concerning Federal coal lease holdings provided in sec. 2(a)2(A) of the Mineral Leasing Act; (6) offeror is in compliance with reclamation requirements for all Federal oil and gas lease holdings as required by sec. 17(g) of the Mineral Leasing Act; and (7) offeror is not in violation of sec. 41 of the Act. (b) Undersigned agrees that signature to this offer constitutes acceptance of this lease, including all terms conditions, and stipulations of which offeror has been given notice, and any amendment or separate lease that may include any land described in this offer open to leasing at the time this offer was filed but omitted for any reason from this lease. The offeror further agrees that this offer cannot be withdrawn, either in whole or in part unless the withdrawal is received by the proper BLM State Office before this lease, an amendment to this lease, or a separate lease, whichever covers the land described in the withdrawal, has been signed on behalf of the United States.

This offer will be rejected and will afford offeror no priority if it is not properly completed and executed in accordance with the regulations, or if it is not accompanied by the required payments.

Duly executed this _____ day of _____, 20_____
(Signature of Lessee or Attorney-in-fact)

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212 make it a crime for any person knowingly and willfully to make to any department or Agency of the United States any false, fictitious, or fraudulent statements or representations as to any matter within its jurisdiction.

LEASE TERMS

Sec. 1. Rentals--Rentals must be paid to proper office of lessor in advance of each lease year. Annual rental rates per acre or fraction thereof are:

- (a) Noncompetitive lease, \$1.50 for the first 5 years; thereafter \$2.00;
- (b) Competitive lease, \$1.50; for the first 5 years; thereafter \$2.00;
- (c) Other, see attachment, or

as specified in regulations at the time this lease is issued.

If this lease or a portion thereof is committed to an approved cooperative or unit plan which includes a well capable of producing leased resources, and the plan contains a provision for allocation of production, royalties must be paid on the production allocated to this lease. However, annual rentals must continue to be due at the rate specified in (a), (b), or (c) rentals for those lands not within a participating area.

Failure to pay annual rental, if due, on or before the anniversary date of this lease (or next official working day if office is closed) must automatically terminate this lease by operation of law. Rentals may be waived, reduced, or suspended by the Secretary upon a sufficient showing by lessee.

Sec. 2. Royalties--Royalties must be paid to proper office of lessor. Royalties must be computed in accordance with regulations on production removed or sold. Royalty rates are:

- (a) Noncompetitive lease, 12 1/2%;
- (b) Competitive lease, 12 1/2 %;
- (c) Other, see attachment; or

as specified in regulations at the time this lease is issued.

Lessor reserves the right to specify whether royalty is to be paid in value or in kind, and the right to establish reasonable minimum values on products after giving lessee notice and an opportunity to be heard. When paid in value, royalties must be due and payable on the last day of the month following the month in which production occurred. When paid in kind, production must be delivered, unless otherwise agreed to by lessor, in merchantable condition on the premises where produced without cost to lessor. Lessee must not be required to hold such production in storage beyond the last day of the month following the month in which production occurred, nor must lessee be held liable for loss or destruction of royalty oil or other products in storage from causes beyond the reasonable control of lessee.

Minimum royalty in lieu of rental of not less than the rental which otherwise would be required for that lease year must be payable at the end of each lease year beginning on or after a discovery in paying quantities. This minimum royalty may be waived, suspended, or reduced, and the above royalty rates may be reduced, for all or portions of this lease if the Secretary determines that such action is necessary to encourage the greatest ultimate recovery of the leased resources, or is otherwise justified.

An interest charge will be assessed on late royalty payments or underpayments in accordance with the Federal Oil and Gas Royalty Management Act of 1982 (FOGRMA) (30 U.S.C. 1701). Lessee must be liable for royalty payments on oil and gas lost or wasted from a lease site when such loss or waste is due to negligence on the part of the operator, or due to the failure to comply with any rule, regulation, order, or citation issued under FOGRMA or the leasing authority.

Sec. 3. Bonds - A bond must be filed and maintained for lease operations as required under regulations.

Sec. 4. Diligence, rate of development, unitization, and drainage - Lessee must exercise reasonable diligence in developing and producing, and must prevent unnecessary damage to, loss of, or waste of leased resources. Lessor reserves right to specify rates of development and production in the public interest and to require lessee to subscribe to a cooperative or unit plan, within 30 days of notice, if deemed necessary for proper development and operation of area, field, or pool embracing these leased lands. Lessee must drill and produce wells necessary to protect leased lands from drainage or pay compensatory royalty for drainage in amount determined by lessor.

Sec. 5. Documents, evidence, and inspection - Lessee must file with proper office of lessor, not later than 30 days after effective date thereof, any contract or evidence of other arrangement for sale or disposal of production. At such times and in such form as lessor may prescribe, lessee must furnish detailed statements showing amounts and quality of all products removed and sold, proceeds therefrom, and amount used for production purposes or unavoidably lost. Lessee may be required to provide plats and schematic diagrams showing development work and improvements, and reports with respect to parties in interest, expenditures, and depreciation costs. In the form prescribed by lessor, lessee must keep a daily drilling record, a log, information on well surveys and tests, and a record of subsurface investigations and furnish copies to lessor when required. Lessee must keep open at all reasonable times for inspection by any representative of lessor, the leased premises and all wells, improvements, machinery, and fixtures thereon, and all books, accounts, maps, and records relative to operations, surveys, or investigations on or in the leased lands. Lessee must maintain copies of all contracts, sales agreements, accounting records, and documentation such as billings, invoices, or similar documentation that supports costs claimed as manufacturing, preparation, and/or transportation costs. All such records must be maintained in lessee's accounting offices for future audit by lessor. Lessee must maintain required records for 6 years after they are generated or, if an audit or investigation is underway, until released of the obligation to maintain such records by lessor.

During existence of this lease, information obtained under this section will be closed to inspection by the public in accordance with the Freedom of Information Act (5 U.S.C. 552).

Sec. 6. Conduct of operations - Lessee must conduct operations in a manner that minimizes adverse impacts to the land, air, and water, to cultural, biological, visual, and other resources, and to other land uses or users. Lessee must take reasonable measures deemed necessary by lessor to accomplish the intent of this section. To the extent consistent with lease rights granted, such measures may include, but are not limited to, modification to siting or design of facilities, timing of operations, and specification of interim and final reclamation measures. Lessor reserves the right to continue existing uses and to authorize future uses upon or in the leased lands, including the approval of easements or rights-of-way. Such uses must be conditioned so as to prevent unnecessary or unreasonable interference with rights of lessee.

Prior to disturbing the surface of the leased lands, lessee must contact lessor to be apprised of procedures to be followed and modifications or reclamation measures that may be necessary. Areas to be disturbed may require inventories or special studies to determine the extent of impacts to other resources. Lessee may be required to complete minor inventories or short term special studies under guidelines provided by lessor. If in the conduct of operations, threatened or endangered species, objects of historic or scientific interest, or substantial unanticipated environmental effects are observed, lessee must immediately contact lessor. Lessee must cease any operations that would result in the destruction of such species or objects.

Sec. 7. Mining operations - To the extent that impacts from mining operations would be substantially different or greater than those associated with normal drilling operations, lessor reserves the right to deny approval of such operations.

Sec. 8. Extraction of helium - Lessor reserves the option of extracting or having extracted helium from gas production in a manner specified and by means provided by lessor at no expense or loss to lessee or owner of the gas. Lessee must include in any contract of sale of gas the provisions of this section.

Sec. 9. Damages to property - Lessee must pay lessor for damage to lessor's improvements, and must save and hold lessor harmless from all claims for damage or harm to persons or property as a result of lease operations.

Sec. 10. Protection of diverse interests and equal opportunity - Lessee must pay, when due, all taxes legally assessed and levied under laws of the State or the United States; accord all employees complete freedom of purchase; pay all wages at least twice each month in lawful money of the United States; maintain a safe working environment in accordance with standard industry practices; and take measures necessary to protect the health and safety of the public.

Lessor reserves the right to ensure that production is sold at reasonable prices and to prevent monopoly. If lessee operates a pipeline, or owns controlling interest in a pipeline or a company operating a pipeline, which may be operated accessible to oil derived from these leased lands, lessee must comply with section 28 of the Mineral Leasing Act of 1920.

Lessee must comply with Executive Order No. 11246 of September 24, 1965, as amended, and regulations and relevant orders of the Secretary of Labor issued pursuant thereto. Neither lessee nor lessee's subcontractors must maintain segregated facilities.

Sec. 11. Transfer of lease interests and relinquishment of lease - As required by regulations, lessee must file with lessor any assignment or other transfer of an interest in this lease. Lessee may relinquish this lease or any legal subdivision by filing in the proper office a written relinquishment, which will be effective as of the date of filing, subject to the continued obligation of the lessee and surety to pay all accrued rentals and royalties.

Sec. 12. Delivery of premises - At such time as all or portions of this lease are returned to lessor, lessee must place affected wells in condition for suspension or abandonment, reclaim the land as specified by lessor and, within a reasonable period of time, remove equipment and improvements not deemed necessary by lessor for preservation of producible wells.

Sec. 13. Proceedings in case of default - If lessee fails to comply with any provisions of this lease, and the noncompliance continues for 30 days after written notice thereof, this lease will be subject to cancellation unless or until the leasehold contains a well capable of production of oil or gas in paying quantities, or the lease is committed to an approved cooperative or unit plan or communitization agreement which contains a well capable of production of unitized substances in paying quantities. This provision will not be construed to prevent the exercise by lessor of any other legal and equitable remedy, including waiver of the default. Any such remedy or waiver will not prevent later cancellation for the same default occurring at any other time. Lessee will be subject to applicable provisions and penalties of FOGRMA (30 U.S.C. 1701).

Sec. 14. Heirs and successors-in-interest - Each obligation of this lease will extend to and be binding upon, and every benefit hereof will inure to the heirs, executors, administrators, successors, beneficiaries, or assignees of the respective parties hereto.

A. General:

1. Page 1 of this form is to be completed only by parties filing for a noncompetitive lease. The BLM will complete page 1 of the form for all other types of leases.
2. Entries must be typed or printed plainly in ink. Offeror must sign Item 4 in ink.
3. An original and two copies of this offer must be prepared and filed in the proper BLM State Office. See regulations at 43 CFR 1821.2-1 for office locations.
4. If more space is needed, additional sheets must be attached to each copy of the form submitted.

B. Special:

Item 1 - Enter offeror's name and billing address.

Item 2 - Identify the mineral status and, if acquired lands, percentage of Federal ownership of applied for minerals. Indicate the agency controlling the surface of the land and the name of the unit or project which the land is a part. The same offer may not include both Public

Domain and Acquired lands. Offeror also may provide other information that will assist in establishing title for minerals. The description of land must conform to 43 CFR 3110. A single parcel number and Sale Date will be the only acceptable description during the period from the first day following the end of a competitive process until the end of that same month, using the parcel number on the List of Lands Available for Competitive Nominations or the Notice of Competitive Lease Sale, whichever is appropriate.

Payments: The amount remitted must include the filing fee and the first year's rental at the rate of \$1.50 per acre or fraction thereof. The full rental based on the total acreage applied for must accompany an offer even if the mineral interest of the United States is less than 100 percent. The filing fee will be retained as a service charge even if the offer is completely rejected or withdrawn. To protect priority, it is important that the rental submitted be sufficient to cover all the land requested. If the land requested includes lots or irregular quarter-quarter sections, the exact area of which is not known to the offeror, rental should be submitted on the basis of each such lot or quarter-quarter section containing 40 acres. If the offer is withdrawn or rejected in whole or in part before a lease issues, the rental remitted for the parts withdrawn or rejected will be returned.

Item 3 - This space will be completed by the United States.

NOTICES

The Privacy Act of 1974 and the regulations in 43 CFR 2.48(d) provide that you be furnished with the following information in connection with information required by this oil and gas lease offer.

AUTHORITY: 30 U.S.C. 181 et seq.; 30 U.S.C 351-359.

PRINCIPAL PURPOSE: The information is to be used to process oil and gas offers and leases.

ROUTINE USES: (1) The adjudication of the lessee's rights to the land or resources. (2) Documentation for public information in support of notations made on land status records for the management, disposal, and use of public lands and resources. (3) Transfer to appropriate Federal agencies when consent or concurrence is required prior to granting a right in public lands or resources. (4)(5) Information from the record and/or the record will be transferred to appropriate Federal, State, local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecutions.

EFFECT OF NOT PROVIDING INFORMATION: If all the information is not provided, the offer may be rejected. See regulations at 43 CFR 3100.

EXHIBIT 8

DECLASSIFIED

Authority WWD 730014ELK HILLS DEVELOPMENT

By urgent request of the Joint Chiefs of Staff, the Secretary of the Navy was empowered by Public Law No. 344 of the Second Session of the 78th Congress of the United States of America to develop and operate or to cause to be developed and operated, either directly or by contract, the lands in the Naval Petroleum Reserve No. 1. This power was made subject to the approval of the President and was authorized for a period of eighteen months beginning June 1, 1944. The purpose of the law was to increase the production from the Reserve to a rate of 65,000 B/D but not in excess of such rate. Total production from the Reserve under this law was not, however, to exceed thirty million barrels.

A substantial increase in production at the earliest possible date was urgently requested by the Joint Chiefs of Staff to meet the critical need for petroleum on the West Coast to supply the armed forces in the Pacific theatre.

Accordingly, a contract was drawn up between the Navy and the Standard Oil Company of California as operator, in which a unit plan for operating the Reserve and sharing the costs was delineated. The Standard Oil Company of California was chosen as operator because it was the only large company capable of furnishing the facilities for such a development program and partially because it was the largest private owner of lands in the Reserve. The Navy has expressed its appreciation of the patriotism of the Standard Oil Company in undertaking such a project at cost with no profit to be received by the Company.

To assist the Navy and the Standard Oil Company in their manpower needs, former oil men and oil engineers were detailed from the naval service to the Reserve under the command of Capt. H. P. Stolz, Director of the Naval Petroleum Reserve No. 1, and himself a former consulting engineer in the California oil industry. The urgency

DECLASSIFIED
 Authority WWD 730014

2. After the maximum production rate has been attained and conservative individual well rates established, it will be necessary to determine the field decline and continue development at a rate which will maintain production at the specified level. It has been tentatively estimated that from 6 to 10 strings of tools must be operated continuously to accomplish this.

A gas injection and storage program has been started with the injection of gas into well 85-339 at a current rate of 800,000 MCF per day under a 166 lb. injection pressure. This well is located at the upstructure apex of a wedge-shaped fault block on the north central flank of the field. When completed the well pumped small quantities of oil for several days and then went entirely to gas. Selection or drilling of additional suitable gas injection wells is planned so that ultimately all the gas from the field can be returned to the reservoir. Sufficient compressor plant facilities have been applied for and granted to carry out the program.

Funds granted by Congress for the current program did not provide for exploration. The Navy is now preparing a request to Congress for funds to explore the west end of the Reserve in the Hillcrest area. The purpose of the program is to provide additional information concerning the total reserves and the probable rate at which the oil could be obtained in the future.

Advance highlights of this request are: The program will call for a total of some 37 to 40 exploratory wells. Two wells will be drilled on each of the undeveloped sections lying along a continuation of the axis of the structure to the west of present production. On each section one well will be drilled to the shallow zone and the other to the deeper Stevens Zone. As soon as information is obtained

DECLASSIFIED

Authority WJD 730014

concerning the amount of reserves, rate of production, and structural interpretation, the wells will be shut in. Modifications may be made, of course, during the program as findings dictate.

There are two leases on the north flank of the structure which are still in the hands of private companies. It is understood that negotiations for the purchase of these leases by the Navy are under way and hold promise of being brought to a successful conclusion.

EB:lr 3/2/45

EXHIBIT 9

CONGRESSIONAL RECORD

Proceedings and Debates of the 94th Congress
LD-4a (Rev. Jan. 71)

SENATE

BILL	DATE	PAGE(S)
S. 426 General Accounting Office References S910(1)(3)	Jan. 27, 1975	S903-911

Introduced by Mr. Hollings, et al

*Annual audit by GAO**Annual report to GAO on shut in oil & gas wells
or flaring wells*

ATE

S 903

ment; to amend the Outer Continental Shelf Lands Act; and for other purposes.

OUTER CONTINENTAL SHELF LANDS ACT
AMENDMENTS OF 1975

Mr. HOLLINGS. Mr. President, during the last few years our Nation has learned that energy, and particularly oil and natural gas, affect virtually every aspect of our lives. It seems amazing, in retrospect, that in all the years of rapid growth in oil consumption and imports, we never really saw the handwriting on the wall. We believed that policy decisions about energy could be given a piecemeal approach, with some of the most important issues not even addressed, except perhaps in the corporate board rooms of the big oil companies. If we know better now, it is because we learned our lesson the hard way, through shortages, price increases, and an embargo.

The major task before us now is finding our way out of a bad situation, and charting a better course for the years ahead. The first step is to find out where we stand with respect to our energy resources, particularly oil and gas. We know that domestic oil and gas production have declined in recent years, and we know that the most promising areas for future production are on the Nation's Outer Continental Shelf. We cannot afford to wait any longer to find out the extent of the OCS resources and determine the best rate of future extraction. At the same time, we certainly cannot afford to give away our OCS lands to the multinational oil companies, whose vested interests may or may not coincide with the U.S. national interest. We must guarantee a fair return to the American people. We must also take into account our short-term and long-term needs, our country's economic and foreign policy positions, and the need to protect our marine and coastal environment.

The bill I am introducing today will do three important things: It will enable us to measure promptly the extent of the publicly owned oil and gas resources on the OCS, it will put the important decisions about production of those resources in the public sector where they belong, and it will allow the coastal States to plan for offshore oil before these decisions are made.

The citizens of our coastal States—including those in the Gulf of Mexico—realize that offshore oil development brings with it an array of onshore impacts requiring careful planning and investments of State money. The facilities needed to support OCS development include pipeline landfalls, platform construction sites, harbor supply bases, refineries, and petrochemical plants, to name a few. The people who work at these facilities require public facilities and services. The Coastal Zone Management program recognizes the rapid growth pressures that these developments can bring to the States. The States appear to be making rapid and effective progress toward developing coastal plans. We can help them by not dictating oil and gas development to them before they finish the job.

My bill authorizes and directs the Sec-

By Mr. HOLLINGS (for himself,
Mr. MAGNUSON, Mr. KENNEDY,
Mr. TUNNEY, Mr. MATHIAS, Mr.
HUMPHREY, Mr. CHILES, Mr.
WILLIAMS, Mr. CASE, Mr. BIDEN,
Mr. RUBIOFF, Mr. MCINTYRE,
Mr. BROOKE, Mr. CRANSTON, and
Mr. PELL):

S. 426. A bill to establish a policy for the management of oil and natural gas in the Outer Continental Shelf; to protect the marine and coastal environ-

retary of the Interior to initiate a major program of offshore oil exploration—including deep drilling—in frontier areas of the Outer Continental Shelf. It calls for a moratorium on conventional leasing on tracts where the Federal exploration program is underway. The Federal Government can conduct this program by using the same drilling and exploration firms that are usually hired by oil companies. The taxpayers of the United States—rather than the oil companies—would be the clients for these drilling companies, and the information received would pass directly into the public domain. Leasing to private companies would await the availability of much-needed data on the size and location of oil and gas in new areas. With better information, we can be sure that bids for production rights on federally explored tracts are truly representative of the value of the resources. The increased bonuses should offset the public expenditures for exploration.

During the exploration period, the coastal States will have time to complete the coastal zone management plans they are currently developing with funds authorized by the Coastal Zone Management Act of 1972. With those plans approved by the Secretary of Commerce and ready for implementation, the States will be in a much better position to cope with the inevitable onshore impacts of offshore oil production. The key decisions will not have been made beforehand without this important State contribution.

I know that the administration shares the views of my cosponsors and me about the importance of going into the frontier areas of the OCS and finding out the extent and location of the resources. But I firmly believe our approach to be sounder than a hasty plan to lease massive acreage to the oil companies and then leave the exploration scheduling, the decisionmaking and the information handing up to them.

One result of a sudden increase in acreage offered for conventional leasing this year would be a sharp reduction in competition and in the size of bonuses paid. We know this from our leasing experience in 1974, and if we extrapolate 1974 figures using the administration's lease plan for 1975-78, we can predict woefully inadequate return to the Treasury. In December 1973, when we leased tracts in the Mississippi-Alabama-Florida region of the Gulf of Mexico, 21.8 percent of the tracts were leased to sole bidders. In October 1974, another Gulf of Mexico sale that was part of 1974's greatly expanded offerings resulted in over 33 percent of the tracts going to sole bidders. Furthermore, the average price per acre dropped substantially in 1974 as the number of acres offered increased. These facts do not bode well for competition and fair return to the Treasury under the administration's plan.

It would not be wise to auction off a much-loved irreplaceable antique without first getting an objective appraisal of its value. Our oil and gas resources, like the antique, are valuable and irreplaceable. We cannot continue to auction them off at prices based on the buyers'

own appraisals, which are not even shared with the people and their Government, the rightful owners of these resources. Our bill would require full public disclosure of all data acquired through exploration on Outer Continental Shelf lands.

The most important decisions in the chain of events leading to offshore oil production are those decisions made after discoveries are made and reserves are proven. Those decisions include answers to the following questions:

First. Should the new oil or gas field be developed immediately?

Second. How much energy will the field contribute to domestic supply—and to the reduction of imports—and where will this supply become available for consumption?

Third. How will the oil be delivered to shore, and where be its landing point?

Fourth. Where will the oil be refined or the gas be processed for distribution?

Fifth. What alternatives need to be examined in each of these questions, and what are the environmental/economic/economic consequences of each?

Sixth. What will be the cost of developing the field, and what will be the economic benefits and price impacts?

Seventh. What will be the total impact of field development on the nearby coastal States?

In the past, many of these questions have been answered solely by the oil companies, with virtually no public involvement. The decisions to develop, to process at a certain place, to bring pipelines ashore have been made by the operating companies on the basis of achieving a maximum return on the company's investment and a maximum profit. Several of the questions—such as the examination of alternatives, the impact on coastal States, the total costs and benefits to the Nation—have not even been asked, let alone answered. These issues are now recognized, however, as legitimate concerns for makers of public policy.

By keeping OCS resources in Federal hands throughout the exploration process, the Government would gain the right and the opportunity to make these public policy decisions for itself and to address the previously neglected issues.

For the immediate future, it is clear that we will need to expand our production of offshore oil and gas about as rapidly as we can. But over the longer term, we do not know what rate of development and production will be in the Nation's best interest. There are wide variations in estimates of our remaining oil and gas reserves. If we accept the conservative estimates of Mobil Oil Corp., or even the recently lowered estimates of the U.S. Geological Survey, we must recognize the need to lower our growth rate in oil consumption. Otherwise, massive exploitation of our resources now will only result in rapid depletion after 1985 and greater dependence on imports later. The administration's crash leasing program is an embodiment of the old "Drain America First" policy.

The fact is, we cannot make good plans for stretching out the life of our resources until we can stop talking

guesses and start talking facts about the extent of OCS oil and gas in the Atlantic and the Gulf of Alaska. We need to retain the right and the opportunity to make public policy through public decisions after we have the facts.

Mr. President, the ideas embodied in my bill appear to meet the major needs of our country in this important area. They are new ideas, and they will require careful examination by the Congress. Senator JACKSON has joined Senator MAGNUSON in requesting the Office of Technology Assessment to study the feasibility and the implications of a Federal exploration program and the other concepts embodied in my bill. They appear to be ideas whose time has come, judging from their broad support among the Governors of the coastal States and the enthusiasm of the Senators who are joining me in introducing this legislation. My cosponsors and I look forward to cooperating fully with our colleagues on the Committee on Interior and Insular Affairs as they undertake the task of modernizing our policies relating to OCS oil and gas development.

Mr. President, I ask unanimous consent that the text of the bill, together with a statement prepared by Senator MATTHIAS in connection with this measure, be printed at this point in the Record.

There being no opposition, the bill and statement were ordered to be printed in the Record, as follows:

S. 428

A bill to establish a policy for the management of oil and natural gas in the Outer Continental Shelf; to protect the marine and coastal environment; to amend the Outer Continental Shelf Lands Act; and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Outer Continental Shelf Lands Act Amendments of 1975".

TABLE OF CONTENTS

Sec. 1. Short title and table of contents.
TITLE I—PURPOSES, DEFINITIONS AND NATIONAL POLICY FOR MANAGING THE RESOURCES OF THE OUTER CONTINENTAL SHELF
Sec. 101. Purposes.
Sec. 102. Definitions.
TITLE II—AMENDMENTS TO THE OUTER CONTINENTAL SHELF LANDS ACT
Sec. 201. Policy.
Sec. 202. Revision of bidding and lease administration.
Sec. 203. Disposition of Federal royalty oil.
Sec. 204. Annual report.
Sec. 205. Ensuring orderly development of oil and gas leases.
Sec. 206. Geological and Geophysical exploration.
Sec. 207. Enforcement.
Sec. 208. Laws applicable to the Outer Continental Shelf.
Sec. 209. New sections of Outer Continental Shelf Lands Act.
Sec. 18—Outer Continental Shelf leasing program.
Sec. 19—Federal Outer Continental Shelf oil and gas exploration program.
Sec. 20—Outer Continental Shelf leasing and development plan.
Sec. 21—Environmental impact assessment and monitoring.
Sec. 22—Safety regulations of oil and gas operations.
Sec. 23—Inspections and enforcement of safety regulations.

Sec. 24—Remedies and penalties.
Sec. 25—Citizen suits.
Sec. 26—Liability for oil spills.
Sec. 27—Research and development.
Sec. 28—Determination of boundaries.
Sec. 29—Moratorium on leasing in frontier areas.

TITLE III—MISCELLANEOUS PROVISIONS

Sec. 301. Pipeline safety and operation.
Sec. 302. Review of shut-in or flaring wells.
Sec. 303. Bidding system study.
Sec. 304. National Strategic Energy Reserve study.

Sec. 305. Relationship to existing law.

TITLE I—PURPOSES, DEFINITIONS AND NATIONAL POLICY FOR MANAGING THE RESOURCES OF THE OUTER CONTINENTAL SHELF

PURPOSES

SEC. 101. The purposes of this Act are to—

(1) establish policies and procedures for managing the oil and natural gas resources of the Outer Continental Shelf in order to achieve national economic goals and assure national security, reduce dependence on foreign sources, and maintain a favorable balance of payments in world trade;

(2) preserve, protect and develop oil and natural gas resources in the Outer Continental Shelf consistent with the need to balance orderly resource development with protection of the marine and coastal environment, in a manner consistent with the Mining and Mineral Policy Act of 1970 and designed to insure the public a fair and equitable return on the public investment in the resources of the Outer Continental Shelf;

(3) encourage development of new and improved technology for energy resource production that will increase human safety and eliminate or reduce risk of damage to the environment;

(4) assure that coastal states which are directly impacted by exploration and development of oil and natural gas adjacent to their coastal zone are provided an opportunity to participate in policy and planning decisions relating to management of the resources in the Outer Continental Shelf.

DEFINITIONS

SEC. 102. For the purposes of this Act—

(1) "Coastal zone" means the coastal waters (including the lands therein and thereunder) and the adjacent shorelands (including the waters therein and thereunder), strongly influenced by each other and in proximity to the shorelines of the several coastal States, and includes transitional and intertidal areas, salt marshes, wetlands, and beaches. The zone extends seaward to the outer limit of the United States territorial sea. The zone extends from the shorelines inward to boundaries of the coastal zone as identified by the coastal States pursuant to the regulations promulgated under the authority of the Coastal Zone Management Act of 1972 (16 U.S.C. 1454(b)(1)). Excluded from the coastal zone are lands the use of which is by law subject solely to the discretion of or which is held in trust by the Federal Government, its officers or agents.

(2) "Coastal State" means a State of the United States in, or bordering on, the Atlantic, Pacific, or Arctic Ocean, the Gulf of Mexico, or Long Island Sound. For the purpose of this Act, the term also includes Puerto Rico, the Virgin Islands, Guam, and American Samoa.

(3) "Adjacent Coastal States" means a coastal State of the United States which (A) would be directly connected by pipeline to drilling a platform, subsea production unit, transfer facility or other similar facilities; (B) would receive crude oil for refining or transshipment which was extracted from the Outer Continental Shelf and transported by means of surface vessels; or (C) is designated by the Administrator of the National

Oceanic and Atmospheric Administration pursuant to subsection 21(f) of this Act as a State which there is a substantial probability of significant impact on the coastal zone, marine environment or coastal environment which would result from the development and production of oil and gas anywhere in the Outer Continental Shelf.

(4) "Marine environment" means the physical, atmospheric, and biological components, conditions and factors which in combination and interactively determine the productivity, state, condition and quality of the marine ecosystem including the waters of the high seas, contiguous zone, transitional and intertidal areas, salt marshes, and wetlands within the coastal zone and in the Outer Continental Shelf of the United States.

(5) "Coastal environment" means the physical, atmospheric, biological, social and economic components, conditions and factors which in combination and interactively determine the productivity, state and quality of the human environment and the terrestrial ecosystem from the shoreline inward to the boundaries of the coastal zone as identified by the States pursuant to the regulations promulgated under the authority of the Coastal Zone Management Act of 1972 (86 Stat. 1280, 16 U.S.C. 1454(b)(1)).

(6) "Governor" means the Governor of a State or the person designated by State law to exercise the powers granted to the Governor pursuant to this Act.

TITLE II—AMENDMENTS TO THE OUTER CONTINENTAL SHELF LANDS ACT

POLICY

SEC. 201. Section 3 of the Outer Continental Shelf Lands Act (67 Stat. 462, 43 U.S.C. 1331 et seq.) is amended by adding the following new subsections (c) and (d):

"(c) It is hereby declared that the Outer Continental Shelf is a vital national resource held by the Federal Government in trust for all the people, which should be made available for orderly development subject to environmental safeguards, consistent with and when necessary to meet national needs as determined pursuant to section 18 of this Act.

"(d) It is hereby recognized that development of the oil and gas resources of the Outer Continental Shelf will have significant impacts on the coastal zones of the coastal States and adjacent coastal States and that in recognition of the national interest in the effective management of the coastal zone—

"(1) such States may require assistance in protecting their coastal zones insofar as possible from the adverse effects of such impacts; and

"(2) such States are entitled to participate in the decisions made by the Federal Government to explore, develop and produce oil and gas in the Outer Continental Shelf to the extent consistent with the national interest."

REVISION OF BIDDING AND LEASE ADMINISTRATION

SEC. 202. (a) Subsection (a) of section 8 of the Outer Continental Shelf Lands Act (67 Stat. 462, 43 U.S.C. 1331 et seq.) is amended by deleting the last sentence of the subsection and inserting:

"The bidding shall be (1) by sealed bids, and (2) at the discretion of the Secretary, on the basis of (A) cash bonus bid with a royalty fixed by the Secretary at not less than 16½ per centum in amount or value of the production saved, removed or sold, (B) variable royalty bid based on a per centum of the production saved, removed or sold with a cash bonus as determined by the Secretary, (C) cash bonus bid with diminishing or sliding royalty based on such formulas as the Secretary shall determine as equitable to encourage continued

production from the lease as resource diminish, but not less than 16½ per centum in amount or value of the production saved, removed or sold at the beginning of the lease period, (D) cash bonus bid with a fixed share of the net profits derived from operation of the tract of no less than 30 per centum reserved to the United States, (E) fixed cash bonus with the net profit share reserved to the United States as the bid variable, (F) cash bonus with a royalty fixed by the Secretary at not less than 16½ per centum in amount or value of the production saved, removed or sold and a per centum share of net profits derived from the production of oil and gas produced from the lease, or (G) competitive performance based on a work program submitted by bidders. The United States net profit share shall be calculated on the basis of the value of the production saved, removed, or sold, less those capital and operating costs directly assignable to the development and operation (but not acquisition) of each individual oil and gas lease issued under this Act to the lessee under a net profit sharing arrangement. No capital or operating charges for materials or labor services not actually used on an area leased for oil or gas under this Act under a net profit sharing arrangement; allocation of income taxes; or expenditures for materials or labor services used prior to lease acquisition shall be permitted as a deduction in the calculation of net income. The Secretary shall by regulation establish accounting procedures and standards to govern the calculation of profits. In the event of any dispute between the United States and a lessee concerning the calculation of the net profits, the burden of proof shall be on the lessee. That part of the net profit share due the United States which is attributable to oil production may be taken in kind in the form of oil and disposed of as provided in subsection (k) of this section. That part of the net share due in kind shall be determined by dividing the net profit due the United States attributable to the product or products taken in kind by the fair market value at the wellhead of the oil and/or gas (as the case may be) saved, removed or sold. In determining the attribution of profits as between oil and gas, costs shall be allocated proportionately to the value of their respective shares of production."

(b) Subsection (b) of section 8 of the Outer Continental Shelf Lands Act (67 Stat. 462, 43 U.S.C. 1331 et seq.) is amended to read as follows:

"(b) An oil and gas lease issued pursuant to this section shall (1) cover an area as large as necessary to comprise a reasonable, economic production unit as determined by the Secretary, (2) be for a period of five years and as long thereafter as oil or gas may be produced from the area in paying quantities, or drilling or well reworking operations as approved by the Secretary are conducted thereon, (3) require the payment of value as determined by one of the bidding procedures set out in subsection (a) of this section, and (4) contain such rental provisions and such other terms and provisions as the Secretary may prescribe at the time of offering the area for lease."

DISPOSITION OF FEDERAL ROYALTY OIL

SEC. 203. Section 8 of the Outer Continental Shelf Lands Act (47 Stat. 462, 43 U.S.C. 1331 et seq.) as amended by this Act is further amended by adding a new subsection (k) to read as follows:

"(k) Upon commencement of production of oil from any lease issued after the effective date of this subsection, the Secretary shall offer to the public and sell by competitive bidding for not less than its fair market value, in such amounts and for such terms as he determines, that proportion of the oil produced from said lease which is due to the

United States as royalty or net profit share oil. The Secretary shall limit participation in such sales where he finds such limitation necessary to assure adequate supplies of oil at equitable prices to independent refiners. In the event that the Secretary limits participation in such sales, he shall sell such oil at an equitable price. The lessee shall take any such royalty oil for which no acceptable bids are received and shall pay to the United States a cash royalty equal to its fair market value, but in no event shall such royalty be less than the highest bid."

ANNUAL REPORT

SEC. 204. (a) Section 15 of the Outer Continental Shelf Lands Act (47 Stat. 462, 43 U.S.C. 1331 et seq.) is amended to read as follows:

"ANNUAL REPORT BY SECRETARY TO CONGRESS

"SEC. 15. (a) Within six months after the end of each fiscal year, the Secretary shall submit to the President of the Senate and the Speaker of the House of Representatives a report on the leasing and production program in the Outer Continental Shelf during such fiscal year, including a detailed accounting of all monies received and expended, and of all exploration, exploratory drilling, leasing, development, and production activities; a summary of management, supervision, and enforcement activities; and recommendations to the Congress for improvements in management, safety and amount of production in leasing and operations in the Outer Continental Shelf and for resolution of jurisdictional conflicts or ambiguities.

(b) Section 313(a) of the Coastal Zone Management Act of 1972 (86 Stat. 1280, 16 U.S.C. 1451 et seq.) is amended by striking the word 'and' after the word 'priority' in subsection (8); renumbering existing subsection (9) as subsection (10); and inserting the following new subsection (9):

"an assessment of the onshore social, economic and environmental impacts in those coastal areas affected by Outer Continental Shelf oil and gas exploration and exploitation; and".

ENSURING ORDERLY DEVELOPMENT OF OIL AND GAS LEASES

SEC. 205. Section 5 of the Outer Continental Shelf Lands Act (67 Stat. 462, 43 U.S.C. 1331 et seq.) is amended by adding the following new subsections.

"Ensuring Orderly Development of Oil and Gas Leases—

"(d) (1) After enactment of this section no oil and gas lease may be issued pursuant to this Act unless the lease requires that development be carried out in accordance with a development plan submitted by the lessee and found by the Secretary to be consistent with the leasing and development plan submitted by the Secretary pursuant to Section 20 of this Act, and provides that failure to comply with such development plan will terminate the lease.

"(2) The development plan will set forth, in the degree of detail established by regulations issued by the Secretary, specific work to be performed, environmental protection and health and safety standards to be met, and a time schedule for performance.

"(3) With respect to permits, licenses, and leases outstanding on the date of enactment of this section, a proposed development plan must be submitted to the Secretary within six months after the date of enactment of this section. Failure to submit a development plan or to comply with an approved development plan shall terminate the permit, license, or lease.

"(4) The Secretary may approve revisions of development plans if he determines that such revision will lead to greater recovery of oil and gas, improve the efficiency of the recovery operation, or is the only means available to avoid substantial economic hardship

on the lessee, licensee or permittee to the extent consistent with protection of the marine and coastal environments.

"(e) After the date of enactment of this subsection, holders of oil and gas leases issued pursuant to this Act shall not be permitted to flare natural gas from any well unless the Secretary finds that there is no practicable way to obtain production or to conduct testing or workover operations with root flaring."

GEOLOGICAL AND GEOPHYSICAL EXPLORATION

SEC. 206. Section 11 of the Outer Continental Shelf Lands Act (67 Stat. 462, 43 U.S.C. 1331 et seq.) is hereby amended to read as follows:

"SEC. 11. No person shall conduct any type of geological or geophysical explorations in the Outer Continental Shelf without a permit issued by the Secretary. Each such permit shall contain terms and conditions designed to (1) prevent interference with actual operations under any lease maintained or granted pursuant to this Act; (2) prevent interference with geophysical and geological exploration being conducted by the United States under the authority of section 19 of this Act; (3) prevent or minimize environmental damage; and (4) require the permittee to furnish the Secretary with copies of all data (including geological, geophysical, and geochemical data, well logs, and drill core analyses) obtained during such exploration.

ENFORCEMENT

SEC. 207. Subsection 5(a)(2) of the Outer Continental Shelf Lands Act (67 Stat. 462, 43 U.S.C. 1331 et seq.) is hereby amended by deleting the first sentence.

LAWS APPLICABLE TO THE OUTER CONTINENTAL SHELF

SEC. 208. Paragraph (2) of subsection (a) of section 4 of the Outer Continental Shelf Lands Act (67 Stat. 462, 43 U.S.C. 1331 et seq.) is amended by deleting the following words: "as of the effective date of this Act".

NEW SECTIONS OF OUTER CONTINENTAL SHELF LANDS ACT

SEC. 209. The Outer Continental Shelf Lands Act (47 Stat. 462, 43 U.S.C. 1331 et seq.) is hereby amended by adding the following new sections:

"OUTER CONTINENTAL SHELF LEASING PROGRAM

"SEC. 18. (a) Congress declares that it is the policy of the United States that Outer Continental Shelf lands determined to be both geologically favorable for the accumulation of oil and gas and capable of supporting oil and gas development without undue environmental harm or damage should be made available for leasing in a manner consistent with national needs.

"(b) The Secretary is authorized and directed to prepare and maintain a leasing program to implement the policy set forth in subsection (a) of this section. The leasing program shall indicate as precisely as possible the size, timing, and location of leasing activity that will best meet national energy needs for the ten-year period following the promulgation of such a leasing program in a manner consistent with subsection (a) of this section and to—

"(1) manage the Outer Continental Shelf in a manner which considers all of the economic, social and environmental values of the renewable and nonrenewable resources contained therein and the potential impact of oil and gas exploration on other resource values of the Outer Continental Shelf and the marine and coastal environments;

"(2) schedule and location of exploration, development and production of oil and gas among the oil-and-gas-bearing physiographic regions of the Outer Continental Shelf, based on—

"(a) existing information concerning their geographical, geological, and ecological characteristics;

"(b) their location with respect to, and relative needs of, regional and national energy markets;

"(c) their location with respect to other uses of the sea and seabed including fisheries, intracoastal navigation, existing or proposed sea lanes, potential sites of deepwater ports, and other anticipated uses of the resources and space in the Outer Continental Shelf;

"(d) interest by potential oil and gas producers in the development of oil and gas resources as indicated by exploration, nomination or consultation;

"(e) laws, goals and policies of the affected coastal States and adjacent coastal States.

"(3) schedule the timing and location of leasing so that areas and regions with the least potential for environmental damage and impact on the coastal zone are leased first, to the maximum extent practicable, consistent with the determination of national needs;

"(4) schedule the timing and location of leasing so as to allow development of the oil and gas resources to keep pace with the availability of construction materials, tubular steel products and other equipment and materials required for exploration and development of the resource;

"(5) receive fair market value for the oil and gas resources held in trust for the public.

"(c) The program shall include estimates of the appropriations and staffing required by all Federal agencies and programs necessary to—

"(1) conduct the geophysical exploration and exploratory drilling authorized and directed by section 19 of this Act;

"(2) obtain resource information and any other information needed to prepare the leasing program required by this section;

"(3) analyze and interpret the exploratory data and other information required prior to offering tracts for lease;

"(4) conduct environmental baseline studies and prepare any environmental impact statement required in accordance with Sec. 102(2)(C) of the National Environmental Policy Act of 1969 (83 Stat. 852, 42 U.S.C. 4321 et seq.); and

"(5) supervise operations under each lease in the manner necessary to assure compliance with the requirements of the law, the regulations and the terms of the lease."

"FEDERAL OUTER CONTINENTAL SHELF OIL AND GAS EXPLORATION PROGRAM

"SEC. 19. (a) The Secretary is authorized and directed to conduct a comprehensive exploratory program designed to obtain sufficient data and information to evaluate the extent, location and potential for developing the oil and gas resources in the Outer Continental Shelf. This program shall be designed to obtain the resource information necessary for determining whether commercial quantities of oil and gas are present, geographical extent of the field and estimates of the recoverable reserves in order to provide a basis for—

"(1) developing an oil and gas leasing and development plan pursuant to Section 20 of this Act;

"(2) improving the information regarding the value of public resources and revenues which should be expected from leasing;

"(3) increasing competition among producers of oil and gas by providing data and information to all potential bidders equally and equitably; and

"(4) providing the public with information on the extent and value of the public resources being offered for sale.

"(b) The Secretary, through the United States Geological Survey, is authorized to conduct seismic, geomagnetic, gravitational, geophysical, geochemical or stratigraphic drilling, or to contract for or purchase the results of such exploratory activities from

January 27, 1975

CONGRESSIONAL RECORD — SENATE

S 907

commercial sources which may be needed to implement the provisions of this section of this Act. The Secretary is further authorized to conduct or contract for such exploratory drilling as necessary to prove the presence of commercial quantities of oil or gas, extent of the field and to obtain sufficient information concerning the geology or seabed conditions which may affect the development of the resources.

"(c) Nothing in this section of this Act shall limit any person from conducting exploratory geophysical surveys including seismic, geomagnetic, gravitational, or geophysical surveys to the extent permitted by section 11 of this Act as amended; *providing, however*, that exploratory drilling shall not be permitted by any person prior to award of a lease other than a contractor of the United States Government to provide services pursuant to subsection (b) of this section.

"(d) The Secretary shall make available to the public all data, information, maps, interpretations and surveys by appropriate means which are obtained directly by the Department of the Interior or under a service contract pursuant to subsection (b) of this section; *providing, however*, that the Secretary shall maintain the confidentiality of all proprietary data or information purchased from commercial sources while not under contract with the United States Government for such period of time as is agreed to by the parties. For the purpose of this subsection, subsection 552(b)(9) of title 5 of the United States Code shall not apply to geological and geophysical information and data, including maps, concerning wells or other related information acquired directly by the Department or under a service contract pursuant to subsection (b) of this section.

"(c) All Federal departments or agencies are authorized and directed to provide the Secretary with any information or data that may be deemed necessary to assist the Secretary in implementing the exploratory program pursuant to this section of this Act. Proprietary information or data provided to the Secretary under the provisions of this subsection shall remain confidential for such period of time as agreed to by the head of the department or agency from whom the information is requested. In addition, the Secretary is authorized and directed to utilize the existing capabilities and resources of other Federal departments and agencies by appropriate agreement.

"(f) The Secretary, in cooperation with the Administrator of the National Oceanic and Atmospheric Administration, is directed to prepare, publish and keep current a series of detailed bathymetric, geological, and geophysical maps of, and reports concerning, the Outer Continental Shelf oil and gas resources, based on data and information compiled pursuant to this section of this Act. Such maps and reports shall be prepared and revised at intervals of not more than six months, beginning January 1, 1976. Such maps and reports shall be made available on a continuing basis to any person on request.

"(g) Within six months after enactment of this section, the Secretary and the Administrator of the National Oceanic and Atmospheric Agency shall jointly develop and transmit to Congress an implementation plan for the oil and gas exploration program authorized by this section of this Act, including procedures for making the data and information available to the public pursuant to subsection (d) and maps and reports to subsection (f) of this section of this Act. The implementation plan shall include a projected schedule of exploratory activities and identification of the regions and areas which will be explored under the oil and gas exploration program during the first five years following enactment of this section. In addition, the implementation plan shall include estimates of the appro-

priations and staffing required to implement the oil and gas exploration program. No action taken to implement this subsection of this Act as it pertains to the development of the implementation plan for the oil and gas exploration program shall be considered a major Federal action for the purposes of section 102(2)(C) of the National Environmental Policy Act of 1972 (83 Stat. 852, 42 U.S.C. 4321 et seq.).

"(h) (1) The Secretary shall, by regulation, establish procedures for determining areas to be considered for exploratory drilling and potential leasing. The procedures shall include but not be limited to consultation (A) with the oil and gas industry; and (B) with State and local governments within the coastal States and adjacent coastal States which would be affected by subsequent leasing and development of the proposed area or region.

"(2) The Secretary shall, in determining areas to be selected for exploratory drilling, coordinate the oil and gas exploratory program provided for by this section of this Act with coastal management programs being developed by any coastal State or adjacent coastal States and for approval pursuant to section 305 of the Coastal Zone Management Act of 1972 (86 Stat. 1280, 16 U.S.C. 1451 et seq.) and the coastal zone management programs of any State which has been approved pursuant to section 306 of that Act.

"(3) The Secretary shall publish in the Federal Register a minimum of 120 days prior to the commencement of exploratory drilling in any area or region detailed information which includes but is not limited to (A) location of proposed drilling activities; and (B) time schedule for commencement and completion of drilling.

"(4) The selection and determination of areas for exploratory drilling and potential leasing shall be considered a "major Federal action" for the purpose of compliance with section 102(2)(c) of the National Environmental Policy Act of 1969.

"(i) The Secretary shall include in the annual report required by section 15 of this Act, information concerning the carrying out of the Secretary's duties under this section, and shall include as a part of each such report a summary of the current data for the period covered by the report.

"(j) There are hereby authorized to be appropriated \$200,000,000 to carry out the purposes of this section of this Act during fiscal years 1976 and 1977, to the Secretary and to appropriate Federal agencies having responsibilities under this section of this Act."

"OUTER CONTINENTAL SHELF LEASING AND DEVELOPMENT PLAN

"SEC. 20. (a) (1) The Secretary is authorized and directed to transmit a leasing and development plan to Congress at least 90 calendar days prior to announcing the invitation to bid on each tract in which oil or gas are found in commercial quantities. Each leasing and development plan shall be deemed approved and the Secretary shall be authorized to proceed with sale of the proposed lease tracts under the provisions of applicable laws and regulations unless between the date of transmittal and the end of the 90-day period, either House passes a resolution stating in substance that the House does not favor the leasing and development plan and setting out the reasons for the disapproval.

"(2) For the purpose of subsection (a)(1) of this section of this Act—

"(A) continuity of session is broken only by an adjournment of Congress since die; and

"(B) the days on which either House is not in session because of an adjournment of more than 3 days to a day certain are excluded in the computation of the 90-day period.

"(b) Each leasing and development plan

required by subsection (a) of this section shall include but not be limited to—

"(1) extent of the resources contained within the tracts proposed for sale;

"(2) location of the tracts in reference to other coastal and offshore activities, including other oil and gas developments or potential developments nearby;

"(3) estimates of the volume of recoverable reserves within the tract proposed for sale based on information derived from the oil and gas exploration program authorized by section 19 of this Act;

"(4) current market value of the oil and gas based on estimates of the recoverable volume in the tract proposed for sale under the development plan;

"(5) cost of producing the recoverable oil and gas under the proposed development plan;

"(6) anticipated location of production units, offshore support facilities, and right-of-ways and number of pipelines and other infrastructure necessary to produce and transport oil and gas from the proposed lease tract;

"(7) capacity of onshore facilities and infrastructure at the point of entry into a coastal State or adjacent coastal State of the oil or gas produced within each proposed tract estimated to the extent possible;

"(8) assessment of the need for new onshore facilities or infrastructure that may be required to handle the oil or gas produced from the proposed lease tracts or otherwise to support operations within the proposed lease tract;

"(9) exceptional, unique, or unusual conditions in the proposed lease tract which may require special treatment or precautions to protect the environment or insure the safe development and production from the tract;

"(10) expected rate of development and production if the proposed tract is leased;

"(11) proposed impact on the economic, social and institutional structure of the affected coastal States and adjacent coastal States; and

"(12) certification of the consistency of the projected development of the proposed lease tract in accordance with the provisions of section 307 of the Coastal Zone Management Act of 1972 (86 Stat. 1280, 16 U.S.C. 1451 et seq.), or where inconsistencies exist, these shall be noted in the leasing and development plan.

"(c) (1) The Secretary shall submit the proposed leasing and development plan to the Governors of the affected coastal States and adjacent coastal States for comment at least 60 days prior to transmittal to Congress pursuant to subsection (a) of this section. At any time prior to the submission of the leasing and development plan to Congress a Governor may request the Secretary to postpone leasing and development of the proposed tracts for a period not to exceed three years following the date proposed for sale in the leasing and development plan if the Governor determines that the proposed lease will result in adverse environmental or economic impacts or other damage to the State or the residents thereof. In the event of any such request, the Secretary shall postpone the transmittal of the leasing and development plan to Congress until proceedings under this subsection are completed.

"(2) The Secretary shall, not later than 30 days from receipt of such request:

"(A) grant the request for postponement; or

"(B) provide for a shorter postponement than request provided that such period of time is adequate for study and provision to ameliorate any adverse economic or environmental effects or other damage and for controlling secondary social or economic impacts associated with development of Federal energy resources in, or on, the Outer Con-

tinental Shelf adjacent to the submerged lands of such State; or

"(C) deny the request for postponement if he finds that such postponement would not be consistent with the national policy or the national interest as expressed in section 3 of this Act.

"(3) The comments received from the Governors of the affected coastal States and adjacent coastal States shall accompany the proposed leasing and development plan when transmitted to Congress. In the event that postponement was requested by any Governor, all correspondence, information and data pertaining to the request for postponement shall be made part of the record and shall accompany the leasing and development plan when transmitted to Congress.

"(d) All environmental impact statements relevant to the leasing and development plan for the proposed tract, area or region which are prepared pursuant to section 102(2)(C) of the National Environmental Policy Act of 1969 (83 Stat. 852, 42 U.S.C. 4321 et seq.) shall accompany the development and leasing plan when transmitted to Congress as required by subsection (a) of this section.

"(e) There are hereby authorized to be appropriated to the Secretary such sums as are necessary to carry out the purposes of this section during fiscal years 1976 and 1977."

ENVIRONMENTAL IMPACT ASSESSMENT AND MONITORING

"Sec. 21. (a) The National Oceanic and Atmospheric Administration shall be considered the "lead agency" for the purpose of complying with the requirements of the National Environmental Policy Act of 1969 (83 Stat. 852, 42 U.S.C. 4321 et seq.) as that Act pertains to the implementation of all sections of this Act.

"(6) Prior to formulation of the leasing and development plan as required by section 20 of this Act, the Administrator of the National Oceanic and Atmospheric Administration (hereinafter referred to as "Administrator"), in consultation with the Secretary, shall conduct a study of the area or region involved to establish baseline information concerning the status of the marine and coastal environment of the Outer Continental Shelf and the coastal zone which may be affected by oil and gas development. The study shall include, but not be limited to, background concentrations of hydrocarbons in water, sediments and organisms; background concentrations of trace metals in water, sediments, and organisms; classification and characterization of benthic and planktonic communities; description of the relationship and state of marine organisms and abiotic components including sediments; and other physical and chemical characteristics of the marine environment such as conductivity, temperature, micronutrients, dissolved oxygen and other factors which determine the productivity and quality of the marine environment.

"(c) The environmental impact statements related to the oil and gas exploration program authorized by section 19, and the leasing and development plan required by section 20 of this Act pursuant to section 102(2)(C) of the National Environmental Policy Act of 1969 (83 Stat. 852, 42 U.S.C. 4321 et seq.), shall include, but shall not be limited to—

"(1) description of the marine and coastal environments affected as they exist prior to proposed leasing and development;

"(2) interrelationships and cumulative environmental impacts of development of the proposed lease tract in relation to possible future oil and gas developments or the siting of other energy facilities in the Outer Continental Shelf or in the adjacent coastal zone;

"(3) population and growth characteristics

of the affected coastal States or adjacent coastal States and identification of any assumptions used to project the impact of proposed development of offshore oil and gas resources on population and growth, including an assessment of the effect of any possible change in population patterns or growth upon the resource base including land use, water, and public services;

"(4) relationship of the proposed leasing and development of oil and gas to existing or developing coastal zone management plans of the affected coastal States and adjacent coastal States developed in accordance with the Coastal Zone Management Act of 1972 (86 Stat. 1280, 16 U.S.C. 1451 et seq.), including the notation of any inconsistencies between the proposed exploration or development and such coastal zone management plans;

"(5) probable impact of the proposed exploration or development on the marine and coastal environments, including secondary or indirect impacts as well as primary or direct impacts;

"(6) negative effects of the proposed exploration or development as they may affect both the national and international environment;

"(7) unavoidable adverse environmental effects including but not limited to air pollution, water pollution, undesirable land use patterns, damage to ecosystems and threats to health;

"(8) extent to which the proposed exploration or development involves tradeoffs between short-term environmental gains at the expense of long-term losses, or, as the case may be, the reverse tradeoffs; and

"(9) any irreversible and irretrievable commitments of resources that would be involved in the proposed exploration or development should it be implemented.

"(d) Subsequent to leasing and development of any area, region or tract under the authority of this Act, the Administrator shall monitor the marine and coastal environment of the areas affected in a manner designed to provide time-series data and trend information which can be compared with baseline data and previously collected data for the purpose of identifying significant changes in the quality and productivity of the environment.

"(e) The Administrator shall, by regulation, establish procedures to implement baseline studies, undertake environmental impact assessments, monitor the affected areas and compile environmental impact statements authorized by this section of this Act.

"(f) The Administrator shall designate which coastal States are to be considered as "adjacent coastal States" for the purposes of this Act within 60 days after receiving notice from the Secretary of an intent to proceed with exploratory drilling pursuant to section 19 of this Act. The Administrator shall designate as an "adjacent coastal State" any coastal State in which

"(1) he determines that there is a substantial risk of serious damage, because of such factors as prevailing winds and currents, to its coastal or marine environment as a result of oil spills, blowouts, or release from vessels, pipelines or other transshipment facilities; or

"(2) he determines that new facilities will be required within the State to provide direct support to/offshore oil and gas development under the proposed leasing and development plan. Such facilities shall include but not be limited to: harbor services and supply bases for vessels operating between the shore and the proposed offshore oil and gas lease tracts; oil production platform construction sites; oil or gas tank storage facilities; terminals for tankers or barges transporting oil or gas from production wells within the proposed lease tracts; natural

gas treatment facilities and refineries utilizing crude oil or natural gas extracted from the proposed lease tracts.

"(g) The Administrator may determine that a coastal State is an "adjacent coastal State" for the purpose of this Act at any time during the life of the proposed lease if he finds that the criteria under subsection (e) of this section apply.

"(h) There is hereby authorized an appropriation to the Administrator such sums as are necessary to carry out the purposes and functions of this section of this Act during fiscal years 1976 and 1977."

SAFETY REGULATIONS FOR OIL AND GAS OPERATIONS

"Sec. 22. (a) It is the policy of this section to ensure, through proved techniques, maximum precautions, and maximum use of the best available technology by well-trained personnel, the safest possible operations in the Outer Continental Shelf. Safe operations are those which minimize the likelihood of blowouts, loss of well control, fires, spillages, releases, or other occurrences which may cause damage to the environment, or to property, or endanger human life or health.

"(b) (1) The Secretary of the Department in which the Coast Guard is operating with the concurrence and advice of the Administrator of the Environmental Protective Agency, the Administrator of the National Oceanic and Atmospheric Administration, and the Secretary shall develop, promulgate, and periodically revise safety regulations for operations in the Outer Continental Shelf, to implement to the extent possible the policy of subsection (a) of this section. Within one year after enactment of this section, the Secretary of the Department in which the Coast Guard is operating shall complete a review of existing safety regulations, consider the results and recommendations of the study authorized in subsection (c) of this section, and promulgate a complete set of safety regulations (which may incorporate Outer Continental Shelf Orders) applicable to operations in the Outer Continental Shelf or any region or areas thereof. The Secretary of the Department in which the Coast Guard is operating shall repromulgate any safety regulations in effect on the date of enactment of this section which that Secretary finds should be retained. No safety regulations promulgated pursuant to this subsection shall reduce the degree of safety or protection to the environment afforded by safety regulations previously in effect.

"(2) In promulgating regulations under this section, the Secretary of the Department in which the Coast Guard is operating shall require on all new drilling and production operations, the use of the best available technology wherever failure of equipment would have a substantial effect on public health, safety, or the environment.

INSPECTIONS AND ENFORCEMENT OF SAFETY REGULATIONS

"Sec. 23. (a) (1) The Secretary of the Department in which the Coast Guard is operating shall enforce the safety and environmental protection regulations promulgated under section 22 of this Act. The Coast Guard shall regularly inspect all operations authorized pursuant to this Act and strictly enforce safety regulations promulgated pursuant to this Act and other applicable laws, rules and regulations relating to public health, safety, or environmental protection. All holders of leases under this Act shall allow prompt access at the site of any operations subject to safety regulations to any inspector, and provide such documents and records that are pertinent to public health, safety, or environmental protection, as the Coast Guard may request.

"(2) The Secretary of the Department in which the Coast Guard is operating shall

promulgate regulations within 90 days of the enactment of this section to provide for—

"(A) physical observation at least once each year by an inspector of the installation or testing of all safety equipment designed to prevent or ameliorate blowouts, fires, spillages, or other major accidents; and

"(B) periodic onsite inspection without advance notice to the lessee to assure compliance with public health, safety, or environmental protection regulations.

"(3) The Secretary of the Department in which the Coast Guard is operating shall make an investigation and public report on all major fires and major oil spillage occurring as a result of operation pursuant to this Act. For the purpose of this subsection, a major oil spillage is any spillage in one instance of more than two hundred barrels of oil over a period of 30 days or of fifty barrels over a single period of twenty-four hours; *Provided*, that an investigation and report of a lesser oil spillage may be initiated at the discretion of the Secretary of the Department in which the Coast Guard is operating.

"(4) For the purposes of carrying out their responsibilities under this section, the Secretary of the Department in which the Coast Guard is operating may by agreement utilize with or without reimbursement the services, personnel, or facilities of any Federal agency.

"(b) The Secretary shall, after consultation with the Secretary of the Department in which the Coast is operating, include in his annual report to Congress required by section 15 of this Act the number of violations of safety regulations found, the names of the violators, and the action taken thereon pursuant to section 24 of this Act.

"(c) The Secretary of the Department in which the Coast Guard is operating shall submit to the Congress an annual report on the enforcement responsibilities assigned that Department under this Act including, but not limited to—

"(1) the number and location of any known oil spillages, estimates of the amount of oil released, cause of the spillage when known, remedial action which may be taken to avoid future spillages of a similar nature, cost of cleaning up the spilled oil, assessment of damage done to the marine and/or coastal environment, and other information which may be useful in reducing the likelihood or future occurrences;

"(2) identity of violators, setting out any legal action taken under section 24 of this Act, and such penalties as may result therefrom; and

"(3) recommendations for legislation or authority deemed necessary to improve the enforcement of the laws, rules or regulations pertaining to the administration of this Act.

"(d) The Secretary of the Department in which the Coast Guard is operating shall consider any allegation from any person of the existence of a violation of any safety regulations issued under this Act. The Secretary of the Department in which the Coast Guard is operating shall answer such allegations within 90 days after receipt thereof, stating whether or not such alleged violations exist and, if so, what action has been taken.

"(e) In any investigation directed by this section the Secretary of the Department in which the Coast Guard is operating or the Secretary shall have power to summon before them or their designees witnesses and to require the production of books, papers, documents, and any other evidence. Attendance of witness or the production of books, papers, documents, or any other evidence shall be compelled by a similar process as in the United States district court. In addition, they or their designees shall administer all necessary oaths to any witnesses summoned before such investigation."

"REMEDIES AND PENALTIES"

"SEC. 24. (a) At the request of the Secretary of the Department in which the Coast Guard is operating, the Attorney General or any United States Attorney of the jurisdiction in which a violation occurred shall institute a civil action in the district court of the United States for the district in which the affected operation is located for a restraining order or injunction or other appropriate remedy to enforce any provision of this Act or any rule, regulation or order issued under the authority of this Act.

"(b) If any person shall fail to comply with any provision of this Act, or any regulation or order issued under the authority of this Act, after notice of such failure and expiration of any period allowed for corrective action, such person shall be liable for a civil penalty of not more than \$50,000 for each and every day of the continuance of such failure. The Secretary may assess, collect, and compromise any such penalty. No penalty shall be assessed until the person charged with a violation shall have been given an opportunity for a hearing on such charge.

"(c) Any person who knowingly and willfully violates any provision of this Act, or any rule, regulation or order issued under the authority of this Act designed to protect public health, safety, or the environment or conserve natural resources or knowingly and willfully makes any false statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under this Act, or who knowingly and willfully falsifies, tampers with, or renders inaccurate a monitoring device or data recorder required to be maintained under this Act or knowingly and willfully reveals any data or information required to be kept confidential by this Act, shall, upon conviction, be punished by a fine of not more than \$100,000, or by imprisonment for not more than one year, or both. Each day that a violation continues shall constitute a separate offense.

"(d) Whenever a corporation or other entity violates any provision of this Act, or any rule, regulation or order issued under the authority of this Act, any officer, or agent of such corporation or entity who knowingly and willfully authorized, ordered or carried out such violation shall be subject to the same fines or imprisonment as provided for under subsection (c) of this section.

"(e) The remedies prescribed in this section shall be concurrent and cumulative and the exercise of one does not preclude the exercise of the others. Further, the remedies prescribed in this section shall be in addition to any other remedies afforded by any other law, rule and regulation."

"CITIZEN SUITS"

"SEC. 25. (a) Except as provided in subsection (b) of this section, any person having an interest which is or may be adversely affected may commence a civil action on his own behalf—

"(1) against any person including—

"(A) the United States, and

"(B) any other governmental instrumentality or agency to the extent permitted by the eleventh amendment to the Constitution who is alleged to be in violation of the provisions of this Act or the regulations promulgated thereunder, or any permit, license, or lease issued by the Secretary;

"(2) against the Secretary where there is alleged a failure of the Secretary to perform any act or duty under this Act which is not discretionary with the Secretary.

"(b) No action may be commenced—

"(1) under subsection (a) (1) of this section—

"(A) prior to sixty days after the plaintiff has given notice in writing under oath of the violation (1) to the Secretary, and (1)

to any alleged violator of the provisions of this Act or any rules or regulations promulgated thereunder, or any permit, license or lease issued thereunder;

"(B) if the Secretary has commenced and is diligently prosecuting a civil action in a court of the United States to require compliance with the provisions of this Act, or the regulations thereunder, or the lease, but in any such action in a court of the United States any person may intervene as a matter of right; or

"(2) Under subsection (a) (2) of this section prior to 60 days after the plaintiff has given notice in writing under oath of such action to the Secretary, in such manner as the Secretary shall by regulation prescribe, except that such action may be brought immediately after such notification in the case where the violation complained of, constitutes an imminent threat to the health or safety of the plaintiff or would immediately affect a legal interest of the plaintiff.

"(c) In any action under this section, the Secretary, if not a party, may intervene as a matter of right.

"(d) The court, in issuing any final order in any action, brought pursuant to subsection (a) of this section, may award costs of litigation including reasonable attorneys fees to any party, whenever the court determines such award is appropriate. The court may, if a temporary restraining order or preliminary injunction is sought, require the filing of a bond or equivalent security in accordance with the Federal Rules of Civil Procedure.

"(e) Nothing in this section shall restrict any right which any person or class of persons may have under this or any statute or common law to seek enforcement of any of the provisions of this Act and the regulations thereunder, or to seek any other relief, including relief against the Secretary."

"LIABILITY FOR OIL SPILLS"

"SEC. 26. (a) Any person in charge of any oil and/or gas operations in the Outer Continental Shelf, as soon as that person has knowledge of a discharge or spillage of oil from any operation, shall immediately notify the nearest Coast Guard installation, of such discharge. Any such individual who fails to notify an appropriate agency of the United States Government immediately of such discharge shall, upon conviction, be fined not more than \$10,000 or imprisoned for not more than one year, or both. Notification received pursuant to this subsection, or information obtained by the use of such notification, shall not be used against any such individual in any criminal case, except a prosecution for perjury or for giving a false statement.

"(b) (1) Whenever any oil or natural gas is discharged or spilled as a result of an operation on the Outer Continental Shelf, the Secretary for the Department in which the Coast Guard is operating shall remove or arrange for the removal of such oil or natural gas as soon as possible, unless that Secretary determines such removal will be done properly and expeditiously by the lessee or permittee of the operation from which the discharge occurs.

"(2) removal of oil or natural gas and actions to minimize damage from oil and natural gas discharges shall, to the greatest extent possible, be in accordance with the National Contingency Plan for removal of oil and hazardous substances established pursuant to section 311(c) (2) of the Federal Water Pollution Control Act, as amended (86 Stat. 862, 33 U.S.C. 1321 et seq.).

"(3) whenever the Secretary of the Department in which the Coast Guard is operating acts to remove a discharge or spillage of oil or natural gas pursuant to this subsection, he is authorized to draw upon money available in the Offshore Oil Pollution Settlements Fund established pursuant

to subsection (c) of this section Such money shall be used to pay promptly for all clean-up costs incurred by the United States Government in removing or in minimizing damage caused by such oil or natural gas spillage of discharge.

"(3) Strict liability for all claims arising out of any one incident shall not exceed \$100,000,000. The holder shall be liable for the first \$7,000,000 of such claims that are allowed. The fund shall be liable for the balance of the claims that are allowed up to \$100,000,000. If the total claims allowed exceed \$100,000,000, they shall be reduced proportionately. The unpaid portion of any claim may be asserted and adjudicated under other applicable Federal or State law.

"(4) In any case where liability without regard to fault is imposed pursuant to this subsection, the rules of subrogation shall apply in accordance with the laws of the State in which such damages occurred: *Provided, however,* That in the event such damages occurred outside the jurisdiction of any State, the rules of subrogation shall apply in accordance with the laws applicable pursuant to section 4 of this Act.

"(5) The Offshore Oil Pollution Settlements Fund is hereby established as a non-profit corporate entity that may sue and be sued in its own name. The fund shall be administered by the holders of leases issued under this Act under regulations prescribed by the Secretary. The fund shall be subject to an annual audit by the Comptroller General, and a copy of the audit shall be submitted to the Congress. Claims allowed against the fund shall be paid only from moneys deposited in the fund.

"(6) There is hereby imposed on each barrel of oil produced pursuant to any lease issued or maintained under this Act a fee of 2½ cents per barrel. The fund shall collect the fee from the lessees or their assignees. Costs of administration shall be paid from the money collected by the fund, and all sums not needed for administration and the satisfaction of claims shall be invested prudently in income producing securities approved by the Secretary. Income from such securities shall be added to the principal of the fund.

"(7) Subject to the limitation contained in subparagraph (3) of this subsection, if the fund is unable to satisfy a claim asserted and finally determined under this subsection, the fund may borrow the money needed to satisfy the claim from any commercial credit source, at the lowest available rate of interest, subject to the approval of the Secretary.

"(8) No compensation shall be paid under this subsection unless notice of the damage is given to the Secretary within three years following the date on which the damage occurred.

"(9) Payment of compensation for any damage pursuant to this subsection shall be subject to the holder or the fund acquiring by subrogation all rights of the claimant to recover for such damages from any other person.

"(10) The collection of amounts for the fund shall cease when \$100,000,000 has been accumulated, but shall be renewed when the accumulation in the fund falls below \$85,000,000. The fund shall insure that collections are equitable to all holders of lease or right-of-way.

"(11) The several district courts of the United States shall have jurisdiction over claims against the fund.

"(c) If any area within or without a lease granted or maintained under this Act is polluted by any discharge or spillage of oil from operations conducted by or on behalf of the holder of such lease, and such pollution damages or threatens to damage aquatic life, wildlife, or public or private property, the control and removal of the pollutant shall be at the expense of such holder, including ad-

ministrative and other costs incurred by the Secretary or any other Federal or State officer or agency. Upon failure of such holder to adequately control and remove such pollutant, the Secretary in cooperation with other Federal, State, or local agencies, or in cooperation with such holder, or both, shall have the right to accomplish the control and removal at the expense of the holder.

"(d) The Secretary shall establish requirements that all holders of leases issued or maintained under this Act shall establish and maintain evidence of financial responsibility of not less than \$7 million. Financial responsibility may be established by any one of, or a combination of, the following methods acceptable to the Secretary: (A) evidence of insurance, (B) surety bonds, (C) qualification as a self-insurer, or (D) other evidence of financial responsibility. Any bond filed shall be issued by a bonding company authorized to do business in the United States.

"(c) The provisions of this section shall not be interpreted to supersede section 311 of the Federal Water Pollution Control Act Amendments of 1972 or preempt the field of strict liability or to enlarge or diminish the authority of any State to impose additional requirements.

"RESEARCH AND DEVELOPMENT

"SEC. 27. (a) The Secretary of the Department in which the Coast Guard is operating is authorized and directed to carry out a research and development program designed to improve safety of operations related to exploration and development of the oil and gas resources of the Outer Continental Shelf where similar programs are not presently being conducted by a Federal department or agency and where the Secretary determines that such research and development is not being adequately conducted by any other public or private entity including but not limited to—

- "(1) downhole safety devices;
- "(2) methods for reestablishing control of blowing out or burning wells;
- "(3) methods for containing and cleaning up oil spills;
- "(4) improved flow detection systems for undersea pipelines.

"(b) The Secretary of the Department in which the Coast Guard is operating shall establish equipment and performance standards for oil spill cleanup operations. Such standards shall be coordinated with the National Oil and Hazardous Substances Pollution Contingency Plan, and reviewed by the Administrator of the Environmental Protection Agency, and the Administrator of the National Oceanic and Atmospheric Administration.

"(c) The Administrator of the National Oceanic and Atmospheric Administration, in cooperation with the Secretary of Navy, the Secretary of the Department in which the Coast Guard is operating, and the Directors of the National Institutes of Occupational Safety and Occupational Health, shall conduct studies of underwater diving techniques and equipment suitable for protection of human safety."

"DETERMINATION OF BOUNDARIES

"SEC. 28. Within one year following the date of enactment of this section, the President may establish procedures for settling any outstanding boundary disputes, including international boundaries between the United States and Canada and between the United States and Mexico, and establish contiguous boundaries between adjacent States, as directed in section 4 of this Act."

"MORATORIUM ON LEASING IN FRONTIER AREAS

"SEC. 29. (a) Immediately upon the date of enactment of this section there shall cease any additional leasing of tracts for the purpose of developing oil and gas under the authority of the Outer Continental Shelf

Lands Act (67 Stat. 462, 43 U.S.C. 1331 et seq.) in all regions and areas where there has been no previous development of oil and gas on the Outer Continental Shelf or other areas where geological or environmental conditions make oil and gas development hazardous (hereinafter referred to as "Frontier areas"): to wit, the areas known as Georges Bank; Baltimore Canyon; Blake Plateau; and the portion of the Florida Embayment in the Atlantic Ocean; Southern California, including the Santa Barbara Channel; and Gulf of Alaska. To the extent that leasing has commenced in these areas under the present rules and regulations in force, the Secretary of the Interior shall terminate negotiations with regard to all tracts which have been nominated for sale, are in the process of being nominated for sale, or have been designated for sale.

(b) This moratorium shall continue in any area until such time as the Federal Outer Continental Shelf Oil and Gas Exploration Program is implemented in that area pursuant to section 19 of the Outer Continental Shelf Lands Act and the frontier areas are explored as provided for; and Congress has concurred by its silence with an Outer Continental Shelf Leasing and Development Plan for that area submitted in compliance with section 20 of this Act.

TITLE III—MISCELLANEOUS PROVISIONS PIPELINE SAFETY AND OPERATION

SEC. 301. (a) The Secretary of Transportation in cooperation with the Secretary of Interior, is authorized and directed to report to the Congress within 60 days after enactment of this Act on appropriations and staffing needed to monitor pipelines on Federal lands and the Outer Continental Shelf so as to assure that they meet all applicable standards of construction, operation, and maintenance.

(b) The Secretary of Transportation, in cooperation with the Secretary of the Interior, is authorized and directed to review all laws and regulations relating to the construction, operation, and maintenance of pipelines on Federal lands and the Outer Continental Shelf and report to Congress within one year after enactment of this Act on administrative changes needed and recommendations for new legislation.

(c) One year after the date of the enactment of this Act, the Interstate Commerce Commission and the Secretary of Transportation shall submit to the President and the Congress a report on the adequacy of existing transport facilities and regulations to facilitate distribution of oil and gas resources of the Outer Continental Shelf. The report shall include recommendations for changes in existing legislation or regulations to facilitate such distribution.

REVIEW OF SHUT-IN OR FLARING WELLS

SEC. 302. (a) Within six months after enactment of this Act, and each year thereafter, the Secretary shall submit a report to Comptroller General and the Congress listing all shut-in oil and gas wells and wells flaring natural gas on leases issued under the Outer Continental Shelf Lands Act. The reports shall indicate why each well is shut-in or flaring natural gas, and whether the Secretary intends to require production or order cessation of flaring.

(b) Within six months after receipt of the Secretary's reports, the Comptroller General shall review and evaluate the reasons for allowing the wells to be shut-in or to flare natural gas and submit his findings and recommendations to Congress.

BIDDING SYSTEM STUDY

SEC. 303. Within one year after the date of enactment of this Act, the Secretary of the Interior, in consultation with the Comptroller General, shall prepare and publish a report with recommendations for achieving an

January 27, 1975

CONGRESSIONAL RECORD — SENATE

S 911

equitable system of lease sales while maximizing production and revenues from the leasing of Outer Continental Shelf lands, and shall include a plan for implementing recommended administrative changes and legislative proposals. Such report shall include but not be limited to the consideration of the following—

(1) competitive bidding systems provided in section 8 of the Outer Continental Shelf Lands Act as amended by this Act;

(2) measures to encourage entry of new competitors; and

(3) measures to increase supply to independent refiners and distributors.

NATIONAL STRATEGIC ENERGY RESERVE STUDY—

SEC. 304. The Secretary of the Interior, in consultation with appropriate Federal officials, shall determine the extent and location of the oil and gas deposits held in reserve by the United States Government. The Secretary shall study the most appropriate means of developing a National Strategic Energy Reserve in the national interest. Included in the study shall be an assessment of the feasibility of establishing areas in the Outer Continental Shelf as strategic reserves, and the plausibility of developing certain existing onshore naval petroleum reserves for commercial production in exchange for designating comparable offshore oil and gas reserves as a National Strategic Energy Reserve. The Secretary shall consult with other Federal agencies and departments and nongovernmental authorities in conducting such study. The Secretary shall report to the Congress by July 1976 the results of such study.

RELATIONSHIP TO EXISTING LAW

SEC. 305. Except as otherwise expressly provided herein, nothing in this Act shall be construed to amend, modify, or repeal any provisions to the Coastal Zone Management Act of 1972 or the National Environmental Policy Act of 1969.

STATEMENT BY SENATOR MATHIAS

Mr. President, over the last two years the Congress has become increasingly involved with the development of oil and gas resources on the Outer Continental Shelf. Prior to that time, little attention had been paid to this subject and leasing and production took place for many years under outdated legislation and with only a casual glance from regulatory agencies. Even though Congress has been concerned for these last two years with the Outer Continental Shelf, there has been no significant revision of the laws which govern this area.

In the last days of the second session of the 93d. Congress, the Interior Committee reported the Energy Supply Act of 1974 to the Senate floor for consideration and this was passed after considerable debate and amendment. There was no time to have that legislation or parallel legislation considered in the House before the end of the 93d. Congress. Though this disappointed some Senators at the time, it may have been a blessing, as we now have a much fuller view of what should be included in any comprehensive measure governing OCS development.

I know it is the intention of the Senate Interior Committee to report out legislation on this subject in the very near future and I applaud that intention.

While I consider it unwise to undertake leasing in frontier areas without amending the Outer Continental Shelf Lands Act, I also recognize that Congress has a responsibility to quickly enact the necessary legislation. I am very pleased, therefore, to join Senator Hollings and others in introducing comprehensive legislation to govern leasing and production on the Outer Continental Shelf. The legislation we introduce today will provide a program which is sensitive to America's long-term energy need but at the same time mindful of the delicate

coastal zone environment in which OCS development must necessarily occur.

I am pleased to have played a considerable part in Congress' increased involvement in the OCS. As the Appropriations Committee representative on the National Ocean Policy Study, I have had a full opportunity to represent Maryland as this legislation has taken form. The State of Maryland has a significant stake in what decisions we in the Congress make. Although Maryland has a relatively small Atlantic coastline, that coastline is certainly among the state's most important assets. Assateague is one of the last undeveloped barrier islands on the East Coast and we have fought too many long and difficult legislative battles to see that island now despoiled. Ocean City is a very different Maryland asset, but its value to the economy of Worcester County and the State of Maryland is equally great and could certainly be adversely affected by the unplanned growth of energy facilities. So anyone with good sense would call on the Federal and State governments to establish a sound working relationship so that any and all problems associated with OCS development could be carefully analyzed and the proper decisions made. This can only come about by extensive amendment to the present statutory framework.

The bill that I join in introducing today will provide a major program of offshore oil exploration in frontier areas of the Outer Continental Shelf by the Federal government. There is no reason why the Federal Government cannot conduct a sound exploration program using private firms on a contractual basis. The important, but only difference, over present practice would be that the information would be fully available on these public lands. This would ensure first an adequate return to the public and, second, production only in an environmentally acceptable manner.

We have also sought to provide the Secretary of the Interior with greater latitude in holding lease sales of public lands. For some time now Congress has been disturbed over the level of competition existing in OCS lease sales. By providing new methods, we can assure that adequate competition does in fact exist.

I am particularly pleased that my amendment to the Energy Supply Act of 1974 has been incorporated into our broader legislation. It gives the Governors of the coastal states a right to delay leasing for up to three years should they find that their state will be subject to adverse economic or environmental impacts and the Secretary of the Interior concurs. My amendment, which passed the Senate, provided for a Board to review the Secretary's decision. I also introduced legislation of a similar nature earlier in this Congress. The legislation which we introduce today modifies that approach somewhat by providing that the Congress shall be the final reviewing authority should a Governor be denied his request. The Congress can, in effect, uphold the Governor by a resolution of either the House or the Senate. I think that this is a workable solution and one that adequately protects the coastal states.

The National Ocean Policy Study, since its creation approximately one year ago, has held extensive hearings on OCS development and the conclusion that I have drawn as a member of that panel is that OCS development is in the public interest if we proceed with the utmost caution and establish at the very outset the best controls and standards. Our bill has much to say about these matters. In short, it mandates that we make our best effort to ensure that the mistakes of the past will not be repeated. We are mindful that our states and the nation as a whole can lose environmentally and economically through poorly planned OCS development.

It is incumbent upon the Congress to establish new priorities and standards for OCS development. This must be a central pillar of our national energy policy. We must undertake this task on an expedited basis because the nation is critically short of domestic petroleum supplies, but we must never sacrifice careful planning in a rush for such supplies. We must be constantly mindful that an error on the side of conservation is easiest to correct.

EXHIBIT 10

93d Congress, 2d Session - - - - - House Document No. 93-406

COMPREHENSIVE ENERGY PLAN

COMMUNICATION

FROM

ADMINISTRATOR, FEDERAL ENERGY
ADMINISTRATION

TRANSMITTING

THE COMPREHENSIVE ENERGY PLAN, PURSUANT TO
SECTION 22(a) OF PUBLIC LAW 93-275



93 PUBLIC LAW 275, approved 5-7-74

DECEMBER 10, 1974.—Referred to the Committee on Interstate and Foreign
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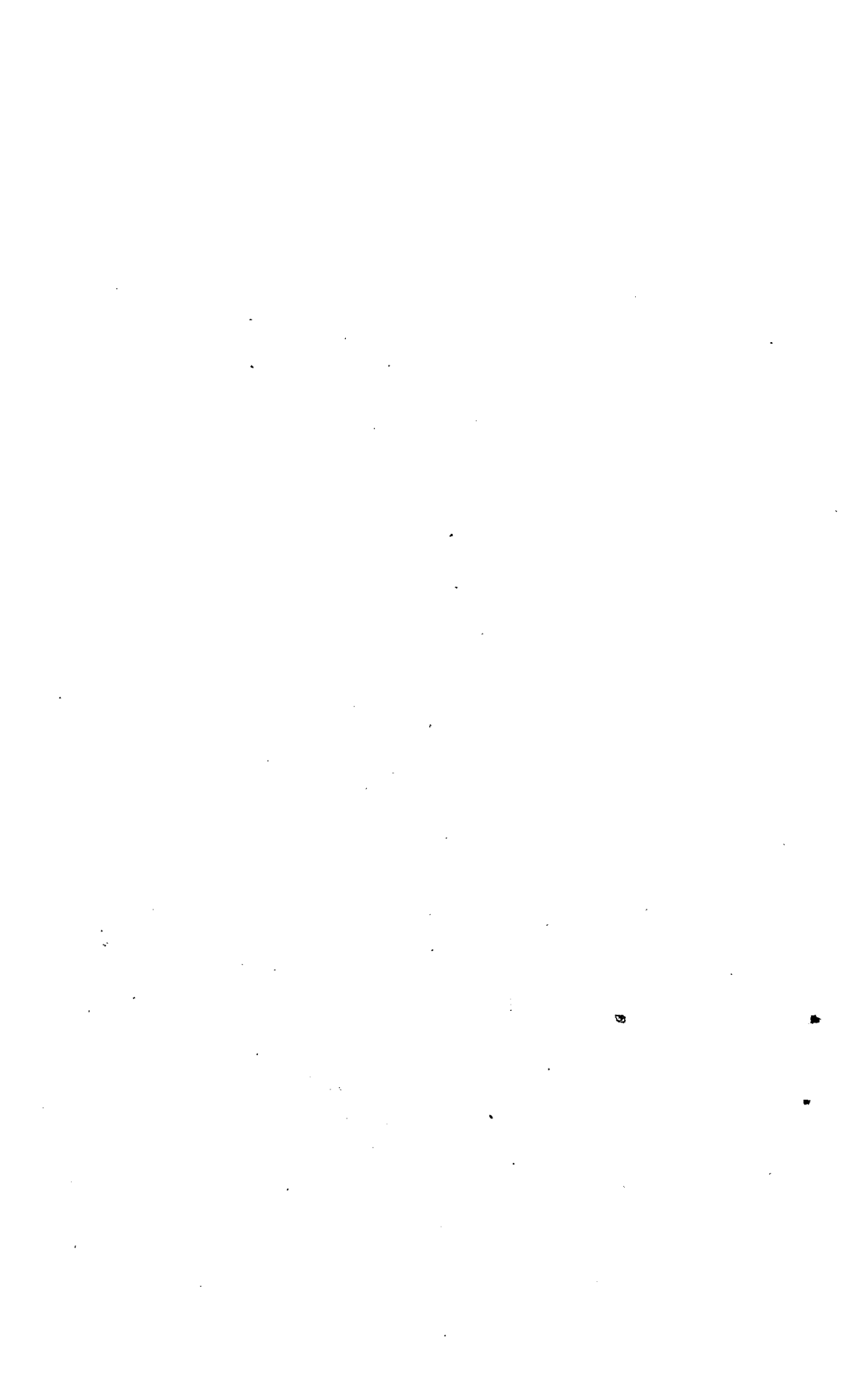
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OUTER CONTINENTAL SHELF LEASING PROGRAM

Prospects for large, new discoveries of onshore oil and gas deposits in the lower 48 States are small. For this reason, it is proposed that leasing of the Federal OCS be accelerated, to include frontier areas of Alaska, the Atlantic and Pacific coasts, and the Gulf of Mexico. Accelerated development of the OCS could produce a reduction in oil imports of up to 2.5 million barrels per day by 1985.

In addition to increasing domestic production of petroleum, the accelerated leasing program could reduce the Nation's energy bill. Extraction costs per barrel for OCS oil range from an estimated \$1.50 for the Atlantic to \$3.50 for the Gulf of Alaska. These cost estimates compare favorably with the current world oil price of about \$11 per barrel.

There are environmental risks and costs associated with OCS development. The greatest danger is the risk of a major oil spill, but this risk has a low probability of occurrence. There are problems associated with management of the coastal zone to insure proper siting of onshore facilities and linking these to offshore installations in an environmentally protective manner; avoiding the social strains of too rapid development would be a challenge.

Accelerated leasing of OCS lands is expected to produce higher regional employment levels and population in the discovery area. In addition, personal and corporate incomes and the tax base for State and local governments would also increase. The social effects of population increases would be reflected in increased demands for public services, and attempts to preserve traditional lifestyles.

Internationally, the reduction in oil imports would aid the balance of payments and reduce the pressures upon the international financial system. In addition, there would be strategic foreign policy and national security advantages in having energy sources which are not susceptible to interruption by a foreign power.

APPENDIX 2

LEASING ACTIONS

A. OUTER CONTINENTAL SHELF LEASING PROGRAM

Background

Recent world events have spotlighted the growing dependence of the United States on imported crude oil and petroleum products. Interruptions in oil imports impose severe costs on the United States due to the pervasive economic role of petroleum in almost every sector of the economy.

As the Outer Continental Shelf represents one of the most important potential sources of increased domestic energy production, the President has called for an accelerated leasing program as a mechanism to insure that the most favorable OCS exploration prospects become available for near-term development.

Only about 10 million acres of the more than 500 million acres OCS have been leased and explored. It is estimated by the U.S. Geological Survey that recoverable resources from the OCS range from 58 to 116 billion barrels of oil and from 355 to 710 trillion cubic feet of natural gas. Thus, leasing of the Federal OCS could be greatly accelerated with significant impact on domestic production. The principal OCS areas under consideration for leasing are shown in figure A2-1.

The Secretary of the Interior has been meeting with coastal State officials to establish a program to rapidly develop Outer Continental Shelf resources. The States are responsible for all development inland from a line 3 miles from the shoreline—3 leagues for the Texas and Florida gulf). In accordance with Federal legislation, certain States have enacted laws and are preparing plans to manage development within the coastal zone described above.

The accelerated leasing program will comply with all provisions of the National Environmental Policy Act, and every step will be taken to insure that development will be carried out under environmentally sound conditions. In addition, the administration will propose to the next Congress a Comprehensive Oil Pollution Liability and Compensation Act for damages resulting from oil spills, offshore drilling, and spills into any navigable stream.

Since 1954 the leasing of oil and gas on the OCS has been a priority energy program of the Federal Government. However, the program has not been without its setbacks. During the 1960's the Nation's previously comfortable position with respect to domestic oil supply deteriorated. Domestic exploration declined and major new oil finds were limited to a few offshore areas and the North Slope of Alaska. Toward the end of the decade environmental concerns emerged, subsequent to an oil spill in the Santa Barbara Channel and offshore leasing was virtually halted for 17 months. In 1969, Congress enacted

the National Environmental Policy Act (NEPA) which required an environmental impact statement (EIS) assessment of all major Federal actions having an effect on the environment.

The 4-year accelerated planning schedule, of which the six sales planned for calendar year 1975 are a part, was developed by the Department of the Interior. There are nine proposed sales in Alaskan offshore waters and five in waters off the Atlantic seaboard. An additional sale is proposed for the area located offshore northern California, Oregon, and Washington. Six of the proposed sales—eastern Gulf of Mexico, southern California, and the mid and southern Atlantic areas—involve waters deeper than the 200-meter depth limit of the OCS. The OCS planning schedule is reproduced at the end of this section.

A draft environmental impact statement covering the proposed accelerated leasing program was released October 18. A number of other Federal actions are also being considered to assure proper development of the Outer Continental Shelf. The Secretary of the Interior is contemplating the issuance of new regulations requiring disclosure of exploratory information and restricting joint bidding by the major oil companies in an effort to increase competition. He has requested and received industry assessment of the potential of OCS frontier areas and priority preferences or leasing. The areas under consideration for leasing are as follows:

Atlantic coast.—The principal Atlantic OCS areas are shown in figure A2-2. On August 27, 1974, a detailed analysis and report was filed recommending that a decree be issued determining the pending litigation in *U.S. v. Maine* in favor of the United States and against the defendant States. A favorable decree would grant the United States the right to explore the natural resources under the OCS lands lying more than 3 miles seaward from the coastline. Final action must be taken by the Supreme Court.

Gulf of Mexico (figure A2-3).—The Secretary of the Interior has announced two lease sales off the Louisiana and Texas coasts during fiscal year 1975. Nominations are now being requested from industry from a list of 590 tracts. The sale is tentatively scheduled for May 1975.

Pacific coast (figure A2-4).—The Department of the Interior has placed high priority on leasing lands off southern California in 1975. Nominations have been made and the Department is preparing a draft EIS pertaining to tracts to be leased. A conflict has surfaced between the Department and proponents of the coastal zone management plan. California's Coastal Zone Management Commission has jurisdictional authority over all developments between the 3-mile limit and 1,000 yards inland from the shoreline. Those wishing to delay the sale assert the view that the commission will submit the coastal management plan to the California Legislature in January 1976 and all activities including preparation of the EIS should be delayed until adoption of the plan.

An EIS to define the impacts of policies related to drilling on certain tracts and additional leasing to be conducted in the Santa Barbara Channel is being prepared, although at the present time the OCS planning schedule does not include any leasing in the Santa Barbara Channel.