

UNITED STATES GOVERNMENT
MEMORANDUM

August 7, 2026

To: Public Information (MS 5030)
From: Plan Coordinator, FO, Plans Section (MS 5231)
Subject: Public Information copy of plan

Control # - S-08218
Type - Supplemental Development Operations Coordinations Document
Lease(s) - OCS-G16770 Block - 641 Green Canyon Area
OCS-G20082 Block - 640 Green Canyon Area
Operator - Chevron U.S.A. Inc.
Description - drill new producer well, install a new tie-in skid and 3 new
lease term pipe jumpers
Rig Type - Not Found

Attached is a copy of the subject plan.

It has been deemed submitted as of this date and is under review for approval.

Tehirah Barkum
Plan Coordinator

Site Type/Name	Botm Lse/Area/Blk	Surface Location	Surf Lse/Area/Blk
SPAR/A-TAHITI		6832 FSL, 6451 FWL	G16770/GC/641
WELL/IS001	G16770/GC/641	2455 FSL, 1972 FEL	G20082/GC/640
WELL/IS002	G20082/GC/640	2465 FSL, 2042 FEL	G20082/GC/640
WELL/IS003	G20082/GC/640	2642 FSL, 2057 FEL	G20082/GC/640
WELL/IS004	G16770/GC/641	2655 FSL, 1968 FEL	G20082/GC/640
WELL/PC001	G20082/GC/640	5052 FSL, 3521 FEL	G20082/GC/640
WELL/PC002	G20082/GC/640	5097 FSL, 3432 FEL	G20082/GC/640
WELL/PC003	G20082/GC/640	4847 FSL, 3399 FEL	G20082/GC/640
WELL/PC004	G20082/GC/640	4865 FSL, 3497 FEL	G20082/GC/640
WELL/PS002	G20082/GC/640	3201 FSL, 6334 FEL	G20082/GC/640
WELL/PS003	G20082/GC/640	3086 FSL, 6154 FEL	G20082/GC/640
WELL/PS005	G20082/GC/640	3139 FSL, 6109 FEL	G20082/GC/640
WELL/PS006	G20082/GC/640	3141 FSL, 6370 FEL	G20082/GC/640
WELL/PS008	G20082/GC/640	3023 FSL, 6186 FEL	G20082/GC/640

Record of Changes – PROPRIETARY & PUBLIC COPIES

Chevron U.S.A. Inc.
Supplemental DOCD, Plan Control No. S-8218
Leases OCS-G 20082 / 16770, Green Canyon Blocks 640 / 641

[illegible]

SUPPLEMENTAL DEVELOPMENT OPERATIONS COORDINATION DOCUMENT



CHEVRON U.S.A. INC.

Green Canyon Block 640
Lease OCS-G 20082
Green Canyon 640 Unit Agreement No. 754306008

Platform A (Tahiti)
Green Canyon Block 640
Lease OCS-G 16770

“TAHITI DIAMOND” PROJECT

Estimated Startup Date: 2026

SUBMITTED BY:

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AUTHORIZED REPRESENTATIVE:

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TABLE OF CONTENTS

SECTION 1 PLAN CONTENTS.....	1
1.1 PLAN INFORMATION	1
1.2 LOCATION	2
1.3 SAFETY AND POLLUTION PREVENTION FEATURES	2
1.4 STORAGE TANKS AND PRODUCTION VESSELS	3
1.5 POLLUTION PREVENTION MEASURES	3
1.6 ADDITIONAL MEASURES	3
1.7 COST RECOVERY FEE.....	3
SECTION 2 GENERAL INFORMATION.....	4
2.1 APPLICATIONS AND PERMITS	4
2.2 DRILLING FLUIDS	4
2.3 PRODUCTION	4
2.4 OIL CHARACTERISTICS	4
2.5 NEW OR UNUSUAL TECHNOLOGY	4
2.6 BONDING STATEMENT	4
2.7 OIL SPILL FINANCIAL RESPONSIBILITY (OSFR)	4
2.8 DEEPWATER WELL CONTROL STATEMENT.....	4
2.9 SUSPENSION OF PRODUCTION	5
2.10 BLOWOUT SCENARIO AND WORST CASE DISCHARGE CALCULATIONS.....	5
SECTION 3 GEOLOGICAL AND GEOPHYSICAL INFORMATION	6
3.1 GEOLOGICAL DESCRIPTION.....	6
3.2 STRUCTURE CONTOUR MAPS.....	6
3.3 INTERPRETED SEISMIC LINES	6
3.4 GEOLOGICAL STRUCTURE CROSS-SECTIONS	6
3.5 SHALLOW HAZARDS REPORT	6
3.6 SHALLOW HAZARDS ASSESSMENT	6
3.7 HIGH-RESOLUTION SEISMIC LINES	6
3.8 STRATIGRAPHIC COLUMN	6
3.9 TIME VS DEPTH TABLES.....	6
SECTION 4 HYDROGEN SULFIDE INFORMATION	7

4.1 CONCENTRATION	7
4.2 CLASSIFICATION	7
4.3 H ₂ S CONTINGENCY PLAN.....	7
4.4 MODELING REPORT	7
SECTION 5 MINERAL RESOURCE CONSERVATION INFORMATION.....	8
5.1 TECHNOLOGY & RESERVOIR ENGINEERING PRACTICES AND PROCEDURES	8
5.2 TECHNOLOGY AND RECOVERY PRACTICES AND PROCEDURES.....	8
5.3 RESERVOIR DEVELOPMENT.....	8
SECTION 6 BIOLOGICAL, PHYSICAL AND SOCIOECONOMIC INFORMATION.....	9
6.1 DEEPWATER BENTHIC COMMUNITIES	9
6.2 TOPOGRAPHIC FEATURES (BANKS)	9
6.3 TOPOGRAPHIC FEATURES STATEMENT (SHUNTING)	9
6.5 LIVE BOTTOMS (LOW RELIEF)	9
6.6 POTENTIALLY SENSITIVE BIOLOGICAL FEATURES.....	9
6.7 THREATENED AND ENDANGERED SPECIES, CRITICAL HABITAT AND MARINE MAMMAL INFORMATION	9
6.8 ARCHAEOLOGICAL REPORT.....	12
6.9 AIR AND WATER QUALITY INFORMATION	12
6.10 SOCIOECONOMIC INFORMATION.....	12
SECTION 7 WASTES AND DISCHARGES INFORMATION.....	13
7.1 PROJECTED GENERATED WASTES	13
“Wastes You Will Generate, Treat and Downhole Dispose or Discharge to the Gulf of America” is included as Attachment 7-A.....	13
7.2 MODELING REPORT.....	13
SECTION 8 AIR EMISSIONS INFORMATION\	14
8.1 SUMMARY INFORMATION	14
SECTION 9 OIL SPILL INFORMATION	15
9.1 OIL SPILL RESPONSE PLANNING	15
9.2 SPILL RESPONSE SITES.....	15
9.3 OSRO INFORMATION	15
9.4 WORST-CASE DISCHARGE SCENARIO DETERMINATION.....	16
9.5 OIL SPILL RESPONSE DISCUSSION	16
9.6 MODELING REPORT	24
SECTION 10 ENVIRONMENTAL MONITORING INFORMATION	25

10.1 MONITORING SYSTEMS	25
10.2 INCIDENTAL TAKES.....	25
10.3 FLOWER GARDEN BANKS NATIONAL MARINE SANCTUARY	26
SECTION 11 LEASE STIPULATIONS INFORMATION	27
11.4 MILITARY WARNING AREA (MWA)	27
11.2 MARINE PROTECTED SPECIES	27
SECTION 12 ENVIRONMENTAL MITIGATION MEASURES INFORMATION	29
12.1 MEASURES TAKEN TO AVOID, MINIMIZE, AND MITIGATE IMPACTS	29
12.2 INCIDENTAL TAKES.....	29
SECTION 13 RELATED FACILITIES AND OPERATIONS INFORMATION	30
13.1 RELATED OCS FACILITIES AND OPERATIONS	30
13.2 TRANSPORTATION SYSTEM	30
13.3 PRODUCED LIQUID HYDROCARBONS TRANSPORTATION VESSELS	30
SECTION 14 SUPPORT VESSELS AND AIRCRAFT INFORMATION	31
14.1 GENERAL	31
14.2 DIESEL OIL SUPPLY VESSELS	31
14.3 DRILLING FLUID TRANSPORTATION	31
14.4 SOLID AND LIQUID WASTE TRANSPORTATION	31
14.5 VICINITY MAP	31
SECTION 15 ONSHORE SUPPORT FACILITIES INFORMATION	32
15.1 GENERAL	32
15.2 SUPPORT BASE CONSTRUCTION OR EXPANSION	32
15.3 SUPPORT BASE CONSTRUCTION OR EXPANSION TIMETABLE	32
15.4 WASTE DISPOSAL	32
SECTION 16 COASTAL ZONE MANAGEMENT (CZM) INFORMATION.....	33
SECTION 17 ENVIRONMENTAL IMPACT ANALYSIS (EIA).....	35
SECTION 18 ADMINISTRATIVE INFORMATION	36
18.1 EXEMPTED INFORMATION DESCRIPTION	36
18.2 BIBLIOGRAPHY	36

SECTION ATTACHMENTS

Section 1	Plan Contents
1-A	OCS Plan Information Forms
1-B	Location Plat
1-C	Pay.Gov Receipt
Section 7	Waste and Discharges Information
7-A	Waste You Will Generate, Treat and Downhole Dispose or Discharge to the GOA
Section 8	Air Emissions Information
8-A	Emissions Worksheets
Section 14	Support Vessels and Aircraft Information
14-A	Waste You Will Transport and/or Dispose Onshore Table
14-B	Vicinity Map
Section 16	Coastal Zone Management Act (CZMA) Information
16-A	Coastal Zone Consistency Certification (<i>Alabama</i>)
Section 17	Environmental Impact Analysis (EIA)
17-A	Environmental Impact Analysis (EIA)

SECTION 1 PLAN CONTENTS

1.1 PLAN INFORMATION

Chevron U.S.A. Inc. (Chevron) is the designated operator of Leases OCS-G 16759, 16760, 20082 and 16770, Green Canyon (GC) Blocks 596, 597, 640 and 641, which are part of the Green Canyon Block 640 Unit (Agreement No. 754306008). The Tahiti field is comprised of subsea wells that tie-back to the Chevron operated A-Tahiti SPAR, Complex ID Number 1819.

Under this Supplemental Development Operations Coordination Document (DOCD), Chevron proposes to provide for a new producer well, PS012 (GC 640), to be drilled and completed under Supplemental Exploration Plan (EP), Control No. S-8194, and install a new tie-in skid and three (3) new lease term flexible pipe jumpers.

Chevron further proposes to update the air emissions to include miscellaneous well intervention activities for the following wells with surface locations in GC 640:

Well No.	API No.	Status	Previous Plan
PC001	60-811-40663-00	COM	S-7820 / R-6805 / S-8170
PC002	60-811-40666-00	COM	S-7820 / R-6805 / S-8170
PC003	60-811-40659-00	COM	S-7820 / R-6805 / S-8170
PC004	60-811-40664-01	COM	S-7820 / R-6805 / S-8170
IS001	60-811-40578-00	COM	S-7447 / R-6733 / R-7241 / S-8170
IS002	60-811-40573-00	COM	S-7447 / R-6733 / R-7241 / S-8170
IS003	60-811-40576-00	COM	S-7447 / R-6733 / R-7241 / S-8170
IS004	60-811-40577-00	COM	S-7447 / R-6733 / R-7241 / S-8170
PS002	60-811-40462-00	COM	N-8406 / R-6698 / S-8170
PS003	60-811-40463-01	COM	N-8406 / R-6698 / S-8170
PS005	60-811-40467-00	COM	N-8406 / R-5101 / R-6698 / S-8170
PS006	60-811-40468-02	COM	N-8406 / R-5101 / R-6698 / S-8170
PS008	60-811-40469-02	COM	N-8406 / R-6698 / S-8170

Well No.	API No.	Status	Previous Plan
PS009	60-811-40648-01	COM	N-8406 / R-5101 / R-6698 / S-8170
PS010	60-811-40662-00	COM	S-7820 / R-6698 / S-8170
PS011	60-811-40726-00	COM	S-7958 / S-8170
SS002	60-811-40690-02	COM	S-7855 / R-6723 / S-8170

These development operations are in approximately 4,000 to 4,300 feet of water. The pipelines will be installed using dynamically positioned offshore construction/pipelay vessel and support vessels.

The operations proposed will not utilize pile-driving, nor is Chevron proposing any new pipelines expected to make landfall.

The OCS Plan Information Form BOEM-137 is included as **Attachment 1-A**.

1.2 LOCATION

A Well Location Plat depicting the surface locations of the proposed well is included as **Attachment 1-B**.

No anchors are associated with the activities proposed in this plan.

1.3 SAFETY AND POLLUTION PREVENTION FEATURES

No drilling operations are proposed in this plan. Safety of personnel and protection of the environment during the proposed operations is one of the primary concerns of Chevron. Chevron mandates regulatory compliance with the contractors and vendors associated with the proposed operations as follows:

The Bureau of Ocean Energy Management (BOEM) mandates that the operations described in this DOCD comply with well control, pollution prevention, construction, welding procedures, and training described in the Bureau of Safety and Environmental Enforcement (BSEE) regulations 30 CFR 250 C, D, E, O and S; and as further clarified by BSEE Notice to Lessees.

BSEE conducted periodic announced and unannounced onsite inspections of offshore facilities to confirm operators are complying with lease stipulations, regulatory requirements, approved plans, and other conditions, and complying with pollution prevention requirements. The National Potential Incident of Noncompliance (PINC) List serves as the baseline for these inspections.

United States Coast Guard (USCG) regulations contained in Title 33 CFR Part 144 mandate that appropriate life rafts, life jackets, ring buoys, etc. be maintained on the facilities at all times. U.S. Environmental Protection Agency (EPA) regulations contained in the NPDES General Permit for Region VI mandate that supervisory and certain designated personnel on board the facility be

familiar with the effluent limitations and guidelines for overboard discharges into the receiving waters.

There will be no disposal of equipment, cables, chains, containers, or other materials into offshore waters.

1.4 STORAGE TANKS AND PRODUCTION VESSELS

There are no changes or additions to the production vessels described in the initial DOCD (Control No. N-8406) for the A-Tahiti SPAR facility.

1.5 POLLUTION PREVENTION MEASURES

These operations do not propose activities for which the State of Florida is an affected state.

1.6 ADDITIONAL MEASURES

Chevron has a robust Health Safety and Environment (HSE) system with a focus on Injury and Incident Free operations. The facility and its operations have been, and will continue to be, the focus of numerous hazard assessments and mitigations to reduce the risk of accidents and incidents, including pollution.

1.7 COST RECOVERY FEE

Documentation of the \$5,565.00 cost recovery fee payment is included as **Attachment 1-C**.

Attachment 1-A

U.S. Department of the Interior
Bureau of Ocean Energy Management

OMB Control Number: 1010-0151
OMB Approval Expires: 6/30/2021

OCS PLAN INFORMATION FORM

General Information									
Type of OCS Plan:		Exploration Plan (EP)	XX	Development Operations Coordination Document (DOCD)					
Company Name: Chevron U.S.A. Inc.				BOEM Operator Number: 00078					
Address: 1500 Louisiana Street Houston, TX 77002				Contact Person: Kelley Pisciola					
				Phone Number: 281-698-8519					
				E-Mail Address: kelley.pisciola@jccteam.com					
If a service fee is required under 30 CFR 550.125(a), provide the				Amount paid	\$5,565.00	Receipt No.		27VNIQEA	
Project and Worst Case Discharge (WCD) Information									
Leases: G-20082 & 16770			Area: Green Canyon		Blocks: 640 & 641		Project Name (If Applicable): Tahiti Diamond		
Objective(s)	X	Oil	X	Gas		Sulphur		Salt	Onshore
Support Base(s): Golden Meadow, LA, Galliano, LA & Theodore, AL									
Platform / Well Name: A-Tahiti SPAR			Total Volume of WCD: 195,774			API Gravity: 29.5°			
Distance to Closest Land (Miles): 118					Volume from uncontrolled blowout: 186,452 BOPD				
Have you previously provided information to verify the calculations and assumptions for your WCD?							XX	Yes	No
If so, provide the Control Number of the EP or DOCD with which this information was provided							S-7855		
Do you propose to use new or unusual technology to conduct your activities?								Yes	XX
Do you propose to use a vessel with anchors to install or modify a structure?								Yes	XX
Do you propose any facility that will serve as a host facility for deepwater subsea development?								Yes	XX
Description of Proposed Activities and Tentative Schedule (Mark all that apply)									
Proposed Activity					Start Date		End Date		No. of Days
Installation of subsea infrastructure					2026		2026		12 days
Installation of two flexible jumpers					01/01/2027		01/31/2027		30 days
Commence Well No. PS012 Production					02/01/2027		02/01/2045		18 years
Future Well Intervention Ops (PC wells, IS wells, PS wells & SS002 well)					2026		2035		180 days/year
Description of Drilling Rig					Description of Structure				
	Jackup	XX	Drillship			Caisson		Tension leg platform	
	Gorilla Jackup		Platform rig			Fixed platform		Compliant tower	
	Semisubmersible		Submersible		X	Spar		Guyed tower	
	DP Semisubmersible		Other (Attach description)			Floating production system		Other (Attach description)	
Drilling Rig Name (If known):									
Description of Lease Term Pipelines									
From (Facility/Area/Block)		To (Facility/Area/Block)		Diameter (Inches)		Length (Feet)			
GC 640 Tie-In Skid		GC 640 Manifold		5-Inch OD		~352 feet			
GC 640 Well No. PS012		GC 640 Tie-In Skid		5-Inch OD		~417 feet			
GC 640 Well No. PS009		GC 640 Tie-In Skid		5-Inch OD		~437 feet			

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location									
Well or Structure Name/Number (If renaming well or structure, reference previous name): A-Tahiti SPAR				Previously reviewed under an approved EP or DOCD?		XX	Yes		No
Is this an existing well or structure?		X	Yes		No	If this is an existing well or structure, list the Complex ID or API No.		CID 1819	
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?							Yes	XX	No
WCD Info	For wells, volume of uncontrolled blowout (Bbls/Day):			For structures, volume of all storage and pipelines (Bbls): 9,322		API Gravity of fluid		29.5°	
	Surface Location			Bottom-Hole Location (For Wells)		Completion (For multiple completions, enter separate lines)			
Lease No.	OCS-G 16770					OCS OCS			
Area Name	Green Canyon								
Block No.	641								
Blockline Departures (in feet)	N/S Departure: 6832' FSL			N/S Departure:		N/S Departure		F __ L	
	E/W Departure: 6451' FWL			E/W Departure:		E/W Departure		F __ L	
Lambert X-Y coordinates	X: 2,382,451'			X:		X:		F __ L	
	Y: 9,922,672'			Y:		Y:		F __ L	
Latitude/ Longitude	Latitude: 27° 19' 33.2682"			Latitude:		Latitude		F __ L	
	Longitude: -90° 42' 50.946"			Longitude:		Longitude		F __ L	
Water Depth (Feet): 4,000'				MD (Feet):		TVD (Feet):		MD (Feet):	
Anchor Radius (if applicable) in feet:								TVD (Feet):	
Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)									
Anchor Name or No.	Area	Block	X Coordinate		Y Coordinate		Length of Anchor Chain on Seafloor		
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location									
Well or Structure Name/Number (If renaming well or structure, reference previous name): PS012				Previously reviewed under an approved EP or DOCD? S-EP (Control No. 8194)			☒	Yes	No
Is this an existing well or structure?		☐	Yes	☐	No	☒		If this is an existing well or structure, list the Complex ID or API No.	
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?							☒	Yes	No
WCD info	For wells, volume of uncontrolled blowout (Bbbls/day):			For structures, volume of all storage and pipelines (Bbbls):			API Gravity of fluid		
	Surface Location			Bottom-Hole Location (For Wells)			Completion (For multiple completions, enter separate lines)		
Lease No.	OCS G 20082			OCS			OCS OCS		
Area Name	GREEN CANYON								
Block No.	640								
Blockline Departures (in feet)	N/S Departure: F <u>S</u> L 3194			N/S Departure:			N/S Departure: F <u> </u> L N/S Departure: F <u> </u> L N/S Departure: F <u> </u> L		
	E/W Departure: F <u>E</u> L 6146			E/W Departure:			E/W Departure: F <u> </u> L E/W Departure: F <u> </u> L E/W Departure: F <u> </u> L		
Lambert X-Y coordinates	X: 2369854			X:			X: X: X:		
	Y: 9919034			Y:			Y: Y: Y:		
Latitude/ Longitude	Latitude N 27 18 59.5210			Latitude			Latitude Latitude Latitude		
	Longitude W 90 45 11.2864			Longitude			Longitude Longitude Longitude		
Water Depth (Feet): 4292				MD (Feet):		TVD (Feet):		MD (Feet): MD (Feet): MD (Feet):	
Anchor Radius (if applicable) in feet:				NA				TVD (Feet): TVD (Feet): TVD (Feet):	
Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)									
Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor				
			X =	Y =					
			X =	Y =					
			X =	Y =					
			X =	Y =					
			X =	Y =					
			X =	Y =					
			X =	Y =					
			X =	Y =					

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location									
Well or Structure Name/Number (If renaming well or structure, reference previous name): PC001				Previously reviewed under an approved EP or DOCD?		XX	Yes		No
Is this an existing well or structure?		X	Yes		No	If this is an existing well or structure, list the Complex ID or API No.		60-811-40663-00	
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?							Yes	XX	No
WCD Info	For wells, volume of uncontrolled blowout (Bbls/Day): 186,452			For structures, volume of all storage and pipelines (Bbls):		API Gravity of fluid		29.5°	
	Surface Location			Bottom-Hole Location (For Wells)		Completion (For multiple completions, enter separate lines)			
Lease No.	OCS-G 20082					OCS OCS			
Area Name	Green Canyon								
Block No.	640								
Blockline Departures (in feet)	N/S Departure: 2455' FSL			N/S Departure:		N/S Departure		F __ L	
	E/W Departure: 1972' FEL			E/W Departure:		E/W Departure		F __ L	
Lambert X-Y coordinates	X: 2,374,028'					X:		F __ L	
	Y: 9,918,295'					Y:		F __ L	
Latitude/ Longitude	Latitude: 27° 18' 51"			Latitude:		Latitude		F __ L	
	Longitude: -90° 44' 25"			Longitude:		Longitude		F __ L	
Water Depth (Feet): 4,292'				MD (Feet):		TVD (Feet):		MD (Feet):	
Anchor Radius (if applicable) in feet:						MD (Feet):		TVD (Feet):	
Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)									
Anchor Name or No.	Area	Block	X Coordinate		Y Coordinate		Length of Anchor Chain on Seafloor		
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location									
Well or Structure Name/Number (If renaming well or structure, reference previous name): PC002				Previously reviewed under an approved EP or DOCD?		XX	Yes		No
Is this an existing well or structure?		X	Yes		No	If this is an existing well or structure, list the Complex ID or API No.		60-811-40666-00	
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?							Yes	XX	No
WCD Info	For wells, volume of uncontrolled blowout (Bbls/Day): 186,452			For structures, volume of all storage and pipelines (Bbls):		API Gravity of fluid		29.5°	
	Surface Location			Bottom-Hole Location (For Wells)		Completion (For multiple completions, enter separate lines)			
Lease No.	OCS-G 20082					OCS OCS			
Area Name	Green Canyon								
Block No.	640								
Blockline Departures (in feet)	N/S Departure: 2465' FSL			N/S Departure:		N/S Departure		F __ L	
	E/W Departure: 2042' FEL			E/W Departure:		E/W Departure		F __ L	
Lambert X-Y coordinates	X: 2,373,959'					X:		F __ L	
	Y: 9,918,305'					Y:		F __ L	
Latitude/ Longitude	Latitude: 27° 18' 52"			Latitude:		Latitude		F __ L	
	Longitude: -90° 44' 26"			Longitude:		Longitude		F __ L	
Water Depth (Feet): 4,292'				MD (Feet):		TVD (Feet):		MD (Feet):	
Anchor Radius (if applicable) in feet:						MD (Feet):		TVD (Feet):	
Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)									
Anchor Name or No.	Area	Block	X Coordinate		Y Coordinate		Length of Anchor Chain on Seafloor		
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location									
Well or Structure Name/Number (If renaming well or structure, reference previous name): PC003				Previously reviewed under an approved EP or DOCD?		XX	Yes		No
Is this an existing well or structure?		X	Yes		No	If this is an existing well or structure, list the Complex ID or API No.		60-811-40659-00	
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?							Yes	XX	No
WCD Info	For wells, volume of uncontrolled blowout (Bbls/Day): 186,452			For structures, volume of all storage and pipelines (Bbls):		API Gravity of fluid		29.5°	
	Surface Location			Bottom-Hole Location (For Wells)		Completion (For multiple completions, enter separate lines)			
Lease No.	OCS-G 20082					OCS OCS			
Area Name	Green Canyon								
Block No.	640								
Blockline Departures (in feet)	N/S Departure: 2642' FSL			N/S Departure:		N/S Departure		F __ L	
	E/W Departure: 2057' FEL			E/W Departure:		E/W Departure		F __ L	
Lambert X-Y coordinates	X: 2,373,943'					X:		F __ L	
	Y: 9,918,482'					Y:		F __ L	
Latitude/ Longitude	Latitude: 27° 18' 53"			Latitude:		Latitude		Latitude	
	Longitude: -90° 44' 26"			Longitude:		Longitude		Longitude	
Water Depth (Feet): 4,292'				MD (Feet):		TVD (Feet):		MD (Feet):	
Anchor Radius (if applicable) in feet:						MD (Feet):		TVD (Feet):	
Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)									
Anchor Name or No.	Area	Block	X Coordinate		Y Coordinate		Length of Anchor Chain on Seafloor		
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location									
Well or Structure Name/Number (If renaming well or structure, reference previous name): PC004				Previously reviewed under an approved EP or DOCD?		XX	Yes		No
Is this an existing well or structure?		X	Yes		No	If this is an existing well or structure, list the Complex ID or API No.		60-811-40664-01	
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?							Yes	XX	No
WCD Info	For wells, volume of uncontrolled blowout (Bbls/Day): 186,452			For structures, volume of all storage and pipelines (Bbls):		API Gravity of fluid		29.5°	
	Surface Location			Bottom-Hole Location (For Wells)		Completion (For multiple completions, enter separate lines)			
Lease No.	OCS-G 20082					OCS OCS			
Area Name	Green Canyon								
Block No.	640								
Blockline Departures (in feet)	N/S Departure: 2655' FSL			N/S Departure:		N/S Departure		F __ L	
	E/W Departure: 1968' FEL			E/W Departure:		E/W Departure		F __ L	
Lambert X-Y coordinates	X: 2,374,032'					X:		F __ L	
	Y: 9,918,495'					Y:		F __ L	
Latitude/ Longitude	Latitude: 27° 18' 52"			Latitude:		Latitude		Latitude	
	Longitude: -90° 44' 25"			Longitude:		Longitude		Longitude	
Water Depth (Feet): 4,292'				MD (Feet):		TVD (Feet):		MD (Feet):	
Anchor Radius (if applicable) in feet:						MD (Feet):		TVD (Feet):	
Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)									
Anchor Name or No.	Area	Block	X Coordinate		Y Coordinate		Length of Anchor Chain on Seafloor		
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location									
Well or Structure Name/Number (If renaming well or structure, reference previous name): IS001				Previously reviewed under an approved EP or DOCD?		XX	Yes		No
Is this an existing well or structure?		X	Yes		No	If this is an existing well or structure, list the Complex ID or API No.		60-811-40578-00	
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?							Yes	XX	No
WCD Info	For wells, volume of uncontrolled blowout (Bbls/Day): 186,452			For structures, volume of all storage and pipelines (Bbls):		API Gravity of fluid		29.5°	
	Surface Location			Bottom-Hole Location (For Wells)		Completion (For multiple completions, enter separate lines)			
Lease No.	OCS-G 20082					OCS OCS			
Area Name	Green Canyon								
Block No.	640								
Blockline Departures (in feet)	N/S Departure: 2455' FSL			N/S Departure:		N/S Departure		F __ L	
	E/W Departure: 1972' FEL			E/W Departure:		E/W Departure		F __ L	
Lambert X-Y coordinates	X: 2,374,028'					X:		F __ L	
	Y: 9,918,295'					Y:		F __ L	
Latitude/ Longitude	Latitude: 27° 18' 51"			Latitude:		Latitude		Latitude	
	Longitude: -90° 44' 25"			Longitude:		Longitude		Longitude	
Water Depth (Feet): 4,292'				MD (Feet):		TVD (Feet):		MD (Feet):	
Anchor Radius (if applicable) in feet:						MD (Feet):		TVD (Feet):	
Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)									
Anchor Name or No.	Area	Block	X Coordinate		Y Coordinate		Length of Anchor Chain on Seafloor		
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location									
Well or Structure Name/Number (If renaming well or structure, reference previous name): IS002				Previously reviewed under an approved EP or DOCD?		XX	Yes		No
Is this an existing well or structure?		X	Yes		No	If this is an existing well or structure, list the Complex ID or API No.		60-811-40573-00	
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?							Yes	XX	No
WCD Info	For wells, volume of uncontrolled blowout (Bbls/Day): 186,452			For structures, volume of all storage and pipelines (Bbls):		API Gravity of fluid		29.5°	
	Surface Location			Bottom-Hole Location (For Wells)		Completion (For multiple completions, enter separate lines)			
Lease No.	OCS-G 20082					OCS OCS			
Area Name	Green Canyon								
Block No.	640								
Blockline Departures (in feet)	N/S Departure: 2465' FSL			N/S Departure:		N/S Departure		F __ L	
	E/W Departure: 2042' FEL			E/W Departure:		E/W Departure		F __ L	
Lambert X-Y coordinates	X: 2,373,959'					X:		F __ L	
	Y: 9,918,305'					Y:		F __ L	
Latitude/ Longitude	Latitude: 27° 18' 52"			Latitude:		Latitude		F __ L	
	Longitude: -90° 44' 26"			Longitude:		Longitude		F __ L	
Water Depth (Feet): 4,292'				MD (Feet):		TVD (Feet):		MD (Feet):	
Anchor Radius (if applicable) in feet:						MD (Feet):		TVD (Feet):	
Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)									
Anchor Name or No.	Area	Block	X Coordinate		Y Coordinate		Length of Anchor Chain on Seafloor		
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location									
Well or Structure Name/Number (If renaming well or structure, reference previous name): IS003				Previously reviewed under an approved EP or DOCD?		XX	Yes		No
Is this an existing well or structure?		X	Yes		No	If this is an existing well or structure, list the Complex ID or API No.		60-811-40576-00	
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?							Yes	XX	No
WCD Info	For wells, volume of uncontrolled blowout (Bbls/Day): 186,452			For structures, volume of all storage and pipelines (Bbls):		API Gravity of fluid		29.5°	
	Surface Location			Bottom-Hole Location (For Wells)		Completion (For multiple completions, enter separate lines)			
Lease No.	OCS-G 20082					OCS OCS			
Area Name	Green Canyon								
Block No.	640								
Blockline Departures (in feet)	N/S Departure: 2642' FSL			N/S Departure:		N/S Departure		F __ L	
	E/W Departure: 2057' FEL			E/W Departure:		E/W Departure		F __ L	
Lambert X-Y coordinates	X: 2,373,943'					X:		F __ L	
	Y: 9,918,482'					Y:		F __ L	
Latitude/ Longitude	Latitude: 27° 18' 53"			Latitude:		Latitude		Latitude	
	Longitude: -90° 44' 26"			Longitude:		Longitude		Longitude	
Water Depth (Feet): 4,292'				MD (Feet):		TVD (Feet):		MD (Feet):	
Anchor Radius (if applicable) in feet:						MD (Feet):		TVD (Feet):	
Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)									
Anchor Name or No.	Area	Block	X Coordinate		Y Coordinate		Length of Anchor Chain on Seafloor		
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location									
Well or Structure Name/Number (If renaming well or structure, reference previous name): IS004				Previously reviewed under an approved EP or DOCD?		XX	Yes		No
Is this an existing well or structure?		X	Yes		No	If this is an existing well or structure, list the Complex ID or API No.		60-811-40577-00	
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?							Yes	XX	No
WCD Info	For wells, volume of uncontrolled blowout (Bbls/Day): 186,452			For structures, volume of all storage and pipelines (Bbls):		API Gravity of fluid		29.5°	
	Surface Location			Bottom-Hole Location (For Wells)		Completion (For multiple completions, enter separate lines)			
Lease No.	OCS-G 20082					OCS OCS			
Area Name	Green Canyon								
Block No.	640								
Blockline Departures (in feet)	N/S Departure: 2655' FSL			N/S Departure		N/S Departure		F __ L	
	E/W Departure: 1968' FEL			E/W Departure:		E/W Departure		F __ L	
Lambert X-Y coordinates	X: 2,374,032'					X:		F __ L	
	Y: 9,918,495'					Y:		F __ L	
Latitude/ Longitude	Latitude: 27° 18' 52"			Latitude:		Latitude		F __ L	
	Longitude: -90° 44' 25"			Longitude:		Longitude		F __ L	
Water Depth (Feet): 4,292'				MD (Feet):		TVD (Feet):		MD (Feet):	
Anchor Radius (if applicable) in feet:						MD (Feet):		TVD (Feet):	
Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)									
Anchor Name or No.	Area	Block	X Coordinate		Y Coordinate		Length of Anchor Chain on Seafloor		
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location									
Well or Structure Name/Number (If renaming well or structure, reference previous name):PS002				Previously reviewed under an approved EP or DOCD?		XX	Yes		No
Is this an existing well or structure?		X	Yes		No	If this is an existing well or structure, list the Complex ID or API No.		60-811-40462-00	
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?							Yes	XX	No
WCD Info	For wells, volume of uncontrolled blowout (Bbls/Day): 186,452			For structures, volume of all storage and pipelines (Bbls):		API Gravity of fluid		29.5°	
	Surface Location			Bottom-Hole Location (For Wells)		Completion (For multiple completions, enter separate lines)			
Lease No.	OCS-G 20082					OCS OCS			
Area Name	Green Canyon								
Block No.	640								
Blockline Departures (in feet)	N/S Departure: 2455' FSL			N/S Departure:		N/S Departure		F __ L	
	E/W Departure: 1972' FEL			E/W Departure:		E/W Departure		F __ L	
Lambert X-Y coordinates	X: 2,374,028'					X:		F __ L	
	Y: 9,918,295'					Y:		F __ L	
Latitude/ Longitude	Latitude: 27° 18' 51"			Latitude:		Latitude		Latitude	
	Longitude: -90° 44' 25"			Longitude:		Longitude		Longitude	
Water Depth (Feet): 4,292'				MD (Feet):		TVD (Feet):		MD (Feet):	
Anchor Radius (if applicable) in feet:						MD (Feet):		TVD (Feet):	
Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)									
Anchor Name or No.	Area	Block	X Coordinate		Y Coordinate		Length of Anchor Chain on Seafloor		
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location									
Well or Structure Name/Number (If renaming well or structure, reference previous name): PS003				Previously reviewed under an approved EP or DOCD?		XX	Yes		No
Is this an existing well or structure?		X	Yes		No	If this is an existing well or structure, list the Complex ID or API No.		60-811-40463-01	
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?							Yes	XX	No
WCD Info	For wells, volume of uncontrolled blowout (Bbls/Day): 186,452			For structures, volume of all storage and pipelines (Bbls):		API Gravity of fluid		29.5°	
	Surface Location			Bottom-Hole Location (For Wells)		Completion (For multiple completions, enter separate lines)			
Lease No.	OCS-G 20082					OCS OCS			
Area Name	Green Canyon								
Block No.	640								
Blockline Departures (in feet)	N/S Departure: 2465' FSL			N/S Departure:		N/S Departure		F __ L	
	E/W Departure: 2042' FEL			E/W Departure:		E/W Departure		F __ L	
Lambert X-Y coordinates	X: 2,373,959'					X:		F __ L	
	Y: 9,918,305'					Y:		F __ L	
Latitude/ Longitude	Latitude: 27° 18' 52"			Latitude:		Latitude		F __ L	
	Longitude: -90° 44' 26"			Longitude:		Longitude		F __ L	
Water Depth (Feet): 4,292'				MD (Feet):		TVD (Feet):		MD (Feet):	
Anchor Radius (if applicable) in feet:						MD (Feet):		TVD (Feet):	
Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)									
Anchor Name or No.	Area	Block	X Coordinate		Y Coordinate		Length of Anchor Chain on Seafloor		
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location									
Well or Structure Name/Number (If renaming well or structure, reference previous name): PS005				Previously reviewed under an approved EP or DOCD?		XX	Yes		No
Is this an existing well or structure?		X	Yes		No	If this is an existing well or structure, list the Complex ID or API No.		60-811-40467-00	
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?							Yes	XX	No
WCD Info	For wells, volume of uncontrolled blowout (Bbls/Day): 186,452			For structures, volume of all storage and pipelines (Bbls):		API Gravity of fluid		29.5°	
	Surface Location			Bottom-Hole Location (For Wells)		Completion (For multiple completions, enter separate lines)			
Lease No.	OCS-G 20082					OCS OCS			
Area Name	Green Canyon								
Block No.	640								
Blockline Departures (in feet)	N/S Departure: 2642' FSL			N/S Departure:		N/S Departure		F __ L	
	E/W Departure: 2057' FEL			E/W Departure:		E/W Departure		F __ L	
Lambert X-Y coordinates	X: 2,373,943'					X:		F __ L	
	Y: 9,918,482'					Y:		F __ L	
Latitude/ Longitude	Latitude: 27° 18' 53"			Latitude:		Latitude		Latitude	
	Longitude: -90° 44' 26"			Longitude:		Longitude		Longitude	
Water Depth (Feet): 4,292'				MD (Feet):		TVD (Feet):		MD (Feet):	
Anchor Radius (if applicable) in feet:						MD (Feet):		TVD (Feet):	
Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)									
Anchor Name or No.	Area	Block	X Coordinate		Y Coordinate		Length of Anchor Chain on Seafloor		
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location									
Well or Structure Name/Number (If renaming well or structure, reference previous name): PS006				Previously reviewed under an approved EP or DOCD?		XX	Yes		No
Is this an existing well or structure?		X	Yes	No	If this is an existing well or structure, list the Complex ID or API No.		60-811-40468-02		
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?							Yes	XX	No
WCD Info	For wells, volume of uncontrolled blowout (Bbls/Day): 186,452			For structures, volume of all storage and pipelines (Bbls):		API Gravity of fluid		29.5°	
	Surface Location			Bottom-Hole Location (For Wells)		Completion (For multiple completions, enter separate lines)			
Lease No.	OCS-G 20082					OCS OCS			
Area Name	Green Canyon								
Block No.	640								
Blockline Departures (in feet)	N/S Departure: 2655' FSL			N/S Departure:		N/S Departure		F __ L	
	E/W Departure: 1968' FEL			E/W Departure:		E/W Departure		F __ L	
Lambert X-Y coordinates	X: 2,374,032'					X:		F __ L	
	Y: 9,918,495'					Y:		F __ L	
Latitude/ Longitude	Latitude: 27° 18' 52"			Latitude:		Latitude		F __ L	
	Longitude: -90° 44' 25"			Longitude:		Longitude		F __ L	
Water Depth (Feet): 4,292'				MD (Feet):		TVD (Feet):		MD (Feet):	
Anchor Radius (if applicable) in feet:						MD (Feet):		TVD (Feet):	
Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)									
Anchor Name or No.	Area	Block	X Coordinate		Y Coordinate		Length of Anchor Chain on Seafloor		
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location									
Well or Structure Name/Number (If renaming well or structure, reference previous name): PS008				Previously reviewed under an approved EP or DOCD?		XX	Yes		No
Is this an existing well or structure?		X	Yes		No	If this is an existing well or structure, list the Complex ID or API No.		60-811-40469-02	
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?							Yes	XX	No
WCD Info	For wells, volume of uncontrolled blowout (Bbls/Day): 186,452			For structures, volume of all storage and pipelines (Bbls):		API Gravity of fluid		29.5°	
	Surface Location			Bottom-Hole Location (For Wells)		Completion (For multiple completions, enter separate lines)			
Lease No.	OCS-G 20082					OCS OCS			
Area Name	Green Canyon								
Block No.	640								
Blockline Departures (in feet)	N/S Departure: 2455' FSL			N/S Departure:		N/S Departure		F __ L	
	E/W Departure: 1972' FEL			E/W Departure:		E/W Departure		F __ L	
Lambert X-Y coordinates	X: 2,374,028'					X:		F __ L	
	Y: 9,918,295'					Y:		F __ L	
Latitude/ Longitude	Latitude: 27° 18' 51"			Latitude:		Latitude		Latitude	
	Longitude: -90° 44' 25"			Longitude:		Longitude		Longitude	
Water Depth (Feet): 4,292'				MD (Feet):		TVD (Feet):		MD (Feet):	
Anchor Radius (if applicable) in feet:						MD (Feet):		TVD (Feet):	
Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)									
Anchor Name or No.	Area	Block	X Coordinate		Y Coordinate		Length of Anchor Chain on Seafloor		
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location									
Well or Structure Name/Number (If renaming well or structure, reference previous name): PS009				Previously reviewed under an approved EP or DOCD?		XX	Yes		No
Is this an existing well or structure?		X	Yes		No	If this is an existing well or structure, list the Complex ID or API No.		60-811-40648-01	
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?							Yes	XX	No
WCD Info	For wells, volume of uncontrolled blowout (Bbls/Day): 186,452			For structures, volume of all storage and pipelines (Bbls):		API Gravity of fluid		29.5°	
	Surface Location			Bottom-Hole Location (For Wells)		Completion (For multiple completions, enter separate lines)			
Lease No.	OCS-G 20082					OCS OCS			
Area Name	Green Canyon								
Block No.	640								
Blockline Departures (in feet)	N/S Departure: 2465' FSL			N/S Departure:		N/S Departure		F __ L	
	E/W Departure: 2042' FEL			E/W Departure:		E/W Departure		F __ L	
Lambert X-Y coordinates	X: 2,373,959'					X:		F __ L	
	Y: 9,918,305'					Y:		F __ L	
Latitude/ Longitude	Latitude: 27° 18' 52"			Latitude:		Latitude		F __ L	
	Longitude: -90° 44' 26"			Longitude:		Longitude		F __ L	
Water Depth (Feet): 4,292'				MD (Feet):		TVD (Feet):		MD (Feet):	
Anchor Radius (if applicable) in feet:						MD (Feet):		TVD (Feet):	
Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)									
Anchor Name or No.	Area	Block	X Coordinate		Y Coordinate		Length of Anchor Chain on Seafloor		
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				

OCS PLAN INFORMATION FORM (CONTINUED)
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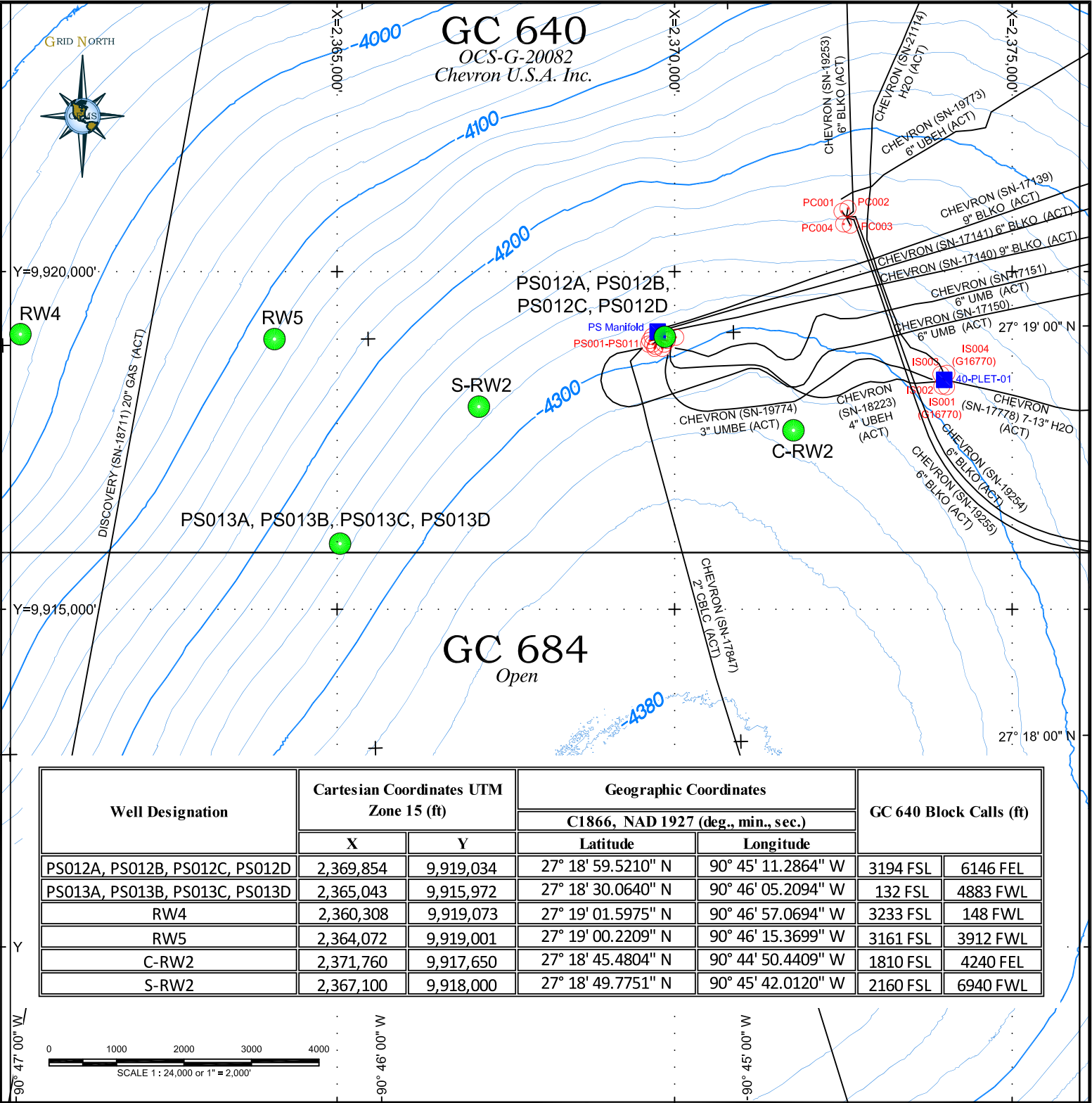
Proposed Well/Structure Location									
Well or Structure Name/Number (If renaming well or structure, reference previous name): PS010				Previously reviewed under an approved EP or DOCD?		XX	Yes		No
Is this an existing well or structure?		X	Yes	No	If this is an existing well or structure, list the Complex ID or API No.		60-811-40662-00		
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?							Yes	XX	No
WCD Info	For wells, volume of uncontrolled blowout (Bbls/Day): 186,452			For structures, volume of all storage and pipelines (Bbls):		API Gravity of fluid		29.5°	
	Surface Location			Bottom-Hole Location (For Wells)		Completion (For multiple completions, enter separate lines)			
Lease No.	OCS-G 20082					OCS OCS			
Area Name	Green Canyon								
Block No.	640								
Blockline Departures (in feet)	N/S Departure: 2642' FSL			N/S Departure:		N/S Departure		F __ L	
	E/W Departure: 2057' FEL			E/W Departure:		E/W Departure		F __ L	
Lambert X-Y coordinates	X: 2,373,943'					X:		F __ L	
	Y: 9,918,482'					Y:		F __ L	
Latitude/ Longitude	Latitude: 27° 18' 53"			Latitude:		Latitude		F __ L	
	Longitude: -90° 44' 26"			Longitude:		Longitude		F __ L	
Water Depth (Feet): 4,292'				MD (Feet):		TVD (Feet):		MD (Feet):	
Anchor Radius (if applicable) in feet:						MD (Feet):		TVD (Feet):	
Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)									
Anchor Name or No.	Area	Block	X Coordinate		Y Coordinate		Length of Anchor Chain on Seafloor		
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location									
Well or Structure Name/Number (If renaming well or structure, reference previous name): PS011				Previously reviewed under an approved EP or DOCD?		XX	Yes		No
Is this an existing well or structure?		X	Yes		No	If this is an existing well or structure, list the Complex ID or API No.		60-811-40726-00	
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?							Yes	XX	No
WCD Info	For wells, volume of uncontrolled blowout (Bbls/Day): 186,452			For structures, volume of all storage and pipelines (Bbls):		API Gravity of fluid		29.5°	
	Surface Location			Bottom-Hole Location (For Wells)		Completion (For multiple completions, enter separate lines)			
Lease No.	OCS-G 20082					OCS OCS			
Area Name	Green Canyon								
Block No.	640								
Blockline Departures (in feet)	N/S Departure: 2655' FSL			N/S Departure:		N/S Departure		F __ L	
	E/W Departure: 1968' FEL			E/W Departure:		E/W Departure		F __ L	
Lambert X-Y coordinates	X: 2,374,032'					X:		F __ L	
	Y: 9,918,495'					Y:		F __ L	
Latitude/ Longitude	Latitude: 27° 18' 52"			Latitude:		Latitude		Latitude	
	Longitude: -90° 44' 25"			Longitude:		Longitude		Longitude	
Water Depth (Feet): 4,292'				MD (Feet):		TVD (Feet):		MD (Feet):	
Anchor Radius (if applicable) in feet:						MD (Feet):		TVD (Feet):	
Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)									
Anchor Name or No.	Area	Block	X Coordinate		Y Coordinate		Length of Anchor Chain on Seafloor		
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				

OCS PLAN INFORMATION FORM (CONTINUED)
Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location									
Well or Structure Name/Number (If renaming well or structure, reference previous name): SS002				Previously reviewed under an approved EP or DOCD?		XX	Yes		No
Is this an existing well or structure?		X	Yes	No	If this is an existing well or structure, list the Complex ID or API No.		60-811-40690-02		
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?							Yes	XX	No
WCD Info	For wells, volume of uncontrolled blowout (Bbls/Day): 186,452			For structures, volume of all storage and pipelines (Bbls):		API Gravity of fluid		29.5°	
	Surface Location			Bottom-Hole Location (For Wells)		Completion (For multiple completions, enter separate lines)			
Lease No.	OCS-G 20082					OCS OCS			
Area Name	Green Canyon								
Block No.	640								
Blockline Departures (in feet)	N/S Departure: 5712' FNL			N/S Departure:		N/S Departure		F __ L	
	E/W Departure: 293' FEL			E/W Departure:		E/W Departure		F __ L	
Lambert X-Y coordinates	X: 2,375,707'					X:		F __ L	
	Y: 9,925,968'					Y:		F __ L	
Latitude/ Longitude	Latitude: 27° 20' 7.1196"			Latitude:		Latitude		F __ L	
	Longitude: -90° 44' 5"			Longitude:		Longitude		F __ L	
Water Depth (Feet): 4,292'				MD (Feet):		TVD (Feet):		MD (Feet):	
Anchor Radius (if applicable) in feet:						MD (Feet):		TVD (Feet):	
Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)									
Anchor Name or No.	Area	Block	X Coordinate		Y Coordinate		Length of Anchor Chain on Seafloor		
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				
			X:		Y:				



PROPOSED WELL LOCATION.

EXISTING STRUCTURE LOCATION, AS REPORTED BY BOEM.

EXISTING WELL WELL LOCATIONS, AS REPORTED BY BOEM.

EXISTING PIPELINE/UMBILICAL/CABLE LOCATION, AS REPORTED BY BOEM.

WATER DEPTH CONTOUR IN FEET. CONTOUR INTERVAL = 20 FEET.

PROJECT NO.: GHZ1089

CHEVRON U.S.A. INC.

SURFACE LOCATION PLAT

BLOCK 640
GREEN CANYON AREA
GULF OF MEXICO

GEOSCIENCE EARTH & MARINE SERVICES, INC.
A Geosyntec Company

FILE NAME: 1089_PLAT.DWG

LOCATION MAP

DATE : 18 JUNE 2025
GRID UNITS: US FEET

PROJECTION: UTM
ZONE: 15 NORTH

GEODETIC DATUM: NAD 1927
ELLIPSOID: CLARKE 1866



Receipt

Tracking Information

Pay.gov Tracking ID: 27VNIQEA

Agency Tracking ID: 77300719275

Form Name: BOEM Development Operations Coordination Document or DPP

Application Name: BOEM Development/DOCD Plan - BD

Payment Information

Payment Type: Debit or credit card

Payment Amount: \$5,565.00

Transaction Date: 02/18/2026 11:07:11 AM EST

Payment Date: 02/18/2026

Region: Gulf of America

Contact: Erik Case (832) 854-6202

Company Name/No: Chevron U.S.A. Inc., 00078

Lease Number(s): 20082

Area-Block: Green Canyon GC, 640

Type-Wells: Supplemental Plan, 1

Account Information

Cardholder Name: Jennifer Vann

Card Type: Master Card

SECTION 2 GENERAL INFORMATION

2.1 APPLICATIONS AND PERMITS

The table below provides the additional applications to be filed covering operations proposed in this DOCD.

Application/Permit	Issuing Agency	Status
Supplemental DWOP	BSEE	To be submitted
Lease Term Pipeline Permits	BSEE	Submitted
Downhole Commingling Application	BSEE	To be submitted
Modification to Surface Commingling	BSEE	To be submitted
Production Safety Systems Modification	BSEE	To be submitted

2.2 DRILLING FLUIDS

No wells are proposed to be drilled as part of this DOCD.

2.3 PRODUCTION

Proprietary Information.

2.4 OIL CHARACTERISTICS

Proprietary Information.

2.5 NEW OR UNUSUAL TECHNOLOGY

No new or unusual technology is proposed in this DOCD as defined by 30 CFR 550.200.

2.6 BONDING STATEMENT

The bond requirements for the activities and facilities proposed in this DOCD are satisfied by an area-wide bond, furnished and maintained according to 30 CFR 556.900 (a) and 30 CFR 556.901 (a) and (b) and NTL No. 2015-BOEM-N04, "General Financial Assurance"; and additional security under 30 CFR 556.901(d) – (f) and NTL No. 2016—BOEM-N01, "Requiring Additional Security" as required by BOEM.

2.7 OIL SPILL FINANCIAL RESPONSIBILITY (OSFR)

Chevron U.S.A. Inc., (Company Number 00078) has demonstrated oil spill financial responsibility for the facilities proposed in this DOCD according to 30 CFR Part 553.15 (a); and NTL No. 2008-N05, "Guidelines for Oil Spill Financial Responsibility for Covered Facilities".

2.8 DEEPWATER WELL CONTROL STATEMENT

Chevron U.S.A. Inc., (Company Number 00078) has the financial capability to drill a relief well and conduct other emergency well control operations.

2.9 SUSPENSION OF PRODUCTION

Chevron does not anticipate filing any requests for Suspension of Production to hold the leases or units addressed in this DOCD in active status.

2.10 BLOWOUT SCENARIO AND WORST CASE DISCHARGE CALCULATIONS

No drilling or completion operations are proposed in this plan.

SECTION 3

GEOLOGICAL AND GEOPHYSICAL INFORMATION

3.1 GEOLOGICAL DESCRIPTION

The proposed operations will be conducted from a previously approved surface location as provided for in S-EP (Control No. S-8194); therefore, a geological description is not provided.

3.2 STRUCTURE CONTOUR MAPS

The proposed operations will be conducted from a previously approved surface location as provided for in S-EP (Control No. S-8194); therefore, structure contour maps are not provided.

3.3 INTERPRETED SEISMIC LINES

The proposed operations will be conducted from a previously approved surface location as provided for in S-EP (Control No. S-8194); therefore, interpreted seismic lines are not provided.

3.4 GEOLOGICAL STRUCTURE CROSS-SECTIONS

The proposed operations will be conducted from a previously approved surface location as provided for in S-EP (Control No. S-8194); therefore, geological structure cross-sections are not provided.

3.5 SHALLOW HAZARDS REPORT

The proposed operations will be conducted from a previously approved surface location as provided for in S-EP (Control No. S-8194); therefore, a shallow hazards report is not provided.

3.6 SHALLOW HAZARDS ASSESSMENT

The proposed operations will be conducted from a previously approved surface location as provided for in S-EP (Control No. S-8194); therefore, a shallow hazards assessment is not provided.

3.7 HIGH-RESOLUTION SEISMIC LINES

The proposed operations will be conducted from a previously approved surface location as provided for in S-EP (Control No. S-8194); therefore, high resolution seismic lines are not provided.

3.8 STRATIGRAPHIC COLUMN

Drilling activities are not proposed in this plan.

3.9 TIME VS DEPTH TABLES

Drilling activities are not proposed in this plan.

SECTION 4

HYDROGEN SULFIDE INFORMATION

4.1 CONCENTRATION

Chevron anticipates encountering 0 ppm H₂S during the proposed operations.

4.2 CLASSIFICATION

In accordance with Title 30 CFR 250.490(c), Chevron requests that the area of proposed operations be classified by the BOEM as H₂S absent.

4.3 H₂S CONTINGENCY PLAN

An H₂S Contingency Plan is not required for the activities proposed in this plan.

4.4 MODELING REPORT

Modeling reports are not required for the activities proposed in this plan.

SECTION 5

MINERAL RESOURCE CONSERVATION INFORMATION

5.1 TECHNOLOGY & RESERVOIR ENGINEERING PRACTICES AND PROCEDURES

Proprietary Information.

5.2 TECHNOLOGY AND RECOVERY PRACTICES AND PROCEDURES

Proprietary Information.

5.3 RESERVOIR DEVELOPMENT

Proprietary Information.

SECTION 6

BIOLOGICAL, PHYSICAL AND SOCIOECONOMIC INFORMATION

6.1 DEEPWATER BENTHIC COMMUNITIES

The proposed operations will be conducted from a previously approved surface location as provided for in S-EP, (Control No. S-8194).

6.2 TOPOGRAPHIC FEATURES (BANKS)

Activities proposed in this DOCD do not fall within 305 meters (1000 feet) of a topographic “No Activity Zone;” therefore, no map is required per NTL No. 2009-G39, “Biologically Sensitive Underwater Features and Areas.”

6.3 TOPOGRAPHIC FEATURES STATEMENT (SHUNTING)

The leases in this DOCD are not located within 61 meters (200 feet) of any pinnacle trend feature; therefore, a separate bathymetric map is not required per NTL No. 2009-G39, “Biologically Sensitive Underwater Features and Areas.”

6.5 LIVE BOTTOMS (LOW RELIEF)

The leases in this DOCD are not located within 30 meters (100 feet) of any live bottom (low relief) feature with vertical relief equal to or greater than 8 feet; therefore, live bottom (low relief) maps are not required per NTL No. 2009-G39, “Biologically Sensitive Underwater Features and Areas.”

6.6 POTENTIALLY SENSITIVE BIOLOGICAL FEATURES

The leases in this DOCD are not located within 30 meters (100 feet) of potentially sensitive biological features. In accordance with NTL No. 2009-G39, “Biologically Sensitive Underwater Features and Areas,” biologically sensitive area maps are not required.

6.7 THREATENED AND ENDANGERED SPECIES, CRITICAL HABITAT AND MARINE MAMMAL INFORMATION

The federally listed endangered and threatened species potentially occurring in the lease area and along the Gulf Coast are provided in the table below.

Species	Scientific Name	Status	Potential Presence		Critical Habitat Designated in the Gulf of America
			Lease Area	Coastal	
Marine Mammals					
Manatee, West Indian	<i>Trichechus manatus latirostris</i>	T	--	X	Florida (peninsular)
Whale, Blue	<i>Balaenoptera masculus</i>	E	X ¹	--	None
Whale, Bryde's ⁴	<i>Balaenoptera brydei/edeni</i>	E	X	--	None
Whale, Fin	<i>Balaenoptera physalus</i>	E	X ¹	--	None
Whale, Humpback	<i>Megaptera novaeangliae</i>	E	X ¹	--	None
Whale, North Atlantic Right	<i>Eubalaena glacialis</i>	E	X ¹	--	None
Whale, Rice's ⁴	<i>Balaenoptera ricei</i>	E	X	--	None

Species	Scientific Name	Status	Potential Presence		Critical Habitat Designated in the Gulf of America
			Lease Area	Coastal	
Whale, Sei	<i>Balaenopiera borealis</i>	E	X ¹	--	None
Whale, Sperm	<i>Physeter catodon</i> (= <i>macrocephalus</i>)	E	X	--	None
Terrestrial Mammals					
Mouse, Beach (Alabama, Choctawatchee, Perdido Key, St. Andrew)	<i>Peromyscus polionotus</i>	E	-	X	Alabama, Florida (panhandle) beaches
Jaguarundi, Gulf Coast	<i>Puma yagouaroundi</i> <i>cacomitli</i>	E	-	X	None
Ocelot	<i>Leopardus</i> (= <i>Felis</i>) <i>pardalis</i>	E	-	X	None
Bat, Florida Bonneted	<i>Eumops floridanus</i>	E	-	X	None
Panther, Florida	<i>Puma</i> (= <i>Felis</i>) <i>concolor coryi</i>	E	-	X	None
Vole, Florida Salt Marsh	<i>Microtus pennsylvanicus</i> <i>dukecampbelli</i>	E	-	X	None
Deer, Key	<i>Odocoileus virginianus</i> <i>clavium</i>	E	-	X	None
Rabbit, Lower Keys Marsh	<i>Sylvilagus palustris hefneri</i>	E	-	X	None
Rat, Silver Rice	<i>Oryzomys palustris natator</i>	E	-	X	None
Birds					
Plover, Piping	<i>Charadrius melodus</i>	T	-	X	Coastal Texas, Louisiana, Mississippi, Alabama and Florida (panhandle)
Crane, Whooping	<i>Grus Americana</i>	E	-	X	Coastal Texas
Crane, Mississippi sandhill	<i>Grus canadensis pulla</i>	E	-	X	Coastal Mississippi
Caracara, Audubon's Crested	<i>Polyborus plancus audubonii</i>	T	-	X	None
Curlew, Eskimo	<i>Numenius borealis</i>	E	-	X	None
Falcon, Northern Aplomado	<i>Falco femoralis septentrionalis</i>	E	-	X	None
Prairie-chicken, Attwater's Greater	<i>Tympanuchus cupido attwateri</i>	E	-	X	None
Scrub-jay, Florida	<i>Aphelocoma coerulescens</i>	T	-	X	None
Kite, Everglade Snail	<i>Rostrhamus sociabilis plumbeus</i>	E	-	X	None
Knot, Red	<i>Calidris canutus rufa</i>	T	-	X	None
Rail, Eastern Black	<i>Laterallus jamaicensis ssp. jamaicensis</i>	T	-	X	None
Sparrow, Cape Sable Seaside	<i>Ammodramus maritimus mirabilis</i>	E	-	X	Everglades
Stork, Wood	<i>Mycteria americana</i>	T	-	X	None
Tern, Roseate	<i>Sterna dougallii dougallii</i>	T	-	X	None

Species	Scientific Name	Status	Potential Presence		Critical Habitat Designated in the Gulf of America
			Lease Area	Coastal	
Warbler, Bachman's	<i>Vermivora bachmanii</i>	E	-	X	None
Woodpecker, Red-cockaded	<i>Picoides borealis</i>	E	-	X	None
Reptiles					
Sea Turtle, Green	<i>Chelonia mydas</i>	T/E ³	X	X	None
Sea Turtle, Hawksbill	<i>Eretmochelys imbricata</i>	E	X	X	None
Sea Turtle, Kemp's Ridley	<i>Lepidochelys kempli</i>	E	X	X	None
Sea Turtle, Leatherback	<i>Dermochelys coriacea</i>	E	X	X	None
Sea Turtle, Loggerhead	<i>Caretta caretta</i>	T	X	X	Texas, Louisiana, Mississippi, Alabama, Florida
Turtle, Alabama Red-bellied	<i>Pseudemys alabamensis</i>	E	-	X	None
Crocodile, American	<i>Crocodylus acutus</i>	T	-	X	Everglades and Florida Keys
Snake, Eastern Indigo	<i>Drymarchon couperi</i>	T	-	X	None
Tortoise, Gopher	<i>Gopherus polyphemus</i>	T	-	X	None
Turtle, Ringed Map	<i>Graptemys oculifera</i>	T	-	X	None
Turtle, Yellow-blotched Map	<i>Graptemys flavimaculata</i>	T	-	X	None
Fish					
Sturgeon, Gulf	<i>Acipenser oxyrinchus (=oxyrhynchus) desotoi</i>	T	X	X	Coastal Louisiana, Mississippi, Alabama and Florida (panhandle)
Shark, Oceanic Whitetip	<i>Carcharhinus longimanus</i>	E	X	-	None
Sawfish, Smalltooth	<i>Pristis pectinate</i>	E	-	X	None
Grouper, Nassau	<i>Epinephelus striatus</i>	T	-	X	Florida ⁵
Ray, Giant Manta	<i>Manta birostris</i>	E	X	--	None
Sturgeon, Pallid	<i>Scaphirhynchus albus</i>	E	-	X	None
Corals					
Coral, Elkhorn	<i>Acopora palmate</i>	T	X ²	X	Florida ⁵
Coral, Staghorn	<i>Acopora cervicornis</i>	T	X	X	Florida ⁵
Coral, Boulder Star	<i>Orbicella franksi</i>	T	X	X	Flower Garden Banks and Florida
Coral, Lobed Star	<i>Orbicella annularis</i>	T	X	X	Flower Garden Banks and Florida
Coral, Mountainous Star	<i>Orbicella faveolate</i>	T	X	X	Flower Garden Banks and Florida

Species	Scientific Name	Status	Potential Presence		Critical Habitat Designated in the Gulf of America
			Lease Area	Coastal	
Coral, Rough Cactus	<i>Mycetophyllia ferox</i>	T	-	X	Florida ⁵
Coral, Pillar	<i>Dendrogyra cylindrus</i>	T	-	X	Florida ⁵

Abbreviations: E = Endangered; T = Threatened

1 The Blue, Fin, Humpback, North Atlantic Right, and Sei Whales are rare or extralimital in the Gulf of America and are unlikely to be present in the lease area.

2 According to the 2017 EIS, Elkhorn Coral, while uncommon, has been found in the Flower Garden Banks. (BOEM 2017-009)

3 Green Sea Turtles are considered threatened throughout the Gulf of America; however, the breeding population off the coast of Florida is considered endangered.

4 The Bryde's whale, also known as the Bryde's whale complex, is a collection of baleen whales that are still being researched to determine if they are the same species or if they are individual species of whales. In 2021, the Rice's whale, formerly known as the Gulf of America Bryde's whale, was determined to be a separate species. There are less than 100 Rice's whales living in the Gulf of America year-round. These whales retain all the protections of the Gulf of America Bryde's whale under the Endangered Species Act while the regulations are being updated to reflect the name change. Other Bryde's whales are migratory and may enter the Gulf of America; however, the migratory Bryde's whales are rare or extralimital in the Gulf of America and are unlikely to be present in the lease area.

5 Critical habitat is in the Gulf of America, but outside of planning area. Species may still occur in the Gulf of America.

6.8 ARCHAEOLOGICAL REPORT

The proposed operations will be conducted from a previously approved surface location as provided for in S-EP (Control No. S-8194); therefore, in accordance with NTL No. 2005-G07, "Archaeological Resource Surveys and Reports," and NTL No. 2011-JOINT-G01, "Revisions to the List of OCS Lease Blocks Requiring Archaeological Resource Surveys and Reports," an archaeological resource survey report is not provided.

6.9 AIR AND WATER QUALITY INFORMATION

Air and water quality information is not required to be included in this plan per NTL No. 2008-G04, "Information Requirements for Exploration Plans and Development Operations Coordination Documents."

6.10 SOCIOECONOMIC INFORMATION

Socioeconomic information is not required to be included in this plan per NTL No. 2008-G04, "Information Requirements for Exploration Plans and Development Operations Coordination Documents."

SECTION 7

WASTES AND DISCHARGES INFORMATION

7.1 PROJECTED GENERATED WASTES

“Wastes You Will Generate, Treat and Downhole Dispose or Discharge to the Gulf of America” is included as **Attachment 7-A**.

7.2 MODELING REPORT

Modeling reports are not required for the activities proposed in this plan.

Attachment 7-A

TABLE 1. WASTE ESTIMATED TO BE GENERATED, TREATED AND/OR DOWNHOLE DISPOSED OR DISCHARGED TO THE GOM

Please specify if the amount reported is a total or per well amount and be sure to include appropriate units.

Projected generated waste			Projected ocean discharges		Projected Downhole Disposal
Type of Waste	Composition	Projected Amount	Discharge rate	Discharge Method	Answer yes or no
Will drilling occur ? If yes, you should list muds and cuttings					
Water-based drilling fluid	N/A	N/A	N/A	N/A	N/A
Cuttings wetted with water-based fluid	N/A	N/A	N/A	N/A	N/A
Cuttings wetted with synthetic-based fluid	N/A	N/A	N/A	N/A	N/A
Will humans be there? If yes, expect conventional waste					
Domestic waste	Gray water from living quarters	100 gal/person/day	100 gal/person/day	remove floating solids and discharge overboard	No
Sanitary waste	Sanitary waste from living quarters	2040 gals/day	2040 gals/day	chlorinate and discharge overboard	No
Is there a deck? If yes, there will be Deck Drainage					
Deck Drainage	Deck drainage	0-4000 bbl/day (dependent on rainfall)	15 bbl/hr	remove oil and grease and discharge overboard	No
Will you conduct well treatment, completion, or workover?					
Well treatment fluids		300 bbl/well/operation	300 bbl/day/operation	discharge overboard when rig operations occur	No
Well completion fluids		300 bbl/well/operation	300 bbl/day/operation	discharge overboard when rig operations occur	No
Workover fluids		300 bbl/well/operation	300 bbl/day/operation	discharge overboard when rig operations occur	No
Miscellaneous discharges. If yes, only fill in those associated with your activity.					
Desalinization unit discharge	Rejected water from watermaker	6480 gals/day	6480 gals/day	discharge overboard	No
Blowout prevent fluid					
Ballast water		794,000 gals (empty one quadrant for tank inspection)	620 gal/min (pump capacity)	discharge overboard	No
Bilge water		Combined with deck drainage	Combined with deck drainage	discharge overboard	No
Miscellaneous discharges to which chemicals have been added		Varied	Varied	discharge overboard	No
Other miscellaneous discharges		Varied	Varied	discharge overboard	No
Cooling water					
Will you produce hydrocarbons? If yes fill in for produced water.					
Produced water	Reservoir Formation Water	40,000 bbl/day	40,000 bbl/day	treat for oil & grease and discharge overboard	No
Please enter individual or general to indicate which type of NPDES permit you will be covered by?					
NOTE: If you will not have a type of waste for the activity being applied for, enter NA for all columns in the row.			NOTE: All discharged wastes should comply with the requirements of the NPDES permit.		

SECTION 8

AIR EMISSIONS INFORMATION

8.1 SUMMARY INFORMATION

Included as **Attachment 8-A** are the Air Emissions Worksheets.

COMPANY	Chevron U.S.A. Inc.
AREA	Green Canyon
BLOCK	641, 640
LEASE	OCS-G 16770 (GC 641), G-20082 (GC 640)
FACILITY	Tahiti
WELL	IS002, IS003, PN002, PS012 (GC 640)
COMPANY CONTACT	Heather Spindel-Colwell
TELEPHONE NO.	985-273-9599
REMARKS	Installation of subsea infrastructure and flexible jumpers in GC 640. Inclusion of well PS012.

LEASE TERM PIPELINE CONSTRUCTION INFORMATION:		
YEAR	NUMBER OF PIPELINES	TOTAL NUMBER OF CONSTRUCTION DAYS
2026	2	12
2027	3	26
2028		
2029		
2030		
2031		
2032		
2033		
2034		
2035		

AIR EMISSIONS COMPUTATION FACTORS

Fuel Usage Conversion Factors		Natural Gas Turbines		Natural Gas Engines		Diesel Recip. Engine		Diesel Turbines					
		SCF/hp-hr	9.524			SCF/hp-hr	7.143	GAL/hp-hr	0.0514	GAL/hp-hr	0.0514		
Equipment/Emission Factors	units	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3	REF.	DATE	Reference Links
Natural Gas Turbine	g/hp-hr		0.0086	0.0086	0.0026	1.4515	0.0095	N/A	0.3719	N/A	AP42 3.1-18, 3.1-2a	4/00	https://www3.epa.gov/ttnchie1/ap42/ch03/final/c03s01.pdf
RECIP. 2 Cycle Lean Natural Gas	g/hp-hr		0.1293	0.1293	0.0020	6.5998	0.4082	N/A	1.2009	N/A	AP42 3.2-1	7/00	https://www3.epa.gov/ttn/chie1/ap42/ch03/final/c03s02.pdf
RECIP. 4 Cycle Lean Natural Gas	g/hp-hr		0.0002	0.0002	0.0020	2.8814	0.4014	N/A	1.8949	N/A	AP42 3.2-2	7/00	https://www3.epa.gov/ttn/chie1/ap42/ch03/final/c03s02.pdf
RECIP. 4 Cycle Rich Natural Gas	g/hp-hr		0.0323	0.0323	0.0020	7.7224	0.1021	N/A	11.9408	N/A	AP42 3.2-3	7/00	https://www3.epa.gov/ttn/chie1/ap42/ch03/final/c03s02.pdf
Diesel Recip. < 600 hp	g/hp-hr	1	1	1	0.0279	14.1	1.04	N/A	3.03	N/A	AP42 3.3-1	10/96	https://www3.epa.gov/ttnchie1/ap42/ch03/final/c03s03.pdf
Diesel Recip. > 600 hp	g/hp-hr	0.32	0.182	0.178	0.0055	10.9	0.29	N/A	2.5	N/A	AP42 3.4-1 & 3.4-2	10/96	https://www3.epa.gov/ttn/chie1/ap42/ch03/final/c03s04.pdf
Diesel Boiler	lbs/bbl	0.0840	0.0420	0.0105	0.0089	1.0080	0.0084	5.14E-05	0.2100	0.0336	AP42 1.3-6; Pb and NH3: WebFire (08/2018)	9/98 and 5/10	https://cfpub.epa.gov/webfire/
Diesel Turbine	g/hp-hr	0.0381	0.0137	0.0137	0.0048	2.7941	0.0013	4.45E-05	0.0105	N/A	AP42 3.1-1 & 3.1-2a	4/00	https://www3.epa.gov/ttnchie1/ap42/ch03/final/c03s01.pdf
Dual Fuel Turbine	g/hp-hr	0.0381	0.0137	0.0137	0.0048	2.7941	0.0095	4.45E-05	0.3719	0.0000	AP42 3.1-18, 3.1-2a; AP42 3.1-1 & 3.1-2a	4/00	https://cfpub.epa.gov/webfire/
Vessels – Propulsion	g/hp-hr	0.320	0.1931	0.1873	0.0047	7.6669	0.2204	2.24E-05	1.2025	0.0022	USEPA 2017 NELTSP refer to Diesel Recip. > 600 hp reference	3/19	https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data
Vessels – Drilling Prime Engine, Auxiliary	g/hp-hr	0.320	0.1931	0.1873	0.0047	7.6669	0.2204	2.24E-05	1.2025	0.0022	USEPA 2017 NELTSP refer to Diesel Recip. > 600 hp reference	3/19	
Vessels – Diesel Boiler	g/hp-hr	0.0466	0.1491	0.1417	0.4400	1.4914	0.0820	3.73E-05	0.1491	0.0003	USEPA 2017 NELTSP (units converted) refer to Diesel Boiler Reference	3/19	
Vessels – Well Stimulation	g/hp-hr	0.320	0.1931	0.1873	0.0047	7.6669	0.2204	2.24E-05	1.2025	0.0022	USEPA 2017 NELTSP refer to Diesel Recip. > 600 hp reference	3/19	
Natural Gas Heater/Boiler/Burner	lbs/MMscf	7.60	1.90	1.90	0.60	190.00	5.50	5.00E-04	84.00	3.2	AP42 1.4-1 & 1.4-2; Pb and NH3: WebFire (08/2018)	7/98 and 8/18	https://www3.epa.gov/ttnchie1/ap42/ch01/final/c01s04.pdf
Combustion Flare (no smoke)	lbs/MMscf	0.00	0.00	0.00	0.57	71.40	35.93	N/A	325.5	N/A	AP42 13.5-1, 13.5-2	2/18	https://www3.epa.gov/ttn/chie1/ap42/ch13/final/C13S05_02-05-18.pdf
Combustion Flare (light smoke)	lbs/MMscf	2.10	2.10	2.10	0.57	71.40	35.93	N/A	325.5	N/A	AP42 13.5-1, 13.5-2	2/18	
Combustion Flare (medium smoke)	lbs/MMscf	10.50	10.50	10.50	0.57	71.40	35.93	N/A	325.5	N/A	AP42 13.5-1, 13.5-2	2/18	
Combustion Flare (heavy smoke)	lbs/MMscf	21.00	21.00	21.00	0.57	71.40	35.93	N/A	325.5	N/A	AP42 13.5-1, 13.5-2	2/18	
Liquid Flaring	lbs/bbl	0.42	0.0966	0.0651	5.964	0.84	0.01428	5.14E-05	0.21	0.0336	AP42 1.3-1 through 1.3-3 and 1.3-5	5/10	https://www3.epa.gov/ttnchie1/ap42/ch01/final/c01s03.pdf
Storage Tank	tons/yr/tank						4.300				2014 Gulfwide Inventory; Avg emiss (upper bound of 95% CI)	2017	https://www.boem.gov/environment/environmental-studies/2014-gulfwide-emission-inventory
Fugitives	lbshr/component						0.0005				API Study	12/93	https://www.apiresearch.com/publications/item.cgi?9879d38a-8bc0-4abe-bb5c-9b623870125d
Glycol Dehydrator	tons/yr/dehydrator						19,240				2011 Gulfwide Inventory; Avg emiss (upper bound of 95% CI)	2014	https://www.boem.gov/environment/environmental-studies/2011-gulfwide-emission-inventory
Cold Vent	tons/yr/vent						44,747				2014 Gulfwide Inventory; Avg emiss (upper bound of 95% CI)	2017	https://www.boem.gov/environment/environmental-studies/2014-gulfwide-emission-inventory
Waste Incinerator	lb/ton		15.0	15.0	2.5	2.0	N/A	N/A	20.0	N/A	AP 42 2.1-12	10/96	https://www3.epa.gov/moves/nonroad2008a-installation-and-updates
On-ice – Loader	lbs/gal	0.043	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003	USEPA NONROAD2008 model; TSP (units converted) refer to Diesel Recip. <600 reference	2009	
On-ice – Other Construction Equipment	lbs/gal	0.043	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003	USEPA NONROAD2008 model; TSP (units converted) refer to Diesel Recip. <600 reference	2009	
On-ice – Other Survey Equipment	lbs/gal	0.043	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003	USEPA NONROAD2008 model; TSP (units converted) refer to Diesel Recip. <600 reference	2009	
On-ice – Tractor	lbs/gal	0.043	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003	USEPA NONROAD2008 model; TSP (units converted) refer to Diesel Recip. <600 reference	2009	
On-ice – Truck (for gravel island)	lbs/gal	0.043	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003	USEPA NONROAD2008 model; TSP (units converted) refer to Diesel Recip. <600 reference	2009	
On-ice – Truck (for surveys)	lbs/gal	0.043	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003	USEPA NONROAD2008 model; TSP (units converted) refer to Diesel Recip. <600 reference	2009	
Man Camp - Operation (max people/day)	tons/person/day		0.0004	0.0004	0.0004	0.006	0.001	N/A	0.001	N/A	BOEM 2014-1001	2014	https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/BOEM_Newsroom/Library/Publications/2014-1001.pdf
Vessels - Ice Management Diesel	g/hp-hr	0.320	0.1931	0.1873	0.0047	7.6669	0.2204	2.24E-05	1.2025	0.0022	USEPA 2017 NELTSP refer to Diesel Recip. > 600 hp reference	3/19	https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data
Vessels - Hovercraft Diesel	g/hp-hr	0.320	0.1931	0.1873	0.0047	7.6669	0.2204	2.24E-05	1.2025	0.0022	USEPA 2017 NELTSP refer to Diesel Recip. > 600 hp reference	3/19	

Sulfur Content Source	Value	Units
Fuel Gas	3.38	ppm
Diesel Fuel	0.0015	% weight
Produced Gas (Flare)	3.38	ppm
Produced Oil (Liquid Flaring)	1	% weight

Density and Heat Value of Diesel Fuel		
Fuel		
Density	7.05	lbs/gal
Heat Value	19,300	Btu/lb

Heat Value of Natural Gas	
Heat Value	1,050 MMBtu/MMscf

Natural Gas Flare Parameters	Value	Units
VOC Content of Flare Gas	0.6816	lb VOC/lb-mol gas
Natural Gas Flare Efficiency	98	%

AIR EMISSIONS CALCULATIONS - 1ST YEAR

COMPANY	AREA	BLOCK	LEASE	FACILITY	WELL	CONTACT	PHONE	REMARKS																	
Chevron U.S.A. Inc.	Green Canyon	841, 840	OCS-G 16770 (GC 641), G-20082 (GC 640)	Tahiti		Heather Spindel-Colwell	985-273-9599	Installation of subsea infrastructure and flexible jumpers in GC 640. Inclusion of well PS012.																	
OPERATIONS	EQUIPMENT	RATING	MAX. FUEL	ACT. FUEL	RUN TIME	MAXIMUM POUNDS PER HOUR										ESTIMATED TONS									
	Diesel Engines	HP	GAL/HR	GAL/D																					
	Nat. Gas Engines	HP	SCF/HR	SCF/D																					
	Burners	MMBTU/HR	SCF/HR	SCF/D	HR/D	D/YR	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3	
DRILLING	VESSLS - Drilling - Propulsion Engine - Diesel	(Note 1)	64,368	3,311.48	79,475.43	24	12	45.41	27.40	26.58	0.66	1087.99	31.28	0.00	170.85	0.32	6.54	3.95	3.83	0.10	156.67	4.50	0.00	24.57	0.05
	VESSLS - Drilling - Propulsion Engine - Diesel		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	VESSLS - Drilling - Propulsion Engine - Diesel		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	VESSLS - Drilling - Propulsion Engine - Diesel		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Vessels - Diesel Boiler		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Vessels - Drilling Prime Engine, Auxiliary		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
PIPELINE	VESSLS - Pipeline Laying Vessel - Diesel	(Note 2)	47,289	2,432.81	58,387.42	24	12	33.36	20.13	19.52	0.49	799.31	22.98	0.00	125.37	0.23	4.80	2.90	2.81	0.07	115.10	3.31	0.00	18.05	0.03
INSTALLATION	VESSLS - Pipeline Burying - Diesel		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
FACILITY INSTALLATION	VESSLS - Heavy Lift Vessel/Derrick Barge Diesel		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
PRODUCTION	RECIP->600hp Diesel - Hurricane Generator	ENG5405	66.00	3.40	81.49	24	52	0.15	0.15	0.15	0.00	2.05	0.15	--	0.44	--	0.09	0.09	0.09	0.00	1.28	0.09	--	0.28	--
	RECIP->600hp Diesel - Emergency Generator	ENG5305	2,876.00	147.96	3,551.01	24	52	2.03	1.15	1.13	0.03	69.11	1.84	--	15.85	--	1.27	0.72	0.70	0.02	43.13	1.15	--	9.89	--
	RECIP->600hp Diesel - Firewater Pump Engine	ZZZ6205	1,065.00	54.79	1,314.96	24	52	0.75	0.43	0.42	0.01	25.59	0.68	--	5.87	--	0.47	0.27	0.26	0.01	15.97	0.42	--	3.66	--
	RECIP->600hp Diesel - Firewater Pump Engine	ZZZ6255	1,065.00	54.79	1,314.96	24	52	0.75	0.43	0.42	0.01	25.59	0.68	--	5.87	--	0.47	0.27	0.26	0.01	15.97	0.42	--	3.66	--
	RECIP->600hp Diesel - Gas Turbine Driver	ZZZ110 (Dual Fuel) (Note 3)	14,264.00	733.83	17,611.82	24	365	10.06	5.72	5.60	0.17	342.77	9.12	--	78.62	--	44.08	25.07	24.52	0.76	1501.33	39.94	--	344.34	--
	RECIP->600hp Diesel - Temporary TAR Generator		2,220.00	114.21	2,741.04	24	45	1.57	0.89	0.87	0.03	53.35	1.42	--	12.24	--	0.85	0.48	0.47	0.01	28.81	0.77	--	6.61	--
	RECIP->600hp Diesel - Temporary TAR Generator	LCR1-DR ZZZ2900	2,220.00	114.21	2,741.04	24	45	1.57	0.89	0.87	0.03	53.35	1.42	--	12.24	--	0.85	0.48	0.47	0.01	28.81	0.77	--	6.61	--
	RECIP->600hp Diesel - Platform Crane No. 1 Driver (East)	LCR1-DR ZZZ2900	490.00	25.21	605.00	24	365	1.08	1.08	1.08	0.03	15.23	1.12	--	3.27	--	4.73	4.73	4.73	0.13	66.72	4.92	--	14.34	--
	RECIP->600hp Diesel - Platform Crane No. 2 Driver (West)	LCR1-DR ZZZ2900	490.00	25.21	605.00	24	365	1.08	1.08	1.08	0.03	15.23	1.12	--	3.27	--	4.73	4.73	4.73	0.13	66.72	4.92	--	14.34	--
	RECIP->600hp Diesel - Temporary/Mobile Equipment*	(Note 4)	1,850.00	95.18	2,284.20	24	365	4.08	4.08	4.08	0.11	57.51	4.24	--	12.36	--	17.86	17.86	17.86	0.50	251.88	18.58	--	54.13	--
	VESSLS - Shuttle Tankers		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSLS - Well Stimulation		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECIP->600hp Diesel - Life Boats		180.00	9.26	222.25	24	52	0.40	0.40	0.40	0.01	5.60	0.41	--	1.20	--	0.25	0.25	0.25	0.01	3.49	0.26	--	0.75	--
	RECIP->600hp Diesel - Life Boats		180.00	9.26	222.25	24	52	0.40	0.40	0.40	0.01	5.60	0.41	--	1.20	--	0.25	0.25	0.25	0.01	3.49	0.26	--	0.75	--
	RECIP->600hp Diesel - Life Boats		180.00	9.26	222.25	24	52	0.40	0.40	0.40	0.01	5.60	0.41	--	1.20	--	0.25	0.25	0.25	0.01	3.49	0.26	--	0.75	--
	RECIP->600hp Diesel - Life Boats		180.00	9.26	222.25	24	52	0.40	0.40	0.40	0.01	5.60	0.41	--	1.20	--	0.25	0.25	0.25	0.01	3.49	0.26	--	0.75	--
	RECIP->600hp Diesel - Rescue Boat		180.00	9.26	222.25	24	52	0.40	0.40	0.40	0.01	5.60	0.41	--	1.20	--	0.25	0.25	0.25	0.01	3.49	0.26	--	0.75	--
	Natural Gas Turbine - Gas Turbine Driver	ZZZ5010	14,264.00	135,847.62	3,260.343	24	365	--	0.27	0.27	0.08	45.64	0.30	--	11.70	--	--	1.19	1.19	0.35	199.92	1.31	--	51.23	--
	Natural Gas Turbine - Gas Turbine Driver	ZZZ5110	14,264.00	135,847.62	3,260.343	0	0	--	0.27	0.27	0.08	45.64	0.30	--	11.70	--	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	Natural Gas Turbine - Gas Turbine Driver	ZZZ5210	14,264.00	135,847.62	3,260.343	24	365	--	0.27	0.27	0.08	45.64	0.30	--	11.70	--	--	1.19	1.19	0.35	199.92	1.31	--	51.23	--
	Natural Gas Turbine - Water Inj.	ZZZ6705	14,800.00	140,952.38	3,382.857	24	365	--	0.28	0.28	0.08	47.36	0.31	--	12.14	--	--	1.23	1.23	0.37	207.44	1.36	--	53.16	--
	Natural Gas Turbine - Water Inj.	ZZZ6745	14,800.00	140,952.38	3,382.857	24	365	--	0.28	0.28	0.08	47.36	0.31	--	12.14	--	--	1.23	1.23	0.37	207.44	1.36	--	53.16	--
	Diesel Turbine		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Dual Fuel Turbine		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECIP - 2 Cycle Lean Natural Gas		0.00	0.00	0.00	0	0	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECIP - 4 Cycle Lean Natural Gas		0.00	0.00	0.00	0	0	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECIP - 4 Cycle Rich Natural Gas		0.00	0.00	0.00	0	0	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Diesel Boiler		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Natural Gas Heater/Boiler/Burner		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MISC.		BPD	SCF/HR	COUNT	hrs	Days	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	STORAGE TANK		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - no smoke		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - light smoke		1,286.573	2.70	2.70	24	365	2.70	2.70	2.70	0.73	91.86	46.23	--	418.78	--	11.83	11.83	11.83	3.21	402.35	202.47	--	1834.25	--
	COMBUSTION FLARE - medium smoke		6,277.083	72	65.91	24	72	65.91	65.91	65.91	3.58	448.18	225.54	--	2043.19	--	56.95	56.95	56.95	3.09	387.23	194.87	--	1765.32	--
	COMBUSTION FLARE - heavy smoke		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--	
	COLD VENT		2.00	2.00	2.00	24	365	--	--	--	--	20.43	--	--	0.00	--	--	--	--	--	89.49	--	--	--	--
	FUGITIVES		33,600.00	33,600.00	33,600.00	24	365	--	--	--	--	16.80	--	--	0.00	--	--	--	--	--	73.58	--	--	--	--
	GLYCOL DEHYDRATOR		0.00	0.00	0.00	0	0	--	--	--	--	--	--	--	0.00	--	--	--	--	--	0.00	--	--	--	--
	WASTE INCINERATOR		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	--	0.00	--	
	Liquid Flaring		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
DRILLING	COMBUSTION FLARE - no smoke		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - light smoke		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - medium smoke		0.00	0.00	0.00	0	0	0.0																	

AIR EMISSIONS CALCULATIONS - 1ST YEAR

COMPANY	AREA	BLOCK	LEASE	FACILITY	WELL	CONTACT	PHONE	REMARKS																	
Chevron U.S.A. Inc.	Green Canyon	841, 840	OCS-G 16770 (GC 641), G-20082 (GC 640)	Tahiti		Heather Spindel-Colwell	985-273-9599	Installation of subsea infrastructure and flexible jumpers in GC 640. Inclusion of well PS012.																	
OPERATIONS	EQUIPMENT	RATING	MAX. FUEL GAL/HR	ACT. FUEL SCF/D	RUN TIME	MAXIMUM POUNDS PER HOUR										ESTIMATED TONS									
	Diesel Engines	HP	GAL/HR	GAL/D																					
	Nat. Gas Engines	HP	SCF/HR	SCF/D																					
	Burners	MMBTU/HR	SCF/HR	SCF/D	HR/D	D/YR	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3	
DRILLING	VESSLS - Drilling - Propulsion Engine - Diesel	(Note 1)	64,368	3,311.48	79,475.43	24	2	45.41	27.40	26.58	0.66	1087.99	31.28	0.00	170.85	0.32	1.09	0.66	0.64	0.02	26.11	0.75	0.00	4.10	0.01
	VESSLS - Drilling - Propulsion Engine - Diesel		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	VESSLS - Drilling - Propulsion Engine - Diesel		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	VESSLS - Drilling - Propulsion Engine - Diesel		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Vessels - Diesel Boiler		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Vessels - Drilling Prime Engine, Auxiliary		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
PIPELINE INSTALLATION	VESSLS - Pipeline Laying Vessel - Diesel	(Note 2)	47,289	2,432.81	58,387.42	24	26	33.36	20.13	19.52	0.49	799.31	22.98	0.00	125.37	0.23	10.41	6.28	6.09	0.15	249.38	7.17	0.00	39.12	0.07
	VESSLS - Pipeline Burying - Diesel		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
FACILITY INSTALLATION	VESSLS - Heavy Lift Vessel/Derrick Barge Diesel		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
PRODUCTION	RECIP->600hp Diesel - Hurricane Generator	ENG5405	66.00	3.40	81.49	24	52	0.15	0.15	0.15	0.00	2.05	0.15	--	0.44	--	0.09	0.09	0.09	0.00	1.28	0.09	--	0.28	--
	RECIP->600hp Diesel - Emergency Generator	ENG5305	2,876.00	147.96	3,551.01	24	52	2.03	1.15	1.13	0.03	69.11	1.84	--	15.85	--	1.27	0.72	0.70	0.02	43.13	1.15	--	9.89	--
	RECIP->600hp Diesel - Firewater Pump Engine	ZZZ6205	1,065.00	54.79	1,314.96	24	52	0.75	0.43	0.42	0.01	25.59	0.68	--	5.87	--	0.47	0.27	0.26	0.01	15.97	0.42	--	3.66	--
	RECIP->600hp Diesel - Firewater Pump Engine	ZZZ6255	1,065.00	54.79	1,314.96	24	52	0.75	0.43	0.42	0.01	25.59	0.68	--	5.87	--	0.47	0.27	0.26	0.01	15.97	0.42	--	3.66	--
	RECIP->600hp Diesel - Gas Turbine Driver	EZZ5110 (Dual Fuel) (Note 3)	14,264.00	733.83	17,611.82	24	365	10.06	5.72	5.60	0.17	342.77	9.12	--	78.62	--	44.08	25.07	24.52	0.76	1501.33	39.94	--	344.34	--
	RECIP->600hp Diesel - Temporary TAR Generator		2,220.00	114.21	2,741.04	24	45	1.57	0.89	0.87	0.03	53.35	1.42	--	12.24	--	0.85	0.48	0.47	0.01	28.81	0.77	--	6.61	--
	RECIP->600hp Diesel - Temporary TAR Generator	LCR1-DR ZZZ2900	2,220.00	114.21	2,741.04	24	45	1.57	0.89	0.87	0.03	53.35	1.42	--	12.24	--	0.85	0.48	0.47	0.01	28.81	0.77	--	6.61	--
	RECIP->600hp Diesel - Platform Crane No. 1 Driver (East)	LCR1-DR ZZZ2900	490.00	25.21	605.00	24	365	1.08	1.08	1.08	0.03	15.23	1.12	--	3.27	--	4.73	4.73	4.73	0.13	66.72	4.92	--	14.34	--
	RECIP->600hp Diesel - Platform Crane No. 2 Driver (West)	LCR1-DR ZZZ2900	490.00	25.21	605.00	24	365	1.08	1.08	1.08	0.03	15.23	1.12	--	3.27	--	4.73	4.73	4.73	0.13	66.72	4.92	--	14.34	--
	RECIP->600hp Diesel - Temporary/Mobile Equipment*	(Note 4)	1,850.00	95.18	2,284.20	24	365	4.08	4.08	4.08	0.11	57.51	4.24	--	12.36	--	17.86	17.86	17.86	0.50	251.88	18.58	--	54.13	--
	VESSLS - Shuttle Tankers		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSLS - Well Stimulation		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECIP->600hp Diesel - Life Boats		180.00	9.26	222.25	24	52	0.40	0.40	0.40	0.01	5.60	0.41	--	1.20	--	0.25	0.25	0.25	0.01	3.49	0.26	--	0.75	--
	RECIP->600hp Diesel - Life Boats		180.00	9.26	222.25	24	52	0.40	0.40	0.40	0.01	5.60	0.41	--	1.20	--	0.25	0.25	0.25	0.01	3.49	0.26	--	0.75	--
	RECIP->600hp Diesel - Life Boats		180.00	9.26	222.25	24	52	0.40	0.40	0.40	0.01	5.60	0.41	--	1.20	--	0.25	0.25	0.25	0.01	3.49	0.26	--	0.75	--
	RECIP->600hp Diesel - Life Boats		180.00	9.26	222.25	24	52	0.40	0.40	0.40	0.01	5.60	0.41	--	1.20	--	0.25	0.25	0.25	0.01	3.49	0.26	--	0.75	--
	RECIP->600hp Diesel - Rescue Boat		180.00	9.26	222.25	24	52	0.40	0.40	0.40	0.01	5.60	0.41	--	1.20	--	0.25	0.25	0.25	0.01	3.49	0.26	--	0.75	--
	Natural Gas Turbine - Gas Turbine Driver	EZZ5010	14,264.00	135,847.62	3,260.343	24	365	--	0.27	0.27	0.08	45.64	0.30	--	11.70	--	--	1.19	1.19	0.35	199.92	1.31	--	51.23	--
	Natural Gas Turbine - Gas Turbine Driver	EZZ5110	14,264.00	135,847.62	3,260.343	0	0	--	0.27	0.27	0.08	45.64	0.30	--	11.70	--	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	Natural Gas Turbine - Gas Turbine Driver	EZZ5210	14,264.00	135,847.62	3,260.343	24	365	--	0.27	0.27	0.08	45.64	0.30	--	11.70	--	--	1.19	1.19	0.35	199.92	1.31	--	51.23	--
	Natural Gas Turbine - Water Inj.	EZZ6705	14,800.00	140,952.38	3,382.857	24	365	--	0.28	0.28	0.08	47.36	0.31	--	12.14	--	--	1.23	1.23	0.37	207.44	1.36	--	53.16	--
	Natural Gas Turbine - Water Inj.	EZZ6745	14,800.00	140,952.38	3,382.857	24	365	--	0.28	0.28	0.08	47.36	0.31	--	12.14	--	--	1.23	1.23	0.37	207.44	1.36	--	53.16	--
	Diesel Turbine		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Dual Fuel Turbine		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECIP - 2 Cycle Lean Natural Gas		0.00	0.00	0.00	0	0	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECIP - 4 Cycle Lean Natural Gas		0.00	0.00	0.00	0	0	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECIP - 4 Cycle Rich Natural Gas		0.00	0.00	0.00	0	0	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Diesel Boiler		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Natural Gas Heater/Boiler/Burner		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MISC.		BPD	SCF/HR	COUNT	hrs	Days	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	STORAGE TANK		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - no smoke		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - light smoke		1,286.573	2.70	2.70	24	365	2.70	2.70	2.70	0.73	91.86	46.23	--	418.78	--	11.83	11.83	11.83	3.21	402.35	202.47	--	1834.25	--
	COMBUSTION FLARE - medium smoke		6,277.083	6.277.083	24	72	65.91	65.91	65.91	3.58	448.18	225.54	--	2043.19	--	56.95	56.95	56.95	3.09	387.23	194.87	--	1765.32	--	
	COMBUSTION FLARE - heavy smoke		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COLD VENT		0.00	2.00	24	365	--	--	--	--	--	20.43	--	--	--	--	--	--	--	--	89.49	--	--	--	--
	FUGITIVES		33,600.00	--	24	365	--	--	--	--	--	16.80	--	--	--	--	--	--	--	--	73.58	--	--	--	--
	GLYCOL DEHYDRATOR		0.00	0.00	0.00	0	0	--	--	--	--	--	--	--	--	--	--	--	--	--	0.00	--	--	--	--
	WASTE INCINERATOR		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--
DRILLING WELL TEST	Liquid Flaring		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	COMBUSTION FLARE - no smoke		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - light smoke		0.00	0.00	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - medium smoke		0.00	0.00	0.00	0	0	0.00	0.00	0.0															

AIR EMISSIONS CALCULATIONS - 1ST YEAR

COMPANY	AREA		BLOCK	LEASE	FACILITY	WELL		CONTACT	PHONE	REMARKS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Chevron U.S.A. Inc.	Green Canyon		641, 640	OCS-G 16770 (GC 641), G-20082 (GC 640)	Tahiti			Heather Spindel-Colwell	985-273-9599	Installation of subsea infrastructure and flexible jumpers in GC 640. Inclusion of well PS012.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
OPERATIONS	EQUIPMENT	EQUIPMENT ID	RATING	MAX. FUEL	ACT. FUEL	RUN TIME	MAXIMUM POUNDS PER HOUR														ESTIMATED TONS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
							GAL/HR		SCFD		TSP	PM10	PM2.5	SOx	NOx	VOC	Ph	CO	NH3	TSP	PM10	PM2.5	SOx	NOx	VOC	Ph	CO	NH3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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AIR EMISSIONS CALCULATIONS

COMPANY		AREA	BLOCK	LEASE	FACILITY	WELL			
Chevron U.S.A. Inc.		Green Canyon	641, 640	OCS-G 16770 (GC 641), G-20082 (GC 640)	Tahiti	IS002, IS003, PN002, PS012 (GC 640)			
Year	Proposed Total Facility Emitted Substance								
	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3
2026	156.75	136.40	135.60	9.54	3914.14	646.86	0.00	4312.57	0.08
2027	156.91	136.49	135.69	9.54	3917.86	646.96	0.00	4313.16	0.08
2028-2035	156.31	136.13	135.34	9.53	3903.49	646.55	0.00	4310.90	0.08
Allowable	3929.40			3929.40	3929.40	3929.40		81796.29	

Year	Previously Permitted Facility Totals								
	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3
2024-2033	156.31	136.13	135.34	9.53	3,903.49	646.55	0.00	4,310.90	0.08
Allowable	3,929.40			3,929.40	3,929.40	3,929.40		81,796.29	

[illegible]

SECTION 9

OIL SPILL INFORMATION

9.1 OIL SPILL RESPONSE PLANNING

All the proposed activities and facilities in this DOCD will be covered by the Oil Spill Response Plan (OSRP) filed by Chevron Corporation's (Company No. 02335) Gulf of America Regional OSRP approved on March 22, 2016; Chevron submitted the Biennial Review of the OSRP in June of 2025 and it was deemed in compliance with 30 CFR 254 by BSEE on December 3, 2025. The following operators are covered under this OSRP:

Chevron Corporation (02335)
Chevron U.S.A. Inc. (00078)
Chevron Pipe Line Company (00400)
Sabine Pipe Line LLC (02950)
Union Oil Company of California (00003)
Unocal Pipeline Company (01113)
PRS Offshore, L.P. (01767)

9.2 SPILL RESPONSE SITES

Primary Response Equipment Location	Preplanned Staging Location
Ingleside, Galveston, and Port Arthur, TX; Lake Charles, Morgan City, Houma, Port Fourchon, Leeville, Venice, Fort Jackson, Harvey, Belle Chasse, and Baton Rouge, LA; Pascagoula, MS; Theodore, AL; Tampa, Miami, and Jacksonville, FL	Ingleside, TX; Port Fourchon and Galliano, LA; Theodore, AL

9.3 OSRO INFORMATION

Clean Gulf Associates (CGA) and Marine Spill Response Corporation (MSRC) cooperatives are the primary surface response equipment providers for Chevron in the Gulf of America Region. CGA and MSRC each maintain a dedicated fleet of vessels and other equipment strategically positioned along the Gulf Coast. CGA and MSRC each maintain a network of trained Oil Spill Removal Organizations (OSROs) to deploy and operate their equipment. CGA and MSRC have the capability to plan the mobilization and rapid deployment of spill response resources on a 24-hour, 7 days a week basis, year-round.

Marine Well Containment Company (MWCC) is the primary subsea containment service provider for Chevron. MWCC equipment is available on a 24-hour, 7 days a week basis, year-round.

Chevron's primary staging areas, marine transportation facilities and helicopter bases, are located in Port Fourchon and Galliano, Louisiana. Chevron has the capability to contract for additional staging areas throughout the Gulf of America coastal ports.

As per Chevron's Regional OSRP, our primary Incident Command Post is located in Covington, LA. Chevron has the ability to set up and effectively manage spills at Chevron facilities located in Houma and Lafayette, LA and Houston, TX. Chevron has the capability to contract additional command posts facilities as necessary throughout the Gulf Coast region.

9.4 WORST-CASE DISCHARGE SCENARIO DETERMINATION

Category	Production	
	Regional OSRP WCD	DOCD WCD
Type of Activity	>10 Miles Production	>10 Miles Production
Facility location (Area/Block)	GC 641	GC 641
Facility designation	A (Tahiti Spar)	A (Tahiti Spar)
Distance to nearest shoreline	118	118
Storage tanks & flowlines (bbl)	5,278	5,278
Lease term pipelines (bbl)	4,044	4,044
Uncontrolled blowout (bbl)	186,452	186,452
Total Volume (bbl)	195,774	195,774
Type of oil(s) (crude, condensate, diesel)	Crude	Crude
API gravity	29.5°	29.5°

Chevron has determined that the worst-case scenario from the activities proposed in this DOCD does not supersede the worst-case scenario from our approved Regional OSRP.

Since Chevron has the capability to respond to the worst-case spill scenario included in our Regional OSRP approved on March 22, 2016 and the Biennial Review update BSEE acknowledged on June 24, 2021, and since the worst-case scenario determined for our DOCD does not replace the worst-case scenario in our Regional OSRP, Chevron hereby certifies that Chevron has the capability to respond, to the maximum extent practicable, to a worst-case discharge, or a substantial threat of such a discharge, resulting from the activities proposed in this DOCD.

9.5 OIL SPILL RESPONSE DISCUSSION

Chevron maintains numerous resources, equipment and expertise to respond to an oil spill in the Gulf of America. Chevron has oil spill response service contracts with both local and international companies and cooperatives and has a large corps of dedicated Chevron emergency responders that can work in the Gulf of America. Chevron has contracts with the following oil spill response service providers.

Oil Spill Removal Organizations (OSRO). These companies have on-hand shoreline protection and cleanup equipment to respond to a spill in the Gulf of America.

- American Pollution Control (AmPol)
- Clean Gulf Associates Services
- ES&H Environmental Services
- OMI Environmental Services

- T&T Marine Salvage Inc.
- U.S. Environmental Services
- Oil Spill Response (OSRL)

Oil Spill Cooperatives (OSC) – OSCs have equipment pre-staged in the Gulf of America, including Lake Charles, Intracoastal City, Houma, Fort Jackson and Venice, Louisiana; Galveston, Texas; and Pascagoula, Mississippi. OSCs provide resources to respond to offshore incidents including areas identified in this plan.

- Clean Gulf Associates (CGA) – This major cooperative is strictly dedicated to Gulf of America oil and gas developers and producers.
- Marine Spill Response Corporation (MSRC) – This national cooperative has extensive dedicated offshore resources located in the Gulf of America

Well Control Emergency Response Companies

- Marine Well Containment Company (MWCC)
- Wild Well Control Inc. (WWC)
- Boots & Coots

Oil Spill Management and Response Consultants

- The Response Group (TRG)

Chemical Dispersant Companies (capable of delivering air and vessel dispersants)

- Airborne Support, Inc via Clean Gulf Associates (CGA)
- Marine Well Containment Company (MWCC)
- Oil Spill Response (OSRL)

Chevron will use a layered approach to respond to a worst-case discharge from the area by conducting simultaneous response operations at the well site, in the offshore environment and in nearshore and shoreline areas. Plans will be implemented, resources deployed and response operations established within these environmental areas to accomplish the following objectives:

- Provide for the safety of responders and the general public
- Intervene at the well site to stop the flow of oil
- Minimize the spread of oil at the surface
- Minimize encroachment to the coastline environment
- Protect coastal and natural resources

Upon notification of a worst-case discharge oil spill at the locations listed in this plan, Chevron will mobilize resources listed in the attached enclosures. This information comes directly from the Chevron regional Gulf of America Oil Spill Response Plan and applies to a worst-case discharge volume of 465,709 barrels per day that could occur at a Chevron facility located in Mississippi Canyon Block 122. These same assets would be mobilized to all sites contained in this plan.

- Aerial Surveillance Equipment
- Offshore Recovery Equipment
- Nearshore Recovery Equipment
- In-Situ Burn Equipment
- Aerial Dispersant Equipment
- Shoreline Protection Equipment
- Offshore Storage Equipment

Chevron will also take the following general actions to mobilize and coordinate response operations:

- Set up and staff its command center in Covington, LA
- Set up a source control group in Houston, TX or Covington, LA
- Mobilize well site resources to cap, contain and disperse oil at the well head
- Mobilize assets to drill relief wells
- Mobilize assets to contain and collect surface oil at the well site and in the offshore environment
- Mobilize assets to disperse and burn surface oil at the well site and in the offshore environment
- Establish a deepwater staging area from a LA port or location
- Deploy assets to track the movement of oil on the surface

Follow up actions will include the following:

- Locate, monitor, track and project the movement of the oil spill
- Mobilize nearshore skimming and booming vessels, barges and systems to shorebase locations for rapid deployment in the nearshore environment
- Mobilize oil spill removal organization (OSRO) resources and assets to staging areas for rapid deployment of shoreline protection resources

- Mobilize wildlife protection and rehabilitation resources to staging areas for rapid deployment of resources
- Determine Incident Command Post (ICP) locations based on intervention operations and results and surface oil spill trajectories
- Determine ICP Operations Branch locations based on intervention operations and results and surface oil spill trajectories
- Determine additional staging areas based on the spill trajectory

Spill Response Resources and Deployment Time

Offshore Response: Offshore response operations may include some or all of the following simultaneous activities: containment booming, mechanical recovery, aerial dispersants and in-situ burning. Response objectives within the offshore layer are to:

- Provide for the safety of responders and the general public
- Minimize wide scale spread of oil
- Minimize encroachment to coastline environment

The strategy for offshore response will be to:

- Station mechanical recovery vessels and barges that are outfitted with ocean boom systems closest to the source to contain and collect as much oil as possible.
- Station mechanical recovery vessels and barges that deploy skimming systems on vessels of opportunity close to the source to rapidly contain and collect oil that strays from the main oil slick.
- Station in-situ burn assets close to the source to burn as much oil as possible.
- Aerially disperse oil that cannot be mechanically recovered.

Simultaneous implementation of these strategies is designed to effectively contain and recover an oil spill significantly offshore in order to minimize the potential impacts to public health, wildlife and the environment. Separate and distinct resources will be assigned for each operation. Based on the anticipated worst case discharge scenario, Chevron can be onsite with contracted oil spill recovery equipment with adequate response capacity to contain and recover surface hydrocarbons, and prevent land impact, to the maximum extent practicable, within an estimated 24 hours.

The following sections provide more information on each operation needed to contain a worst case discharge to the maximum extent possible.

(1) Mechanical Recovery and Slick Containment. Offshore skimming and booming vessels, barges and systems will be deployed to the source of the spill and stationed in the thickest parts of the spill to enhance the encounter rate, collect and contain the oil. VHF radio communications will be established between skimming vessels and barges and spotter aircraft and surveillance

systems to direct vessels to coordinates of thickest oil to maximize the effectiveness and efficiency of on-water recovery resources. Vessels operating in oil will relay spill characteristics (thickness, trajectory) to the Forward Operating Branch and Incident Command Post in order to station additional vessels and barges that are equipped with night-sensing systems in areas of recoverable oil prior to nightfall. This will again maximize the oil recovery encounter rate. MSRC Responder Class vessels, the CGA Hoss barge, Production Support Vessels, Dual Purpose Vessels and vessels of opportunity outfitted with KOSEQ skimming systems will deploy J-boom or U-boom configurations that will maximize containment of oil to collect using skimmers. These vessels will work in tandem to cover as large of a geographic area as possible at the location of the surface spill where oil is thickest.

Vessels deployed with MSRC and CGA Fast Response Units and CGA Fast Response Vessels will be stationed to collect oil that moves past the front-line mechanical assets. These units will deploy a J-boom configuration because it only requires one support vessel. Oil that escapes the above assets and moves shoreward will be collected by vessels of opportunity that deploy sorbent boom, collection nets or other types of equipment that absorbs surface oil. These assets will be deployed as task forces that can rapidly respond to light oil.

(2) In-Situ Burning. Offshore in-situ burn assets will be deployed as primary response resources for all locations within federal waters. Vessels of opportunity that can operate near the spill site will be used to deploy fire boom and trained in-situ burn responders. Fire boom will be configured in a “U” shape or similar to the NOFI Ocean Buster design.

(3) Aerial Dispersants. Aerial dispersants will be deployed as primary response resources for all locations that fall within the FOSC pre-approval process. Dispersant aircraft that arrive on-scene before mechanical recovery or in-situ burn resources will apply dispersants to areas until relieved by a different asset.

Vessel radar systems and infrared cameras will be used to detect and mechanically collect oil at night. This will allow surveillance operations to continue both day and night and through inclement weather. These systems also will be used to track the movement of oil which will assist with shoreline response planning.

Louisiana and Texas resources potentially at risk may include but are not limited to the following: marine sensitivities, beaches, waterfowl, shoreline resources, marshes, marinas/piers, populated areas, and environmental sensitivities

The BOEM oil spill trajectory model indicates that Louisiana parishes and Mississippi, Alabama, and Florida counties could be impacted by an oil spill from areas listed in this plan. These areas are dominated by fine sand beaches, coarse sand beaches, swamps and saltwater marshes. The four subsections below summarize potential concerns with each environment. This information is taken from various Coast Guard Area Contingency Plans.

Fine Sand Beach Environment

- Sensitivity: Fine sand beaches have a low sensitivity to oil spill impacts and cleanup methods.

- Oil Behavior: Oil typically stains and covers the beach sands with low permeability.
- Cleanup: The penetration is low to moderate depending on the water table and the position of the oiling on the shoreline. A potential environmental issue during beach cleanup is the protection of the dune habitat from the cleanup operations. Fine sand beaches typically have poor access, but good transportation ability. Fine sand beaches are relatively easier to clean in contrast to marshes. Large volumes of stained sand and debris can be generated by beach cleanup.

Coarse Sand Beach Environment

- Sensitivity: The environmental sensitivity of coarse sand beaches is low due to the limited animal and vegetation population.
- Oil Behavior: Spilled oil typically stains and coats coarse grain beach sands with moderate to high permeability.
- Cleanup: Sediment penetration on coarse grain beaches is moderate/high depending on the water table and the location of oil deposition. A potential environmental issue is the protection of the dune habitat from cleanup operations. The transit ability of this shoreline type is less than fine sand beaches because the bearing strength is lower, and this type of sand builds steep beach faces. Access is typically poor.

Swamp Environment

- Sensitivity: The environmental sensitivity is high for swamps because of the presence of wetland habitat.
- Oil Behavior: Oil usually coats and covers the sediment and vegetation with low sediment penetration.
- Cleanup: The sediment penetration potential is low due to the high water table and the water content of the sediments. A potential environmental issue is that the cleanup may be more damaging than the oil itself. The access to swamps is poor due to the soft sediment and the presence of dense tree growth.

Salt Marsh Environment

- Sensitivity: The environmental sensitivity is high for salt marsh because of the presence of wetland habitat.
- Oil Behavior: Oil usually coats and covers the sediment and vegetation with low sediment penetration.
- Cleanup: The sediment penetration potential is low/moderate due to the high water table and water content of the sediment. A potential environmental issue is that the cleanup may be more damaging than the oil itself. Access is typically poor in Louisiana.

The protection of waterfowl and wildlife during the course of an oil release is an essential element in every spill response operation. Federal and state natural resource trustees will be notified in

the event that a wildlife habitat may be affected by a spill event. Information concerning methods to protect waterfowl and wildlife are contained in the Chevron OSRP. For fish and wildlife resources, the emphasis is on habitats where:

- Large numbers of animals are concentrated in small areas, such as bays where waterfowl concentrate during migration or for overwintering
- Early life stages are present in somewhat restricted areas or in shallow water, such as anadromous fish streams and turtle nesting beaches
- Habitats are extremely important to specific life stages or migration patterns such as foraging or overwintering
- Specific areas are vital sources for seed or propagation
- The species are on Federal or state threatened or endangered lists
- A significant percentage of the population is likely to be exposed to oil

Human-use resources of concern are listed in the Chevron OSRP. Areas of economic importance, like waterfront hotels, should also be considered when establishing resource protection priorities. Human-use resources are most sensitive when:

- Archaeological and cultural sites are located in the intertidal zones
- Oiling can result in potential significant commercial losses through fouling, tainting, or avoidance because of public perception of a problem
- The resource is unique, such as a historical site
- Oiling can result in potential human health concerns, such as tainting of water intakes and/or subsistence fisheries

Response Capability

Chevron is a member of both CGA and MSRC cooperatives. CGA and MSRC are the primary surface response equipment providers for Chevron in the Gulf of America Region. CGA and MSRC each maintain a dedicated fleet of vessels and other equipment strategically positioned along the Gulf Coast. CGA and MSRC each maintain a network of trained Oil Spill Removal Organizations (OSROs) deploy and operate their equipment. CGA and MSRC have the capability to plan the mobilization and rapid deployment of spill response resources on a 24-hour, 7 days a week basis, year-round.

Chevron maintains service contracts with several private OSROs including American Pollution Control Corporation (AmPol), U.S. Environmental Services (USES), OMI Environmental Services, ES&H Environmental Services and Airborne Support Inc.

Chevron's Aviation Group operates and maintains a private fleet of helicopters servicing our operation in the Gulf of America. Chevron pilots and helicopters provide aerial surveillance. The Chevron Chief Pilot fills the Air Operations Branch Director role during an emergency.

MWCC is the designated subsea containment service provider for Chevron. MWCC equipment is available on a 24-hour, 7 days a week basis, year-round. MWCC equipment locations are Ingleside, TX and Theodore, AL.

Chevron's primary staging areas are located in Fourchon and Galliano, Louisiana. Chevron has the capability to contract for additional staging areas throughout Gulf of America coastal ports.

Chevron's primary command post for an oil spill is located in Covington, LA; however, Chevron has the ability to set up and effectively manage spills at Chevron facilities located in Houma and Lafayette, LA and Houston, TX. Chevron has the capability to contract for additional command posts facilities as necessary throughout Gulf Coast region.

Estimated Initial Equipment Response Times

Capability	Equipment	ETA	Source
Aerial Surveillance	Manned Aircraft (Helicopters and Fixed-wing)	~1 to 2 hours	Chevron Aviation (Galliano, LA & Picayune, MS)
On-water Containment, Skimming, & Storage	Response Vessels (w/ boom, skimmer and storage and surveillance technology)	~10 to 14 hours	CGA & MSRC: Venice, Fort Jackson, Harvey, Belle Chasse, Fourchon
Aerial Dispersant	Spotter and Spray aircraft	~4 to 6 hours	MSRC (Stennis) and/or CGA Airborne Support (Houma)
In-Situ Burn	Vessels, Boom and support equipment	~12 to 24 hours	CGA (Harvey) & MSRC (Fort Jackson)
Sub-sea Surveillance	Remote Operated Vehicles (ROVs)	~18 to 24 hours	Chouest Offshore (Fourchon)
Additional resources will continue to be deployed over subsequent days, weeks, and/or months as necessary			

(¹This includes supervisors and response technicians trained to operate all equipment listed.)

Response Technology

Chevron, through our cooperative response organizations (Clean Gulf Associates (CGA) and Marine Spill Response Corporation (MSRC) with other oil and gas operators), has developed high-tech surveillance capabilities with the primary objective of positioning on-water assets in the thickest parts of the spill by detection and classification of potential oil targets as recoverable, tracking moving oil, and expanding the operating window of skimming operations to low-light conditions.

This technology includes high-definition (HD) cameras, optical and thermal infrared imaging systems, and X-band radar oil detection. These systems are integrated into an electronic chart system that provides an exact geographic position and can project the image onto the electronic map for oil spill recovery.

This capability can be leveraged across the response zones and enables the on-water recovery task force strategy where multiple skimming vessels may be directed by a command and control vessel.

The above information is taken from the Chevron Gulf of America Regional OSRP, submitted to BSEE in accordance with 30 CFR 254.

Suitability of Resources

All response equipment, materials, support vessels and strategies listed in this document and in the Chevron Regional Gulf of America OSRP have proven suitable for the many environmental conditions existing at the locations listed in this plan. Chevron additionally conducts annual oil spill response training, drills and exercises and validates the content of the OSRP. The Chevron Regional Gulf of America OSRP is maintained by the Chevron Gulf of America Emergency Management Advisor.

9.6 MODELING REPORT

Modeling reports are not required for the activities proposed in this plan.

SECTION 10

ENVIRONMENTAL MONITORING INFORMATION

10.1 MONITORING SYSTEMS

Chevron will not utilize any new or unusual technology during the operations proposed under this Initial DOCD.

10.2 INCIDENTAL TAKES

There is no reason to believe that any of the endangered species or marine mammals as listed in the Endangered Species Act (ESA) will be “taken” as a result of the operations proposed under this plan.

Operations proposed in this plan may utilize a moon pool(s) to conduct various subsea activities. Accordingly, Chevron will adhere with the requirements set forth in the Appendices to the Biological Opinion on the Federally Regulated Oil and Gas Program in the Gulf of America issued on March 13, 2020, and the amendment issued on April 26, 2021.

Moon pool(s) will be regularly monitored while open to the water column and when the vessel is not underway. If water conditions are such that observers are unable to see within a meter of the surface, operations requiring lowering or retrieval of equipment through the moon pool will be conducted at a rate that will minimize potential harm, if safety allows.

Prior to and following hull door closure, the moon pool will be monitored continuously by a dedicated crew observer with no other tasks to ensure that no ESA listed species is present in the moon pool area. If visibility is not clear to the hull door from above (e.g., turbidity or low light), 30 minutes of monitoring will be conducted prior to hull door closure. Prior to movement of the vessel and/or deployment/retrieval of equipment, the moon pool will be monitored continuously for a minimum of 30 minutes, by a dedicated crew observer with no other tasks, to ensure no individual protected species are present in the moon pool area.

If an ESA listed species is observed in the moon pool, the vessel will not be moved and equipment will not be deployed or retrieved, to the extent practicable unless the safety of crew or vessel requires otherwise. NMFS will be contacted immediately at nmfs.psoreview@noaa.gov. If the observed animal leaves the moon pool, activities will commence.

Should an ESA listed species be observed in a moon pool prior to commencement of activity, recovery of the animal or other actions specific to the scenario may be required to prevent interaction with the animal. No action will be taken except at the direction of and after contact with NMFS.

Should an interaction with equipment or entanglement/entrapment of any ESA listed species occur (e.g., the animal cannot or does not leave the moon pool on its own volition), the interaction will be reported immediately. Any observation of a leatherback sea turtle within a moon pool, regardless of whether interaction with equipment or entanglement/entrapment is observed, will

be reported immediately to the ESA Section 7 biologist at (301) 427-8413 (nmfs.psoreview@noaa.gov).

Further, any interaction with equipment or entanglement/entrapment of any ESA listed species (i.e., the animal cannot or does not leave the pool of its own volition) will be reported immediately. For assistance with marine mammals and sea turtles, the stranding network listed at www.fisheries.noaa.gov/report and BSEE at protectedspecies@bsee.gov will be contacted for additional guidance on continued monitoring requirements, recovery assistance needs (if required), and incidental report information. Other ESA listed species (e.g., giant manta ray) will be reported to relevant state agency wildlife lines, the ESA Section 7 biologist, and BSEE at protectedspecies@bsee.gov. The vessel will not be moved and equipment will not be deployed or retrieved to/from the pool, to the extent practicable, until NMFS and BSEE are contacted and provide input on how to proceed.

Any individual protected species listed species observed within a moon pool that then leaves the moon pool of its own volition will be reported within 24 hours to NMFS at nmfs.psoreview@noaa.gov and BSEE at protectedspecies@bsee.gov. If the observed animal is no longer observed in the moon pool, monitoring will take place for at least 30 minutes to ensure it has left the moon pool. After 30 minutes, activities will commence.

It has been documented that the use of explosives and/or seismic devices can affect marine life. Operations proposed in this plan will not be utilizing either of these devices.

Chevron and/or its contractor representatives will adhere to the requirements as set forth in the following documents, as applicable, to avoid or minimize impacts to any of the species listed in the ESA as a result of the operations conducted herein:

- Appendices to the Biological Opinion on the Federally Regulated Oil and Gas Program in the Gulf of Mexico issued on March 13, 2020, and the amendment issued on April 26, 2021
 - Appendix A: "Seismic Survey Mitigation and Protected Species Observer Protocols"
 - Appendix B: "Marine Trash and Debris Awareness and Elimination Survey Protocols"
 - Appendix C: "Vessel Strike Avoidance and Injured/Dead Aquatic Protected Species Reporting Protocols"
 - Appendix J: "Sea Turtle Handling and Resuscitation Guidelines"

10.3 FLOWER GARDEN BANKS NATIONAL MARINE SANCTUARY

GC Blocks 596, 597, 640 and 641 are not located in the Flower Garden Banks National Marine Sanctuary; therefore, relevant information is not required in this DOCD.

SECTION 11

LEASE STIPULATIONS INFORMATION

Development activities are subject to the following stipulations attached to Leases OCS-G 16759, 16760, 20082 and 16770, Green Canyon Blocks 596, 597, 640 and 641.

11.4 MILITARY WARNING AREA (MWA)

Green Canyon Block 640 and 641 are located within designated MWA-W92.

Chevron has entered into agreements with:

Fleet Area Control and Surveillance Facility
Attention: Schedules Officer
118 Albemare Ave.
P.O. Box 40
Jacksonville, FL 32212
Telephone: (904) 542-2113
Email: Ronald.McNeal@navy.mil

11.2 MARINE PROTECTED SPECIES

In accordance with the Federal Endangered Species Act and the Marine Mammal Protection Act, Chevron will:

- (a) Collect and remove flotsam resulting from activities related to exploration, development, and production of this lease;
- (b) Post signs in prominent places on all vessels and platforms used as a result of activities related to exploration, development, and production of this lease detailing the reasons (legal and ecological) why release of debris must be eliminated;
- (c) Observe for marine mammals and sea turtles while on vessels, reduce vessel speed to 10 knots or less when assemblages of cetaceans are observed, and maintain 90 meters or greater from whales, and a distance of 45 meters or greater from small cetaceans and sea turtles;
- (d) Employ mitigation measures prescribed by BOEM/BSEE or the National Marine Fisheries Service (NMFS) for all seismic surveys, including the use of an “exclusion zone” based upon the appropriate water depth, ramp-up and shutdown procedures, visual monitoring, and reporting;
- (e) Identify important habitats, including designated critical habitat, used by listed species (e.g., sea turtle nesting beaches, piping plover critical habitat), in oil spill contingency planning and require the strategic placement of spill cleanup equipment to be used only by personnel trained in less-intrusive cleanup techniques on beaches and bay shores; and
- (f) Immediately report all sightings and locations of injured or dead protected species (e.g., marine mammals and sea turtles) to the appropriate stranding network. If oil and gas industry activity is

responsible for the injured or dead animal (e.g., because of a vessel strike), the responsible parties should remain available to assist the stranding network. If the injury or death was caused by a collision with the lessee's vessel, the lessee must notify BOEM within 24 hours of the strike.

BOEM and BSEE issue Notices to Lessees (NTLs), which more fully describe measures implemented in support of the above-mentioned implementing statutes and regulations, as well as measures identified by the U.S. Fish and Wildlife Service and NMFS arising from, among others, conservation recommendations, rulemakings pursuant to the MMPA, or consultation. The lessee and its operators, personnel, and subcontractors, while undertaking activities authorized under this lease, must implement and comply with the specific mitigation measures outlined in NTL No. 2016-BOEM-G01, "Vessel Strike Avoidance and Injured/Dead Protected Species Reporting;" NTL No. 2016-BOEM-G02, "Implementation of Seismic Survey Mitigation Measures and Protected Species Observer Program;" and NTL No. 2015-BSEE-G03, "Marine Trash and Debris Awareness and Elimination." At the lessee's option, the lessee, its operators, personnel, and contractors may comply with the most current measures to protect species in place at the time an activity is undertaken under this lease, including but not limited to new or updated versions of the NTLs identified in this paragraph. The lessee and its operators, personnel, and subcontractors will be required to comply with the mitigation measures, identified in the above referenced NTLs, and additional measures in the conditions of approvals for their plans or permits

SECTION 12

ENVIRONMENTAL MITIGATION MEASURES INFORMATION

12.1 MEASURES TAKEN TO AVOID, MINIMIZE, AND MITIGATE IMPACTS

Chevron will adhere to the requirements as set forth in the following documents, as applicable, to avoid or minimize impacts to any marine and coastal environments and habitats, biota, and threatened and endangered species:

- Appendices to the Biological Opinion on the Federally Regulated Oil and Gas Program in the Gulf of Mexico issued on March 13, 2020, and the amendment issued on April 26, 2021
 - Appendix A: “Seismic Survey Mitigation and Protected Species Observer Protocols”
 - Appendix B: “Marine Trash and Debris Awareness and Elimination Survey Protocols”
 - Appendix C: “Vessel Strike Avoidance and Injured/Dead Aquatic Protected Species Reporting Protocols”
 - Appendix J: “Sea Turtle Handling and Resuscitation Guidelines”

12.2 INCIDENTAL TAKES

Chevron will adhere to the requirements set forth in the following documents, as applicable, to avoid or minimize impacts to any of the species listed in the Endangered Species Act (ESA) as a result of the operations conducted herein:

- Appendices to the Biological Opinion on the Federally Regulated Oil and Gas Program in the Gulf of Mexico issued on March 13, 2020, and the amendment issued on April 26, 2021
 - Appendix A: “Seismic Survey Mitigation and Protected Species Observer Protocols”
 - Appendix B: “Marine Trash and Debris Awareness and Elimination Survey Protocols”
 - Appendix C: “Vessel Strike Avoidance and Injured/Dead Aquatic Protected Species Reporting Protocols”
 - Appendix J: “Sea Turtle Handling and Resuscitation Guidelines”

See **Section 6.7** for a list of Threatened and Endangered Species, Critical Habitat and Marine Mammal Information.

SECTION 13

RELATED FACILITIES AND OPERATIONS INFORMATION

13.1 RELATED OCS FACILITIES AND OPERATIONS

The host platform for the activities proposed in this DOCD is the previously installed A-Tahiti SPAR which supports subsea production from wells located in GC 596, GC 597, GC 640 and GC 641. The pipeline system will shut-in according to the guidance contained in NTL 2009-G36. The boarding shut down valve will close in 45 seconds.

The PS012 production well will be tied in locally at the South Drill Center. To provide access to the existing manifold, an existing producer well (PS009) will be rerouted to the new subsea infrastructure that is part of the Tahiti Diamond Project. Both wells will produce through a new tie-in skid via three (3) new flexible pipe jumpers. The tie-in skid will connect to the Tahiti system at the manifold slot vacated by PS009.

13.2 TRANSPORTATION SYSTEM

An existing 20-24 inch oil Right-of-Way Pipeline (PSN 15497) transports produced hydrocarbons from the A-Tahiti SPAR to the existing A-Boxer Platform in GC Block 19 for ultimate delivery to shore via Operations System No. 29.5. An existing 12-16 inch gas Right-of-Way Pipeline (PSN 15603) transports produced hydrocarbons from the A-Tahiti SPAR to the existing PLES located in GC Block 294 for ultimate delivery to shore via Operations System No. DSO.

No near shore or onshore pipelines or facilities will be constructed.

13.3 PRODUCED LIQUID HYDROCARBONS TRANSPORTATION VESSELS

There will not be any transfers of liquid hydrocarbons other than via pipeline.

SECTION 14

SUPPORT VESSELS AND AIRCRAFT INFORMATION

14.1 GENERAL

For vessel transit, the most practical, direct route from the proposed shorebase, as permitted by weather and traffic conditions will be utilized. Chevron does not anticipate that these routes will transit within the Rice's whale core area for the operations covered under this plan as designated by the March 13, 2020 NMFS programmatic Biological Opinion. In the event the vessel routes change, BSEE/BOEM will be contacted 15 days in advance

Information regarding the vessels and aircraft to be used to support the proposed activities is provided in the table below.

Type	Maximum Fuel Tank Capacity	Maximum Number in Area at Any Time	Trip Frequency or Duration
DP Pipelay Vessel	766,099 gals	1	42 days total (only during subsea installation)
Crew Boat	47,382 gals	1	3 / week
Supply Boat	303,093 gals	1	2 / week
Helicopter	760 gals	1	As Needed

14.2 DIESEL OIL SUPPLY VESSELS

Diesel oil supply vessel information is not required to be submitted with this plan.

14.3 DRILLING FLUID TRANSPORTATION

Drilling fluid transportation information is not required to be submitted with this plan.

14.4 SOLID AND LIQUID WASTE TRANSPORTATION

"Wastes You Will Transport and/or Dispose Onshore" is included as **Attachment 14-A**.

14.5 VICINITY MAP

A vicinity map showing the location of the activities proposed herein relative to the shoreline with the distance of the proposed activities from the shoreline and the primary routes of the support vessels and aircraft that will be used when traveling between the onshore support facilities and the activities proposed in this plan is included as **Attachment 14-B**.

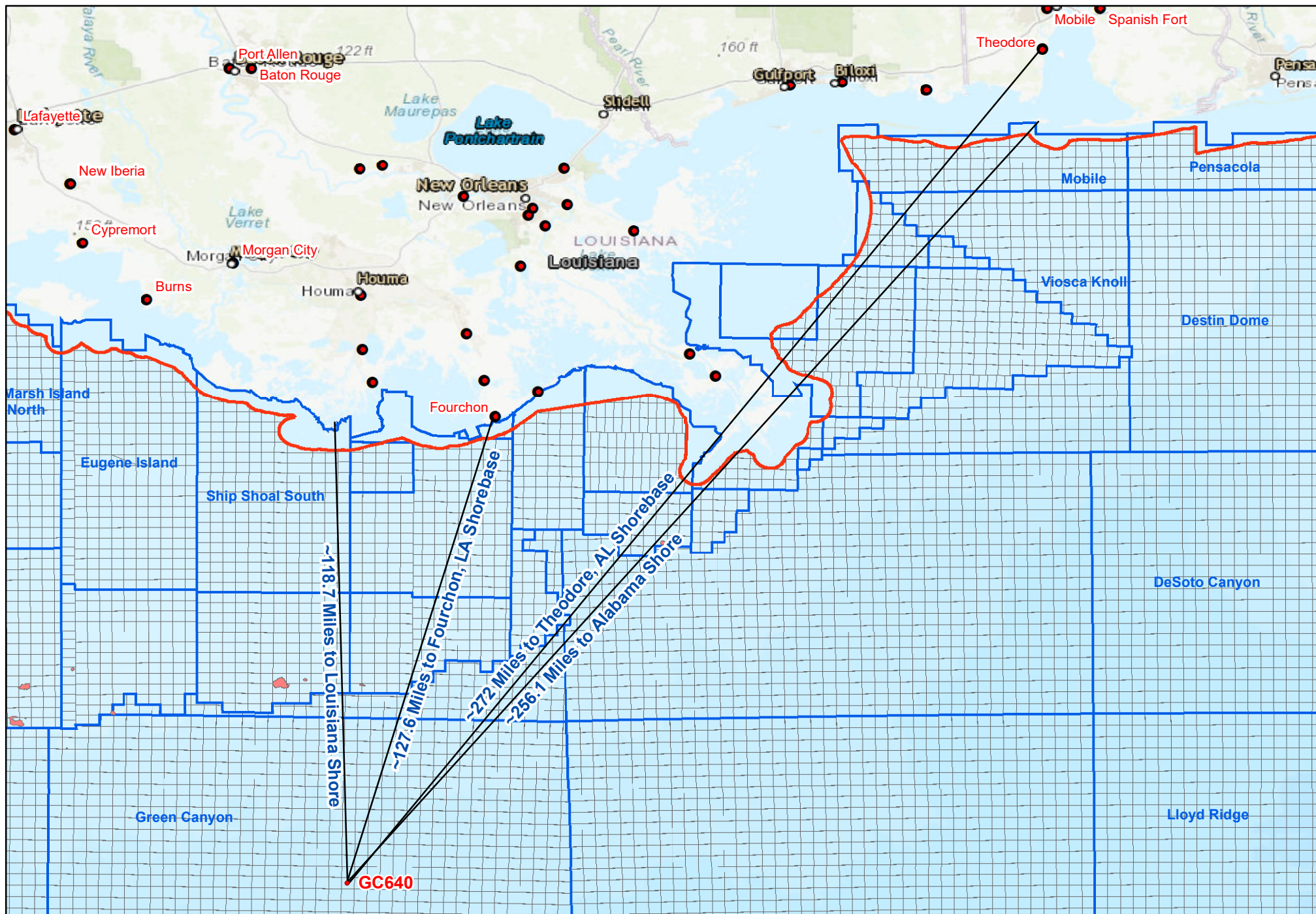
Attachment 14-A

TABLE 2. WASTES YOU WILL TRANSPORT AND /OR DISPOSE OF ONSHORE

please specify whether the amount reported is a total or per well

Projected generated waste		Solid and Liquid Wastes transportation	Waste Disposal		
Type of Waste	Composition	Transport Method	Name/Location of Facility	Amount	Disposal Method
Will drilling occur ? If yes, fill in the muds and cuttings.					
EXAMPLE: Synthetic-based drilling fluid or mud	internal olefin, ester	Below deck storage tanks on offshore support vessels	Newport Environmental Services Inc., Ingleside, TX	X bbl/well	Recycled
Oil-based drilling fluid or mud	NA				
Synthetic-based drilling fluid or mud	NA				
Cuttings wetted with Water-based fluid	NA				
Cuttings wetted with Synthetic-based fluid	NA				
Cuttings wetted with oil-based fluids	NA				
Will you produce hydrocarbons? If yes fill in for produced sand.					
Produced sand	NA				
Will you have additional wastes that are not permitted for discharge? If yes, fill in the appropriate rows.					
EXAMPLE: trash and debris (recyclables)	Plastic, paper, aluminum	barged in a storage bin	ARC, New Iberia, LA	X lb/well	Recycled
Trash and debris	Paper, plastic, aluminum glass and other refuse	Shipped in containers	Progressive Waste Solutions, Larose, LA	1800 bbls/day	Landfilled
Used oil	NA				
Wash water	NA				
Chemical product wastes	NA				

NOTE: If you will not have a type of waste, enter NA in the row.



SECTION 15

ONSHORE SUPPORT FACILITIES INFORMATION

15.1 GENERAL

The onshore facilities to be used to provide supply and service support for the proposed activities are provided in the table below.

Name	Location	Existing/New/Modified
Intermoore	Golden Meadow, Louisiana	Existing
Chevron Galliano Airbase	Galliano, Louisiana	Existing
Core Industries	Theodore, Alabama	Existing

15.2 SUPPORT BASE CONSTRUCTION OR EXPANSION

There will be no new construction of an onshore support base, nor will Chevron expand the existing shorebase as a result of the operations proposed in this DOCD.

15.3 SUPPORT BASE CONSTRUCTION OR EXPANSION TIMETABLE

A support base construction or expansion timetable is not required for the activities proposed in this plan.

15.4 WASTE DISPOSAL

Solid and liquid waste transportation information is not required for the activities proposed in this plan.

SECTION 16

COASTAL ZONE MANAGEMENT (CZM) INFORMATION

Under direction of the Coastal Zone Management Act (CZMA), the state(s) of Alabama and Louisiana developed Coastal Zone Management Programs (CZMP) to allow for the supervision of significant land and water use activities that take place within or that could significantly affect the Alabama and Louisiana coastal zones.

Proposed activities are 256 miles from the Alabama shore, and 118.7 miles from the Louisiana shore. Measures will be taken to avoid or mitigate the probable impacts. Chevron will operate in compliance with existing federal and state laws, regulations, and resultant enforceable program policies in Alabama's and Louisiana's Coastal Zone Management Programs.

The OCS related oil and gas exploration and development activities having potential impact on the Alabama and Louisiana Coastal Zones are based on the location of the proposed facilities, access to those sites, best practical techniques for drilling locations, drilling equipment guidelines for the prevention of adverse environmental effects, effective environmental protection, emergency plans and contingency plans.

The policies and corresponding sections within this Development Operations Coordination Document identified by the State of Alabama Coastal Area Management Program (ACAMP) as being related to OCS Plans are provided in the table below.

Enforceable Program Policies of the Alabama Coastal Area Management Program (ACAMP)

Policy	Plan Section	Comments
Coastal Resource Use Policies		
Coastal Development		Dock and port facilities in Alabama and Louisiana will be used. There will be no new construction, dredging, or filling in Alabama state waters. There will be no new commercial development, capital improvements nor employment effects in Alabama's coastal zone.
Mineral Resource Exploration and Extraction		
Commercial Fishing	9	
Hazard Management	3	A Shallow Hazards Report has previously been submitted to BOEM in order to identify and assess the seafloor and shallow geologic conditions in this block.
Shoreline Erosion	9	Proposed development operations will take place approximately 256 miles from Alabama's shore.
Recreation	9	
Transportation	13	

Policy	Plan Section	Comments
Natural Resource Protection Policies		
Biological Productivity	9	
Water Quality	9	
Water Resources	9	
Air Quality	8	
Wetlands and Submerged Grassbeds	9	
Beach and Dune Protection	9	
Wildlife Habitat Protection	9	
Endangered Species	9	
Cultural Resources Protection	6	The proposed operations will be conducted from a previously approved surface location as provided for in S-EP (Control No. S-8194). No areas in the Tahiti Development Area were designated as archaeologically sensitive.

A certificate of Coastal Zone Management Consistency for the state of Alabama is included as **Attachment 16-A**.

A Coastal Zone Management certification for the state of Louisiana is not required for the activities proposed in this plan.

ATTACHMENT 16-A

**COASTAL ZONE MANAGEMENT
CONSISTENCY CERTIFICATION**

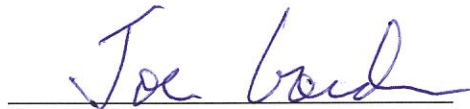
SUPPLEMENTAL DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

**GREEN CANYON BLOCK 640
LEASE OCS-G 20082**

The proposed activity complies with the enforceable policies of the Alabama approved management program and will be conducted in a manner consistent with such program.

Chevron U.S.A.Inc.

Lessee or Operator

A handwritten signature in blue ink, appearing to read "Joe Bond", is written over a horizontal line.

Certifying Official

February 23, 2026

Date

SECTION 17

ENVIRONMENTAL IMPACT ANALYSIS (EIA)

The Environmental Impact Analysis is included as **Attachment 17-A**.

ATTACHMENT 17-A

Chevron U.S.A., Inc. (Chevron)

Supplemental Development Operations Coordination Document Green Canyon Block 640 OCS-G 20082

(A) Impact Producing Factors

ENVIRONMENTAL IMPACT ANALYSIS WORKSHEET

Environment Resources	Impact Producing Factors (IPFs) Categories and Examples Refer to recent GOM OCS Lease Sale EIS for a more complete list of IPFs					
	Emissions (air, noise, light, etc.)	Effluents (muds, cutting, other discharges to the water column or seafloor)	Physical disturbances to the seafloor (rig or anchor emplacements, etc.)	Wastes sent to shore for treatment or disposal	Accidents (e.g., oil spills, chemical spills, H ₂ S releases)	Discarded Trash & Debris
Site-specific at Offshore Location						
Designated topographic features		(1)	(1)		(1)	
Pinnacle Trend area live bottoms		(2)	(2)		(2)	
Eastern Gulf live bottoms		(3)	(3)		(3)	
Benthic communities			(4)			
Water quality			X		X	
Fisheries			X		X	
Marine Mammals	X(8)				X(8)	X
Sea Turtles	X(8)				X(8)	X
Air quality	X(9)					
Shipwreck sites (known or potential)			(7)			
Prehistoric archaeological sites			(7)		X	
Vicinity of Offshore Location						
Essential fish habitat			X		X(6)	
Marine and pelagic birds	X				X	X
Public health and safety					(5)	
Coastal and Onshore						
Beaches					X(6)	X
Wetlands					X(6)	
Shore birds and coastal nesting birds					X(6)	X
Coastal wildlife refuges					X	
Wilderness areas					X	

Footnotes for Environmental Impact Analysis Matrix

- 1) Activities that may affect a marine sanctuary or topographic feature. Specifically, if the well or platform site or any anchors will be on the seafloor within the:
 - 4-mile zone of the Flower Garden Banks, or the 3-mile zone of Stetson Bank;
 - 1000-m, 1-mile or 3-mile zone of any topographic feature (submarine bank) protected by the Topographic Features Stipulation attached to an Outer Continental Shelf (OCS) lease;
 - Essential Fish Habitat (EFH) criteria of 500 feet. from any no-activity zone; or
 - Proximity of any submarine bank (500 feet. buffer zone) with relief greater than two meters that is not protected by the Topographic Features Stipulation attached to an OCS lease.
- 2) Activities with any bottom disturbance within an OCS lease block protected through the Live Bottom (Pinnacle Trend) Stipulation attached to an OCS lease.
- 3) Activities within any Eastern Gulf OCS block where seafloor habitats are protected by the Live Bottom (Low-Relief) Stipulation attached to an OCS lease.
- 4) Activities on blocks designated by the BOEM as being in water depths 300 meters or greater.
- 5) Exploration or production activities where H₂S concentrations greater than 500 ppm might be encountered.
- 6) All activities that could result in an accidental spill of produced liquid hydrocarbons or diesel fuel that you determine would impact these environmental resources. If the proposed activity is located a sufficient distance from a resource that no impact would occur, the EIA can note that in a sentence or two.
- 7) All activities that involve seafloor disturbances, including anchor emplacements, in any OCS block designated by the BOEM as having high probability for the occurrence of shipwrecks or prehistoric sites, including such blocks that will be affected that are adjacent to the lease block in which your planned activity will occur. If the proposed operations are located a sufficient distance from a shipwreck or a prehistoric site that no impact would occur, the EIA can note that in a sentence or two.
- 8) All activities that you determine might have an adverse effect on endangered or threatened marine mammals or sea turtles or their critical habitats.
- 9) Production activities that involve transportation of produced fluids to shore using shuttle tankers or barges.

TABLE 1: THREATENED AND ENDANGERED SPECIES, CRITICAL HABITAT, AND MARINE MAMMAL INFORMATION

The federally listed endangered and threatened species potentially occurring in the lease area and along the Gulf Coast are provided in the table below.

Species	Scientific Name	Status	Potential Presence		Critical Habitat Designated in the Gulf of Mexico	Gulf of Mexico Range
			Lease Area	Coastal		
Marine Mammals						
Manatee, West Indian	<i>Trichechus manatus latirostris</i>	T	--	X	Florida (peninsular)	Coastal Louisiana, Mississippi, Alabama, and Florida
Whale, Blue	<i>Balaenoptera masculus</i>	E	X ¹	--	None	GOM
Whale, Bryde's ⁴	<i>Balaenoptera brydei/edeni</i>	E	X	--	None	Eastern GOM
Whale, Fin	<i>Balaenoptera physalus</i>	E	X ¹	--	None	GOM
Whale, Humpback	<i>Megaptera novaeangliae</i>	E	X ¹	--	None	GOM
Whale, North Atlantic Right	<i>Eubalaena glacialis</i>	E	X ¹	--	None	GOM
Whale, Rice's ⁴	<i>Balaenoptera ricei</i>	E	X	--	None	GOM
Whale, Sei	<i>Balaenopiera borealis</i>	E	X ¹	--	None	GOM
Whale, Sperm	<i>Physeter catodon</i> (= <i>macrocephalus</i>)	E	X	--	None	GOM
Terrestrial Mammals						
Mouse, Alabama Beach	<i>Peromyscus polionotus ammobates</i>	E	-	X	Alabama beaches	Alabama beaches
Mouse, Choctawatchee Beach	<i>Peromyscus polionotus allophrys</i>	E	-	X	Florida panhandle beaches	Florida panhandle beaches
Mouse, Perdido Key Beach	<i>Peromyscus polionotus trissyllepsis</i>	E	-	X	Alabama, Florida (panhandle) beaches	Alabama, Florida (panhandle) beaches
Mouse, St. Andrew Beach	<i>Peromyscus polionotus peninsularis</i>	E	-	X	Florida panhandle beaches	Florida panhandle beaches
Jaguarundi, Gulf Coast	<i>Puma yagouaroundi cacomitli</i>	E	-	X	None	Texas
Ocelot	<i>Leopardus</i> (= <i>Felis</i>) <i>pardalis</i>	E	-	X	None	Texas

Species	Scientific Name	Status	Potential Presence		Critical Habitat Designated in the Gulf of Mexico	Gulf of Mexico Range
			Lease Area	Coastal		
Bat, Florida Bonneted	<i>Eumops floridanus</i>	E	-	X	None	Florida
Panther, Florida	<i>Puma (=Felis) concolor coryi</i>	E	-	X	None	Florida
Vole, Florida Salt Marsh	<i>Microtus pennsylvanicus dukecampbelli</i>	E	-	X	None	Florida
Deer, Key	<i>Odocoileus virginianus clavium</i>	E	-	X	None	Florida Keys
Rabbit, Lower Keys Marsh	<i>Sylvilagus palustris hefneri</i>	E	-	X	None	Florida Keys
Rat, Silver Rice	<i>Oryzomys palustris natator</i>	E	-	X	None	Florida Keys
Birds						
Plover, Piping	<i>Charadrius melodus</i>	T	-	X	Coastal Texas, Louisiana, Mississippi, Alabama, and Florida (panhandle)	Coastal GOM
Crane, Whooping	<i>Grus Americana</i>	E	-	X	Coastal Texas	Coastal Texas and Louisiana
Crane, Mississippi sandhill	<i>Grus canadensis pulla</i>	E	-	X	Coastal Mississippi	Coastal Mississippi
Caracara, Audubon's Crested	<i>Polyborus plancus audubonii</i>	T	-	X	None	Coastal Florida Peninsula
Curlew, Eskimo	<i>Numenius borealis</i>	E	-	X	None	Coastal Texas
Falcon, Northern Aplomado	<i>Falco femoralis septentrionalis</i>	E	-	X	None	Coastal Texas
Prairie-chicken, Attwater's Greater	<i>Tympanuchus cupido attwateri</i>	E	-	X	None	Coastal Texas
Scrub-jay, Florida	<i>Aphelocoma coerulescens</i>	T	-	X	None	Coastal Florida
Kite, Everglade Snail	<i>Rostrhamus sociabilis plumbeus</i>	E	-	X	None	Coastal Southern Florida
Knot, Red	<i>Calidris canutus rufa</i>	T	-	X	None	Coastal GOM
Rail, Eastern Black	<i>Laterallus jamaicensis ssp. jamaicensis</i>	T	-	X	None	Coastal GOM
Sparrow, Cape Sable Seaside	<i>Ammodramus maritimus mirabilis</i>	E	-	X	Everglades	Coastal Florida

Species	Scientific Name	Status	Potential Presence		Critical Habitat Designated in the Gulf of Mexico	Gulf of Mexico Range
			Lease Area	Coastal		
Stork, Wood	<i>Mycteria americana</i>	T	-	X	None	Coastal Alabama and Florida
Tern, Roseate	<i>Sterna dougallii dougallii</i>	T	-	X	None	Coastal Southern Florida
Warbler, Bachman's	<i>Vermivora bachmanii</i>	E	-	X	None	Coastal Southern Florida
Woodpecker, Red-cockaded	<i>Picoides borealis</i>	E	-	X	None	Coastal Louisiana and Florida
Marine Reptiles						
Sea Turtle, Green	<i>Chelonia mydas</i>	T/E ³	X	X	None	GOM
Sea Turtle, Hawksbill	<i>Eretmochelys imbricata</i>	E	X	X	None	GOM
Sea Turtle, Kemp's Ridley	<i>Lepidochelys kempli</i>	E	X	X	None	GOM
Sea Turtle, Leatherback	<i>Dermochelys coriacea</i>	E	X	X	None	GOM
Sea Turtle, Loggerhead	<i>Caretta caretta</i>	T	X	X	Texas, Louisiana, Mississippi, Alabama, Florida	GOM
Terrestrial Reptiles						
Turtle, Alabama Red-bellied	<i>Pseudemys alabamensis</i>	E	-	X	None	Coastal Mississippi and Alabama
Crocodile, American	<i>Crocodylus acutus</i>	T	-	X	Everglades and Florida Keys	Coastal Florida
Snake, Eastern Indigo	<i>Drymarchon couperi</i>	T	-	X	None	Coastal Mississippi, Alabama, and Florida
Tortoise, Gopher	<i>Gopherus polyphemus</i>	T	-	X	None	Coastal Louisiana, Mississippi, and Alabama
Turtle, Ringed Map	<i>Graptemys oculifera</i>	T	-	X	None	Coastal Louisiana and Mississippi
Turtle, Yellow-blotched Map	<i>Graptemys flavimaculata</i>	T	-	X	None	Coastal Mississippi
Fish						
Sturgeon, Gulf	<i>Acipenser oxyrinchus (=oxyrhynchus) desotoi</i>	T	X	X	Coastal Louisiana, Mississippi, Alabama, and Florida (panhandle)	Coastal Louisiana, Mississippi, Alabama, and Florida (panhandle)
Shark, Oceanic Whitetip	<i>Carcharhinus longimanus</i>	T	X	—	None	GOM
Sawfish, Smalltooth	<i>Pristis pectinate</i>	E	-	X	None	Florida
Grouper, Nassau	<i>Epinephelus striatus</i>	T	-	X	Florida ⁵	Florida

Species	Scientific Name	Status	Potential Presence		Critical Habitat Designated in the Gulf of Mexico	Gulf of Mexico Range
			Lease Area	Coastal		
Ray, Giant Manta	<i>Manta birostris</i>	T	X	--	None	GOM
Sturgeon, Pallid	<i>Scaphirhynchus albus</i>	E	-	X	None	Louisiana Coastal Rivers
Corals						
Coral, Elkhorn	<i>Acopora palmate</i>	T	X ²	X	Florida ⁵	Flower Garden Banks and Florida
Coral, Staghorn	<i>Acopora cervicornis</i>	T	X	X	Florida ⁵	Florida
Coral, Boulder Star	<i>Orbicella franksi</i>	T	X	X	Flower Garden Banks and Florida	Flower Garden Banks and Florida
Coral, Lobed Star	<i>Orbicella annularis</i>	T	X	X	Flower Garden Banks and Florida	Flower Garden Banks and Florida
Coral, Mountainous Star	<i>Orbicella faveolate</i>	T	X	X	Flower Garden Banks and Florida	Flower Garden Banks and Florida
Coral, Rough Cactus	<i>Mycetophyllia ferox</i>	T	-	X	Florida ⁵	Florida and Southern Gulf of Mexico
Coral, Pillar	<i>Dendrogyra cylindrus</i>	T	-	X	Florida ⁵	Florida

Abbreviations: E = Endangered; T = Threatened

1 The Blue, Fin, Humpback, North Atlantic Right, and Sei Whales are rare or extralimital in the Gulf of Mexico and are unlikely to be present in the lease area.

2 According to the 2017 EIS, Elkhorn Coral, while uncommon, has been found in the Flower Garden Banks. (BOEM 2017-009)

3 Green Sea Turtles are considered threatened throughout the Gulf of Mexico; however, the breeding population off the coast of Florida is considered endangered.

4 The Bryde's whale, also known as the Bryde's whale complex, is a collection of baleen whales that are still being researched to determine if they are the same species or if they are individual species of whales. In 2021, the Rice's whale, formerly known as the Gulf of Mexico Bryde's whale, was determined to be a separate species. There are less than 100 Rice's whales living in the Gulf of Mexico year-round. These whales retain all the protections of the Gulf of Mexico Bryde's whale under the Endangered Species Act while the regulations are being updated to reflect the name change. Other Bryde's whales are migratory and may enter the Gulf of Mexico; however, the migratory Bryde's whales are rare or extralimital in the Gulf of Mexico and are unlikely to be present in the lease area.

5 Critical habitat is in the Gulf of Mexico, but outside of planning area. Species may still occur in the Gulf of Mexico.

(B) Analysis

Site-Specific at Green Canyon Block 640

Proposed operations consist of the production of Well No. PS012 and the installation of subsea infrastructure and 3 new flexible jumper pipelines, all in GC Block 640. Further, provide for future well intervention operations for existing wells with a surface location in GC Block 640.

Operations will be conducted with a Drillship and Pipelay Vessel.

There are no seismic surveys, pile driving, or pipelines making landfall associated with the operations covered by this Plan.

1. Designated Topographic Features

Potential IPFs on topographic features include physical disturbances to the seafloor and accidents.

Physical disturbances to the seafloor: Green Canyon Block 640 is 49.1 miles from the closest designated Topographic Features Stipulation Block (Southwest Diaphus); therefore, no adverse impacts are expected.

Accidents: It is unlikely that an accidental surface or subsurface spill would occur from the proposed operations (refer to statistics in **Item 5**, Water Quality). Oil spills cause damage to benthic organisms only if the oil contacts the organisms. Oil from a surface spill can be driven into the water column; measurable amounts have been documented down to a 10-meter depth. At this depth, the oil is found only at concentrations several orders of magnitude lower than the amount shown to have an effect on corals. Because the crests of topographic features in the Northern Gulf of Mexico are found below 10 meters, oil from a surface spill is not expected to reach their sessile biota. Oil from a subsurface spill is not applicable due to the distance of these blocks from a topographic area. The activities proposed in this plan will be covered by Chevron's Regional OSRP (refer to information submitted in **Section 9**).

If dispersants were utilized as a response method, the fate and effects of spilled oil would be impacted. Dispersants have been utilized in previous spill response efforts and were used extensively in the response to the Deepwater Horizon oil spill, with both surface and sub-surface applications. Reports on dispersant usage on surface oil indicate that a majority of the dispersed oil remains in the top 10 meters of the water column, with 60 percent of the oil in the top two meters of water (McAuliffe et al, 1981; Lewis and Aurand, 1997; OCS Report BOEM 2017-007). Lubchenco et al. (2010) report that most chemically dispersed surface oil from the Deepwater Horizon explosion and oil spill remained in the top six meters of the water column where it mixed with surrounding waters and biodegraded (BOEM 2017-007). None of the topographic features or potentially sensitive biological features in the GOM are shallower than 10 meters (33 feet), and only the Flower Garden Banks are shallower than 20 meters (66 feet).

In one extraordinary circumstance with an unusual combination of meteorological and oceanographic conditions, a tropical storm forced a large volume of Deepwater Horizon oil spill-linked surface oil/dispersant mixture to as deep as 75 meters (246 feet), causing temporary exposure to mesophotic corals in the Pinnacle Trend area and leading to some coral mortality and sublethal impacts (Silva et al., 2015; BOEM 2017-007).

Additionally, concentrations of dispersed and dissolved oil in the Deepwater Horizon oil-spill subsea plume were reported to be in the parts per million range or less and were generally lower away from the water's surface and away from the well head (Adcroft et al., 2010; Haddad and Murawski, 2010; Joint Analysis Group, 2010; Lubchenco et al, 2010; BOEM 2017-007).

In the case of subsurface spills like a blowout or pipeline leak, dispersants may be injected at the seafloor. This will increase oil concentrations near the source but tend to decrease them further afield, especially at the surface. Marine organisms in the lower water column will be exposed to an initial increase of water-soluble oil compounds that will dilute in the water column over time (Lee et al., 2013a; NAS 2020).

Dispersant application involves a trade-off between decreasing the risk to the surface and shoreline habitat and increasing the risk beneath the surface. The optimal trade-off must account for various factors, including the type of oil spilled, the spill volume, the weather and sea state, the water depth, the degree of turbulence, and the relative abundance and life stages of organisms (NRC, 2005; NAS 2020).

Chemical dispersants may increase the risk of toxicity to subsurface organisms by increasing bioavailability of the oil. However, it is important to note that at the 1:20 dispersant-to-oil ratio recommended for use during response operations, the dispersants currently approved for use are far less acutely toxic than oil is. Toxicity of chemically dispersed oil is primarily due to the oil itself and its enhanced bioavailability (Lee et al., 2015; NAS 2020).

With the exception of special Federal management areas or designated exclusion areas, dispersants have been preapproved for surface use, which provides the USCG On-Scene Coordinator with the authority to approve the use of dispersants. However, that approval would only be granted upon completion of the protocols defined in the appropriate Area Contingency Plan (ACP) and the Regional Response Team (RRT) Dispersant Plan. The protocols include conducting an environmental benefit analysis to determine if the dispersant use will prevent a substantial threat to the public health or welfare or minimize serious environmental damage. The Regional Response Team would be notified immediately to provide technical support and guidance in determining if the dispersant use meets the established criteria and provide an environmental benefit. Additionally, there is currently no preapproval for subsea dispersant injection and the USCG On-Scene Coordinator must approve use of this technology before any subsea application. Due to the unprecedented volume of dispersants applied for an extended period of time, the U.S. National Response Team has developed guidance for atypical dispersant operations to ensure that planning and response activities will be consistent with national policy (BOEM 2017-007).

Dispersants were used extensively in the response to the Deepwater Horizon oil spill, both surface and sub-surface applications. However, during a May 2016 significant oil spill (approximately 1,926 barrels) in the Gulf of Mexico dispersants were not utilized as part of the response. The Regional Response Team was consulted and recommended that dispersants not be used, despite acknowledging the appropriate protocols were correctly followed and that there was a net environmental benefit in utilizing dispersants. This demonstrates that the federal authorities (USCG and RRT) will be extremely prudent in their decision-making regarding dispersant use authorizations.

Due to the distance of these blocks from a topographic area and the coverage of the activities proposed in this plan by Chevron's Regional OSRP (refer to information submitted in **Section 9**), impacts to topographic features from surface or sub-surface oil spills are not expected.

There are no other IPFs (including emissions, effluents, and wastes sent to shore for treatment or disposal) from the proposed operations that are likely to impact topographic features.

2. Pinnacle Trend Area Live Bottoms

Potential IPFs on pinnacle trend area live bottoms include physical disturbances to the seafloor, emissions (noise / sound), and accidents.

Physical disturbances to the seafloor: Green Canyon Block 640 is 190.5 miles from the closest live bottom (pinnacle trend) area; therefore, no adverse impacts are expected.

Emissions (noise / sound): All routine OCS oil-and gas-related activities have some element of sound generation. Common sound sources include propeller cavitation, rotating machinery, and reciprocating machinery, which are associated with routine OCS oil-and gas-related activities such as vessel traffic, construction, and oil and gas production, processing, and transport. Sound introduced into the marine environment as a result of human activities has the potential to affect marine organisms. Although there is little information available on sound detection and sound-mediated behaviors for marine invertebrates, the overall impacts on pinnacle and low-relief feature communities from anthropogenic noise are expected to be negligible (BOEM 2017-009). Additionally, Green Canyon Block 640 is 190.5 miles from the closest live bottom (pinnacle trend) area; therefore, no adverse impacts are expected.

Accidents: It is unlikely that an accidental surface or subsurface spill would occur from the proposed operations (refer to statistics in **Item 5, Water Quality**). Oil spills have the potential to foul benthic communities and cause lethal and sublethal effects on live bottom organisms. Oil from a surface spill can be driven into the water column; measurable amounts have been documented down to a 10-meter depth. At this depth, the oil is found only at concentrations several orders of magnitude lower than the amount shown to have an effect on marine organisms. Oil from a subsurface spill is not expected to impact pinnacle trend area live bottoms due to the distance of

these blocks from a live bottom (pinnacle trend) area. The activities proposed in this plan will be covered by Chevron's Regional OSRP (refer to information submitted in **Section 9**).

If dispersants were utilized as a response method, the fate and effects of spilled oil would be impacted. A detailed discussion on dispersants, their usage during the Deepwater Horizon oil spill, and their impacts on different levels of benthic communities can be found in **Item 1**.

There are no other IPFs (including effluents and wastes sent to shore for treatment or disposal) from the proposed operations which could impact a live bottom (pinnacle trend) area.

3. Eastern Gulf Live Bottoms

Potential IPFs on Eastern Gulf live bottoms include physical disturbances to the seafloor, emissions (noise / sound), and accidents.

Physical disturbances to the seafloor: Green Canyon Block 640 is not located in an area characterized by the existence of live bottoms, and this lease does not contain a Live-Bottom Stipulation requiring a photo documentation survey and survey report.

Emissions (noise / sound): All routine OCS oil-and gas-related activities have some element of sound generation. Common sound sources include propeller cavitation, rotating machinery, and reciprocating machinery, which are associated with routine OCS oil-and gas-related activities such as vessel traffic, construction, and oil and gas production, processing, and transport. Sound introduced into the marine environment as a result of human activities has the potential to affect marine organisms. Although there is little information available on sound detection and sound-mediated behaviors for marine invertebrates, the overall impacts on pinnacle and low-relief feature communities from anthropogenic noise are expected to be negligible (BOEM 2017-009). Additionally, Green Canyon Block 640 is not located in an area characterized by the existence of live bottoms; therefore, no adverse impacts are expected.

Accidents: It is unlikely that an accidental surface or subsurface spill would occur from the proposed operations (refer to statistics in **Item 5**, Water Quality). Oil spills cause damage to live bottom organisms only if the oil contacts the organisms. Oil from a surface spill can be driven into the water column; measurable amounts have been documented down to a 10-meter depth. At this depth, the oil is found only at concentrations several orders of magnitude lower than the amount shown to have an effect on marine invertebrates. Oil from a subsurface spill is not expected to impact Eastern Gulf live bottoms due to the distance of these blocks from a live bottom area and coverage of the activities proposed in this plan by Chevron's Regional OSRP (refer to information submitted in **Section 9**).

If dispersants were utilized as a response method, the fate and effects of spilled oil would be impacted. A detailed discussion on dispersants, their usage during the Deepwater Horizon oil spill, and their impacts on different levels of benthic communities can be found in **Item 1**.

There are no other IPFs (including effluents and wastes sent to shore for treatment or disposal) from the proposed operations that are likely to impact an Eastern Gulf live bottom area.

4. Deepwater Benthic Communities

Green Canyon Block 640 is located in water depths 984 feet (300 meters) or greater. Potential IPFs that could result in impacts to deepwater benthic communities from the proposed operations include physical disturbances to the seafloor and emissions (noise / sound).

Physical disturbances to the seafloor: Green Canyon Block 640 is approximately 10.6 miles from a known deepwater benthic community site (Green Canyon Block 600), listed in NTL 2009-G40. This plan submittal includes the required maps, analyses, and statement(s). The proposed operations will be conducted in accordance with NTL 2009-G40, which will ensure that features or areas that could support high-density deepwater benthic communities will not be impacted.

Emissions (noise / sound): All routine OCS oil-and gas-related activities have some element of sound generation. Common sound sources include propeller cavitation, rotating machinery, and reciprocating machinery, which are associated with routine OCS oil-and gas-related activities such as vessel traffic, construction, and oil and gas production, processing, and transport. Sound introduced into the marine environment as a result of human activities has the potential to affect marine organisms. Although there is little information available on sound detection and sound-mediated behaviors for marine invertebrates, the overall impacts on deepwater benthic communities from anthropogenic noise are expected to be negligible (BOEM 2017-009). Additionally, the proposed operations will be conducted in accordance with NTL 2009-G40, which will ensure that features or areas that could support high-density deepwater benthic communities will not be impacted.

There are no other IPFs (including effluents, wastes sent to shore for treatment or disposal, and accidents) from the proposed operations that are likely to impact deepwater benthic communities.

Deepwater benthic communities would potentially be subject to detrimental effects from a catastrophic seafloor blowout due to sediment and oiled sediment from the initial event (BOEM 2017-007). However, this is unlikely due to the distancing requirements described in NTL 2009-G40. Additionally, the potential impacts would be localized due to the directional movement of oil plumes by water currents and the scattered, patchy distribution of sensitive habitats. Although widely dispersed, biodegraded particles of a passing oil plume might impact patchy habitats, no significant impacts would be expected to the Gulfwide population. Most deepwater benthic communities are expected to experience no impacts from a catastrophic seafloor blowout due to

the directional movement of oil plumes by the water currents and their scattered, patchy distribution. Impacts may be expected if a spill were to occur close to a deepwater benthic habitat, however, beyond the localized area of impact particles would become increasingly biodegraded and dispersed. Localized impacts to deepwater benthic organisms would be expected to be mostly sublethal (BOEM 2017-007).

If dispersants were utilized as a response method, the fate and effects of spilled oil would be impacted. A detailed discussion on dispersants, their usage during the Deepwater Horizon oil spill, and their impacts on different levels of benthic communities can be found in **Item 1**.

5. Water Quality

Potential IPFs that could result in water quality degradation from the proposed operations in Green Canyon Block 640 include disturbances to the seafloor, and accidents.

Physical disturbances to the seafloor: Bottom area disturbances resulting from the emplacement of rigs and the installation of platforms and pipelines would increase water-column turbidity and re-suspension of any accumulated pollutants, such as trace metals and excess nutrients. This would cause short-lived impacts on water quality conditions in the immediate vicinity of the emplacement operations.

Accidents: Impact-producing factors related to OCS oil- and gas-related accidental events primarily involve chemical spills, and oil spills.

Chemical Spills

Accidental chemical spills could result in temporary localized impacts on water quality, primarily due to changing pH. Chemicals spills are generally small volume compared with spills of oil and drilling fluids. During the period of 2007 to 2014, small chemical spills occurred at an average annual volume of 28 barrels, while large chemical spills occurred at an average annual volume of 758 barrels. These chemical spills normally dissolve in water and dissipate quickly through dilution with no observable effects. Also, many of these chemicals are approved to be commingled in produced water for discharge to the ocean, which is a permitted activity. Therefore, impacts from chemical spills are considered to be minor and do not typically require mitigation because of technical feasibility and low toxicity after dilution (BOEM 2017-009).

Oil Spills

Oil spills have the greatest potential of all OCS oil-and gas-related activities to affect water quality. Small spills (<1,000 barrels) are not expected to substantially impact water quality in coastal or offshore waters because the oil dissipates quickly through dispersion and weathering while still at sea. Reasonably foreseeable larger spills ($\geq 1,000$ barrels), however, could impact water quality in coastal and offshore waters (BOEM 2017-007). However, based on data provided in the BOEM 2016 Update of Occurrence Rates for Offshore Oil Spills, it is unlikely that an accidental surface or subsurface spill of a significant volume would occur from the proposed operations. Between

2001 and 2015 OCS operations produced eight billion barrels of oil and spilled 0.062 percent of this oil, or one barrel for every 1,624 barrels produced. (The overall spill volume was almost entirely accounted for by the 2010 Deepwater Horizon blowout and subsequent discharge of 4.9 million barrels of oil. Additional information on unlikely scenarios and impacts from very large oil spills are discussed in the Catastrophic Spill Event Analysis white paper (BOEM 2017-007).

If a spill were to occur, the water quality of marine waters would be temporarily affected by the dissolved components and small oil droplets. Dispersion by currents and microbial degradation would remove the oil from the water column and dilute the constituents to background levels. Historically, changes in offshore water quality from oil spills have only been detected during the life of the spill and up to several months afterwards. Most of the components of oil are insoluble in water and therefore float. Dispersants will only be used if approved by the Regional Response Team in coordination with the RRT Dispersant Plan and RRT Biological Assessment for Dispersants.

Oil spills, regardless of size, may allow hydrocarbons to partition into the water column in a dissolved, emulsion, and/or particulate phase. Therefore, impacts from reasonably foreseeable oil spills are considered moderate. Mitigation efforts for oil spills may include booming, burning, and the use of dispersants (BOEM 2017-009).

These methods may cause short-term secondary impacts to water quality, such as the introduction of additional hydrocarbon into the dissolved phase through the use of dispersants and the sinking of hydrocarbon residuals from burning. Since burning and the use of dispersants put additional hydrocarbons into the dissolved phase, impacts to water quality after mitigation efforts are still considered to be moderate, because dissolved hydrocarbons extend down into the water column. This results in additional exposure pathways via ingestion and gill respiration and may result in acute or chronic effects to marine life (BOEM 2017-009).

Most oil-spill response strategies and equipment are based upon the simple principle that oil floats. However, as evident during the Deepwater Horizon explosion, oil spill, and response, this is not always true. Sometimes it floats and sometimes it suspends within the water column or sinks to the seafloor (BOEM 2017-009).

Oil that is chemically dispersed at the surface move into the top six meters (20 feet) of the water column where it mixes with surrounding waters and begins to biodegrade (U.S. Congress, Office of Technology Assessment, 1990). Dispersant use, in combination with natural processes, breaks up oil into smaller components that allows them to dissipate into the water and degrade more rapidly (Nalco, 2010). Dispersant use must be in accordance with an RRT Preapproved Dispersant Use Manual and with any conditions outlined within a RRT's site-specific, dispersant approval given after a spill event. Consequently, dispersant use must be in accordance with the restrictions for specific water depths, distances from shore, and monitoring requirements. At this time, neither the Region IV nor the Region VI RRT dispersant use manuals, which cover the GOM region, give preapproval for the application of dispersant use subsea (BOEM 2017-009).

The activities proposed in this plan will be covered by Chevron's Regional Oil Spill Response Plan, which discusses potential response actions in more detail (refer to information submitted in **Section 9**).

There are no other IPFs (including emissions, effluents, and wastes sent to shore for treatment or disposal) from the proposed operations that are likely to impact water quality.

6. Fisheries

There are multiple species of fish in the Gulf of Mexico, including the endangered and threatened species listed in **Table 1** at the beginning of this Environmental Impact Assessment. More information regarding the endangered Gulf sturgeon (**Item 20.2**), oceanic whitetip shark (**Item 20.3**), and giant manta ray (**Item 20.4**) can be found below. Potential IPFs that could impact fisheries as a result of the proposed operations in Green Canyon Block 640 include physical disturbances to the seafloor, emissions (noise / sound), and accidents.

Physical disturbances to the seafloor: The emplacement of a structure or rig results in minimal loss of bottom trawling area to commercial fishermen. Pipelines cause gear conflicts which result in losses of trawls and shrimp catch, business downtime, and vessel damage. Most financial losses from gear conflicts are covered by the Fishermen's Contingency Fund (FCF). The emplacement and removal of facilities are not expected to cause significant adverse impacts to fisheries.

Emissions (noise / sound): All routine OCS oil-and gas-related activities have some element of sound generation. Common sound sources include propeller cavitation, rotating machinery, and reciprocating machinery, which are associated with routine OCS oil-and gas-related activities such as vessel traffic, construction, and oil and gas production, processing, and transport. Sound introduced into the marine environment as a result of human activities has the potential to affect marine organisms by stimulating behavioral response, masking biologically important signals, causing temporary or permanent hearing loss (Popper et al., 2005; Popper et al., 2014), or causing physiological injury (e.g., barotrauma) resulting in mortality (Popper and Hastings, 2009). The potential for anthropogenic sound to affect any individual organism is dependent on the proximity to the source, signal characteristics, received peak pressures relative to the static pressure, cumulative sound exposure, species, motivation, and the receiver's prior experience. In addition, environmental conditions (e.g., temperature, water depth, and substrate) affect sound speed, propagation paths, and attenuation, resulting in temporal and spatial variations in the received signal for organisms throughout the ensonified area (Hildebrand, 2009).

Sound detection capabilities among fishes vary. For most fish species, it is reasonable to assume hearing sensitivity to frequencies below 500 Hertz (Hz) (Popper et al., 2003 and 2014; Popper and Hastings, 2009; Slabbekoorn et al., 2010; Radford et al., 2014). The band of greatest interest to this analysis, low-frequency sound (30-500 Hz), has come to be dominated by anthropogenic sources and includes the frequencies most likely to be detected by most fish species. For example, the noise generated by large vessel traffic typically results from propeller cavitation and falls

within 40-150 Hz (Hildebrand, 2009; McKenna et al., 2012). This range is similar to that of fish vocalizations and hearing and could result in a masking effect.

Masking occurs when background noise increases the threshold for a sound to be detected; masking can be partial or complete. If detection thresholds are raised for biologically relevant signals, there is a potential for increased predation, reduced foraging success, reduced reproductive success, or other effects. However, fish hearing and sound production may be adapted to a noisy environment (Wysocki and Ladich, 2005). There is evidence that fishes are able to efficiently discriminate between signals, extracting important sounds from background noise (Popper et al., 2003; Wysocki and Ladich, 2005). Sophisticated sound processing capabilities and filtering by the sound sensing organs essentially narrows the band of masking frequencies, potentially decreasing masking effects. In addition, the low-frequency sounds of interest propagate over very long distances in deep water, but these frequencies are quickly lost in water depths between $\frac{1}{2}$ and $\frac{1}{4}$ the wavelength (Ladich, 2013). This would suggest that the potential for a masking effect from low-frequency noise on behaviors occurring in shallow coastal waters may be reduced by the receiver's distance from sound sources, such as busy ports or construction activities.

Pulsed sounds generated by OCS oil-and gas-related activities (e.g., impact-driven piles and airguns) can potentially cause behavioral response, reduce hearing sensitivity, or result in physiological injury to fishes and invertebrate resources. However, there are no pulsed sound generation activities proposed for these operations.

Support vessel traffic, production facilities, and other sources of continuous sounds contribute to a chronic increase in background noise, with varying areas of effect that may be influenced by the sound level, frequencies, and environmental factors (Hildebrand, 2009; Slabbekoorn et al., 2010; McKenna et al., 2012). These sources have a low potential for causing physiological injury or injuring hearing in fishes and invertebrates (Popper et al., 2014). However, continuous sounds have an increased potential for masking biologically relevant sounds than do pulsed signals. The potential effects of masking on fishes and invertebrates are difficult to assess in the natural setting for communities and populations of species, but evidence indicates that the increase to background noise as a result of OCS oil and gas operations would be relatively minor. Therefore, it is expected that the cumulative impact to fishes and invertebrate resources would be minor and would not extend beyond localized disturbances or behavioral modification.

Despite the importance of many sound-mediated behaviors and the potential biological costs associated with behavioral response to anthropogenic sounds, many environmental and biological factors limit potential exposure and the effects that OCS oil-and gas-related sounds have on fishes and invertebrate resources. The overall impact to fishes and invertebrate resources due to anthropogenic sound introduced into the marine environment by OCS oil-and gas-related routine activities is expected to be minor.

Accidents: Collisions between support vessels and ESA-listed fish, would be unusual events, however, should one occur, death or injury to ESA-listed fish is possible. Contract vessel operators

can avoid protected aquatic species and reduce potential deaths by maintaining a vigilant watch and a distance of 50 meters or greater, with the exception of animals that approach the vessel. Vessel personnel should use a Gulf of Mexico reference guide that includes identifying information on marine mammals, sea turtles, and other marine protected species (i.e., Endangered Species Act listed species such as Gulf sturgeon, giant manta ray, or oceanic whitetip shark) that may be encountered in the Gulf of Mexico OCS.

Contract vessel operators will comply with the measures included in Appendix C of the NMFS Biological Opinion and requirements of the Protected Species Lease Stipulation, except under extraordinary circumstances when the safety of the vessel or crew is in doubt or the safety of life at sea is in question.

Should an ESA-listed fish (e.g., giant manta ray, oceanic whitetip shark, or Gulf sturgeon) be entrapped, entangled, or injured, personnel should contact the ESA Section 7 biologist at (301) 427-8413 (nmfs.psoreview@noaa.gov) and report all incidents to takereport.nmfs@noaa.gov. After making the appropriate notifications, Chevron may call BSEE at (985) 722-7902 for questions or additional guidance on recovery assistance needs, continued monitoring requirements, and incidental report information which at minimum is detailed below. Additional information may be found at the following website: <https://www.fisheries.noaa.gov/report>. Any injured or dead protected species should also be reported to takereport.nmfs@noaa.gov. In addition, if the injury or death was caused by a collision with the operator's vessel, an entrapment within the operator's equipment or vessel (e.g. moon pool), or an entanglement within the operator's equipment, the operator must further notify BOEM and BSEE within 24 hours of the strike or entrapment/entanglement by email to protectedspecies@boem.gov and protectedspecies@bsee.gov. If the vessel is the responsible party, it is required to remain available to assist the respective salvage and stranding network as needed.

An accidental oil spill has the potential to cause some detrimental effects on fisheries; however, it is unlikely that such an event would occur from the proposed operations (refer to **Item 5**, Water Quality). The effects of oil on mobile adult finfish or shellfish would likely be sublethal and the extent of damage would be reduced to the capacity of adult fish and shellfish to avoid the spill, to metabolize hydrocarbons, and to excrete both metabolites and parent compounds. The activities proposed in this plan will be covered by Chevron's Regional OSRP (refer to information submitted in **Section 9**).

There are no other IPFs (including effluents and wastes sent to shore for treatment or disposal) from the proposed operations that are likely to impact fisheries.

7. Marine Mammals

The latest population estimates for the Gulf of Mexico revealed that cetaceans of the continental shelf and shelf-edge were almost exclusively bottlenose dolphin and Atlantic spotted dolphin. Squid eaters, including dwarf and pygmy killer whale, Risso's dolphin, rough-toothed dolphin, and Cuvier's beaked whale, occurred most frequently along the upper slope in areas outside of

anticyclones. The Rice's whale (née Gulf of Mexico Bryde's whale) is the only commonly occurring baleen whale in the northern Gulf of Mexico and has been sighted off western Florida and in the De Soto Canyon region. Florida manatees have been sighted along the entire northern GOM but are mainly found in the shallow coastal waters of Florida, which are unassociated with the proposed operations. A complete list of all endangered and threatened marine mammals in the GOM may be found in **Table 1** at the beginning of this Environmental Impact Assessment. More information regarding the endangered Rice's whale can be found in **Item 20.1** below. Potential IPFs that could impact marine mammals as a result of the proposed operations in Green Canyon Block 640 include emissions, discarded trash and debris, and accidents.

Emissions (noise / sound): Noises from construction activities, support vessels and helicopters (i.e., non-impulsive anthropogenic sound) may elicit a startle reaction from marine mammals. This reaction may lead to disruption of marine mammals' normal activities. Stress may make them more vulnerable to parasites, disease, environmental contaminants, and/or predation (Majors and Myrick, 1990). Responses to sound exposure may include lethal or nonlethal injury, temporary hearing impairment, behavioral harassment and stress, or no apparent response. Noise-induced stress is possible, but it is little studied in marine mammals. Tyack (2008) suggests that a more significant risk to marine mammals from sound are these less visible impacts of chronic exposure. There is little conclusive evidence for long-term displacements and population trends for marine mammals relative to noise.

Vessels are the greatest contributors to increases in low-frequency ambient sound in the sea (Andrew et al. 2011). Sound levels and tones produced are generally related to vessel size and speed. Larger vessels generally emit more sound than smaller vessels, and vessels underway with a full load, or those pushing or towing a load, are noisier than unladen vessels. Cetacean responses to aircraft depend on the animals' behavioral state at the time of exposure (e.g., resting, socializing, foraging, or traveling) as well as the altitude and lateral distance of the aircraft to the animals (Luksenburg and Parsons 2009). The underwater sound intensity from aircraft is less than produced by vessels, and visually, aircraft are more difficult for whales to locate since they are not in the water and move rapidly (Richter et al. 2006). Perhaps not surprisingly then, when aircraft are at higher altitudes, whales often exhibit no response, but lower flying aircraft (e.g., approximately 500 meters or less) have been observed to elicit short-term behavioral responses (Luksenburg and Parsons 2009; NMFS 2017b; NMFS 2017f; Patenaude et al. 2002; Smultea et al. 2008a; Wursig et al. 1998). Thus, aircraft flying at low altitude, at close lateral distances and above shallow water elicit stronger responses than aircraft flying higher, at greater lateral distances and over deep water (Patenaude et al. 2002; Smultea et al. 2008a). Routine OCS helicopter traffic would not be expected to disturb animals for extended periods, provided pilots do not alter their flight patterns to more closely observe or photograph marine mammals. Helicopters, while flying offshore, generally maintain altitudes above 700 feet during transit to and from a working area, and at an altitude of about 500 feet between platforms. The duration of the effects resulting from a startle response is expected to be short-term during routine flights, and the potential effects will be insignificant to sperm whales and Rice's whales. Therefore, we find that any disturbance that may result from aircraft associated with the proposed operations is not likely to adversely affect ESA-listed whales.

Construction and production noise would contribute to increases in the ambient noise environment of the GOM, but they are not expected in amplitudes sufficient to cause either hearing or behavioral impacts (BOEM 2017-009). There is the possibility of short-term disruption of movement patterns and/or behavior caused by vessel noise and disturbance; however, these are not expected to impact survival and growth of any marine mammal populations in the GOM. Additionally, the National Marine Fisheries Service published a final recovery plan for the sperm whale, which identified anthropogenic noise as either a low or unknown threat to sperm whales in the GOM (USDOC, NMFS, 2010b). Sirenians (i.e., manatees) are not located within the area of operations. Additionally, there were no specific noise impact factors identified in the latest BOEM environmental impact statement for sirenians related to GOM OCS operations (BOEM 2017-009). See **Item 20.1** for details on the Rice's whale.

The National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion Appendix C explains how operators must implement measures to minimize the risk of vessel strikes to protected species and report observations of injured or dead protected species. This guidance should also minimize the chance of marine mammals being subject to the increased noise level of a service vessel in very close proximity.

Impulsive sound impacts (i.e., pile driving, seismic surveys) are not included among the activities proposed under this plan.

Emissions (noise / sound): Noises from vessels and helicopters may elicit a startle reaction from marine mammals. This reaction may lead to disruption of marine mammals' normal activities. Stress may make them more vulnerable to parasites, disease, environmental contaminants, and/or predation (Majors and Myrick, 1990). There is little conclusive evidence for long-term displacements and population trends for marine mammals relative to noise.

Discarded trash and debris: Both entanglement in, and ingestion of debris have caused the death or serious injury of marine mammals (Laist, 1997; MMC, 1999). The limited amount of marine debris, if any, resulting from the proposed operations is not expected to substantially harm marine mammals. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V, the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies, including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA).

Chevron will operate in accordance with the regulations, agency guidance, and Appendix B of the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass. Chevron will also collect and remove flotsam resulting from activities related to proposed operations.

Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g., helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), *Think About It (previously All Washed Up: The Beach Litter Problem)*. Thereafter, all personnel will view the marine trash and debris training video annually. Offshore personnel will also receive an explanation from Chevron management or the designated lease operator management that emphasizes their commitment to waste management in accordance with NTL No. 2015-G03-BSEE.

Accidents: Collisions between support vessels and marine mammals, including cetaceans, would be unusual events, however, should one occur, death or injury to marine mammals is possible. Contract vessel operators can avoid marine mammals and reduce potential deaths by maintaining a vigilant watch for marine mammals and maintaining a safe distance of 500 meters or greater from baleen whales, 100 meters or greater from sperm whales, and a distance of 50 meters or greater from all other aquatic protected species, with the exception of animals that approach the vessel. If unable to identify the marine mammal, the vessel will act as if it were a baleen whale and maintain a distance of 500 meters or greater. If a manatee is sighted, all vessels in the area will operate at “no wake/idle” speeds in the area, while maintaining proper distance. When assemblages of cetaceans are observed, including mother/calf pairs, vessel speeds will be reduced to 10 knots or less. Vessel personnel should use a Gulf of Mexico reference guide that includes identifying information on marine mammals, sea turtles, and other marine protected species (i.e., Endangered Species Act listed species such as Gulf sturgeon, giant manta ray, or oceanic whitetip shark) that may be encountered in the Gulf of Mexico OCS.

Contract vessel operators will comply with the measures included in Appendix C of the NMFS Biological Opinion and requirements of the Protected Species Lease Stipulation, except under extraordinary circumstances when the safety of the vessel or crew is in doubt or the safety of life at sea is in question.

Vessel personnel must report sightings of any injured or dead protected marine mammal species immediately, regardless of whether the injury or death is caused by their vessel, to the NMFS Southeast Marine Mammal Stranding Hotline at (877) WHALE-HELP (877-942-5343). Additional information may be found at the following website: <https://www.fisheries.noaa.gov/report>. Any injured or dead protected species should also be reported to takereport.nmfsser@noaa.gov. In addition, if the injury or death was caused by a collision with the operator’s vessel, an entrapment within the operator’s equipment or vessel (e.g. moon pool), or an entanglement within the operator’s equipment, the operator must further notify BOEM and BSEE within 24 hours of the strike or entrapment/entanglement by email to protectedspecies@boem.gov and protectedspecies@bsee.gov. If the vessel is the responsible party, it is required to remain available to assist the respective salvage and stranding network as needed.

These proposed operations will not utilize moon pools to conduct activities.

Oil spills have the potential to cause sublethal oil-related injuries and spill-related deaths to marine mammals. However, it is unlikely that an accidental oil spill would occur from the proposed operations (refer to **Item 5**, Water Quality). Oil spill response activities may increase vessel traffic in the area, which could impact cetacean behavior and/or distribution, thereby causing additional stress to the animals. The effect of oil dispersants on cetaceans is not known. Removing oil from the surface would reduce the likelihood of oil adhering to marine mammals. Laboratory experiments have shown that the dispersants used during the Deepwater Horizon response are cytotoxic to sperm whale cells; however, it is difficult to determine actual exposure levels in the GOM. Therefore, dispersants will only be used if approved by the Regional Response Team in coordination with the RRT Dispersant Plan and RRT Biological Assessment for Dispersants. The acute toxicity of oil dispersant chemicals included in Chevron's OSRP is considered to be low when compared with the constituents and fractions of crude oils and diesel products. The activities proposed in this plan will be covered by Chevron's OSRP (refer to information submitted in accordance with **Section 9**).

The NMFS Office of Protected Resources coordinates agency assessment of the need for response and leads response efforts for spills that may impact cetaceans. If a spill may impact cetaceans, NMFS Protected Resources Contacts should be notified (see contact details below), and they will initiate notification of other relevant parties.

NMFS Protected Resources Contacts for the Gulf of Mexico:

- Marine mammals – Southeast emergency stranding hotline 1-877-433-8299
- Other endangered or threatened species – ESA section 7 consulting biologist: nmfs.ser.emergency.consult@noaa.gov

There are no other IPFs (including physical disturbances to the seafloor and effluents) from the proposed operations that are likely to impact marine mammals.

8. Sea Turtles

GulfCet II studies sighted most loggerhead, Kemp's ridley and leatherback sea turtles over shelf waters. Historically these species have been sighted up to the shelf's edge. They appear to be more abundant east of the Mississippi River than they are west of the river (Fritts et al., 1983b; Lohoefer et al., 1990). Deep waters may be used by all species as a transitory habitat. A complete list of endangered and threatened sea turtles in the GOM may be found in **Table 1** at the beginning of this Environmental Impact Assessment. Additional details regarding the loggerhead sea turtle's critical habitat in the GOM are located in **Item 20.5**. Potential IPFs that could impact sea turtles as a result of the proposed operations include emissions, discarded trash and debris, and accidents.

Emissions (noise / sound): Noise from vessels, and helicopters may elicit a startle reaction from sea turtles, but this is a temporary disturbance. As a result, sound sources associated with vessel movement as part of the proposed operations are insignificant and therefore are not likely to

adversely affect sea turtles. Exposure to sound from pile driving activities may result in hearing loss and temporary loss of available habitat for sea turtles, including some local displacement from the area for as long as the pile driving activity is occurring. The impact of this exposure is not anticipated to be significant for adult sea turtles because the continuous “banging” of a pile should provide ample warning to avoid the immediate pile-driving area. Juvenile sea turtles may be motivated to remain in *Sargassum* habitat and may not leave the area, which could cause hearing loss; the juveniles that do leave the area may be adversely affected by being displaced from *Sargassum* habitat. The annual number of predicted disturbances of oceanic juveniles is relatively low.

Discarded trash and debris: Both entanglement in, and ingestion of, debris have caused the death or serious injury of sea turtles (Balazs, 1985). The limited amount of marine debris, if any, resulting from the proposed operations is not expected to substantially harm sea turtles. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V, the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies, including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA).

Chevron will operate in accordance with the regulations, agency guidance, and Appendix B of the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass. Chevron will also collect and remove flotsam resulting from activities related to proposed operations.

Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g., helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), *Think About It (previously All Washed Up: The Beach Litter Problem)*. Thereafter, all personnel will view the marine trash and debris training video annually. Offshore personnel will also receive an explanation from Chevron management or the designated lease operator management that emphasizes their commitment to waste management in accordance with NTL No. 2015-G03-BSEE.

Accidents: Collisions between support vessels and sea turtles would be unusual events, however, should one occur, death or injury to sea turtles is possible. Contract vessel operators can avoid sea turtles and reduce potential deaths by maintaining a vigilant watch for sea turtles and maintaining a safe distance of 50 meters or greater when they are sighted, with the exception of sea turtles that approach the vessel. Vessel crews should use a reference guide to help identify the five species of sea turtles that may be encountered in the Gulf of Mexico OCS as well as other marine protected species (i.e., Endangered Species Act listed species). Contract vessel operators will comply with

the measures included in Appendix C of the NMFS Biological Opinion and requirements of the Protected Species Lease Stipulation, except under extraordinary circumstances when the safety of the vessel or crew is in doubt or the safety of life at sea is in question.

Vessel crews must report sightings of any injured or dead protected sea turtle species immediately, regardless of whether the injury or death is caused by their vessel, to the State Coordinators for the Sea Turtle Stranding and Salvage Network (STSSN) at http://www.sefsc.noaa.gov/species/turtles/stranding_coordinators.htm (phone numbers vary by state). Additional information may be found at the following website: <https://www.fisheries.noaa.gov/report>. Any injured or dead protected species should also be reported to takereport.nmfsser@noaa.gov. In addition, if the injury or death was caused by a collision with the operator's vessel, an entrapment within the operator's equipment or vessel (e.g. moon pool), or an entanglement within the operator's equipment, the operator must further notify BOEM and BSEE within 24 hours of the strike or entrapment/entanglement by email to protectedspecies@boem.gov and protectedspecies@bsee.gov. If the vessel is the responsible party, it is required to remain available to assist the respective salvage and stranding network as needed.

These proposed operations will not utilize moon pools to conduct activities.

All sea turtle species and their life stages are vulnerable to the harmful effects of oil through direct contact or by fouling of their food. Exposure to oil can be fatal, particularly to juveniles and hatchlings. However, it is unlikely that an accidental oil spill would occur from the proposed operations (refer to **Item 5**, Water Quality). Oil spill response activities may increase vessel traffic in the area, which could add to the possibility of collisions with sea turtles. The activities proposed in this plan will be covered by Chevron's Regional Oil Spill Response Plan (refer to information submitted in accordance with **Section 9**).

The NMFS Office of Protected Resources coordinates agency assessment of the need for response and leads response efforts for spills that may impact sea turtles. If a spill may impact sea turtles, the following NMFS Protected Resources Contacts should be notified, and they will initiate notification of other relevant parties.

- Dr. Brian Stacy at brian.stacy@noaa.gov and 352-283-3370 (cell); or
- Stacy Hargrove at stacy.hargrove@noaa.gov and 305-781-7453 (cell)

There are no other IPFs (including physical disturbances to the seafloor and effluents) from the proposed operations that are likely to impact sea turtles.

9. Air Quality

Potential IPFs that could impact air quality as a result of the proposed operations include accidents.

The projected air emissions identified in **Section 8** are not expected to affect the OCS air quality primarily due to distance to the shore or to any Prevention of Significant Deterioration Class I air quality area such as the Breton Wilderness Area. Green Canyon Block 640 is beyond the 200-kilometer (124 mile) buffer for the Breton Wilderness Area and is 118.7 miles from the coastline. Therefore, no special mitigation, monitoring, or reporting requirements apply with respect to air emissions.

Accidents and blowouts can release hydrocarbons or chemicals, which could cause the emission of air pollutants. However, these releases should not impact onshore air quality because of the prevailing atmospheric conditions, emission height, emission rates, and the distance of Green Canyon Block 640 from the coastline. There are no other IPFs (including effluents, physical disturbances to the seafloor, and wastes sent to shore for treatment or disposal) from the proposed operations that are likely to impact air quality.

10. Shipwreck Sites (known or potential)

In accordance with BOEM NTL 2005-G07, Chevron will submit an archaeological resource report per 30 CFR 550.194 if directed to do so by the Regional Director.

Potential IPFs that could impact known or unknown shipwreck sites as a result of the proposed operations in Green Canyon Block 640 include accidents and disturbances to the seafloor. Green Canyon Block 640 is not located in or adjacent to an OCS block designated by BOEM as having a high probability for occurrence of shipwrecks. Should Chevron discover any evidence of a shipwreck, they will immediately halt operations within a 1000-foot radius, report to BOEM within 48 hours, and make every reasonable effort to preserve and protect that cultural resource.

Physical Disturbances to the seafloor: Green Canyon Block 640 is not located in or adjacent to an OCS block designated by BOEM as having a high probability for occurrence of shipwrecks; therefore, no adverse impacts are expected.

Accidents: An accidental oil spill has the potential to cause some detrimental effects to shipwreck sites if the release were to occur subsea. However, it is unlikely that an accidental oil spill would occur from the proposed operations (refer to **Item 5**, Water Quality). The activities proposed in this plan will be covered by Chevron's Regional Oil Spill Response Plan (refer to information submitted in accordance with **Section 9**).

There are no other IPFs (including emissions, effluents, and wastes sent to shore for treatment or disposal) from the proposed operations that are likely to impact shipwreck sites.

11. Prehistoric Archaeological Sites

In accordance with BOEM NTL 2005-G07, Chevron will submit an archaeological resource report per 30 CFR 550.194 if directed to do so by the Regional Director.

Potential IPFs which could impact prehistoric archaeological sites as a result of the proposed operations in Green Canyon Block 640 include physical disturbances to the seafloor and accidents. Green Canyon Block 640 is located outside the Archaeological Prehistoric high probability line, therefore, no adverse impacts are expected. Should Chevron discover any object of prehistoric archaeological significance, they will immediately halt operations within a 1000-foot radius, report to BOEM within 48 hours, and make every reasonable effort to preserve and protect that cultural resource.

Physical Disturbances to the seafloor: Green Canyon Block 640 is not located in or adjacent to an OCS block designated by BOEM as having a high probability for occurrence of archaeological sites; therefore, no adverse impacts are expected.

Accidents: An accidental oil spill has the potential to cause some detrimental effects to prehistoric archaeological sites if the release were to occur subsea. However, it is unlikely that an accidental oil spill would occur from the proposed operations (refer to **Item 5**, Water Quality). The activities proposed in this plan will be covered by Chevron's Regional Oil Spill Response Plan (refer to information submitted in accordance with **Section 9**).

There are no other IPFs (including emissions, effluents, and wastes sent to shore for treatment or disposal) from the proposed operations that are likely to impact prehistoric archaeological sites.

Vicinity of Offshore Location

12. Essential Fish Habitat (EFH)

Potential IPFs that could impact EFH as a result of the proposed operations in Green Canyon Block 640 include physical disturbances to the seafloor and accidents. EFH includes all estuarine and marine waters and substrates in the Gulf of Mexico.

Physical disturbances to the seafloor: Turbidity and sedimentation resulting from the bottom disturbing activities included in the proposed operations would be short term and localized. Fish are mobile and would avoid these temporarily suspended sediments. Additionally, the Live Bottom Low Relief Stipulation, the Live Bottom (Pinnacle Trend) Stipulation, and the Eastern Gulf Pinnacle Trend Stipulation have been put in place to minimize the impacts of bottom disturbing activities. Therefore, the bottom disturbing activities from the proposed operations would have a negligible impact on EFH.

Accidents: An accidental oil spill has the potential to cause some detrimental effects on EFH. Oil spills that contact coastal bays and estuaries, as well as OCS waters when pelagic eggs and larvae are present, have the greatest potential to affect fisheries. However, it is unlikely that an oil spill would occur from the proposed operations (refer to **Item 5**, Water Quality). The activities proposed in this plan will be covered by Chevron's Regional OSRP (refer to information submitted in **Section 9**).

There are no other IPFs (including emissions, effluents, and wastes sent to shore for treatment or disposal) from the proposed operations that are likely to impact essential fish habitat.

13. Marine and Pelagic Birds

Potential IPFs that could impact marine birds as a result of the proposed operations include emissions (air, noise / sound), accidental oil spills, and discarded trash and debris from vessels and the facilities.

Emissions:

Air Emissions

Emissions of pollutants into the atmosphere from these activities are far below concentrations which could harm coastal and marine birds.

Noise / Sound Emissions

The OCS oil-and gas-related helicopters and vessels have the potential to cause noise and disturbance. However, flight altitude restrictions over sensitive habitat, including that of birds, may make serious disturbance unlikely. Birds are also known to habituate to noises, including airport noise. It is an assumption that the OCS oil-and gas-related vessel traffic would follow regular routes; if so, seabirds would find the noise to be familiar. Therefore, the impact of OCS oil-and gas-related noise from helicopters and vessels to birds would be expected to be negligible.

The use of explosives for decommissioning activities may potentially kill one or more birds from barotrauma if a bird (or several birds because birds may occur in a flock) is present at the location of the severance. For the impact of underwater sound, a threshold of 202 dB sound exposure level (SEL) for injury and 208 dB SEL for barotrauma was recommended for the *Brahyramphus marmoratus*, a diving seabird (USDOI, FWS, 2011). However, the use of explosive severance of facilities for decommissioning are not included in these proposed operations, therefore these impacts are not expected.

Accidents: An oil spill would cause localized, low-level petroleum hydrocarbon contamination. However, it is unlikely that an oil spill would occur from the proposed operations (refer to **Item 5**, Water Quality). Marine and pelagic birds feeding at the spill location may experience chronic, nonfatal, physiological stress. It is expected that few, if any, coastal and marine birds would

actually be affected to that extent. The activities proposed in this plan will be covered by Chevron's Regional OSRP (refer to information submitted in **Section 9**).

Discarded trash and debris: Marine and pelagic birds could become entangled and snared in discarded trash and debris, or ingest small plastic debris, which can cause permanent injuries and death. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V, the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies, including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA).

Chevron will operate in accordance with the regulations, agency guidance, and Appendix B of the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass. Chevron will also collect and remove flotsam resulting from activities related to proposed operations.

Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g., helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), *Think About It (previously All Washed Up: The Beach Litter Problem)*. Thereafter, all personnel will view the marine trash and debris training video annually. Offshore personnel will also receive an explanation from Chevron management or the designated lease operator management that emphasizes their commitment to waste management in accordance with NTL No. 2015-G03-BSEE. Debris, if any, from these proposed operations will seldom interact with marine and pelagic birds; therefore, the effects will be negligible.

ESA bird species: Seven species found in the GOM are listed under the ESA. BOEM consults on these species and requires mitigations that would decrease the potential for greater impacts due to small population size.

There are no other IPFs (including effluents, physical disturbances to the seafloor, and wastes sent to shore for treatment or disposal) from the proposed operations that are likely to impact marine and pelagic birds.

14. Public Health and Safety Due to Accidents.

There are no IPFs (including emissions, effluents, physical disturbances to the seafloor, wastes sent to shore for treatment or disposal, and accidents, including an accidental H₂S release) from the proposed operations which could impact public health and safety. In accordance with NTL

No.'s 2008-G04, 2009-G27, and 2009-G31, sufficient information is included in **Section 4** to justify our request that our proposed operations be classified by BSEE as H₂S absent.

Coastal and Onshore

15. Beaches

Potential IPFs from the proposed operations that could impact beaches include accidents and discarded trash and debris.

Accidents: Oil spills contacting beaches would have impacts on the use of recreational beaches and associated resources. Due to the distance from shore (118.7 miles) and the response capabilities that would be implemented, no significant adverse impacts are expected. The activities proposed in this plan will be covered by Chevron's Regional OSRP (refer to information submitted in **Section 9**).

Discarded trash and debris: Trash on the beach is recognized as a major threat to the enjoyment and use of beaches. There will only be a limited amount of marine debris, if any, resulting from the proposed operations. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V, the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies, including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA).

Chevron will operate in accordance with the regulations, agency guidance, and Appendix B of the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass. Chevron will also collect and remove flotsam resulting from activities related to proposed operations.

Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g., helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), *Think About It (previously All Washed Up: The Beach Litter Problem)*. Thereafter, all personnel will view the marine trash and debris training video annually. Offshore personnel will also receive an explanation from Chevron management or the designated lease operator management that emphasizes their commitment to waste management in accordance with NTL No. 2015-G03-BSEE.

There are no other IPFs (including emissions, effluents, physical disturbances to the seafloor, and wastes sent to shore for treatment or disposal) from the proposed operations that are likely to impact beaches.

16. Wetlands

Potential IPFs from the proposed operations that could impact wetlands include accidents and discarded trash and debris.

Accidents: Oil spills could impact wetlands; however, it is unlikely that an oil spill would occur from the proposed operations (refer to **Item 5**, Water Quality). Due to the distance from shore (118.7 miles) and the response capabilities that would be implemented, no impacts are expected. The activities proposed in this plan will be covered by Chevron's Regional OSRP (refer to information submitted in **Section 9**).

Discarded trash and debris: There will only be a limited amount of marine debris, if any, resulting from the proposed operations. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V, the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies, including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA).

Chevron will operate in accordance with the regulations, agency guidance, and Appendix B of the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass. Chevron will also collect and remove flotsam resulting from activities related to proposed operations.

Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g., helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), *Think About It (previously All Washed Up: The Beach Litter Problem)*. Thereafter, all personnel will view the marine trash and debris training video annually. Offshore personnel will also receive an explanation from Chevron management or the designated lease operator management that emphasizes their commitment to waste management in accordance with NTL No. 2015-G03-BSEE.

There are no other IPFs (including emissions, effluents, physical disturbances to the seafloor, and wastes sent to shore for treatment or disposal) from the proposed operations that are likely to impact wetlands.

17. Shore Birds and Coastal Nesting Birds

Potential IPFs that could impact shore birds and coastal nesting birds as a result of the proposed operations include accidents and discarded trash and debris.

Accidents: Oil spills could impact shore birds and coastal nesting birds. However, it is unlikely that an oil spill would occur from the proposed operations (refer to **Item 5**, Water Quality). Given the distance from shore (118.7 miles) and the response capabilities that would be implemented, no impacts are expected. The activities proposed in this plan will be covered by Chevron's Regional OSRP (refer to information submitted in **Section 9**).

Discarded trash and debris: Coastal and marine birds are highly susceptible to entanglement in floating, submerged, and beached marine debris: specifically, plastics. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V, the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies, including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA).

Chevron will operate in accordance with the regulations, agency guidance, and Appendix B of the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass. Chevron will also collect and remove flotsam resulting from activities related to proposed operations.

Informational placards will be posted on vessels and every facility that has sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g., helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), *Think About It (previously All Washed Up: The Beach Litter Problem)*. Thereafter, all personnel will view the marine trash and debris training video annually. Offshore personnel will also receive an explanation from Chevron management or the designated lease operator management that emphasizes their commitment to waste management in accordance with NTL No. 2015-G03-BSEE.

There are no other IPFs (including emissions, effluents, physical disturbances to the seafloor, and wastes sent to shore for treatment or disposal) from the proposed operations that are likely to impact shore birds and coastal nesting birds.

18. Coastal Wildlife Refuges

Potential IPFs that could impact coastal wildlife refuges as a result of the proposed operations include accidents and discarded trash and debris.

Accidents: An accidental oil spill from the proposed operations could impact coastal wildlife refuges. However, it is unlikely that an oil spill would occur from the proposed operations (refer to **Item 5**, Water Quality). Due to the distance from shore (118.7 miles) and the response capabilities that would be implemented, no impacts are expected. The activities proposed in this plan will be covered by Chevron's Regional OSRP (refer to information submitted in **Section 9**).

Discarded trash and debris: Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V, the Marine Plastic Pollution Research and Control Act and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA).

Chevron will operate in accordance with the regulations, agency guidance, and Appendix B of the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass. Chevron will also collect and remove flotsam resulting from activities related to proposed operations.

Informational placards will be posted on vessels and every facility that has sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g., helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), *Think About It (previously All Washed Up: The Beach Litter Problem)*. Thereafter, all personnel will view the marine trash and debris training video annually. Offshore personnel will also receive an explanation from Chevron management or the designated lease operator management that emphasizes their commitment to waste management in accordance with NTL No. 2015-G03-BSEE.

There are no other IPFs (including emissions, effluents, physical disturbances to the seafloor, and wastes sent to shore for treatment or disposal) from the proposed operations that are likely to impact coastal wildlife refuges.

19. Wilderness Areas

Potential IPFs that could impact wilderness areas as a result of the proposed operations include accidents and discarded trash and debris.

Accidents: An accidental oil spill from the proposed operations could impact wilderness areas. However, it is unlikely that an oil spill would occur from the proposed operations (refer to **Item 5**, Water Quality). Due to the distance from the nearest designated Wilderness Area (173.8 miles) and the response capabilities that would be implemented, no significant adverse impacts are expected. The activities proposed in this plan will be covered by Chevron's Regional OSRP (refer to information submitted in **Section 9**).

Discarded trash and debris: Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V, the Marine Plastic Pollution Research and Control Act and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA).

Chevron will operate in accordance with the regulations, agency guidance, and Appendix B of the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass. Chevron will also collect and remove flotsam resulting from activities related to proposed operations.

Informational placards will be posted on vessels and every facility that has sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g., helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), *Think About It* (previously *All Washed Up: The Beach Litter Problem*). Thereafter, all personnel will view the marine trash and debris training video annually. Offshore personnel will also receive an explanation from Chevron management or the designated lease operator management that emphasizes their commitment to waste management in accordance with NTL No. 2015-G03-BSEE.

There are no other IPFs (including emissions, effluents, physical disturbances to the seafloor, and wastes sent to shore for treatment or disposal) from the proposed operations that are likely to impact wilderness areas.

20. Other Environmental Resources Identified

20.1 – Rice’s Whale (née Gulf of Mexico Bryde’s Whale)

The Bryde’s whale, also known as the Bryde’s whale complex, is a collection of baleen whales that are still being researched to determine if they are the same species or if they are individual species of whales. In 2021, the Rice’s whale, formerly known as the Gulf of Mexico Bryde’s whale, was determined to be a separate species from other Bryde’s whales. There are less than 100 Rice’s whales living in the Gulf of Mexico year-round. These whales retain all the protections of the Gulf of Mexico Bryde’s whale under the Endangered Species Act while the regulations are being updated to reflect the name change.

The Rice’s whale (née Gulf of Mexico Bryde’s whale) is the only commonly occurring baleen whale in the northern Gulf of Mexico and has been sighted off western Florida and in the De Soto Canyon region. The Rice’s whale area is over 197.8 miles from the proposed operations. Additionally, vessel traffic associated with the proposed operations will not flow through the Rice’s whale area. Therefore, there are no IPFs from the proposed operations that are likely to impact the Rice’s whale. Additional information on marine mammals may be found in **Item 7**.

20.2 – Gulf Sturgeon

The Gulf sturgeon resides primarily in inland estuaries and rivers from Louisiana to Florida and a small population of the species enters the Gulf of Mexico seasonally in western Florida. Potential IPFs from the proposed operations that could impact the Gulf sturgeon include accidents, emissions (noise / sound), and discarded trash and debris. Additional information on ESA-listed fish may be found in **Item 6**.

Accidents: Collisions between support vessels and the Gulf sturgeon would be unusual events; however, should one occur, death or injury to the Gulf sturgeon is possible. Contract vessel operators can avoid protected aquatic species and reduce potential deaths by maintaining a vigilant watch and a distance of 50 meters or greater, with the exception of animals that approach the vessel. Vessel personnel should use a Gulf of Mexico reference guide that includes identifying information on marine mammals, sea turtles, and other marine protected species (i.e., Endangered Species Act listed species such as Gulf sturgeon, giant manta ray, or oceanic whitetip shark) that may be encountered in the Gulf of Mexico OCS.

Contract vessel operators will comply with the measures included in Appendix C of the NMFS Biological Opinion and requirements of the Protected Species Lease Stipulation, except under extraordinary circumstances when the safety of the vessel or crew is in doubt or the safety of life at sea is in question.

Should an ESA-listed fish (e.g., giant manta ray, oceanic whitetip shark, or Gulf sturgeon) be entrapped, entangled, or injured, personnel should contact the ESA Section 7 biologist at (301) 427-8413 (nmfs.psoreview@noaa.gov) and report all incidents to takereport.nmfs@noaa.gov.

After making the appropriate notifications, Chevron may call BSEE at (985) 722-7902 for questions or additional guidance on recovery assistance needs, continued monitoring requirements, and incidental report information which at minimum is detailed below. Additional information may be found at the following website: <https://www.fisheries.noaa.gov/report>. Any injured or dead protected species should also be reported to takereport.nmfs@noaa.gov. In addition, if the injury or death was caused by a collision with the operator's vessel, an entrapment within the operator's equipment or vessel (e.g. moon pool), or an entanglement within the operator's equipment, the operator must further notify BOEM and BSEE within 24 hours of the strike or entrapment/entanglement by email to protectedspecies@boem.gov and protectedspecies@bsee.gov. If the vessel is the responsible party, it is required to remain available to assist the respective salvage and stranding network as needed.

Due to the distance from the nearest identified Gulf sturgeon critical habitat (186.6 miles) and the response capabilities that would be implemented during a spill, no significant adverse impacts are expected to the Gulf sturgeon. Considering the information from the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion, the location of this critical habitat in relation to proposed operations, the likely dilution of oil reaching nearshore areas, and the on-going weathering and dispersal of oil over time, we do not anticipate the effects from oil spills will appreciably diminish the value of Gulf sturgeon designated critical habitat for the conservation of the species. The activities proposed in this plan will be covered by Chevron's Regional OSRP (refer to information submitted in **Section 9**).

Emissions (noise / sound): All routine OCS oil-and gas-related activities have some element of sound generation. Common sound sources include propeller cavitation, rotating machinery, and reciprocating machinery, which are associated with routine OCS oil-and gas-related activities such as vessel traffic, construction, and oil and gas production, processing, and transport. Sound introduced into the marine environment as a result of human activities has the potential to affect marine organisms. The National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion found that construction and operational sounds other than pile driving will have insignificant effects on Gulf sturgeon (NMFS, 2020).

Discarded trash and debris: Trash and debris are not expected to impact the Gulf sturgeon. There will only be a limited amount of marine debris, if any, resulting from the proposed operations. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V, the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies, including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA).

Chevron will operate in accordance with the regulations, agency guidance, and Appendix B of the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable,

environmentally persistent materials such as plastic or glass. Chevron will also collect and remove flotsam resulting from activities related to proposed operations.

Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g., helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), *Think About It (previously All Washed Up: The Beach Litter Problem)*. Thereafter, all personnel will view the marine trash and debris training video annually. Offshore personnel will also receive an explanation from Chevron management or the designated lease operator management that emphasizes their commitment to waste management in accordance with NTL No. 2015-G03-BSEE.

There are no other IPFs (including effluents, physical disturbances to the seafloor, and wastes sent to shore for treatment or disposal) from the proposed operations that are likely to impact the Gulf sturgeon.

20.3 – Oceanic Whitetip Shark

Oceanic whitetip sharks may be found in tropical and subtropical waters around the world, including the Gulf of Mexico (Young 2016). According to the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion, Essential Fish Habitat (EFH) for the oceanic whitetip shark includes localized areas in the central Gulf of Mexico and Florida Keys. Oceanic whitetip sharks were listed as threatened under the Endangered Species Act in 2018 due to worldwide overfishing. Oceanic whitetip sharks had an abundant worldwide population, which has been threatened in recent years by inadequate regulatory measures governing fisheries; therefore, there is little research regarding the impact of oil and gas operations on oceanic whitetip sharks (NMFS, 2020). IPFs that have been determined by NMFS to be discountable to oceanic whitetip sharks include vessel strike, emissions (noise / sound), discharges, entanglement and entrapment, and marine debris. IPFs that could impact oceanic whitetip sharks as a result of the proposed operations in Green Canyon Block 640 include accidents. Additional information on ESA-listed fish may be found in **Item 6**.

Accidents: Collisions between support vessels and the oceanic whitetip shark would be unusual events, however, should one occur, death or injury to the oceanic whitetip shark is possible. Contract vessel operators can avoid protected aquatic species and reduce potential deaths by maintaining a vigilant watch and a distance of 50 meters or greater, with the exception of animals that approach the vessel. Vessel personnel should use a Gulf of Mexico reference guide that includes identifying information on marine mammals, sea turtles, and other marine protected species (i.e., Endangered Species Act listed species such as Gulf sturgeon, giant manta ray, or oceanic whitetip shark) that may be encountered in the Gulf of Mexico OCS.

Contract vessel operators will comply with the measures included in Appendix C of the NMFS Biological Opinion and requirements of the Protected Species Lease Stipulation, except under

extraordinary circumstances when the safety of the vessel or crew is in doubt or the safety of life at sea is in question.

Should an ESA-listed fish (e.g., giant manta ray, oceanic whitetip shark, or Gulf sturgeon) be entrapped, entangled, or injured, personnel should contact the ESA Section 7 biologist at (301) 427-8413 (nmfs.psoreview@noaa.gov) and report all incidents to takereport.nmfs@noaa.gov. After making the appropriate notifications, Chevron may call BSEE at (985) 722-7902 for questions or additional guidance on recovery assistance needs, continued monitoring requirements, and incidental report information which at minimum is detailed below. Additional information may be found at the following website: <https://www.fisheries.noaa.gov/report>. Any injured or dead protected species should also be reported to takereport.nmfs@noaa.gov. In addition, if the injury or death was caused by a collision with the operator's vessel, an entrapment within the operator's equipment or vessel (e.g. moon pool), or an entanglement within the operator's equipment, the operator must further notify BOEM and BSEE within 24 hours of the strike or entrapment/entanglement by email to protectedspecies@boem.gov and protectedspecies@bsee.gov. If the vessel is the responsible party, it is required to remain available to assist the respective salvage and stranding network as needed.

There is little information available on the impacts of oil spills or dispersants on oceanic whitetip sharks. It is expected that exposure of oil or dispersants to oceanic whitetip sharks would likely result in effects similar to other marine species, including fitness reduction and the possibility of mortality (NMFS, 2020). Due to the sparse population in the Gulf of Mexico, it is possible that a small number of oceanic whitetip sharks could be impacted by an oil spill. However, it is unlikely that such an event would occur from the proposed operations (refer to **Item 5**, Water Quality). The activities proposed in this plan will be covered by Chevron's Regional OSRP (refer to information submitted in **Section 9**).

Discarded trash and debris: There is little available information on the effects of marine debris on oceanic whitetip sharks. Since these sharks are normally associated with surface waters, they may be susceptible to entanglement. However, due to the small, widely dispersed, and highly mobile population in the Gulf of Mexico, and the localized and patchy distribution of marine debris, it is extremely unlikely that oceanic whitetip sharks would be impacted by marine debris.

There will only be a limited amount of marine debris, if any, resulting from the proposed operations. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V, the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies, including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA).

Chevron will operate in accordance with the regulations, agency guidance, and Appendix B of the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins

to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass. Chevron will also collect and remove flotsam resulting from activities related to proposed operations.

Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g., helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), *Think About It (previously All Washed Up: The Beach Litter Problem)*. Thereafter, all personnel will view the marine trash and debris training video annually. Offshore personnel will also receive an explanation from Chevron management or the designated lease operator management that emphasizes their commitment to waste management in accordance with NTL No. 2015-G03-BSEE.

There are no other IPFs (including effluents, physical disturbances to the seafloor, and wastes sent to shore for treatment or disposal) from the proposed operations that are likely to impact oceanic whitetip sharks.

20.4 – Giant Manta Ray

According to the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion, the giant manta ray lives in tropical, subtropical, and temperate oceanic waters and productive coastlines throughout the Gulf of Mexico. While uncommon in the Gulf of Mexico, there is a population of approximately 70 giant manta rays in the Flower Garden Banks National Marine Sanctuary (Miller and Klimovich 2017). Giant manta rays were listed as threatened under the Endangered Species Act in 2018 due to worldwide overfishing. Giant manta rays had an abundant worldwide population, which has been threatened in recent years by inadequate regulatory measures governing fisheries; therefore, there is little research regarding the impact of oil and gas operations on giant manta rays (NMFS, 2020). IPFs that have been determined by NMFS to be discountable to giant manta rays include vessel strike, emissions (noise / sound), discharges, entanglement and entrapment, and marine debris. IPFs that could impact giant manta rays as a result of the proposed operations in Green Canyon Block 640 include accidents. Additional information on ESA-listed fish may be found in **Item 6**.

Accidents: Collisions between support vessels and the giant manta ray would be unusual events, however, should one occur, death or injury to the giant manta ray is possible. Contract vessel operators can avoid protected aquatic species and reduce potential deaths by maintaining a vigilant watch and a distance of 50 meters or greater, with the exception of animals that approach the vessel. Vessel personnel should use a Gulf of Mexico reference guide that includes identifying information on marine mammals, sea turtles, and other marine protected species (i.e., Endangered Species Act listed species such as Gulf sturgeon, giant manta ray, or oceanic whitetip shark) that may be encountered in the Gulf of Mexico OCS.

Contract vessel operators will comply with the measures included in Appendix C of the NMFS Biological Opinion and requirements of the Protected Species Lease Stipulation, except under extraordinary circumstances when the safety of the vessel or crew is in doubt or the safety of life at sea is in question.

Should an ESA-listed fish (e.g., giant manta ray, oceanic whitetip shark, or Gulf sturgeon) be entrapped, entangled, or injured, personnel should contact the ESA Section 7 biologist at (301) 427-8413 (nmfs.psoreview@noaa.gov) and report all incidents to takereport.nmfs@noaa.gov. After making the appropriate notifications, Chevron may call BSEE at (985) 722-7902 for questions or additional guidance on recovery assistance needs, continued monitoring requirements, and incidental report information which at minimum is detailed below. Additional information may be found at the following website: <https://www.fisheries.noaa.gov/report>. Any injured or dead protected species should also be reported to takereport.nmfs@noaa.gov. In addition, if the injury or death was caused by a collision with the operator's vessel, an entrapment within the operator's equipment or vessel (e.g. moon pool), or an entanglement within the operator's equipment, the operator must further notify BOEM and BSEE within 24 hours of the strike or entrapment/entanglement by email to protectedspecies@boem.gov and protectedspecies@bsee.gov. If the vessel is the responsible party, it is required to remain available to assist the respective salvage and stranding network as needed.

There is little information available on the impacts of oil spills or dispersants on giant manta rays. It is expected that exposure of oil or dispersants to giant manta rays would likely result in effects similar to other marine species, including fitness reduction and the possibility of mortality (NMFS, 2020). It is possible that a small number of giant manta rays could be impacted by an oil spill in the Gulf of Mexico. However, due to the distance to the Flower Garden Banks (86.6 miles), the low population dispersed throughout the Gulf of Mexico, and the response capabilities that would be implemented during a spill, no significant adverse impacts are expected to impact giant manta rays. Additionally, it is unlikely that such an event would occur from the proposed operations (refer to **Item 5**, Water Quality). The activities proposed in this plan will be covered by Chevron's Regional OSRP (refer to information submitted in **Section 9**).

Discarded trash and debris: There is little available information on the effects of marine debris on giant manta rays. Since these sharks are normally associated with surface waters, they may be susceptible to entanglement. However, due to the small, widely dispersed, and highly mobile population in the Gulf of Mexico, and the localized and patchy distribution of marine debris, it is extremely unlikely that oceanic whitetip sharks would be impacted by marine debris.

There will only be a limited amount of marine debris, if any, resulting from the proposed operations. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V, the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies, including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA).

Chevron will operate in accordance with the regulations, agency guidance, and Appendix B of the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass. Chevron will also collect and remove flotsam resulting from activities related to proposed operations.

Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g., helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), *Think About It (previously All Washed Up: The Beach Litter Problem)*. Thereafter, all personnel will view the marine trash and debris training video annually. Offshore personnel will also receive an explanation from Chevron management or the designated lease operator management that emphasizes their commitment to waste management in accordance with NTL No. 2015-G03-BSEE.

There are no other IPFs (including effluents, physical disturbances to the seafloor, and wastes sent to shore for treatment or disposal) from the proposed operations that are likely to impact giant manta rays.

20.5 – Loggerhead Sea Turtle

The loggerhead sea turtles are large sea turtles that inhabit continental shelf and estuarine environments throughout the temperate and tropical regions of the Atlantic Ocean, with nesting beaches along the northern and western Gulf of Mexico. NMFS issued a Final Rule in 2014 (79 FR 39855) designating a critical habitat including 38 marine areas within the Northwest Atlantic Ocean, with seven of those areas residing within the Gulf of Mexico. These areas contain one or a combination of habitat types: nearshore reproductive habitats, winter areas, breeding areas, constricted migratory corridors, and/or *Sargassum* habitats.

There are multiple IPFs that may impact loggerhead sea turtles (see **Item 8**). However, the closest loggerhead critical habitat is located 234 miles from Green Canyon Block 640; therefore, no adverse impacts are expected to the critical habitat. Additionally, considering the information from the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion, we do not expect proposed operations to affect the ability of *Sargassum* to support adequate prey abundance and cover for loggerhead turtles.

20.6 - Protected Corals

Protected coral habitats, including designated critical habitats, are noncontiguous and occur in the Flower Garden Banks National Marine Sanctuary and Florida. Five banks in the Flower Garden Banks National Marine Sanctuary have been designated as critical habitats for boulder star

(*Orbicella franksi*), lobed star (*Orbicella annularis*), and mountainous star (*Orbicella faveolate*) corals. Elkhorn coral can also be found in the Flower Garden Banks, though the area is not a designated critical habitat for this coral. Various coastal counties in Florida are also designated as critical habitats for protected coral species. These coral habitats are located outside of the planning area and are not expected to be impacted by the proposed operations. The following table comprehensively details the designated critical habitat for each protected coral species in the Flower Garden Banks National Marine Sanctuary and Florida.

		Protected Corals						
		Elkhorn Coral <i>Acopora palmate</i>	Staghorn Coral <i>Acopora cervicornis</i>	Boulder Star Coral <i>Orbicella franksi</i>	Lobed Star Coral <i>Orbicella annularis</i>	Mountainous Star Coral <i>Orbicella faveolate</i>	Rough Cactus Coral <i>Mycetophyllia ferox</i>	Pillar Coral <i>Dendrogyra cylindrus</i>
Designated Critical Habitat	Flower Garden Banks National Marine Sanctuary							
	East Flower Garden Bank			X	X	X		
	West Flower Garden Bank			X	X	X		
	Rankin Bank			X	X	X		
	Rankin Bank			X	X	X		
	Geyer Bank			X	X	X		
	McGrail Bank			X	X	X		
	Florida (outside of planning area)							
	Martin County					X		
	Palm Beach County	X	X	X	X	X		X
	Broward County	X	X	X	X	X	X	X
	Miami-Dade County	X	X	X	X	X	X	X
	Monroe County	X	X	X	X	X	X	X

Potential IPFs to protected corals from the proposed operations include accidents.

Accidents: It is unlikely that an accidental surface or subsurface spill would occur from the proposed operations (refer to statistics in **Item 5**, Water Quality). Oil spills cause damage to corals only if the oil contacts the organisms. Due to the distance from the Flower Garden Banks National Marine Sanctuary (86.6 miles) and other critical coral habitats, no adverse impacts are expected.

The activities proposed in this plan will be covered by Chevron's Regional OSRP (refer to information submitted in **Section 9**).

There are no other IPFs (including emissions, effluents, physical disturbances to the seafloor, and wastes sent to shore for treatment or disposal) from the proposed operations that are likely to impact protected corals.

20.7 - Endangered Beach Mice

There are four subspecies of endangered beach mouse that are found in the dune systems along parts of Alabama and northwest Florida. Due to the location of Green Canyon Block 640 and the beach mouse critical habitat (above the intertidal zone), there are no IPFs that are likely to impact endangered beach mice.

20.8 - Navigation

The current system of navigation channels around the northern GOM is believed to be generally adequate to accommodate traffic generated by the future Gulfwide OCS Program. As exploration and development activities increase on deepwater leases in the GOM, port channels may need to be expanded to accommodate vessels with deeper drafts and longer ranges. However, current navigation channels will not be changed, and new channels will not be required as a result of the activities proposed in this plan.

(C) IMPACTS ON PROPOSED OPERATIONS

The site-specific environmental conditions have been taken into account for the proposed operations. No impacts are expected on the proposed operations from site-specific environmental conditions.

(D) ENVIRONMENTAL HAZARDS

During the hurricane season, June through November, the Gulf of Mexico is impacted by an average of ten tropical storms (39-73 mph winds), of which six become hurricanes (> 74 mph winds). Due to its location in the Gulf, Green Canyon Block 640 may experience hurricane and tropical storm force winds and related sea currents. These factors can adversely impact the integrity of the operations covered by this plan. A significant storm may present physical hazards to operators and vessels, damage exploration or production equipment, or result in the release of hazardous materials (including hydrocarbons). Additionally, the displacement of equipment may disrupt the local benthic habitat and pose a threat to local species.

The following preventative measures included in this plan may be implemented to mitigate these impacts:

1. Platform / structure Installation

Operator will not conduct platform / structure installation operations during Tropical Storm or Hurricane threat.

2. Pipeline Installation

Operator will not conduct pipeline installation operations during Tropical Storm or Hurricane threat.

(E) ALTERNATIVES

No alternatives to the proposed operations were considered to reduce environmental impacts.

(F) MITIGATION MEASURES

No mitigation measures other than those required by regulation will be employed to avoid, diminish, or eliminate potential impacts on environmental resources.

(G) CONSULTATION

No agencies or persons were consulted regarding potential impacts associated with the proposed operations. Therefore, a list of such entities has not been provided.

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Although not cited, the following were utilized in preparing this EIA:

- Hazard Surveys

SECTION 18

ADMINISTRATIVE INFORMATION

18.1 EXEMPTED INFORMATION DESCRIPTION

The proposed bottomhole locations of the planned wells have been removed from the Public Information copy of the DOCD as well as any discussions of the target objectives, geologic or geophysical data, and interpreted geology.

18.2 BIBLIOGRAPHY

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8. Revised Development Operations Coordination Document (Control No. R-5101).
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