UNITED STATES GOVERNMENT
MEMORANDUM

June 19, 2019

To: Public Information (MS 5030)

From: Plan Coordinator, FO, Plans Section (MS 5231)

Subject: Public Information copy of plan

- Control # - S-07958
- 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 - Well PS011
- 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.

Robert Arpino
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/PS011	G20082/GC/640	3188 FSL, 5984 FEL	G20082/GC/640

PUBLIC COPY
May, 2019

SUPPLEMENTAL UNIT
DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

Green Canyon Blocks 640/641
Leases OCS-G 20082/16770
Green Canyon 640 Unit (Unit Agreement #754306008)
Tahiti

A-Tahiti SPAR Production Facility
Located in
Green Canyon Block 641

Affected States: Louisiana

Estimated Startup Date: 04/11/2020

SUBMITTED BY:
Chevron U.S.A. Inc.
100 Northpark Boulevard
Room S2218A
Covington, LA 70433
Carly Moss
Carly.Moss@chevron.com

AUTHORIZED REPRESENTATIVE:
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TABLE OF CONTENTS

SECTION ATTACHMENTS

Section 1	**Plan Contents**
1-A	OCS Plan Information Form
1-B	Well Location Plat
1-C	Pay.gov Receipt
Section 3	**Geological, Geophysical Information**
3-D	Shallow Hazards Assessment
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 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 Lease OCS-G 20082, Green Canyon Block 640, which is part of the Green Canyon Block 640 Unit (Agreement No. 754306008). Under this Supplemental Development Operations Coordination Document (DOCD), Chevron proposes to install two lease term jumper pipelines and commence production of Well No. PS011 (***the drilling and completion of the PS011 well is provided for under Supplemental Exploration Plan (EP), Control No. S-7956, pending approval***). Further, Chevron is updating the air emissions to include miscellaneous well intervention activities for the PS011 well. The lease term jumpers will be installed using a dynamically positioned lay barge.

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

1.2 LOCATION

The Well Location Plats depicting the surface locations are included as **Attachment 1-B**.

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 Supplemental 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 Notices 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.

1.4 STORAGE TANKS AND PRODUCTION VESSELS

The table below provides storage tanks with capacity of 25 barrels or more that will store fuels, oil and lubricants.

Type of Storage Tank	Type of Facility	Tank Capacity (bbl)	Number of Tanks	Total Capacity (bbl)	Fluid Gravity (API)
Fuel oil (marine diesel)	Light Construction Vessel	942.86	7	6600	30°
Production	Light Construction Vessel	36.25	8	290	22°

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 does not propose any additional safety, pollution prevention, or early spill detection measures beyond those required by 30 CFR Part 250.

1.7 COST RECOVERY FEE

Documentation of the $4,238.00 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)	Development Operations Coordination Document (DOCD)	X	

Company Name: Chevron U.S.A. Inc.	BOEM Operator Number: 00078
Address:	Contact Person: Kelley Pisciola
100 Northpark Blvd	Phone Number: 281-698-8519
Covington, LA 70433	E-Mail Address: kelley.pisciola@jccteam.com

If a service fee is required under 30 CFR 550.125(a), provide the	Amount paid	$4,238.00	Receipt No.	26DV2L3A

Project and Worst Case Discharge (WCD) Information

Lease(s): OCS-G 20082	Area: GC	Block(s): 640	Project Name (If Applicable): Tahiti (PS011)

Objective(s)	x	Oil	x	Gas		Sulphur		Salt	Onshore Support Base(s): Galliano and Port Fourchon, Louisiana

Platform/Well Name: A-Tahiti Spar	Total Volume of WCD: 195,410	API Gravity: 29.5°
Distance to Closest Land (Miles): 118	Volume from uncontrolled blowout: 186,452 bbls/day	

Have you previously provided information to verify the calculations and assumptions for your WCD?		Yes	X	No
If so, provide the Control Number of the EP or DOCD with which this information was provided				
Do you propose to use new or unusual technology to conduct your activities?		Yes	X	No
Do you propose to use a vessel with anchors to install or modify a structure?		Yes	X	No
Do you propose any facility that will serve as a host facility for deepwater subsea development?		Yes	X	No

Description of Proposed Activities and Tentative Schedule (Mark all that apply)

Proposed Activity	Start Date	End Date	No. of Days
Exploration drilling			
Development drilling			
Well completion			
Well test flaring (for more than 48 hours)			
Installation or modification of structure			
Installation of production facilities			
Installation of subsea wellheads and/or manifolds	April 11, 2020	April 11, 2020	1
Installation of lease term pipelines	June 10, 2020	June 17, 2020	7
Commence production	March 21, 2021	March 24, 2021	3
Other (Specify and attach description)			

Description of Drilling Rig

	Jackup	x	Drillship		Caisson		Tension leg platform
	Gorilla Jackup		Platform rig		Fixed platform		Compliant tower
	Semisubmersible		Submersible		Spar		Guyed tower
	DP Semisubmersible		Other (Attach Description)		Floating production system		Other (Attach Description)

Drilling Rig Name (If Known):

Description of Structure

(See Description of Drilling Rig table above.)

Description of Lease Term Pipelines

From (Facility/Area/Block)	To (Facility/Area/Block)	Diameter (Inches)	Length (Feet)
GC 640 TAH PS011	GC 640 Tie-in Skid	6.625" OD bulk oil jumper	~100
GC 640 Tie-in Skid	GC 640 South Drill Center Manifold	6.625" OD bulk oil jumper	~100

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?	X	Yes		No
Is this an existing well or structure?		Yes X		No	If this is an existing well or structure, list the Complex ID or API No.	1819			
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?							Yes	X	No

WCD info	For wells, volume of uncontrolled blowout (Bbls/day):	For structures, volume of all storage and pipelines (Bbls):	API Gravity of fluid	

	Surface Location	**Bottom-Hole Location (For Wells)**	**Completion (For multiple completions, enter separate lines)**
Lease No.	OCS G 16770	OCS	OCS OCS
Area Name	GC		
Block No.	641		
Blockline Departures (in feet)	N/S Departure: F_S L 6832	N/S Departure: F L	N/S Departure: F L N/S Departure: F L N/S Departure: F L
	E/W Departure: F_W L 6451	E/W Departure: F L	E/W Departure: F L E/W Departure: F L E/W Departure: F L
Lambert X-Y coordinates	X: 2,382,451	X:	X: X: X:
	Y: 9,922,672	Y:	Y: Y: Y:
Latitude/ Longitude	Latitude 27° 19' 33.2682"	Latitude	Latitude Latitude Latitude
	Longitude -90° 42' 50.946"	Longitude	Longitude Longitude Longitude
Water Depth (Feet): 4,000		MD (Feet): / TVD (Feet):	MD (Feet): / TVD (Feet): MD (Feet): / TVD (Feet): MD (Feet): / TVD (Feet):
Anchor Radius (if applicable) in 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): PS011 (PSA)					Previously reviewed under an approved EP or DOCD? (S-7569)		X	Yes		No
Is this an existing well or structure?		Yes		No X	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	X	No

WCD info	For wells, volume of uncontrolled blowout (Bbls/day):	For structures, volume of all storage and pipelines (Bbls):	API Gravity of fluid	

	Surface Location	**Bottom-Hole Location (For Wells)**	**Completion (For multiple completions, enter separate lines)**
Lease No.	OCS G 20082	OCS G 20082	OCS OCS
Area Name	GC	GC	
Block No.	640	640	
Blockline Departures (in feet)	N/S Departure: F S ___ L 3188	N/S Departure: F S ___ L	N/S Departure: F____ L N/S Departure: F____ L N/S Departure: F____ L
	E/W Departure: F E ___ L 5984	E/W Departure: F E ___ L	E/W Departure: F____ L E/W Departure: F____ L E/W Departure: F____ L
Lambert X-Y coordinates	X: 2,370,016	X:	X: X: X:
	Y: 9,919,028	Y:	Y: Y: Y:
Latitude/ Longitude	Latitude 27°18' 59.433"	Latitude	Latitude Latitude Latitude
	Longitude -90°45' 09.492"	Longitude	Longitude Longitude Longitude

Water Depth (Feet): 4,292'	MD (Feet):	TVD (Feet):	MD (Feet): MD (Feet): MD (Feet):	TVD (Feet): TVD (Feet): TVD (Feet):
Anchor Radius (if applicable) in 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 =	

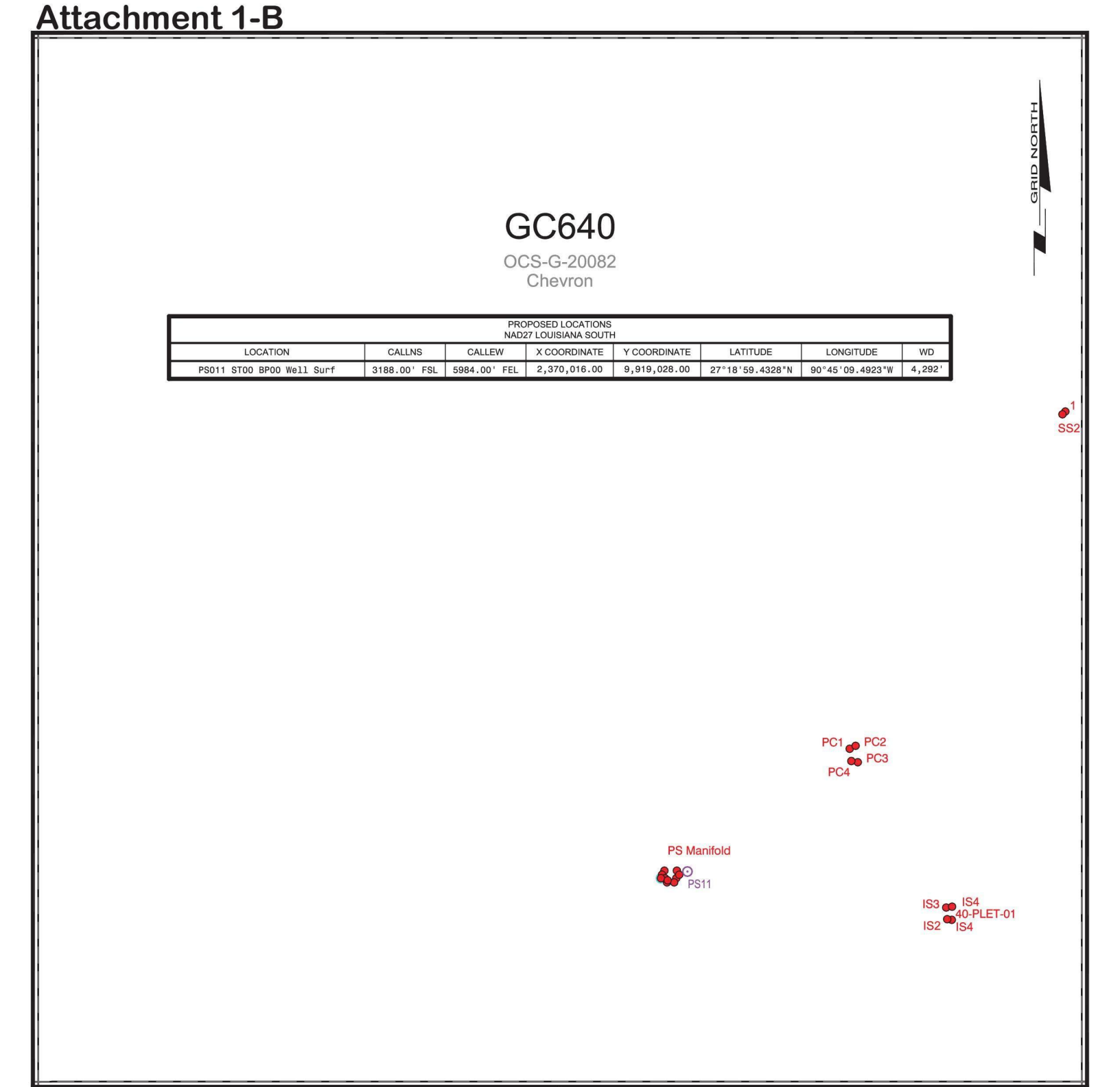
Attachment 1-B

GRID NORTH

GC640

OCS-G-20082
Chevron

PROPOSED LOCATIONS NAD27 LOUISIANA SOUTH							
LOCATION	CALLNS	CALLEW	X COORDINATE	Y COORDINATE	LATITUDE	LONGITUDE	WD
PS011 ST00 BP00 Well Surf	3188.00' FSL	5984.00' FEL	2,370,016.00	9,919,028.00	27°18'59.4328"N	90°45'09.4923"W	4,292'



Chevron U.S.A. Inc.

DEVELOPMENT OPERATIONS COORDINATION DOCUMENT

OCS-G-20082 BLOCK 640
GREEN CANYON AREA
GULF OF MEXICO

Geodetic Datum: NAD27
Projection: BLM 15 (NORTH)
Grid Units: US SURVEY FEET

SCALE 1:24000 — 0 — 2000 FEET

FUGRO USA MARINE, INC.
6100 Hillcroft Ave.
Houston, Texas 77081
(713) 346-3700

Job No.: 18015308 | Date: 12/10/18 | Drwn: MM | Chart: 1 Of: 1

DWG File: 1801530801_GC640_DOCD_PS11_G20082

12/10/2018

PUBLIC INFORMATION

Attachment 1-C

Richard, Kirk (KRichard)

From: notification@pay.gov
Sent: Thursday, December 06, 2018 9:39 AM
To: Richard, Kirk (KRichard)
Subject: [**EXTERNAL**] Pay.gov Payment Confirmation: BOEM Development/DOCD Plan - BD

An official email of the United States government

Pay.gov

Your payment has been submitted to Pay.gov and the details are below. If you have any questions regarding this payment, please contact Brenda Dickerson at (703) 787-1617 or BseeFinanceAccountsReceivable@bsee.gov.

Application Name: BOEM Development/DOCD Plan - BD
Pay.gov Tracking ID: 26DV2L3A
Agency Tracking ID: 75630745352
Transaction Type: Sale
Transaction Date: 12/06/2018 10:38:52 AM EST
Account Holder Name: Kirk Richard
Transaction Amount: $4,238.00
Card Type: AmericanExpress
Card Number: **********1009

Region: Gulf of Mexico
Contact: Kirk Richard 985-773-6327
Company Name/No: Chevron U.S.A. Inc., 00078
Lease Number(s): 20082, , , ,
Area-Block: Green Canyon GC, 640: , : , : , : ,
Type-Wells: Supplemental Plan, 1

THIS IS AN AUTOMATED MESSAGE. PLEASE DO NOT REPLY.

Pay.gov is a program of the U.S. Department of the Treasury, Bureau of the Fiscal Service

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
Modification to Surface Commingling Application	BSEE	To be submitted
Downhole Commingling Application	BSEE	To be submitted
Supplemental Deepwater Operations Plan	BSEE	To be submitted
Lease Term Pipeline Application	BSEE	To be submitted
Modification to Production Surface Safety System	BSEE	To be submitted

2.2 DRILLING FLUIDS

No drilling operations are proposed in 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 a 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 a current BOEM-approved deferment from providing additional security under 30 CFR 556.53(d) and National NTL No. 2008-N07, “Supplemental Bond Procedures.” If, at any point, Chevron no longer qualifies for a supplemental bond deferment, Chevron will either provide the required additional security or a third-party guarantee with 60 days after such disqualification.

2.7 OIL SPILL FINANCIAL RESPONSIBILITY (OSFR)

Chevron U.S.A. Inc. (Company No. 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 No. 00078) has the financial capability to drill a relief well and conduct other emergency well control operations.

2.9 SUSPENSION OF PRODUCTION

The Green Canyon Block 640 Unit is currently held by ongoing production.

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
Proprietary Information.

3.2 STRUCTURE CONTOUR MAPS
Proprietary Information.

3.3 INTERPRETED SEISMIC LINES
Proprietary Information.

3.4 GEOLOGICAL STRUCTURE CROSS-SECTIONS
Proprietary Information.

3.5 SHALLOW HAZARDS REPORT
A shallow hazards survey was conducted over Green Canyon Block 640 and 641, Tahiti Development Project and previously submitted.

3.6 SHALLOW HAZARDS ASSESSMENT
In accordance with NTL No. 2008-G05, "Shallow Hazards Program," a site-specific shallow hazards assessment has been prepared for the proposed surface location evaluating seafloor and subsurface geological and manmade features and conditions that may adversely affect drilling operations. The shallow hazards assessment is included as **Attachment 3-D.**

3.7 HIGH-RESOLUTION SEISMIC LINES
Proprietary Information.

3.8 STRATIGRAPHIC COLUMN
Proprietary Information.

3.9 TIME VS DEPTH TABLES
Proprietary Information.

15810 Park Ten Place, Suite 100
Houston, Texas 77084
www.gemsinc.com

March 22, 2019

Project No.: 0219-2835

Chevron U.S.A. Inc.
1500 Louisiana
Houston, Texas 77002

Attention: Mr. Phillip Von Dullen III

Site Clearance Letter
Proposed Wellsite PS_RW1
Block 640 (OCS-G-20082)
Green Canyon Area
Gulf of Mexico

Chevron U.S.A. Inc. (Chevron) contracted Geoscience Earth & Marine Services (GEMS) to provide an assessment of the seafloor and shallow geologic conditions to determine the favorability of drilling operations for the proposed location PS_RW1, whose surface location is in Block 640 (OCS-G-20082), Green Canyon (GC) Area, Gulf of Mexico. This letter addresses specific seafloor and subsurface conditions around the proposed location to the Top of Salt at a depth of about 7,556 ft below the mudline (bml).

Proposed Wellsite PS_RW1 is located along a relatively benign area of seafloor. There are no potential sites for deepwater benthic communities within 2,000 ft of the proposed wellsite. The closest sonar target is 1,673 ft northwest of the wellsite but is not recommended for archaeological avoidance. There is a negligible to low potential for encountering overpressured sands and negligible to low potential for shallow gas within the limit of investigation based on seismic attributes and amplitude analysis.

This letter provides details specific to the well location, including available data, Notice to Lessees (NTL) requirements, man-made features, and wellsite conditions.

Proposed Well Location

The surface location for the Proposed Wellsite GC 640 PS_RW1 is in the southeast corner of Block 640 (Figure GC 640 PS_RW1-1). Chevron provided the following coordinates:

Table 1. Proposed Location Coordinates

Proposed Wellsite GC 640 PS_RW1			
Spheroid & Datum: Clarke 1866 NAD27 Projection: UTM Zone 15 North		Line Reference	Block Calls (GC 640)
X: 2,374,855 ft	Latitude: 27° 18' 41.3626" N	Inline 2105	1,145 ft FEL
Y: 9,917,290 ft	Longitude: 90° 44' 16.2156" W	Crossline 5144	1,450 ft FSL

Chevron plans to drill this well using a dynamically positioned drilling vessel. GEMS' assessment addresses the seafloor and subsurface conditions within a 2,000 ft radius around the proposed well location.

Available Data

The following discussion is based on findings from the reports listed below:

- Geologic and Geohazards Site Assessment, Tahiti Development Project, Blocks 596, 640, and 641, Green Canyon Area, Gulf of Mexico (GEMS, 2003)
- Geologic and Stratigraphic Assessment, Blocks 596, 597, 640, and 641, Green Canyon Area, Gulf of Mexico (GEMS, 2004)

- Integrated Summary Report, Geologic Constraints and Engineering Design Properties, Tahiti development, Green Canyon Area Blocks 596, 640, and 641 (GEMS, 2006)
- Tahiti Development Area Archaeological Assessment Blocks 595-597, 639-641, & 683-685 Green Canyon Area, Gulf of Mexico (GEMS, 2011)

The text, maps, and figures included in the reports provide detail on the regional geology, soil properties, and archaeological assessment of the Study Area. For this assessment, GEMS used two sets of geophysical data provided by Chevron: a 3-D exploration seismic time volume and high-resolution (HR) geophysical data. The 3-D seismic data were provided to GEMS in 2003 and cover Blocks 596, 640, and 641 (Figure GC 640 PS_RW1-1).

Proprietary AUV Data. The high-resolution (HR) data were collected by C & C Technologies, Inc., (C&C) in 2003 using an Autonomous Underwater Vehicle (AUV). The AUV data included 100 kHz side-scan sonar, 2-10 kHz subbottom profiler, 3 m (10 ft) bin multibeam bathymetry, and 1 m (3 ft) bin multibeam backscatter data. The surveyed area encompassed all or portions of Blocks 595-597, 639-641, and 683-685 in Green Canyon Area (Figure GC 640 PS_RW1-1).

Public Data. GEMS established the study's regional framework by referencing public sources such as BOEM and various published technical papers. GEMS has compiled a database of information including Federal lease blocks of reported chemosynthetic communities, shallow water flow, shipwrecks, obstructions, and infrastructure (BOEM, 2019a). Regional bathymetry data is from BOEM's deepwater bathymetry grid created from 3-D seismic surveys (BOEM, 2019b).

Subsurface depths at the proposed wellsite were calculated using the following equation, where ***x*** is two-way travel time in seconds below the mudline:

$$\text{Depth (feet)} = 425.35 * x^2 + 2459 * x$$

This polynomial was generated from a Chevron velocity gradient and was first used for the Geologic and Stratigraphic Assessment in Blocks 596, 640, and 641 (GEMS, 2003).

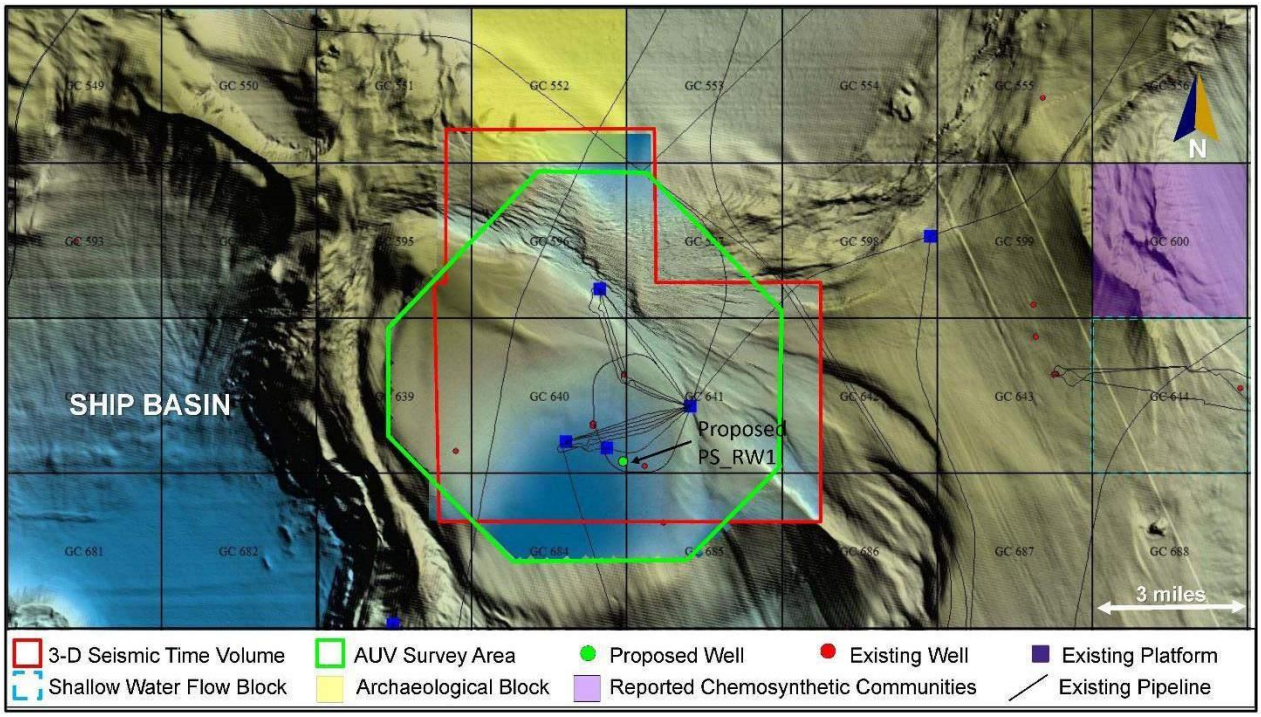


Figure GC 640 PS_RW1-1. Seafloor Rendering Showing the Proposed Wellsite Location

Attachments

Wellsite maps are centered on the Proposed Wellsite GC 640 PS_RW1 location and are displayed at a scale of 1 inch = 1,000 ft (1:12,000). The maps included in this letter are as follows:

Map No. PS-RW1 -1:	Bathymetry Map
Map No. PS-RW1 -2	Seafloor Features Map
Map No. PS-RW1 -3	Side-Scan Sonar Mosaic
Map No. PS-RW1 -4	Seafloor Amplitude Rendering
Map No. PS-RW1 -5	Geologic Features Map

The accompanying illustrations were extracted from the available data sets and are listed below:

Illustration GC 640-PS_RW1-1: Subbottom Profiler Line 140 Showing Near-Surface Conditions Beneath Proposed Wellsite PS_RW1

Illustration GC 640-PS_RW1-2: Portions of Inline 2105 and Crossline 5144 Showing Conditions Beneath Proposed Wellsite PS_RW1

Illustration GC 640-PS_RW1-3: Tophole Prognosis Chart, Proposed Wellsite PS_RW1, Green Canyon Area, Block 640

NTL Requirements

The following letter complies with the Bureau of Ocean Energy Management (BOEM) Notice to Lessees (NTLs) 2008-G04, 2008-G05, and 2009-G40, (MMS, 2008a, b, and 2010). BOEM's high probability archaeological blocks do not include GC 640 but lists a nearby bock to the north, GC 552 (BOEM, 2011). Mitigation guidelines released by BOEMRE in March 2011 require an archaeological assessment prior to any bottom disturbing activities (BOEMRE, 2011). GEMS prepared an archaeological assessment to comply with the Archaeological Resource Surveys and Reports requirements in NTL 2005-G07 (MMS, 2005) and submitted the report to Chevron in December 2011 (GEMS, 2011).

As specified in NTL 2008-G04 (MMS, 2008a), GEMS extracted the power spectrum diagram from the 3-D seismic data cube (time) provided at the proposed wellsite (Figure GC 640 PS_RW1-2). The extraction was generated within a 2,000-ft radius of the intersection of the inline and crossline at the proposed wellsite. The extraction interval consisted of the seafloor to an equivalent of one second bml. GEMS converted the amplitude vs. frequency spectrum, generated by the IHS software, to power vs. frequency by squaring the amplitude values as described by J. A. Coffeen, 1978. The frequency bandwidth at 50% power ranges between 7 and 60 Hz.

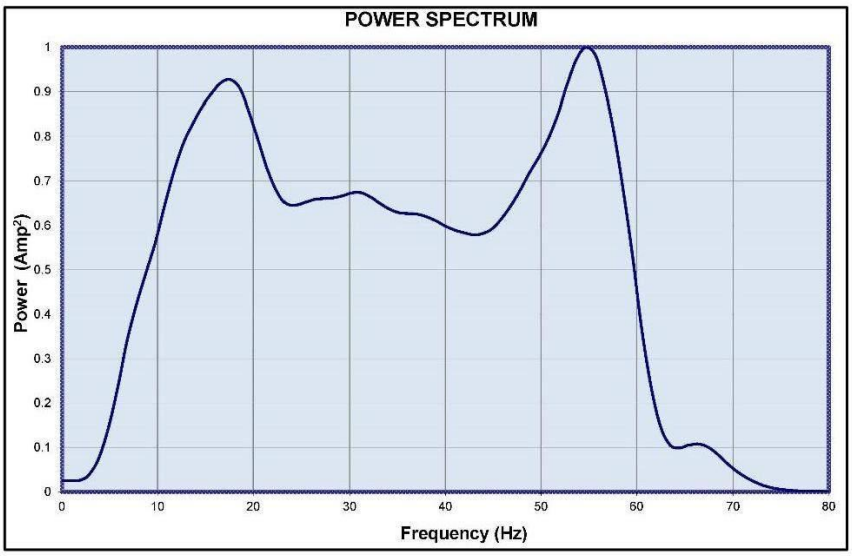


Figure GC 640 PS_RW1-2. Power Spectrum Curve, Proposed Wellsite PS_RW1 in Green Canyon Block 640

Man-Made Features

The proposed well PS_RW1 is within the Tahiti development area and is about 9,310 ft southwest of the Tahiti truss spar in GC 641. The Tahiti field in GC 640 contains three subsea drill centers. One of the drill centers is about 1,290 ft northwest of the proposed location. The drill centers are tied back to the floating production facility in GC 641. Oil and gas are exported north through Shell Pipeline Company's 20-24" oil pipeline and Discovery Producer Services 12-16" gas pipeline. The closest existing infrastructure to the proposed wellsite includes Chevron's two bulk oil 6" flowlines about 650 ft and 800 ft to the southwest and Chevron's 7-13" water line, which is approximately 875 ft to the northeast and (Map PS-RW1-1).

Archaeological Assessment

GEMS delineated 68 unidentified contacts in the side-scan sonar data within the AUV Survey Area (GEMS, 2011). One side-scan sonar contact is located within 2,000 ft of the proposed wellsite location (Maps PS_RW1-2 and - PS_RW1-3). Side-Scan Sonar Contact 46 is 1,673 ft northwest of the proposed well (Table PS_RW1-1 and Figure GC640-PS_RW1-3). The unidentified sonar contact likely represents modern debris associated with shipping, exploratory, or storm events (GEMS, 2011).

Table GC640-PS_RW1-1. Sonar Contact within 2,000 ft of Proposed Wellsite PS_RW1

No.	Length (Feet)	Width (Feet)	Height (Feet)	Shape	X NAD27 (Meters)	Y NAD27 (Meters)	Distance/ Direction
46	29.956	2.02	0.00	Linear	723,673.8	3,023,272	1,673 ft/NW

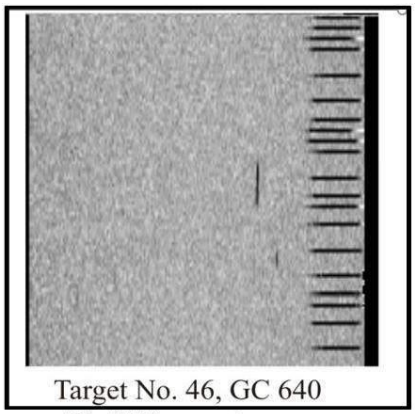


Figure GC640-PS_RW1-3. Side-scan Sonar Contact 46

Archaeological Avoidance. No archaeological avoidances and no known shipwrecks lie within the area of potential effect. No potential cultural resources were discovered near Proposed Wellsite PS_RW1 (Map GC640-PS_RW1-3). The unidentified contact has the standard 100 ft geohazard avoidance as prescribed in NTL 2008-G05 (MMS, 2008b). If any wood, ceramics, textiles or ferrous objects become exposed during any bottom disturbing operations, all activities must be halted and BOEM notified within 48 hours.

Wellsite Conditions

The surface location is clear of constraining geologic conditions within a 2,000 ft radius surrounding the proposed location. The shallow stratigraphy will consist of interbedded hemipelagic clays, turbidites, and mass-transport deposits composed of generally clays and silts with some interspersed thin sands (Illustrations GC640-PS_RW1-1 to - PS_RW1-3).

Water Depth and Seafloor Conditions. The water depth at the proposed surface location is approximately -4,288 ft below sea level (Map No. PS-RW1-1). The seafloor is smooth, featureless, and slopes to the southwest at about 1.8° (Maps PS-RW1-1 and PS-RW1-2). Seafloor sediments at the Proposed Wellsite PS_RW1 are expected to be hemipelagic and pelagic clays. These shallow sediments should provide adequate foundation for bottom-founded structures.

Based on the current geophysical data provided, the present-day seabed and near-surface sediments at the proposed location are stable and not prone to failure. The low seafloor amplitude response and side-scan sonar reflectivity in the vicinity of the proposed wellsite suggest the seabed is covered by soft clays (Maps PS-RW1-3 and PS-RW1-4).

Deepwater Benthic Communities. Federal lease Block GC 640 is not designated as having high-density deepwater benthic communities (MMS, 2010). There are no apparent geophysical indicators at the seafloor or at depth that would suggest conditions capable of supporting high-density deepwater benthic communities at the proposed wellsite (Maps PS_RW1-3 through PS_RW1-5).

The Side-Scan Sonar Mosaic and Seafloor Amplitude Rendering (Maps PS-RW1-3 and PS-RW1-4) show normal or ambient returns along the seabed with no indication of any hard-bottom or fluid expulsion events within 2,000 ft of the proposed well. In addition, BOEM does not list any areas of positive or negative seafloor anomalies within 2,000 ft of the proposed location (BOEM, 2019c).

Stratigraphy

Stratigraphic conditions are shown on Illustrations GC640-PS_RW1-1 through GC640-PS_RW1-3. Four horizons (Horizons 120, 250, 500, and 900) were previously mapped within the limit of investigation to define the stratigraphic facies.

The AUV subbottom profiler data define the upper 185 ft of sediments beneath the mudline in the area of the proposed wellsite (Illustration GC640-PS_RW1-1). The uppermost 10 ft of sediment at the well is a drape consisting of very soft, high water content clays. The sediments beneath the drape to the limit of the subbottom penetration will consist primarily of hemipelagic clays and silty clays. Jumbo piston cores and a soil boring collected in the area penetrated normally consolidated clays to 150 ft bml. Soil Boring BH-3 collected at anchor cluster #1 in the southwestern portion of GC 641, approximately ~4,400 ft east of the proposed location, encountered normally consolidated clays with shear strengths increasing from very soft at the seafloor to very stiff at 300 ft bml (GEMS, 2006).

The 3-D seismic data define the stratigraphy from the seafloor to the Top of Salt, about 7,556 ft bml (Illustrations GC640-PS_RW1-2 and -PS_RW1-3). The shallow units between the seafloor and Horizon 250 (205 ft bml) consist of hemipelagic clays and silty clays interbedded with muddy turbidites.

The seismic sequence below Horizon 250 (205 ft bml) to about 2,304 ft bml consists of low- to moderate- amplitude, continuous to chaotic reflections (Illustrations GC640-PS_RW1-2 and -PS_RW1-3). These reflections probably represent alternating clay-rich, normally deposited hemipelagic sediments, clay-rich turbidities, and clay-rich, mass-transport deposits. Occasional, thin, sand seams are possible within these intervals.

Below 2,304 ft bml, the seismic stratigraphy consists of moderate-amplitude, continuous reflectors alternating with low- to moderate-amplitude, discontinuous to chaotic intervals (Illustrations GC640-PS_RW1-2 and -PS_RW1-3). These reflections represent turbidites alternating with muddy mass-transport complexes, although the sand content may increase in this interval compared to the overlying units. The Top of Salt will be encountered at approximately 7,556 ft bml, which is -11,844 ft subsea (Illustration GC640-PS_RW1-3). The salt surface dips to the west-northwest at about 30˚.

Faults

Proposed Wellsite PS_RW1 is not expected to intersect seafloor faults in the shallow section to the Top of Salt (Illustrations GC640-PS_RW1-1 through -PS_RW1-3). The subbottom profiler shows buried fractures about 250 ft northeast and southwest of the proposed location (Illustration GC640-PS_RW1-1). The fractures are confined in the interval from 40 ft to 85 ft bml. The fractures are likely the result of sediment compaction soon after deposition. The fractures do not extend to the seafloor.

The wellbore will, however, intersect at least two buried faults at 1,818 ft and 2,304 ft bml. The faults are buried by over 1,400 ft of sediment. Additional faults may exist beyond the resolution of the data below Horizon 900 (989 ft bml), particularly with proximity to the Top of Salt. Caution is recommended when

intersecting faults because faulted intervals may represent zones of borehole instability and/or cause lost circulation problems.

Shallow Gas and Shallow Water Flow

The potential for shallow gas is negligible to low and the potential for shallow water flow is negligible to low at this well (Illustration GC640-PS_RW1-3). During drilling operations of previous Tahiti wells, no shallow water flow, shallow gas, or shallow oil were observed at the wellhead in the riserless section (Personal Correspondence, Philip Von Dullen, 2015).

Subsurface amplitude mapping from the previous shallow hazards assessments at Tahiti were considered for the hazards analysis for the proposed location (GEMS, 2003 and 2004). However, GEMS performed an additional amplitude extraction from the seafloor to the Top of Salt at and surrounding the proposed location to better highlight interpreted shallow gas hazards (Map PS-RW1-5).

Shallow Gas. There are no apparent subsurface amplitude anomalies or other direct hydrocarbon indicators directly beneath the proposed location (Map PS-RW-5). No high-amplitude events are mapped within 2,000 ft of the proposed wellsites.

The potential for encountering shallow gas is considered negligible in the clay-prone stratigraphic units from the seafloor to 2,304 ft bml. A "low" potential for shallow gas is attributed to the bedded turbidite intervals from about 2,304 ft to the top of salt 7,556 ft bml.

Shallow Water Flow. The potential for shallow water flow at the proposed well location is considered negligible to low based on the lack of regionally extensive sand-prone complexes in the shallow section and the lack of reported water flow incidents from the nearby existing wells (BOEM, 2019d). Shallow water flow is not expected from the seafloor to 2,304 ft bml. A low potential for shallow water flow exists within possible sands below 2,304 ft bml to the Top of Salt (7,556 ft bml). Any fluids encountered within these sediments are not likely to be significantly overpressured.

Results and Recommendations

The Proposed Wellsite PS_RW1 in block 640, Green Canyon Area, appears geologically suitable for exploration drilling operations; however, we advise using caution while drilling through the faulted intervals at 1,818 ft bml and 2,304 ft bml. Faults are possible zones with the potential for loss in drilling fluids. There is a negligible to low potential for encountering shallow water flow or shallow gas within the limit of investigation.

Engineers should be aware of the location of several pipelines within 2,000 ft of the proposed well. In addition, one sonar contact is located within 2,000 ft of the proposed location. We recommend a 100-ft hazards avoidance around any mapped contacts. Should any potentially historic materials such as textiles, wood, ceramics, or other items be discovered during exploration activities, all operations must cease and BOEM be notified within 48 hours.

Closing

We appreciate the opportunity to be of service to Chevron U.S.A. Inc. and look forward to working with Chevron on future projects.

Sincerely,

GEOSCIENCE EARTH & MARINE SERVICES

Thomas Neurauter, Ph.D.
Senior Marine Geologist

Daniel Lanier
President

Erin Williams Janes
Project Manager/Senior Geoscientist

Attachments (5 Maps and 3 Illustrations)
Distribution: Mr. Phillip Von Dullen III, Chevron U.S.A. Inc., Houston, TX (2 Copies)

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SECTION 4
HYDROGEN SULFIDE INFORMATION

4.1 CONCENTRATION

Chevron anticipates encountering zero ppm H_2S 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 H_2S absent.

4.3 H_2S CONTINGENCY PLAN

An H_2S 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 seafloor disturbing activities proposed in this plan are in water depths greater than 300 meters (984'). Geoscience Earth & Marine Services, Inc. (GEMS) was contracted to provide an assessment of the shallow conditions at the proposed surface location. Chevron will avoid all high-density deepwater benthic communities by 2,000 feet from each proposed mud and cuttings discharge location and 250 feet from the location of all other seafloor disturbances. As per NTL No. 2009-G40, "Deepwater Benthic Communities," a map showing the 2,000-foot radius around the well site is included as **Attachment 3-D**

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)

Activities proposed under this DOCD will be conducted outside all Topographic Feature Protective Zones; therefore, shunting of drill cuttings and drilling fluids is not required per NTL No. 2009-G39, "Biologically Sensitive Underwater Features and Areas."

6.4 LIVE-BOTTOMS (PINNACLE TREND FEATURES)

Green Canyon Block 640 is 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)

Green Canyon Block 640 is 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

Green Canyon Block 640 is 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 Mexico
			Lease Area	Coastal	
Marine Mammals					
Manatee, West Indian	*Trichechus manatus latirostris*	E	--	X	Florida (peninsular)
Whale, Blue	*Balaenoptera masculus*	E	X*	--	None
Whale, Finback	*Balaenoptera physalus*	E	X*	--	None
Whale, Humpback	*Megaptera novaeangliae*	E	X*	--	None
Whale, North Atlantic Right	*Eubalaena glacialis*	E	X*	--	None
Whale, Sei	*Balaenopiera borealis*	E	X*	--	None
Whale, Sperm	*Physeter catodon (=macrocephalus)*	E	X	--	None
Terrestrial Mammals					
Mouse, Beach (Alabama, Choctawatchee, Perdido Key, St. Andrew)	*Peromyscus polionotus*	E	-	X	Alabama, Florida (panhandle) beaches
Birds					
Plover, Piping	*Charadrius melodus*	T	-	X	Coastal Texas, Louisiana, Mississippi, Alabama and Florida (panhandle)
Crane, Whooping	*Grus Americana*	E	-	X	Coastal Texas
Reptiles					
Sea Turtle, Green	*Chelonia mydas*	T	X	X	None
Sea Turtle, Hawksbill	*Eretmochelys imbricata*	E	X	X	None
Sea Turtle, Kemp's Ridley	*Lepidochelys kempli*	E	X	X	None
Sea Turtle, Leatherback	*Dermochelys coriacea*	E	X	X	None
Sea Turtle, Loggerhead	*Caretta caretta*	T	X	X	Texas, Louisiana, Mississippi, Alabama, Florida
Fish					
Sturgeon, Gulf	*Acipenser oxyrinchus (=oxyrhynchus) desotoi*	T	X	X	Coastal Louisiana, Mississippi, Alabama and Florida (panhandle)
Corals					
Coral, Elkhorn	*Acopora palmate*	T	-	X	Florida Keys and Dry Tortugas
Coral, Staghorn	*Acopora cervicornis*	T	-	X	Florida

Abbreviations: E = Endangered; T = Threatened

* 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.

6.8 ARCHAEOLOGICAL REPORT

The proposed operations will be conducted from within 500 feet of the previously approved surface location of GC 640 PS010 as provided for in EP (Control No. S-7778); 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

Per NTL No. 2008-G04, "Information Requirements for Exploration Plans and Development Operations Coordination Documents," waste and discharge information is not required to be submitted with this plan.

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 EMISSIONS WORKSHEETS AND SCREENING QUESTIONS

Screen Questions for DOCD's	Yes	No
Is any calculated Complex Total (CT) Emission amount (tons) associated with your proposed development activities more than 90% of the amounts calculated using the following formulas: CT = $3400D^{2/3}$ for CO, and CT = 33.3D for the other air pollutants (where D = distance to shore in miles)?		X
Do your emission calculations include any emission reduction measures or modified emission factors?		X
Does or will the facility complex associated with your proposed development and production activities process production from eight or more wells?	X	
Do you expect to encounter H_2S at concentrations greater than 20 parts per million (ppm)?		X
Do you propose to flare or vent natural gas for more than 48 continuous hours from any proposed well?		X
Do you propose to burn produced hydrocarbon liquids?		X
Are your proposed development and production activities located within 25 miles (40 kilometers) from shore?		X
Are your proposed development and production activities located within 124 miles (200 kilometers) of the Breton Wilderness Area?		X

8.2 SUMMARY INFORMATION

Included as **Attachment 8-A** are Air Emission Worksheets which show the emissions calculations for the Plan Emissions and if different, a set of worksheets showing the emissions calculations for the Complex Total Emissions.

This information was calculated by: Meghan Gallinaro
(985) 773-6085

Attachment 8-A

DOCD AIR QUALITY SCREENING CHECKLIST

OMB Control No. 1010-0151
OMB Approval Expires: 06/30/2021

COMPANY	Chevron U.S.A. Inc.
AREA	Green Canyon
BLOCK	640
LEASE	G20082
PLATFORM	NA
WELL	PS001, PS002, PS003, PS004, PS005, PS006, PS007, PS008, PS009, PS010, PS011
COMPANY CONTACT	Meghan Gallinaro
TELEPHONE NO.	985-773-6085
REMARKS	This AQR includes additional drilling days each year for recompletions, workovers, interventions, abandonment activities, and inspections/maintenance of subsea wells, equipment and pipelines.

LEASE TERM PIPELINE CONSTRUCTION INFORMATION:		
YEAR	NUMBER OF PIPELINES	TOTAL NUMBER OF CONSTRUCTION DAYS
2018		
2019		
2020		
2021		
2022		
2023		
2024		
2025		
2026		
2027		
2028		

AIR EMISSIONS CUMPUTATION FACTORS

Fuel Usage Conversion Factors	Natural Gas Turbines		Natural Gas Engines		Diesel Recip. Engine		REF.	DATE
	SCF/hp-hr	9.524	SCF/hp-hr	7.143	GAL/hp-hr	0.0483	AP42 3.2-1	4/76 & 8/84

Equipment/Emission Factors	units	PM	SOx	NOx	VOC	CO	REF.	DATE
NG Turbines	gms/hp-hr		0.00247	1.3	0.01	0.83	AP42 3.2-1& 3.1-1	10/96
NG 2-cycle lean	gms/hp-hr		0.00185	10.9	0.43	1.5	AP42 3.2-1	10/96
NG 4-cycle lean	gms/hp-hr		0.00185	11.8	0.72	1.6	AP42 3.2-1	10/96
NG 4-cycle rich	gms/hp-hr		0.00185	10	0.14	8.6	AP42 3.2-1	10/96
Diesel Recip. < 600 hp.	gms/hp-hr	1	0.1835	14	1.12	3.03	AP42 3.3-1	10/96
Diesel Recip. > 600 hp.	gms/hp-hr	0.32	0.1835	11	0.33	2.4	AP42 3.4-1	10/96
Diesel Boiler	lbs/bbl	0.084	0.3025	0.84	0.008	0.21	AP42 1.3-12,14	9/98
NG Heaters/Boilers/Burners	lbs/mmscf	7.6	0.593	100	5.5	84	P42 1.4-1, 14-2, & 14	7/98
NG Flares	lbs/mmscf		0.593	71.4	60.3	388.5	AP42 11.5-1	9/91
Liquid Flaring	lbs/bbl	0.42	6.83	2	0.01	0.21	AP42 1.3-1 & 1.3-3	9/98
Tank Vapors	lbs/bbl				0.03		E&P Forum	1/93
Fugitives	lbs/hr/comp.				0.0005		API Study	12/93
Glycol Dehydrator Vent	lbs/mmscf				6.6		La. DEQ	1991
Gas Venting	lbs/scf				0.0034			

Sulphur Content Source	Value	Units
Fuel Gas	3.33	ppm
Diesel Fuel	0.05	% weight
Produced Gas(Flares)	3.33	ppm
Produced Oil (Liquid Flaring)	1	% weight

AIR EMISSIONS CALCULATIONS

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL	CONTACT	PHONE	REMARKS
Chevron U S A Inc	Green Canyon	640	G20082	NA	PS001, PS002, PS003, PS004, PS005, PS006, PS007, PS008, PS009, PS010, PS011	Meghan Gallinaro	985-773-6085	This AQR includes additional drilling days each year for recompletions, workovers, interventions, abandonment activities, and inspections/maintenance of subsea wells, equipment and pipelines

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	PM	SOx	NOx	VOC	CO	PM	SOx	NOx	VOC	CO
DRILLING	PRIME MOVER>600hp diesel	61800	2984.94	71638.56	24	180	43.56	24.98	1497.36	44.92	326.70	94.09	53.95	3234.29	97.03	705.66
	PRIME MOVER>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	BURNER diesel	0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	AUXILIARY EQUIP<600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(crew)	10800	521.64	12519.36	7	60	7.61	4.37	261.67	7.85	57.09	1.60	0.92	54.95	1.65	11.99
	VESSELS>600hp diesel(supply)	6600	318.78	7650.72	19	90	4.65	2.67	159.91	4.80	34.89	3.98	2.28	136.72	4.10	29.83
	VESSELS>600hp diesel(tugs)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PIPELINE INSTALLATION	PIPELINE LAY BARGE diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PIPELINE BURY BARGE diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(crew)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(supply)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FACILITY INSTALLATION	DERRICK BARGE diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MATERIAL TUG diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(crew)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(supply)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRODUCTION	RECIP.<600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECIP.>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TURBINE nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.2 cycle lean nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.4 cycle lean nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.4 cycle rich nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	BURNER nat gas	0	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
	MISC.	BPD	SCF/HR	COUNT												
	TANK-	0			0	0				0.00					0.00	
	FLARE-		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	PROCESS VENT-		520000		24	2				1768.00					42.43	
	FUGITIVES-			0.0		0				0.00					0.00	
	GLYCOL STILL VENT-		0		0	0				0.00					0.00	
DRILLING WELL TEST	OIL BURN	0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	GAS FLARE		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
2019 YEAR TOTAL							55.82	32.01	1918.94	1825.57	418.68	99.66	57.15	3425.97	145.21	747.48
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES											3952.71	3952.71	3952.71	3952.71	82119.46
	118.7															

* This AQR includes contingency drilling days each year for recompletions, workovers, interventions, abandonment activities, and inspections/maintenance of subsea wells, equipment and pipelines.
Note, the number of days for "drilling activity" in the AQR will not match the Form 137.

AIR EMISSIONS CALCULATIONS

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL	CONTACT	PHONE	REMARKS
Chevron U S A Inc	Green Canyon	640	G20082	NA	PS001, PS002, PS003, PS004, PS005, PS006, PS007, PS008, PS009, PS010, PS011	Meghan Gallinaro	985-773-6085	This AQR includes additional drilling days each year for recompletions, workovers, interventions, abandonment activities, and inspections/maintenance of subsea wells, equipment and pipelines

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	PM	SOx	NOx	VOC	CO	PM	SOx	NOx	VOC	CO
DRILLING	PRIME MOVER>600hp diesel	61800	2984 94	71638 56	24	180	43 56	24 98	1497 36	44 92	326 70	94 09	53 95	3234 29	97 03	705 66
	PRIME MOVER>600hp diesel	0	0	0 00	0	0	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
	PRIME MOVER>600hp diesel	0	0	0 00	0	0	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
	PRIME MOVER>600hp diesel	0	0	0 00	0	0	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
	BURNER diesel	0			0	0	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
	AUXILIARY EQUIP<600hp diesel	0	0	0 00	0	0	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
	VESSELS>600hp diesel(crew)	10800	521 64	12519 36	7	60	7 61	4 37	261 67	7 85	57 09	1 60	0 92	54 95	1 65	11 99
	VESSELS>600hp diesel(supply)	6600	318 78	7650 72	19	90	4 65	2 67	159 91	4 80	34 89	3 98	2 28	136 72	4 10	29 83
	VESSELS>600hp diesel(tugs)	0	0	0 00	0	0	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
PIPELINE INSTALLATION	PIPELINE LAY BARGE diesel	0	0	0 00	0	0	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
	JUMPER INSTALLATION VESSEL diesel	12070	582 981	13991 54	24	7	8 51	4 88	292 44	8 77	63 81	0 71	0 41	24 57	0 74	5 36
	PIPELINE BURY BARGE diesel	0	0	0 00	0	0	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
	SUPPORT VESSEL diesel	0	0	0 00	0	0	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
	VESSELS>600hp diesel(crew)	0	0	0 00	0	0	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
	VESSELS>600hp diesel(supply)	0	0	0 00	0	0	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
FACILITY INSTALLATION	DERRICK BARGE diesel	0	0	0 00	0	0	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
	MATERIAL TUG diesel	0	0	0 00	0	0	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
	VESSELS>600hp diesel(crew)	0	0	0 00	0	0	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
	VESSELS>600hp diesel(supply)	0	0	0 00	0	0	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
PRODUCTION	RECIP <600hp diesel	0	0	0 00	0	0	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
	RECIP >600hp diesel	0	0	0 00	0	0	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
	SUPPORT VESSEL diesel	0	0	0 00	0	0	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
	TURBINE nat gas	0	0	0 00	0	0		0 00	0 00	0 00	0 00		0 00	0 00	0 00	0 00
	RECIP 2 cycle lean nat gas	0	0	0 00	0	0		0 00	0 00	0 00	0 00		0 00	0 00	0 00	0 00
	RECIP 4 cycle lean nat gas	0	0	0 00	0	0		0 00	0 00	0 00	0 00		0 00	0 00	0 00	0 00
	RECIP 4 cycle rich nat gas	0	0	0 00	0	0		0 00	0 00	0 00	0 00		0 00	0 00	0 00	0 00
	BURNER nat gas	0	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
	MISC.	BPD	SCF/HR	COUNT												
	TANK-	0			0	0				0 00					0 00	
	FLARE-		0		0	0		0 00	0 00	0 00	0 00		0 00	0 00	0 00	0 00
	PROCESS VENT-		520000		24	2				1768 00					42 43	
	FUGITIVES-			0 0		0				0 00					0 00	
	GLYCOL STILL VENT-		0		0	0				0 00					0 00	
DRILLING WELL TEST	OIL BURN	0			0	0	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
	GAS FLARE		0		0	0		0 00	0 00	0 00	0 00		0 00	0 00	0 00	0 00
2020 YEAR TOTAL							**64.33**	**36.89**	**2211.39**	**1834.34**	**482.48**	**100.38**	**57.56**	**3450.53**	**145.95**	**752.84**
EXEMPTION CALCULATION	**DISTANCE FROM LAND IN MILES** 118 7											**3952.71**	**3952.71**	**3952.71**	**3952.71**	**82119.46**

* This AQR includes contingency drilling days each year for recompletions, workovers, interventions, abandonment activities, and inspections/maintenance of subsea wells, equipment and pipelines
Note, the number of days for "drilling activity" in the AQR will not match the Form 137

AIR EMISSIONS CALCULATIONS

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL	CONTACT	PHONE	REMARKS
Chevron U S A Inc	Green Canyon	640	G20082	NA	PS001, PS002, PS003, PS004, PS005, PS006, PS007, PS008, PS009, PS010, PS011	Meghan Gallinaro	985-773-6085	This AQR includes additional drilling days each year for recompletions, workovers, interventions, abandonment activities, and inspections/maintenance of subsea wells, equipment and pipelines

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	PM	SOx	NOx	VOC	CO	PM	SOx	NOx	VOC	CO
DRILLING	PRIME MOVER>600hp diesel	61800	2984.94	71638.56	24	180	43.56	24.98	1497.36	44.92	326.70	94.09	53.95	3234.29	97.03	705.66
	PRIME MOVER>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PRIME MOVER>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	BURNER diesel	0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	AUXILIARY EQUIP<600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(crew)	10800	521.64	12519.36	7	60	7.61	4.37	261.67	7.85	57.09	1.60	0.92	54.95	1.65	11.99
	VESSELS>600hp diesel(supply)	6600	318.78	7650.72	19	90	4.65	2.67	159.91	4.80	34.89	3.98	2.28	136.72	4.10	29.83
	VESSELS>600hp diesel(tugs)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PIPELINE INSTALLATION	PIPELINE LAY BARGE diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	PIPELINE BURY BARGE diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(crew)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(supply)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FACILITY INSTALLATION	DERRICK BARGE diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MATERIAL TUG diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(crew)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS>600hp diesel(supply)	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRODUCTION	RECIP.<600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECIP.>600hp diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	SUPPORT VESSEL diesel	0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	TURBINE nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.2 cycle lean nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.4 cycle lean nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	RECIP.4 cycle rich nat gas	0	0	0.00	0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	BURNER nat gas	0	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
	MISC.	BPD	SCF/HR	COUNT												
	TANK-	0			0	0				0.00					0.00	
	FLARE-		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
	PROCESS VENT-		520000		24	2				1768.00					42.43	
	FUGITIVES-			0.0		0				0.00					0.00	
	GLYCOL STILL VENT-		0		0	0				0.00					0.00	
DRILLING WELL TEST	OIL BURN	0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	GAS FLARE		0		0	0		0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
2021-2028	YEAR TOTAL						55.82	32.01	1918.94	1825.57	418.68	99.66	57.15	3425.97	145.21	747.48
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES											3952.71	3952.71	3952.71	3952.71	82119.46
	118.7															

* This AQR includes contingency drilling days each year for recompletions, workovers, interventions, abandonment activities, and inspections/maintenance of subsea wells, equipment and pipelines.
Note, the number of days for "drilling activity" in the AQR will not match the Form 137.

AIR EMISSIONS CALCULATIONS

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL
Chevron U.S.A. Inc.	Green Canyon	640	G20082	NA	PS001, PS002, PS003, PS004, PS005, PS006, PS007, PS008, PS009, PS010, PS011

Year	Emitted Substance				
	PM	SOx	NOx	VOC	CO
2019	99.66	57.15	3425.97	145.21	747.48
2020	100.38	57.56	3450.53	145.95	752.84
2021-2028	99.66	57.15	3425.97	145.21	747.48
Allowable	3952.71	3952.71	3952.71	3952.71	82119.46

SECTION 9
OIL SPILL INFORMATION

9.1 OIL SPILL RESPONSE PLANNING

All the proposed activities and facilities in this DOCD will be covered by Chevron's Oil Spill Response Plan (OSRP) filed by Chevron Corporation (Operator Number 02335) and last approved on October 25, 2018 (OSRP O-421). The following operators are covered under this OSRP:

Chevron U.S.A. Inc. (00078)

Chevron Pipe Line Company (00400)

Sabine Pipe Line LLC (00835)

Union Oil Company of California (00003)

PRS Offshore, L.P. (01767)

9.2 SPILL RESPONSE SITES

Primary Response Equipment Location	Preplanned Staging Location
Leeville, LA	Leeville, LA

9.3 OSRO INFORMATION

Clean Gulf Associates (CGA) and Marine Spill Response Corp. (MSRC) are the primary surface response equipment providers for Chevron in the Gulf of Mexico Region, and maintain a dedicated fleet of vessels and other equipment permanently located at designated ports. CGA and MSRC have the capability to plan the mobilization and rapid deployment of spill response resources on a 24-hour, 7 day a week basis. The CGA and MSRC equipment is strategically positioned across the Gulf of Mexico from Ingleside, TX to Tampa, FL and is available on a 24-hour, 7 day a week basis. Trained Oil Spill Removal Organizations (OSROs) operate all CGA and MSRC equipment.

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

Chevron's primary staging areas, marine transportation facilities and helicopter bases are located in Port Fourchon, Galliano and Venice, LA. Chevron also can contract for additional staging areas throughout Gulf of Mexico 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.

Offshore recovery equipment is primarily staged at the following locations: Ingleside, Houston, Galveston and Port Arthur, TX, Lake Charles, Morgan City, Houma, Port Fourchon, Leeville,

Fort Jackson, Harvey, Belle Chase and Baton Rouge, LA, Pascagoula, MS, Tampa, Miami and Jacksonville, FL.

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)	PS011
Distance to nearest shoreline (miles)	118	118
Storage tanks & flowlines (bbl)	4,914	N/A
Lease term pipelines (bbl)	4,044	N/A
Uncontrolled blowout (bbl)	186,452	12,000
Total Volume (bbl)	**195,410**	**12,000**
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 last approved on October 25, 2018 (OSRP O-421), 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

A discussion of the response to an oil spill resulting from the activities proposed in this plan. Included is all the applicable information described in 30 CFR 254.26(b),(c),(d), and (e).

Oil spill response related activities for facilities included in this document are governed by the Chevron regional Gulf of Mexico Oil Spill Response Plan (OSRP). The OSRP meets all requirements contained in 30 CFR 254. The Chevron regional Gulf of Mexico OSRP was approved by BSEE on March 22, 2016. The Chevron regional Gulf of Mexico OSRP encompasses all facilities operated by Chevron U.S.A. Inc. and, herein the jurisdiction of the BOEM and BSEE.

Upon notification of a major oil release from a Chevron facility or operation in the Gulf of Mexico, Chevron response personnel will make the initial notifications to all involved government agencies, Oil Spill Response Organizations (OSROs), and associated support services.

Chevron has a contract in effect with MWCC, MSRC and CGA, as well as other OSROs, to ensure availability of personnel, services, and equipment on a 24-hour-per-day basis. The OSROs can provide personnel, equipment, and material in sufficient quantities and recovery

capacity to respond effectively to oil spills from the facilities and leases covered by this plan, including the Worst-Case Discharge scenarios. OSROs under contract with Chevron have oil spill response equipment located throughout the Gulf Coast area. Much of the equipment is in road ready condition and available to be transported on short notice to the nearest predetermined staging area(s). The "road-ready condition" provides the shortest reasonable response times for transporting equipment to the staging areas.

Based on the anticipated Worst-Case Discharge scenario, Chevron can be onsite with the 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.

These assets are listed in the Chevron Oil Spill Response Plan.

The following paragraphs provide information required by 30 CFR 254.26.

Trajectory Analysis

Land areas that could be potentially impacted by an oil spill were determined using the BOEM Oil Spill Risk Analysis Model (OSRAM) trajectory results. The OSRAM estimates the probability that oil spills from designated locations would contact shoreline and offshore natural resources. These probabilities indicate, in terms of percentage, the chance that an oil spill occurring in a particular launch area will contact a certain county or parish within 3, 10, and 30 days. OCS Launch Area 46 was used as the point of origin for the blocks in this plan. Land segments identified by the model are listed below:

Land Segment	Chance of contacting within 3 days	Chance of contacting within 10 days	Chance of contacting within 30 days
C08, Matagorda County, TX	0	0	2%
C09, Brazoria County, TX	0	0	1%
C10, Galveston County, TX	0	0	1%
C12, Jefferson County, TX	0	0	1%
C13, Cameron Parish, LA	0	0	2%
C14, Vermilion Parish, LA	0	0	1%
C17, Terrebonne Parish, LA	0	0	1%
C18, Lafourche Parish, LA	0	0	1%
C20, Plaquemines Parish, LA	0	0	3%

Resource Identification

Resources of special economic or environmental importance found in land segments identified in the above paragraph can be found in the NOAA ESI Coastal Sensitivity Atlas (Maps). These maps can be accessed through NOAA and will be used during any spill occurring from the locations listed in this document.

Additionally, information on environmental sensitivities is contained in the below Coast Guard Area Contingency Plans which will be accessed and followed during an oil spill that threatens the Gulf of Mexico shoreline.

- Corpus Christi, TX Area Contingency Plan
- Port Arthur, TX Area Contingency Plan

- Houston-Galveston, TX Area Contingency Plan
- Southeast Louisiana Area Contingency Plan
- Sector New Orleans, LA Area Contingency Plan
- Mobile, AL Area Contingency Plan
- St. Petersburg, FL Area Contingency Plan

Response Discussion

Chevron maintains numerous resources, equipment and expertise to respond to an oil spill in the Gulf of Mexico. 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 Mexico. Chevron has contracts with the following oil spill response service organizations (OSRO).

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

- Clean Gulf Associates Services (CGAS)
- Clean Gulf Associates (CGA)
- Marine Spill Response Corporation (MSRC)
- U.S. Environmental Services LLC (USES)
- American Pollution Control Corporation (AmPol)
- OMI Environmental Solutions (OMIES)
- ES&H Environmental Consulting (ES&H)
- Clean Harbors Inc.
- Horizon Environmental
- Oil Spill Response Limited (OSR)
- Marine Well Containment Company (MWCC)
- T&T Marine

Oil Spill Cooperatives (OSC). OSCs have equipment pre-staged in the Gulf of Mexico 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 strictly dedicated to Gulf of Mexico oil and gas developers and producers.
- Marine Spill Response Corporation (MSRC) – This national not-for-profit organization has extensive dedicated offshore resources located in the Gulf of Mexico.

Well Control Emergency Response Companies

- Wild Well Control Inc.
- Boots & Coots
- IWC Services, Inc.

Oil Spill Management and Response Consultants

- The Response Group (TRG)

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

- Airborne Support, Inc.
- Marine Spill Response Corporation (MSRC)
- Clean Gulf Associates (CGA)
- Oil Spill Response Limited (OSR)

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 similar to those listed in the attached enclosures. This information comes directly from the Chevron regional Gulf of Mexico Oil Spill Response Plans and applies to a worst-case discharge volume of 465,709 barrels per day that could occur at the Chevron facility located in Mississippi Canyon Block 122. Resources will be mobilized to sites as relevant to the situation and/or directed by unified command.

- 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 as appropriate:

- Set up and staff its incident command post 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 as appropriate:

- 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 to protect and rehabilitate wildlife
- 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 will integrate simultaneous containment booming, mechanical recovery, surface 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
- Maximize containment and recovery of free oil

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 closest to the source to burn as much oil as possible.
- Apply Dispersants to oil that cannot be mechanically recovered.

Simultaneous implementation of these strategies is designed to effectively contain and recover an oil spill offshore 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 minimize land impact, to the maximum extent practicable, within an estimated 24 hours.

The following sections of Chevron's OSRP provide more information on each operation to respond to and 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. 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 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 various boom configurations that will maximize containment of oil to collect using skimmers. These vessels will work in coordinated ways to cover as large of a geographic area as possible at the location of the surface spill where oil is the 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.

*In-situ burn, and surface dispersant use require FOSC and/or EPA approval

(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.

*In-situ burn, and surface dispersant use require FOSC and/or EPA approval

Vessel radar systems and infrared cameras will be used to detect and mechanically collect oil. 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 LA parishes and Texas counties could be impacted by an oil spill from areas listed in this plan. These areas are dominated by find sand beaches, coarse sand beaches, swamps and salt water marshes. The below summarizes 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. Find 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 water content of the sediments. A potential environmental issue is that the cleanup may be more damaging than the oil itself. Access to swamps is poor due to the soft sediment and 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 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 in on habitats where:

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

Human-use resources of concern are listed in the Chevron OSRP. Areas of economic important, 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

Suitability of Resources

All response equipment, materials, support vessels and strategies listed in this document and the Chevron regional Gulf of Mexico Oil Spill Response Plan 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 Oil Spill Response Plan. The Chevron regional Gulf of Mexico Oil Spill Response Plan is maintained by the Chevron Greater Gulf of Mexico Emergency Management Coordinator located in Covington, LA.

9.6 MODELING REPORT

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

SECTION 10
ENVIRONMENTAL MONITORING INFORMATION

10.1 MONITORING SYSTEMS

There are no environmental monitoring systems currently in place or planned for the proposed activities.

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.

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 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:

- NTL No. 2015-BSEE-G03, "Marine Trash and Debris Awareness and Elimination"
- 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"

10.3 FLOWER GARDEN BANKS NATIONAL MARINE SANCTUARY

Green Canyon Block 640 is 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 Lease OCS-G 20082, Green Canyon Block 640.

11.1 MILITARY WARNING AREA (MWA)

Green Canyon Block 640 is 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

This plan does not propose activities for which the state of Florida is an affected state; therefore, mitigation information is not required for the activities proposed in this plan.

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:

- NTL No. 2015-BSEE-G03, "Marine Trash and Debris Awareness and Elimination"
- 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"

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 640. Two lease term jumper pipelines (applications to be submitted), approximately 100' in length, will be installed as part of this DOCD.

13.2 TRANSPORTATION SYSTEM

A 20-24-inch oil Right-of-Way Pipeline (PSN 15497) was installed to transport produced hydrocarbons from the A-Tahiti SPAR to the existing A-Boxer Platform in Green Canyon Block 19 for ultimate delivery to shore via Operations System No. 29.5. A 12-16-inch gas Right-of-Way Pipeline (PSN 15603) was installed to transport produced hydrocarbons from the A-Tahiti SPAR to an existing PLES located in Green Canyon Block 294 for ultimate delivery to shore via Operations System No. DS0. No new nearshore 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

The most practical, direct route from the shorebase as permitted by weather and traffic conditions will be utilized. 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
Light Construction Vessel (LCV)	6600 bbls	1	7 days
Crew boat	47,382 gals	1	60 days
Supply boat	303,093 gals	1	90 days
Helicopter	430 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

A table, "Wastes You Will Transport and/or Dispose of 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 well 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 (recylables)	*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.

Attachment 14-B

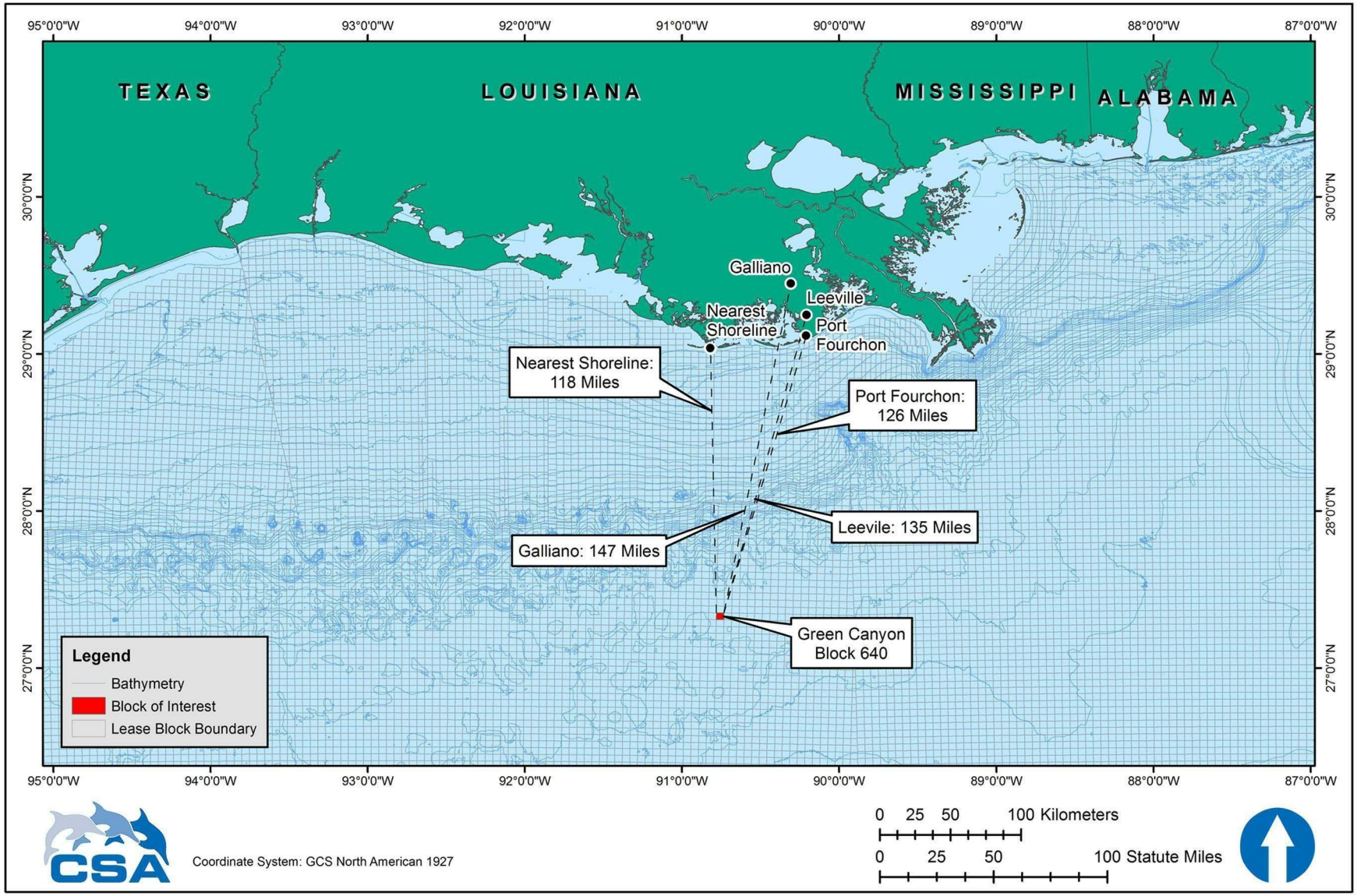

Figure 1. Vicinity map for the lease area.

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
C-Port Shorebase	Fourchon, Louisiana	Existing
Chevron Galliano Airbase	Galliano, Louisiana	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

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

SECTION 16
COASTAL ZONE MANAGEMENT (CZM) INFORMATION

A certificate for Coastal Zone Management Consistency for the State of Louisiana was submitted with the Initial DOCD for Green Canyon Block 640 (Control No. N-8406).

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_2S releases)	Discarded Trash & Debris
Site-specific at Offshore Location						
Designated topographic features						
Pinnacle Trend area live bottoms						
Eastern Gulf live bottoms						
Benthic communities	(4)		(4)		(4), (8)	(4)
Water quality			X		(8)	
Fisheries			X		(8)	
Marine Mammals	(8)				(8)	X
Sea Turtles	(8)				(8)	X
Air quality						
Shipwreck sites (known or potential)						
Prehistoric archaeological sites						
Vicinity of Offshore Location						
Essential fish habitat			X		(6)	
Marine and pelagic birds	(8)				(6)	X
Public health and safety					(6)	
Coastal and Onshore						
Beaches						
Wetlands						
Shore birds and coastal nesting birds						
Coastal wildlife refuges						
Wilderness areas						

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 OCS lease;
   - Essential Fish Habitat (EFH) criteria of 500 ft. from any no-activity zone; or
   - Proximity of any submarine bank (500 ft. buffer zone) with relief greater than 2 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 action 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 activities 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.

(B) ANALYSIS

Site-Specific at Green Canyon Block 640

Proposed operations consist of the installation of two lease term jumper pipelines and the commencement of production from Lease OCS-G 20082, Green Canyon Block 640, Well PS011.

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 52 miles from the closest designated Topographic Features Stipulation Block (Diaphus Bank); therefore, no adverse impacts are expected.

Accidents: It is unlikely that an accidental surface or subsurface spill would occur from the proposed activities (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 m 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 m, no oil from a surface spill could 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**).

There are no other IPFs (including emissions, effluents and wastes sent to shore for disposal) from the proposed activities, which could impact topographic features.

2. Pinnacle Trend Area Live Bottoms

Potential IPFs on pinnacle trend area live bottoms include physical disturbances to the seafloor and accidents.

Physical disturbances to the seafloor: Green Canyon Block 640 **is** 189 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 activities (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 m 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 applicable 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**).

There are no other IPFs (including emissions, effluents and wastes sent to shore for disposal) from the proposed activities 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 and accidents.

Physical disturbances to the seafloor: Green Canyon Blocks 640 and 641 are 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.

Accidents: It is unlikely that an accidental surface or subsurface spill would occur from the proposed activities (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 m 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 applicable due to the distance of these blocks from a live bottom area. 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 disposal) from the proposed activities which could impact an Eastern Gulf live bottom area.

4. Benthic Communities

Green Canyon Block 640 **is** located in water depths 984 feet (300 meters) or greater. IPFs that could result in impacts to benthic communities from the proposed activities include physical disturbances to the seafloor.

Physical disturbances to the seafloor: Green Canyon Block 640 **is** approximately 22 miles from a known benthic community site (Green Canyon Block 287), listed in NTL 2009-G40. This plan submittal includes the required maps, analyses and statement(s). The proposed activities will be

conducted in accordance with NTL 2009-G40, which will ensure that features or areas that could support high-density benthic communities will not be impacted.

There are no other IPFs (including emissions, effluents, wastes sent to shore for disposal, or accidents) from the proposed activities which could impact benthic communities.

5. Water Quality

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 drill rigs, the drilling of wells 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: Oil spills have the potential to alter offshore water quality; however, it is unlikely that an accidental surface or subsurface spill would occur from the proposed activities. Between 1980 and 2000, OCS operations produced 4.7 billion barrels of oil and spilled only 0.001 percent of this oil, or 1 bbl for every 81,000 bbl produced. The spill risk related to a diesel spill from drilling operations is even less. Between 1976 and 1985, (years for which data were collected), there were 80 reported diesel spills greater than one barrel associated with drilling activities. Considering that there were 11,944 wells drilled, this is a 0.7 percent probability of an occurrence. 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. The activities proposed in this plan will be covered by Chevron's Regional Oil Spill Response Plan (refer to information submitted in **Section 9**).

There are no other IPFs (including emissions, physical disturbances to the seafloor, effluents and wastes sent to shore for disposal) from the proposed activities which could cause impacts to water quality.

6. Fisheries

IPFs that could cause impacts to fisheries as a result of the proposed operations in Green Canyon Block 640 include physical disturbances to the seafloor, and accidents.

Physical disturbances to the seafloor: The emplacement of a structure or drilling 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.

Accidents: 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 activities (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 IPFs from emissions, effluents or wastes sent to shore for disposal from the proposed activities which could cause impacts to fisheries.

7. Marine Mammals

GulfCet II studies 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. IPFs that could cause impacts to marine mammals as a result of the proposed operations in Green Canyon Blocks 640 and 641 include emissions, discarded trash and debris, and accidents.

Emissions: Noises from drilling activities, support 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 activities is not expected to substantially harm marine mammals. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and 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 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.

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 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 when they are sighted. Vessel crews should use a reference guide to help identify the twenty-eight species of whales and dolphins and the single species of manatee that may be encountered in the Gulf of Mexico OCS. Vessel crews 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 Marine Mammal and Sea Turtle Stranding Hotline at (888) 404-3922, the NMFS Southeast Regional Office at (727) 824-5312, or the Marine Mammal Stranding Network at (305) 862-2850. In addition, if the injury or death was caused by a collision with a contract vessel, the BOEM must be notified within 24 hours of the strike by email to 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.

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 activities (refer to **Item 5**, Water Quality). Oil spill response activities may increase vessel traffic in the area, which could add to changes in cetacean behavior and/or distribution, thereby causing additional stress to the animals. The effect of oil dispersants on cetaceans is not known. 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**).

There are no other IPFs (including physical disturbances to the seafloor and effluents) from the proposed activities which could impact marine mammals.

8. Sea Turtles

IPFs that could cause impacts to sea turtles as a result of the proposed operations include emissions, discarded trash and debris, and accidents. 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; Lohoefener et al., 1990). Deep waters may be used by all species as a transitory habitat.

Emissions: Noise from drilling activities, support vessels, and helicopters may elicit a startle reaction from sea turtles, but this is a temporary disturbance.

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 activities is not expected to substantially harm sea turtles. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and 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 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.

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 when they are sighted. 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. 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 Marine Mammal and Sea Turtle Stranding Hotline at (888) 404-3922, the NMFS Southeast Regional Office at (727) 824-5312, or

the Marine Mammal Stranding Network at (305) 862-2850. In addition, if the injury or death was caused by a collision with a contract vessel, the BOEM must be notified within 24 hours of the strike by email to 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.

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 activities (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**).

There are no other IPFs (including physical disturbances to the seafloor and effluents) from the proposed activities which could impact sea turtles.

9. Air Quality

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 are 118 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 would 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, wastes sent to shore for treatment or disposal) from the proposed activities which could impact air quality.

10. Shipwreck Sites (known or 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. Chevron will report to BOEM the discovery of any evidence of a shipwreck and make every reasonable effort to preserve and protect that cultural resource. There are no other IPFs (including emissions, effluents, wastes sent to shore for treatment or disposal, or accidents) from the proposed activities which could impact shipwreck sites.

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 activities (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, or wastes sent to shore for treatment or disposal) from the proposed activities that could cause impacts to shipwreck sites.

11. Prehistoric Archaeological Sites

IPFs which could impact prehistoric archaeological sites as a result of the proposed operations in Green Canyon Block 640 include disturbances to the seafloor (structure emplacement) and accidents (oil spill). Green Canyon Block 640 **is** located outside the Archaeological Prehistoric high probability line. Chevron will report to BOEM the discovery of any object of prehistoric archaeological significance and make every reasonable effort to preserve and protect that cultural resource.

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 activities (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, wastes sent to shore for treatment or disposal) from the proposed activities which could impact prehistoric archaeological sites.

Vicinity of Offshore Location

1. Essential Fish Habitat (EFH)

IPFs that could cause impacts to 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: The Live Bottom Low Relief Stipulation, the Live Bottom (Pinnacle Trend) Stipulation, and the Eastern Gulf Pinnacle Trend Stipulation would prevent most of the potential impacts on live-bottom communities and EFH from bottom disturbing activities (e.g., anchoring, structure emplacement and removal).

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 activities (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 or wastes sent to shore for treatment or disposal) from the proposed activities which could impact essential fish habitat.

2. Marine and Pelagic Birds

IPFs that could impact marine birds as a result of the proposed activities include air emissions, accidental oil spills, and discarded trash and debris from vessels and the facilities.

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

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 activities (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 and 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 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. 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 activities will seldom interact with marine and pelagic birds; therefore, the effects will be negligible.

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

3. Public Health and Safety Due to Accidents.

There are no IPFs (emissions, effluents, physical disturbances to the seafloor, wastes sent to shore for treatment or disposal or accidents, including an accidental H_2S release) from the proposed activities which could cause impacts to 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 activities be classified by BSEE as H_2S absent.

Coastal and Onshore

1. Beaches

IPFs from the proposed activities that could cause impacts to beaches include accidents (oil spills) 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 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 activities. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and 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 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.

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 (emissions, effluents, physical disturbances to the seafloor, or wastes sent to shore for treatment or disposal) from the proposed activities which could impact beaches.

2. Wetlands

IPFs from the proposed activities that could cause impacts to wetlands include accidents (oil spills) and discarded trash and debris.

Accidents: Oil spills could cause impacts to wetlands, however, it is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). Due to the distance from shore (118 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 activities. Operators are prohibited from deliberately discharging

debris as mandated by MARPOL-Annex V and 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 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.

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 (emissions, effluents, physical disturbances to the seafloor, or wastes sent to shore for treatment or disposal) from the proposed activities which could impact wetlands.

3. Shore Birds and Coastal Nesting Birds

Accidents: Oil spills could cause impacts to shore birds and coastal nesting birds. However, it is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). Given the distance from shore (118 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 and 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 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.

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 (emissions, effluents, physical disturbances to the seafloor, or wastes sent to shore for treatment or disposal) from the proposed activities that could cause impacts to shore birds and coastal nesting birds.

4. Coastal Wildlife Refuges

Accidents: An accidental oil spill from the proposed activities could cause impacts to coastal wildlife refuges. However, it is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). Due to the distance from shore (118 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 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.

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 (emissions, effluents, physical disturbances to the seafloor, or wastes sent to shore for treatment or disposal) from the proposed activities that could cause impacts to coastal wildlife refuges.

5. Wilderness Areas

Accidents: An accidental oil spill from the proposed activities could cause impacts to wilderness areas. However, it is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). Due to the distance from the nearest designated Wilderness Area (174 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 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.

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 (emissions, effluents, physical disturbances to the seafloor, or wastes sent to shore for treatment or disposal) from the proposed activities that could cause impacts to wilderness areas.

6. Other Environmental Resources Identified

There are no other environmental resources identified for this impact assessment.

(C) IMPACTS ON PROPOSED ACTIVITIES

The site–specific environmental conditions have been taken into account for the proposed activities. No impacts are expected on the proposed activities 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 their location in the gulf, Green Canyon Blocks 640 and 641 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 activities 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 activities. 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
- BOEM EIS's:
  - GOM Deepwater Operations and Activities. Environmental Assessment. BOEM 2000-001
  - GOM Central and Western Planning Areas Sales 166 and 168 Final Environmental Impact Statement. BOEM 96-0058.

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

1. Supplemental Exploration Plan (Control No. S-7778).
2. Initial Development Operations Coordination Document (Control No. N-8406).
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