

UNITED STATES GOVERNMENT  
MEMORANDUM

November 7, 2023

To: Public Information  
From: Plan Coordinator, OLP, Plans Section (GM 235D)

Subject: Public Information copy of plan

Control #	-	Control S-8126
Type	-	Supplemental Exploration Plan
Lease(s)	-	OCS-G 36746 Block - 284 Eugene Island Area
Operator	-	Walter Oil & Gas Corporation
Description	-	Well 001
Rig Type	-	Jackup Rig

Attached is a copy of the subject plan.

It has been deemed submitted and is under review for approval.

Nicole Martinez  
Plan Coordinator

**PUBLIC COPY**  
August 28, 2023

## **SUPPLEMENTAL EXPLORATION PLAN**



**WALTER OIL & GAS CORPORATION**

Eugene Island Block 284  
OCS-G 36746  
Pork Chop Prospect  
Affected State: Louisiana

**Estimated Startup Date: December 1, 2023**

**SUBMITTED BY:**

Walter Oil & Gas Corporation  
1100 Louisiana  
Suite 200  
Houston, TX 77002

Paul Rodriguez  
(281) 659-1221

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**Record of Changes – PUBLIC COPY**  
**S-8126, Supplemental Exploration Plan, Walter Oil & Gas Corporation, (OCS-G 36746, Eugene Island Block 284)**

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## TABLE OF CONTENTS

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



4.3 H2S CONTINGENCY PLAN .....	5
4.4 MODELING REPORT .....	5
<b>SECTION 5 BIOLOGICAL, PHYSICAL AND SOCIOECONOMIC INFORMATION.....</b>	<b>6</b>
5.1 DEEPWATER BENTHIC COMMUNITIES .....	6
5.2 TOPOGRAPHIC FEATURES (BANKS) .....	6
5.3 TOPOGRAPHIC FEATURES STATEMENT (SHUNTING).....	6
5.4 LIVE BOTTOMS (PINNACLE TREND FEATURES).....	6
5.5 LIVE BOTTOMS (LOW RELIEF).....	6
5.6 POTENTIALLY SENSITIVE BIOLOGICAL FEATURES MAP.....	6
5.7 THREATENED AND ENDANGERED SPECIES, CRITICAL HABITAT, AND MARINE MAMMAL INFORMATION.....	6
5.8 ARCHAEOLOGICAL REPORT .....	8
5.9 AIR AND WATER QUALITY INFORMATION .....	8
5.10 SOCIOECONOMIC INFORMATION .....	8
<b>SECTION 6 WASTES AND DISCHARGES INFORMATION .....</b>	<b>9</b>
6.1 PROJECTED GENERATED WASTES .....	9
6.2 MODELING REPORT .....	9
<b>SECTION 7 AIR EMISSIONS INFORMATION .....</b>	<b>10</b>
7.1 EMISSIONS WORKSHEETS AND SCREENING QUESTIONS.....	10
7.2 SUMMARY INFORMATION .....	10
<b>SECTION 8 OIL SPILL INFORMATION .....</b>	<b>11</b>
8.1 OIL SPILL RESPONSE PLANNING .....	11
8.2 SPILL RESPONSE SITES .....	11
8.3 OSRO INFORMATION.....	11
8.4 WORST CASE SCENARIO DETERMINATION.....	11
8.5 OIL SPILL RESPONSE DISCUSSION .....	12
8.6 MODELING REPORT .....	12
<b>SECTION 9 ENVIRONMENTAL MONITORING INFORMATION.....</b>	<b>13</b>
9.1 MONITORING SYSTEMS.....	13
9.2 INCIDENTAL TAKES .....	13
9.3 FLOWER GARDEN BANKS NATIONAL MARINE SANCTUARY .....	13
<b>SECTION 10 LEASE STIPULATIONS INFORMATION .....</b>	<b>14</b>
10.1 MILITARY WARNING AREA (MWA) .....	14

10.2 MARINE PROTECTED SPECIES.....	14
<b>SECTION 11 ENVIRONMENTAL MITIGATION MEASURES INFORMATION.....</b>	<b>16</b>
11.1 MEASURES TAKEN TO AVOID, MINIMIZE, AND MITIGATE IMPACTS .....	16
11.2 INCIDENTAL TAKES .....	16
<b>SECTION 12 SUPPORT VESSELS AND AIRCRAFT INFORMATION .....</b>	<b>17</b>
12.1 GENERAL .....	17
12.2 DIESEL OIL SUPPLY VESSELS .....	17
12.3 DRILLING FLUID TRANSPORTATION Drilling fluid transportation information is not required to be submitted with this plan. ....	17
12.4 SOLID AND LIQUID WASTE TRANSPORTATION .....	17
12.5 VICINITY MAP .....	17
<b>SECTION 13 ONSHORE SUPPORT FACILITIES INFORMATION .....</b>	<b>18</b>
13.1 GENERAL .....	18
13.2 SUPPORT BASE CONSTRUCTION OR EXPANSION .....	18
13.3 SUPPORT BASE CONSTRUCTION OR EXPANSION TIMETABLE .....	18
13.4 WASTE DISPOSAL.....	18
<b>SECTION 14 COASTAL ZONE MANAGEMENT ACT (CZMA) INFORMATION.....</b>	<b>19</b>
<b>SECTION 15 ENVIRONMENTAL IMPACT ANALYSIS.....</b>	<b>20</b>
<b>SECTION 16 ADMINISTRATIVE INFORMATION .....</b>	<b>21</b>
16.1 EXEMPTED INFORMATION DESCRIPTION .....	21
16.2 BIBLIOGRAPHY .....	21

## SECTION ATTACHMENTS

<b>Section 1</b>	<b>Plan Contents</b>
1-A	OCS Plan Information Form
1-B	Well Location Plat
1-C	Bathymetry Map
1-D	Pay.gov Receipt
<b>Section 2</b>	<b>General Information</b>
2-A	Blowout Scenario
<b>Section 3</b>	<b>Geological, Geophysical Information</b>
3-A	Proprietary
3-B	Proprietary
3-C	Proprietary
3-D	Shallow Hazard Assessment
3-D	Proprietary
3-E	Proprietary
3-F	Proprietary
<b>Section 6</b>	<b>Wastes and Discharges Information</b>
6-A	Wastes You Will Generate, Treat and Downhole Dispose or Discharge to the GOM
<b>Section 7</b>	<b>Air Emissions Information</b>
7-A	Emissions Worksheets
<b>Section 8</b>	<b>Oil Spill Information</b>
8-A	Oil Spill Response Discussion
<b>Section 12</b>	<b>Support Vessels and Aircraft Information</b>
12-A	Waste You Will Transport and/or Dispose Onshore
12-B	Vicinity Map
<b>Section 14</b>	<b>Coastal Zone Management Act Information</b>
14-A	Coastal Zone Consistency Certification
<b>Section 15</b>	<b>Environmental Impact Analysis (EIA)</b>
15-A	Environmental Impact Analysis (EIA)

# SECTION 1

## PLAN CONTENTS

### 1.1 PLAN INFORMATION

Lease OCS-G 36746 was awarded to Juneau Oil & Gas, LLC in Lease Sale 253 with an effective date of December 1, 2019, and a lease term ending date of November 30, 2024. Walter Oil & Gas Corporation (Walter) was designated operator of the lease on July 24, 2023.

Under this Exploration Plan, Walter proposes to drill, complete, test and install one well. The well will be drilled with an Independent Leg Jack-up MODU and is located in approximately 194 feet of water. Walter is not proposing any new pipelines expected to make landfall.

The operations proposed will utilize pile-driving. Walter will drive 1 steel pipe with an impact hammer working dry to a depth of 200' BML. It is expected to take 0-50 strikes per foot at 100' and 50 – 200 strikes per foot to set the pipe. Pile driving activities are expected to last 1 day at 12-16 hours per day with 1 pile driven per day. Piles will be driven through layers of primarily marine sands, silts and clays. Sound attenuation will not be utilized.

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

### 1.2 LOCATION

A Well Location Plat depicting the surface location of the proposed well and water depth is included as **Attachment 1-B**.

No anchors are associated with the activities proposed in this plan. A Bathymetry Map depicting the surface location and water depth of the proposed wells is included as **Attachment 1-C**.

### 1.3 SAFETY AND POLLUTION PREVENTION FEATURES

A description of the drilling unit which complies with all relevant regulations is included on the OCS Plan Information Form. Rig specifications will be made part of each Application for Permit to Drill.

The rig will be equipped with safety and fire-fighting equipment required to comply with United States Coast Guard (USCG) regulations. Appropriate lifesaving equipment such as life rafts, life jackets, ring buoys, etc. as prescribed by the USCG, will be maintained on the rig at all times.

Safety features on the drilling unit will include well control, pollution prevention, and blowout prevention equipment as described in BSEE regulations 30 CFR 250 C, D, E, O, Q and S; and as further clarified by BSEE Notices to Lessees, and current policy making invoked by the BSEE, Environmental Protection Agency (EPA) and the USCG.

Pollution prevention measures include installation of curbs, gutters, drip pans, and drains on drilling deck areas to collect all contaminants and debris. Compliance will be maintained with the EPA NPDES Permit. The rig will be monitored daily and any waste or fuel resulting in pollution of

the Gulf waters will be reported to the representative in charge for immediate isolation and correction of the problem. All spills will be reported to the appropriate governmental agencies.

#### **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.

<b>Type of Storage Tank</b>	<b>Type of Facility</b>	<b>Tank Capacity (bbl)</b>	<b>Number of Tanks</b>	<b>Total Capacity (bbl)</b>	<b>Fluid Gravity (API)</b>
Fuel oil (marine diesel)	Jack-up	4388	1	4388	32.4°

#### **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**

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

#### **1.7 COST RECOVERY FEE**

Documentation of the \$4,348.00 cost recovery fee payment is included as **Attachment 1-D**.

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:	X	Exploration Plan (EP)		Development Operations Coordination Document (DOCD)								
Company Name: Walter Oil & Gas Corporation				BOEM Operator Number: 00730								
Address: 1100 Louisiana, Ste. 200				Contact Person: Greer Malbrough								
Houston, TX 77002-5299				Phone Number: 281-698-8525								
				E-Mail Address: greer.malbrough@jccteam.com								
If a service fee is required under 30 CFR 550.125(a), provide the				Amount paid	\$4,348.00	Receipt No.			277FJO8D			
Project and Worst-Case Discharge (WCD) Information												
Leases: OCS-G 36746			Area: EI			Blocks: 284			Project Name (If Applicable): Pork Chop			
Objective(s)	X	Oil	X	Gas		Sulphur		Salt	Onshore Support Base(s): EPS Fourchon			
Platform / Well Name: 001				Total Volume of WCD: 30,577,989 bbls					API Gravity: 51°			
Distance to Closest Land (Miles): 60 miles						Volume from uncontrolled blowout: 315,237 bbls/day						
Have you previously provided information to verify the calculations and assumptions for your WCD?									X	Yes		No
If so, provide the Control Number of the EP or DOCD with which this information was provided									See IEP Control No. N-10129			
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		
Drill, Complete and Test Well 001, install subsea tree/wellhead				12/1/2023			3/25/2024			115		
Description of Drilling Rig						Description of Structure						
X	Jackup			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 Lease Term Pipelines												
From (Facility/Area/Block)			To (Facility/Area/Block)			Diameter (Inches)			Length (Feet)			

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

Proposed Well/Structure Location										
Well or Structure Name/Number (If renaming well or structure, reference previous name): 001				Previously reviewed under an approved EP or DOCD?			Yes	X	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.				
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?							Yes	X	No	
<b>WCD Info</b>	For wells, volume of uncontrolled blowout (Bbls/Day): 315,237		For structures, volume of all storage and pipelines (Bbls): N/A			API Gravity of fluid		51°		
	<b>Surface Location</b>		<b>Bottom-Hole Location (For Wells)</b>			<b>Completion (For multiple completions, enter separate lines)</b>				
<b>Lease No.</b>	OCS-G 36746		OCS-G 36746			OCS OCS				
<b>Area Name</b>	Eugene Island		Eugene Island							
<b>Block No.</b>	284		284							
<b>Blockline Departures (in feet)</b>	N/S Departure: 5400.08' FNL		N/S Departure:			N/S Departure		F <input type="text"/> L <input type="text"/>		
	E/W Departure: 5576.96' FWL		E/W Departure:			E/W Departure		F <input type="text"/> L <input type="text"/>		
<b>Lambert X-Y coordinates</b>	X: 1,915,444.00		X:			X:		X:		
	Y: -97,972.00		Y:			Y:		Y:		
<b>Latitude/ Longitude</b>	Latitude: 28° 23' 49.250" N		Latitude:			Latitude		Latitude		
	Longitude: 91° 35' 46.448" W		Longitude:			Longitude		Longitude		
Water Depth (Feet): 197'			MD (Feet):		TVD (Feet):		MD (Feet):		TVD (Feet):	
Anchor Radius (if applicable) in feet: NA							MD (Feet):		TVD (Feet):	
<b>Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)</b>										
<b>Anchor Name or No.</b>	<b>Area</b>	<b>Block</b>	<b>X Coordinate</b>		<b>Y Coordinate</b>		<b>Length of Anchor Chain on Seafloor</b>			
N/A			X:		Y:					
			X:		Y:					
			X:		Y:					
			X:		Y:					
			X:		Y:					
			X:		Y:					
			X:		Y:					
			X:		Y:					

## Attachment 1-B

272 273  
285273 274  
283

Y = -92,571.92

4 (G00991)

5 (G00991)

A1&amp;A11 (G00991)

1 (G36746)

No.1 (SL)

6 (G00991)

EI 284

OCS-G 36746

Walter Oil &amp; Gas Corporation

B1,B2,B3&amp;B5 (G00991)

2 (G00991)

3 (G00991)

285  
294 295

Y = -107,070.50

283  
295 296

X = 1,909,867.04

X = 1,924,889.20



## PROPOSED WELL LOCATION

LOCATION	BLOCK	CALLS		COORDINATES		LATITUDE	LONGITUDE	WD	MD	TVD
No.1 (SL)	EI 284	5,576.96' FWL	5,400.08' FNL	X = 1,915,444.00	Y = -97,972.00	28° 23' 49.250"N	91° 35' 46.448"W	197'		

## PUBLIC INFORMATION



WALTER OIL &amp; GAS CORPORATION

36499 Perkins Road  
Prairieville, Louisiana 70769  
Tel: 225-673-2163

SCALE IN FEET

## EXPLORATION PLAT

PROPOSED WELL No.1  
OCS-G 36746 BLOCK 284  
EUGENE ISLAND AREA, SOUTH ADDITION

GULF OF MEXICO

DATUM: NAD 27	SPHEROID: CLARKE 1866	PROJECTION: LAMBERT	ZONE: LA SOUTH	DRAWN BY: JFL	CHK. BY: RJN	REV. No.:	JOB No.: 23-034	DWG No.: 23-034EXP
				DATE: 8/18/2023	REV. DATE:		SCALE: 1"=2,000'	SHEET 1 OF 1



## Attachment 1-D

**From:** [notification@pay.gov](mailto:notification@pay.gov)  
**To:** [Greer Malbrough](#)  
**Subject:** Pay.gov Payment Confirmation: BOEM Exploration Plan - BF  
**Date:** Monday, August 28, 2023 10:08:24 AM

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An official email of the United States government

Pay.gov logo



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](mailto:BseeFinanceAccountsReceivable@bsee.gov).

Application Name: BOEM Exploration Plan - BF

[Pay.gov](#) Tracking ID: 277FJO8D

Agency Tracking ID: 76486978010

Transaction Type: Sale

Transaction Date: 08/28/2023 11:08:07 AM EDT

Account Holder Name: Brenda A Roliard

Transaction Amount: \$4,348.00

Card Type: AmericanExpress

Card Number: \*\*\*\*\*3079

Region: Gulf of Mexico

Contact: Greer Malbrough (713) 659-1221

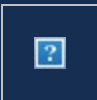
Company Name/No: Walter Oil & Gas Corporation , 00730

Lease Number(s): 36746

Area-Block: Eugene Island EI,284

Surface Locations: 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 all additional applications to be filed covering operations proposed in this EP.

Application/Permit	Issuing Agency	Status
Application for Permit to Drill	BSEE	To be submitted
Application for Permit to Modify	BSEE	To be submitted
Emergency Evacuation Plan	USCG	To be submitted

#### 2.2 DRILLING FLUIDS

The table below provides the types and estimated volumes of the drilling fluids Walter plans to use to drill the proposed well.

Type of Drilling Fluid	Estimated Volume of Drilling Fluid to be Used per Well (bbl)
Water-based (seawater, freshwater, barite)	10,186
Oil-based (diesel, mineral oil)	NA
Synthetic-based (internal olefin, ester)	2496

#### 2.3 NEW OR UNUSUAL TECHNOLOGY

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

#### 2.4 BONDING STATEMENT

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

#### 2.5 OIL SPILL FINANCIAL RESPONSIBILITY (OSFR)

Walter Oil & Gas Corporation (Company No. 00730) will demonstrate oil spill financial responsibility for the facilities proposed in this EP according to 30 CFR 553.15 (a); and NTL No. 2008-N05, "Guidelines for Oil Spill Financial Responsibility for Covered Facilities".

#### 2.6 DEEPWATER WELL CONTROL STATEMENT

Operations proposed in this plan are located in water depths less than 300 meters (984 feet); therefore, a deepwater well control statement is not provided.

#### 2.7 BLOWOUT SCENARIO AND WORST CASE DISCHARGE CALCULATIONS

In accordance with NTL No. 2015-BOEM-N01, "Information Requirements for Exploration Plans, Development and Production Plans, and Development Operations Coordination Documents on the OCS for Worst Case Discharge and Blowout Scenarios," the Blowout Scenario and Worst Case Discharge Assumptions and Calculations are included as **Attachment 2-A**.

## ATTACHMENT 2-A

**Exploration Plan  
OCS-G 36746, Eugene Island Area, BLOCK 284  
Well Locations 001  
BLOWOUT SCENARIO DATA SUBMITTAL  
NTL 2015-N01**

There are currently two independent leg jack-up MODU with 10,000 psi BOP systems and with derrick capacity and horsepower available for relief-well drilling in case the Eugene Island (EI) Block 284 require a relief well. It is estimated that a contract could be administered, and additional equipment procured to drill the relief well in one hundred twenty-four (124) days. Availability and safety record will be predominant factor for selecting the rig for the relief well.

**Measure to prevent Blowout:**

Walter Oil & Gas Corporation (Walter) offset well information and seismic data in the design of the proposed exploration well in EI 284. Walter has gained pore pressure and geology information in this area and this well will be similar pore pressures and geology to the offset wells. Walter will be using MWD/PWD tools to be able to obtain formation pressures while drilling to mitigate risk.

**Uncontrolled blowout volume (first day in bbls): 315,237**

**Duration of flow (days) based on relief well: 97**

**Total volume of spill (bbls (flow rate X duration): 30,577,989**

**Discussion of potential for well to bridge over (include backup to support your assumption):**

Walter does not have sufficient information to anticipate that this well would likely bridge over; therefore, discussion of the likelihood of the well to bridge over is not included in this plan. Walter does not have any empirical data.

**Discussion of likelihood of surface intervention to stop blowout:**

An ongoing operation for surface intervention will work in parallel to the relief well operations. "Well Control" experts will board the rig, provided there is sufficient safety, to review the possibility of surface containment; or coordinate with relief well operations to contain the blowout. Firefighting boats and derrick barges will be employed to control the heat/fire and strip away surface equipment that prohibit successful surface intervention. A capping stack/diverter arrangement could potentially be used provided wellbore/casing integrity is verified during the operation.

**RELIEF WELL**

**Rig type capable of drilling relief well at WD and to TD:**

Independent Leg Jack-up MODU

**Rig package constraints (if none, make statement to that effect):**

No constraints

**Time to acquire rig (days):**

5

**Time to move a rig onsite (days):**

5

**Drilling time (days):**

87

**SUPPLEMENTAL EP**  
**OCS-G 36746, Eugene Island Area, BLOCK 284**  
**Well Locations 001**  
**BLOWOUT SCENARIO DATA SUBMITTAL**  
**NTL 2015-N01**  
**Page 2**

**Statement whether possibility of using nearby platform was considered:**

No nearby platform.

**Additional precautions and safety procedures:**

1. Complete detailed well design program for drilling operations including mud program and cement program. Safety meetings will be conducted every tour to communicate the importance of operations.
2. Maintain mud properties consistent with offset wells.
3. Flow monitoring equipment for the rigs mud return system with real time data provided to supervisory personnel and the rig floor personnel.
4. Real-time gas monitoring for the purpose of measuring gas contained in the mud system for rig floor and supervisory personnel.
5. Drilling breaks monitored and check for flow. In the event of flow, mud weight will be increased to control the well.
6. Monitoring of trip volumes both tripping in and out of the hole. Proper fill up volumes will be measured.
7. Control surge and swab pressures.
8. Circulate bottoms up before trips to insure the well is stable and free of gas.
9. Testing of BOP's at a minimum of every two weeks, when rams are changed or BOP's repaired.

**Measures to reduce the likelihood of a blowout:**

1. Contractor personnel (driller and tool pusher) have the authority to shut-in well should a well flow be encountered. Company personnel will be informed of the situation.
2. Company personnel will go to the floor immediately to assist Contractor personnel in industry-best practices kill procedure.
3. Proper API casing design and cementing practices using centralizers as recommended by simulation to insure centralized casing and 360 degree annular fill up of cement.
4. Production casing will have two barriers (float collar and float shoe).
5. Upon bumping the plug during cement operations, floats will be checked. In the event the floats do not hold, pressure will be maintained for 6-8 hours, and then shoe tract will be rechecked. Remedial cementing or setting of bridge plug will be taken if necessary to isolate the shoe tract.
6. Run cement bond log to verify cement quality before displacing well with completion fluid.

**Arrangements for drilling relief wells:**

1. Review shallow hazards survey to determine positioning of relief well.
2. Contract and mobilize relief well rig.
3. Contract relief well directional drilling company and relief well drilling experts.
4. Prepare drilling program based on optimum rig position relative to targeted wellbore to optimize intervention.

Walter is a member of Clean Gulf. The equipment is on standby in case of an incident.

## **SECTION 3**

### **GEOLOGICAL AND GEOPHYSICAL INFORMATION**

#### **3.1 GEOLOGICAL DESCRIPTION**

Proprietary Information

#### **3.2 STRUCTURE CONTOUR MAP**

Proprietary Information

#### **3.3 INTERPRETED SEISMIC LINE**

Proprietary Information

#### **3.4 GEOLOGICAL STRUCTURE CROSS-SECTIONS**

Proprietary Information

#### **3.5 SHALLOW HAZARDS REPORT**

A shallow hazards survey evaluating seafloor and subsurface geological and manmade features and conditions that may adversely affect drilling operations was conducted by Echo Offshore, LLC (Job No. 20-033-12) for Contango Operators, Inc. under Lease OCS-G 36746. This survey was submitted with Exploration Plan Control No. N-10129 and approved February 9, 2021. The lease was transferred to Walter on July 24, 2023. The shallow hazards report is provided with this plan as supporting information.

#### **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 locations evaluating seafloor and subsurface geological and manmade features and conditions that may adversely affect drilling operations. The shallow hazards assessment and archaeological assessment is included as **Attachment 3-D**.

#### **3.7 HIGH-RESOLUTION SEISMIC LINES**

Proprietary Information

#### **3.8 STRATIGRAPHIC COLUMN**

Proprietary Information

#### **3.9 TIME VERSUS DEPTH TABLES**

Proprietary Information



36499 Perkins Road  
 Prairieville, Louisiana 70769  
 Telephone: 225.673.2163  
 www.echo-offshore.net

August 18, 2023

Job No. 23-034-31

Bureau of Ocean Energy Management (MS 5230)  
 Gulf of Mexico OCS Region  
 1201 Elmwood Park Blvd.  
 New Orleans, LA 70123-2394

**RE: Walter Oil & Gas Corporation  
 Proposed Well No. 1 OCS-G 36746  
 Block 284, Eugene Island Area, South Addition  
 Shallow Hazards and Archaeological Assessment**

Walter Oil & Gas Corporation (Walter) proposes to drill the No. 1 Well from the following surface location in Block 284, Eugene Island Area, South Addition:

<b>Datum:</b> <b>NAD 27</b>	<b>Spheroid:</b> <b>Clarke 1866</b>	<b>Projection:</b> <b>LAMBERT</b>	<b>Zone:</b> <b>LAS</b>	<b>Central Meridian:</b> <b>91° 20' West</b>
Latitude: 28° 23' 49.250" N		Longitude: 91° 35' 46.448" W		
X: 1,917,444.00		Y: -97,972.00		
FWL: 5,576.96'		FNL: 5,400.08'		

Juneau Oil & Gas, LLC contracted Echo Offshore, LLC to conduct a site specific high-resolution geophysical investigation centered in the northcentral portion of Block 284, Eugene Island Area, South Addition. The fieldwork was performed on August 14 and 17, 2020, using 300-meter primary grid spacing and 900-meter tie lines. A geohazard and archaeological assessment report was prepared that addresses the entire data set in compliance with **NTL 2008-G05** and **2005-G07** (Echo Job#20-033-12). This letter should be treated as supplemental to the full geophysical report. Walter Oil & Gas Corporation is now the operator and selected Echo Offshore to prepare this shallow hazard and archaeological assessment for the proposed drill site to comply with **NTL No. 2022-G01** and **NTL No. 2005-G07\_Rev** from the Bureau of Ocean Energy Management (BOEM), Gulf of Mexico Region. Geophysical record copies are enclosed for the magnetometer, side scan sonar, subbottom profiler, echosounder, and processed seismic sections from the transect line nearest the proposed well site as required by the BOEM in **NTL No. 2008-G04**.

- **Water depth** is approximately 197 feet surrounding the proposed surface location. The seafloor grades to the south across the area surrounding the well site at a rate of approximately 4 feet/mile.
- **Seafloor sediments** reportedly consist of silty clays (USDI MMS Visual No. 3, 1983).

**Walter Oil & Gas Corporation**  
**Proposed Well No. 1 OCS-G 36746**  
**Block 284, Eugene Island Area, South Addition**  
**Shallow Hazards and Archaeological Assessment**  
**Page 2**

- **Seafloor installations** are not located within 1,000 feet of the proposed well site. The closest infrastructure to the proposed surface location is the 6" Apache pipeline (Segment 14640) located approximately 1,512 feet to the SW. P&A Well 006 located approximately 2,436 feet to the SSE.
- **Magnetic anomalies** were not recorded within 1,000 feet of the proposed surface location. This closest anomaly to the proposed well site is Anomaly No. 2, a is an 7 nT dipoloar anomaly with a 48ft duration located approximately 2,820ft to the SE. This anomaly has not been recommended for avoidance or mitigation as a potential hazard or archaeological resource.
- **Side scan sonar** verified that the seafloor immediately surrounding the proposed well site was clear of protruding obstructions. The nearest sonar target is No. 4, located approximately 2,755 feet to the SSW. This target is a possible debris field consisting of small indistinct features covering an area 154 x 121 feet with no measurable relief. It has been recommended for avoidance by 200 feet as a potential hazard and/or a possible cultural resource. This target will not be impacted by operations at the proposed well site.
- **Subbottom data** in the vicinity of the surface location resolved a moderately reflective seafloor underlain by alternating units of stratified parallel bedding and acoustically amorphous deposits. The surficial unit (Unit A1) of acoustically amorphous deposits is 13 feet thick at the proposed well location. A small inclusion, possibly indicative of buried shell or other dissimilar material is present beneath the location at 3-4 feet BML. Unit A1 is followed by horizontal parallel bedded deposits down to 49 feet. This unit is interpreted as the base of the Holocene in the area. Approximately 30 feet of moderately to weakly stratified deposits interpreted of interpreted Pleistocene age are interpreted before data attenuation sets in. The proposed well location is located over 3,480 WNW of a near-seafloor fault identified on the subbottom profiler data and also observed at points at the seabed. No significant near-seafloor hazards or instabilities were observed on the subbottom profiler data near the proposed well location.
- **Processed seismic data** (2.0 seconds) recorded 1.5 seconds TWT of usable subsurface data. Uppermost an interval termed Unit A extends from seafloor to the mapped structural marker, termed Horizon H10, occurring at -1,333ft below sea surface (1,136ft below seafloor). This unit is characterized by a series of well layered sub-parallel low to moderate amplitude reflectors, interpreted as interbedded clays, silts, and sands. Within this section several anomalies, indicative of probable gas sands, are observed within the study area, however, no major hazards of problems are interpreted to impact the proposed well location. The closest approach is 965ft north at -453ft below sea surface. At -747ft below sea surface (550ft below seafloor) a better defined, moderate amplitude reflection is interpreted as a <10ft thick sand interbed. This sand interbed may induce minor drilling fluid circulation and wellbore stability problems.

**Walter Oil & Gas Corporation  
Proposed Well No. 1 OCS-G 36746  
Block 284, Eugene Island Area, South Addition  
Shallow Hazards and Archaeological Assessment  
Page 3**

Beneath Horizon H10 a Unit, termed Unit B, exhibits well layered sub-parallel low to moderate amplitude reflectors are observed interpreted as a meg-sequence of interbedded clays, silts, and sands that persist to beyond 3,000ft below sea surface. Several anomalies, indicative of probable gas sands, are observed within the study area in Unit B; none directly impact the proposed well location. The closest approach is 5650ft to the southeast at -3,175 to 3,222ft below sea surface.

No other drilling hazard or problems were interpreted within the 2DHR data set.

The operator has identified the primary hazards to rig movements, ancillary anchor and/or mooring deployments, and drilling. No sonar targets, magnetic anomalies, or other features on the geophysical data were recorded which were interpreted as possible shipwrecks, or possible high probability areas for prehistoric habitation within 1,000 feet of the proposed well location. Pursuant to 30 CFR 550.194 (c), 30 CFR 550.101 (c), and **NTL No. 2005-G07\_Rev**, if any archaeological or potentially historically significant materials are observed during lease development, operations will immediately cease in that area and appropriate BOEM/BSEE personnel will be notified within 48 hours of discovery.

The operator and subcontractors will apply the safest and best available technologies during rig moves and drilling operations.

Sincerely,



Matt Keith  
Geoscience Manager/Marine Archaeologist

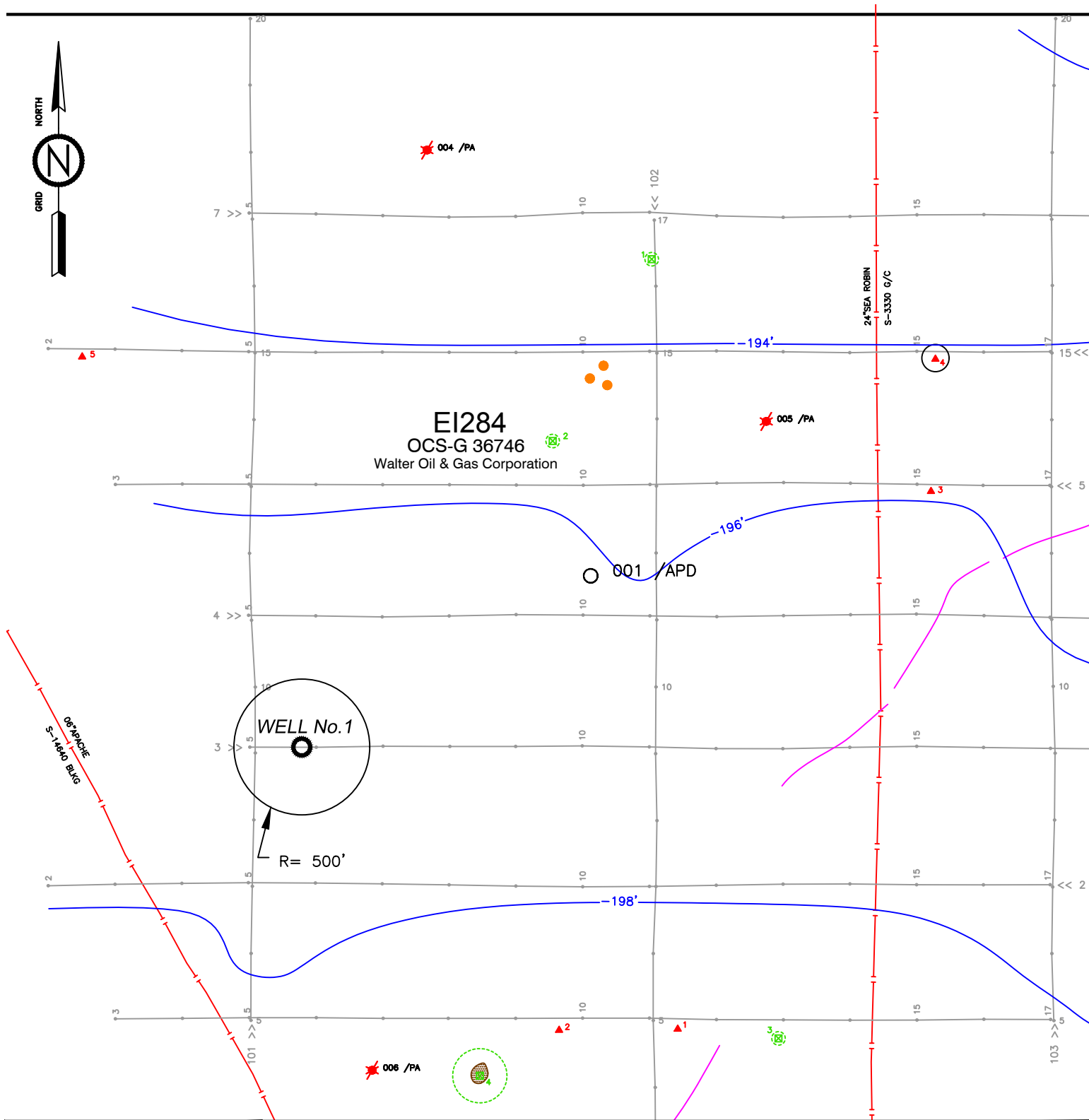


Andrew Haigh  
Marine Geophysicist

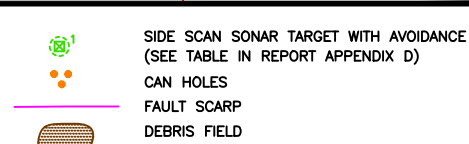
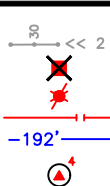
Enclosures:

Well Maps  
Data at Well Location  
Top Hole Prognosis





WELL No. 1  
 5,576.96' FWL  
 5,400.08' FNL  
 X = 1,915,444.00  
 Y = -97,972.00  
 LAT. = 28° 23' 49.250"N  
 LONG. = 91° 35' 46.448"W



WALTER OIL & GAS CORPORATION

**Echo**  
 OFFSHORE LLC

36499 Perkins Road  
 Prairieville, Louisiana 70769  
 Tel: 225-673-2163



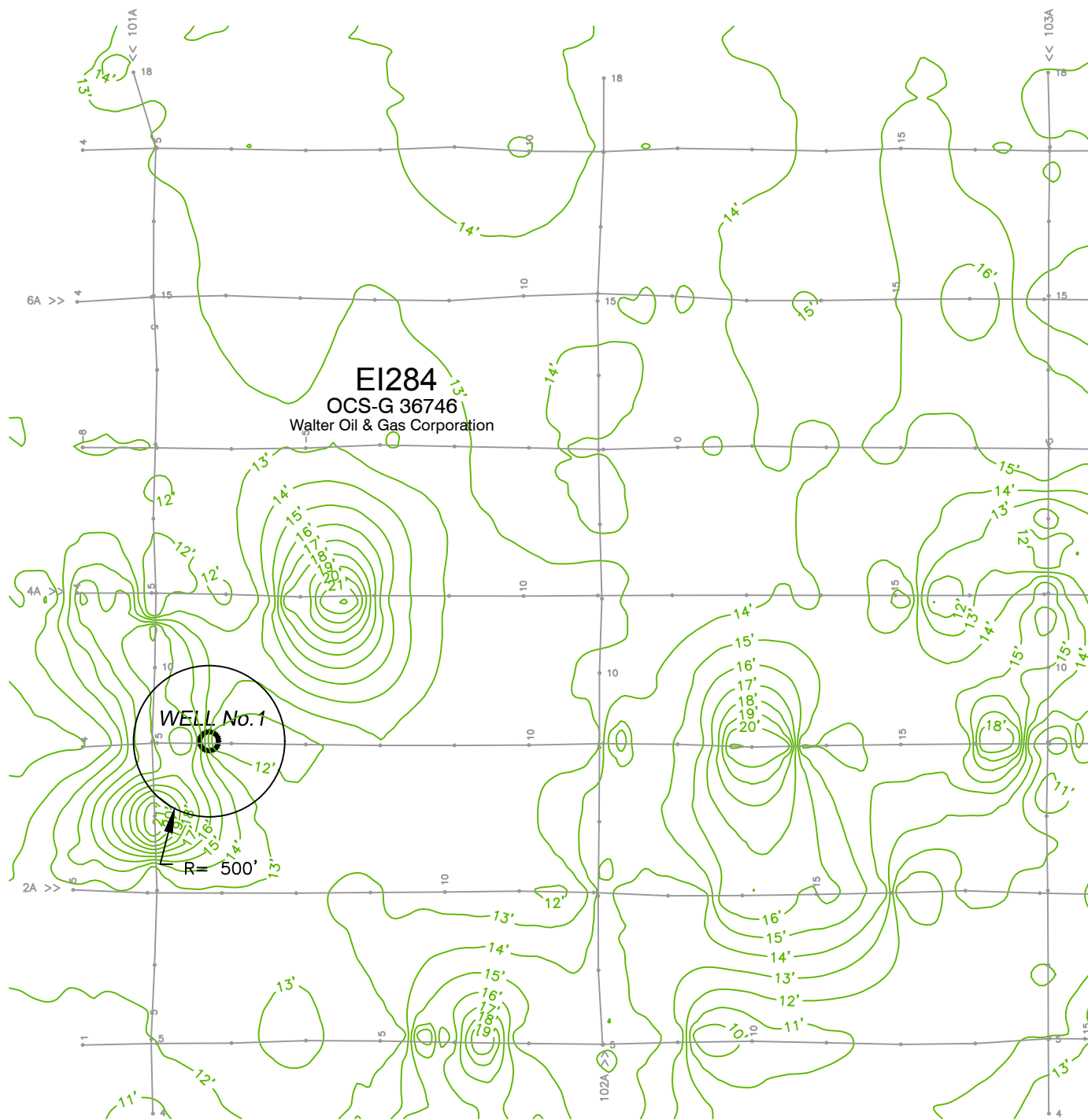
## WELL ASSESSMENT

**BATHYMETRY AND SEAFLOOR FEATURES**  
**OCS-G 36746 BLOCK 284**  
**EUGENE ISLAND AREA, SOUTH ADDITION**

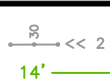
GULF OF MEXICO

DATUM: NAD 27 | SPHEROID: CLARKE 1866 | PROJECTION: LAMBERT | ZONE: LA SOUTH

DRAWN BY: JFL | CHK. BY: RJN | REV. No.: | JOB No.: 23-034 | DWG No.: 23-034-WELLMAPS  
 DATE: 8/18/2023 | REV. DATE: | SCALE: 1"=1,000' | **MAP 1 OF 7**



WELL No. 1  
5,576.96' FWL  
5,400.08' FNL  
X = 1,915,444.00  
Y = -97,972.00  
LAT. = 28° 23' 49.250"N  
LONG. = 91° 35' 46.448"W

**LEGEND**  
LINE TRACK, POSITION FIX & DIRECTION  
ISOPACH IN 1' INTERVALS (THICKNESS IN FEET BML)



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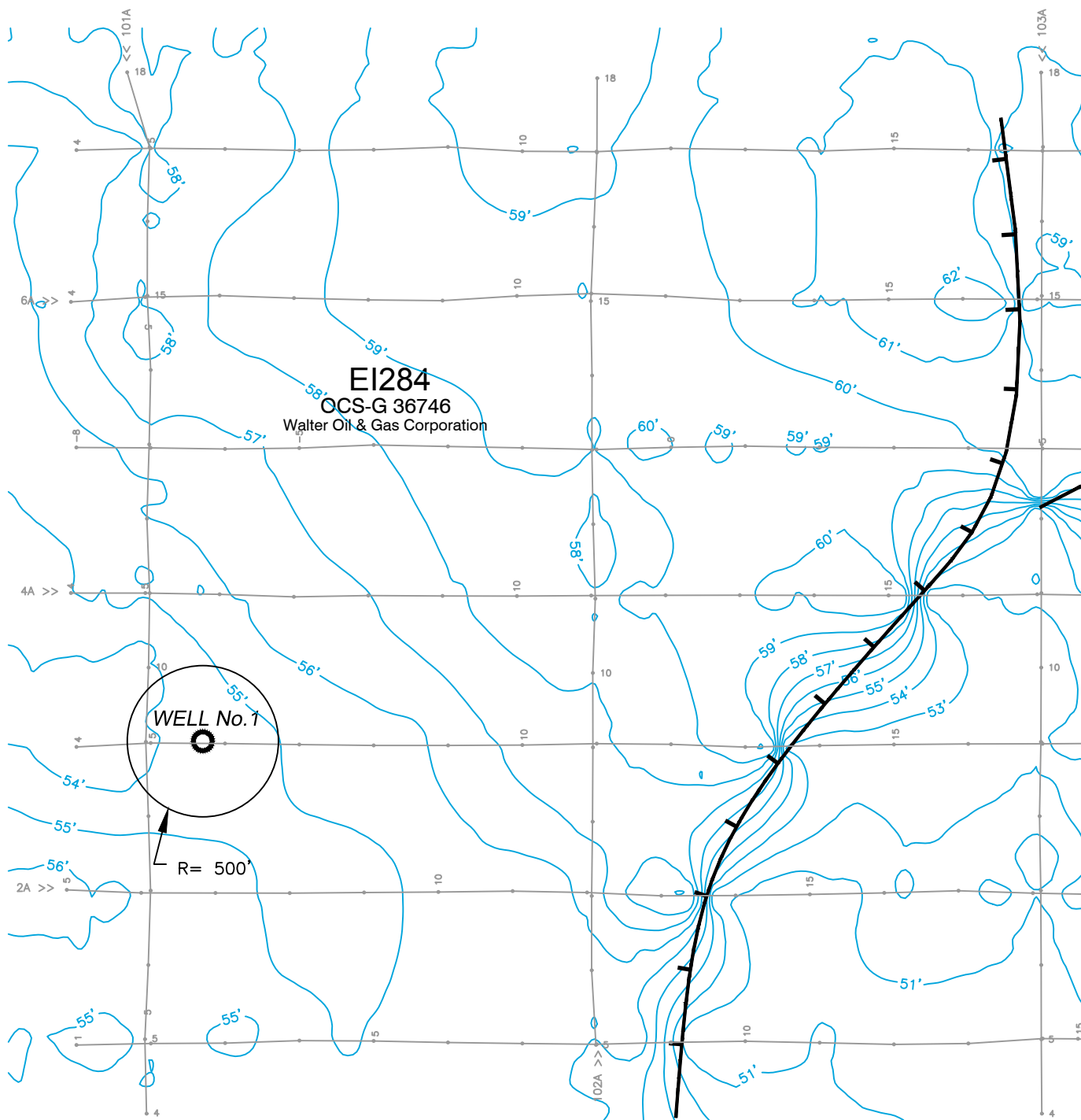


**WELL ASSESSMENT**  
**ISOPACH (HORIZON H01)**  
**OCS-G 36746 BLOCK 284**  
**EUGENE ISLAND AREA, SOUTH ADDITION**

GULF OF MEXICO

DATUM: NAD 27 | SPHEROID: CLARKE 1866 | PROJECTION: LAMBERT | ZONE: LA SOUTH

DRAWN BY: JFL	CHK. BY: RJN	REV. No.:	JOB No.: 23-034	DWG No.: 23-034-WELLMAPS
DATE: 8/18/2023	REV. DATE:	SCALE: 1"=1,000'	<b>MAP 2 OF 7</b>	



WELL No. 1  
5,576.96' FWL  
5,400.08' FNL  
X = 1,915,444.00  
Y = -97,972.00  
LAT. = 28° 23' 49.250"N  
LONG. = 91° 35' 46.448"W

**LEGEND**  
— << 2 — LINE TRACK, POSITION FIX & DIRECTION  
— FAULT  
— DIRECTION OF THROW  
60' — ISOPACH IN 1' INTERVALS (THICKNESS IN FEET BML)



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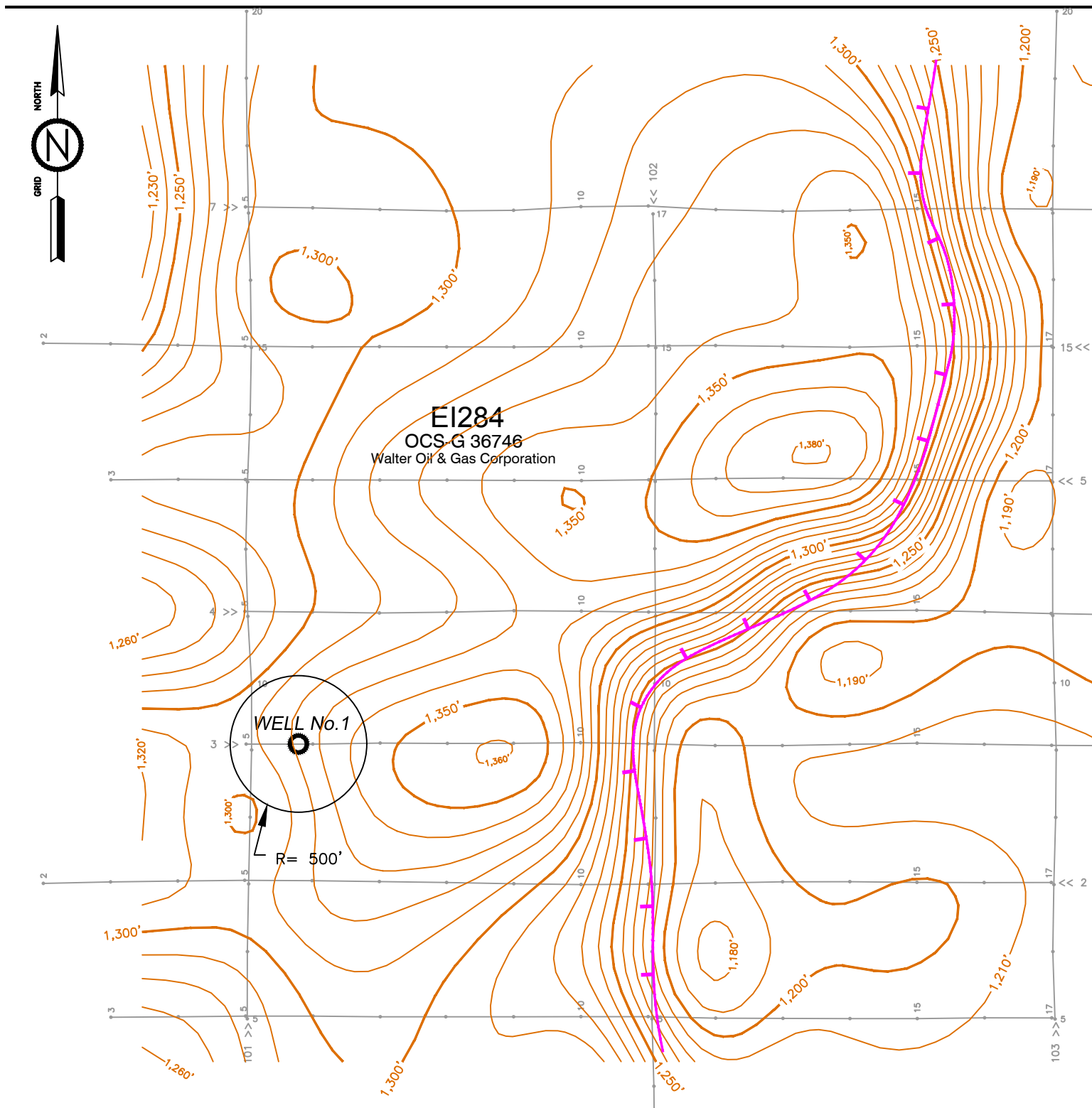


**WELL ASSESSMENT**  
**ISOPACH (HORIZON H03)**  
**OCS-G 36746 BLOCK 284**  
**EUGENE ISLAND AREA, SOUTH ADDITION**

GULF OF MEXICO

DATUM: NAD 27 | SPHEROID: CLARKE 1866 | PROJECTION: LAMBERT | ZONE: LA SOUTH

DRAWN BY: JFL | CHK. BY: RJN | REV. No.: | JOB No.: 23-034 | DWG No.: 23-034-WELLMAPS  
DATE: 8/18/2023 | REV. DATE: | SCALE: 1"=1,000' | **MAP 3 OF 7**



WELL No. 1  
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 5,400.08' FNL  
 X = 1,915,444.00  
 Y = -97,972.00  
 LAT. = 28° 23' 49.250"N  
 LONG. = 91° 35' 46.448"W

**LEGEND**  
 LINE TRACK, POSITION FIX & DIRECTION  
 STRUCTURE (DEPTHS IN FEET BSL)  
 (CONTOUR INTERVAL 10 FEET)  
 FAULT AT HORIZON H10  
 DIRECTION OF THROW



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500 0 500 1,000  
 SCALE IN FEET

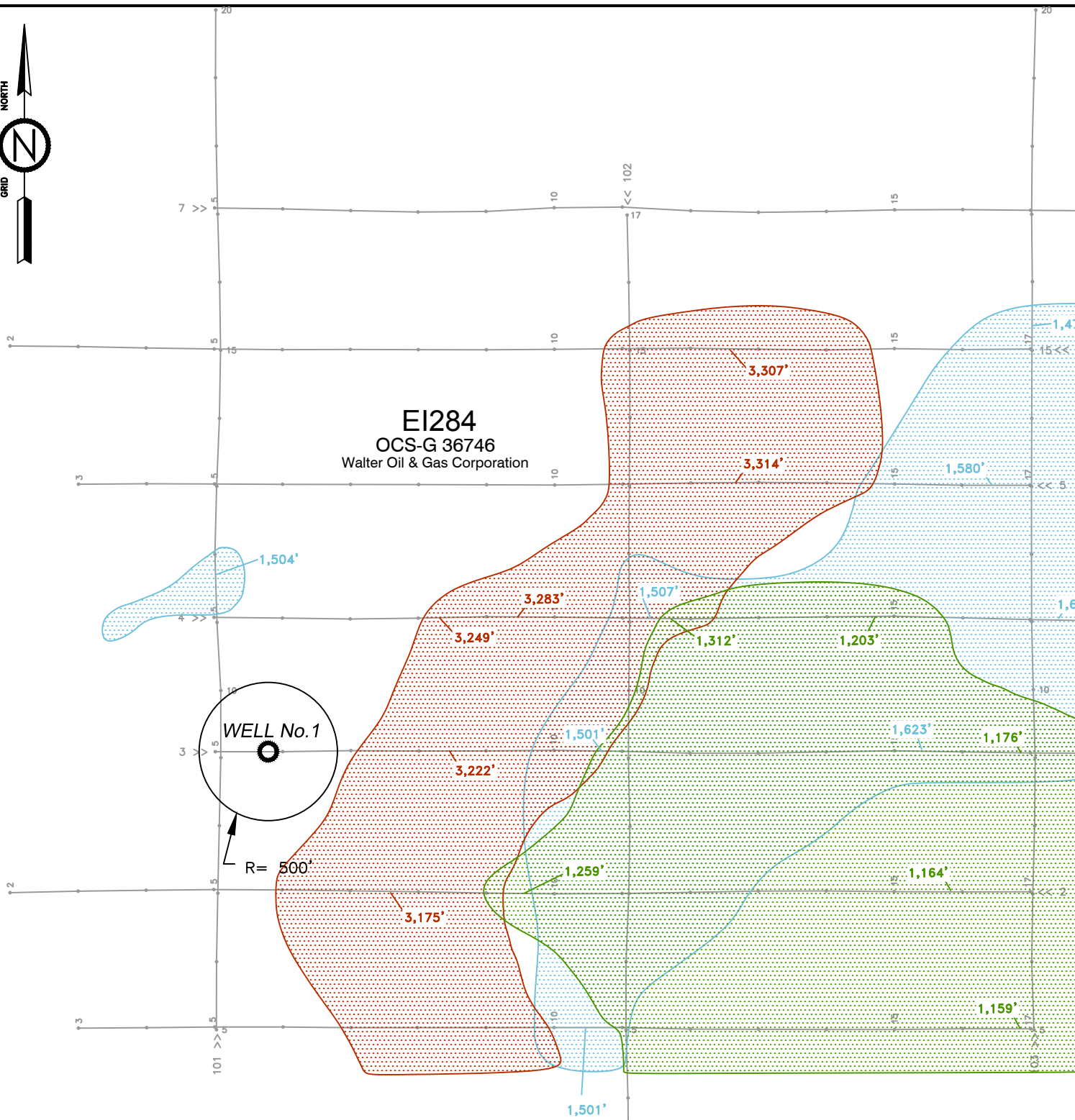
**WELL ASSESSMENT**  
 STRUCTURE AND FAULT (HORIZON H10)  
 OCS-G 36746 BLOCK 284  
 EUGENE ISLAND AREA, SOUTH ADDITION

GULF OF MEXICO

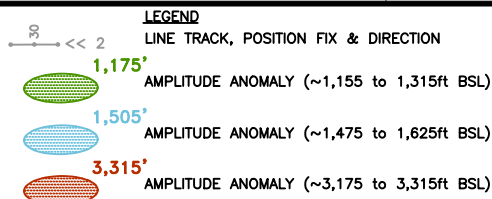
DATUM: NAD 27 SPHEROID: CLARKE 1866 PROJECTION: LAMBERT ZONE: LA SOUTH

DRAWN BY: JFL CHK. BY: RJN REV. No.: JOB No.: 23-034 DWG No.: 23-034-WELLMAPS  
 DATE: 8/18/2023 REV. DATE: SCALE: 1"=1,000' **MAP 4 OF 7**





WELL No. 1  
5,576.96' FWL  
5,400.08' FNL  
X = 1,915,444.00  
Y = -97,972.00  
LAT. = 28° 23' 49.250"N  
LONG. = 91° 35' 46.448"W



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SCALE IN FEET

### WELL ASSESSMENT

AMPLITUDE ANOMALIES (DEPTH > 1,100')

OCS-G 36746 BLOCK 284

EUGENE ISLAND AREA, SOUTH ADDITION

GULF OF MEXICO

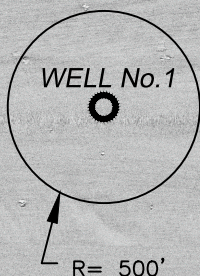
DATUM: NAD 27 | SPHEROID: CLARKE 1866 | PROJECTION: LAMBERT | ZONE: LA SOUTH

DRAWN BY: JFL	CHK. BY: RJN	REV. No.:	JOB No.: 23-034	DWG No.: 23-034-WELLMAPS
DATE: 8/18/2023	REV. DATE:	SCALE: 1"=1,000'	MAP 6 OF 7	





EI284  
OCS-G 36746  
Walter Oil & Gas Corporation



WELL No. 1  
5,576.96' FWL  
5,400.08' FNL  
X = 1,915,444.00  
Y = -97,972.00  
LAT. = 28° 23' 49.250"N  
LONG. = 91° 35' 46.448"W



WALTER OIL & GAS CORPORATION



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Prairieville, Louisiana 70769  
Tel: 225-673-2163



SCALE IN FEET

#### WELL ASSESSMENT

#### SONAR MOSAIC

OCS-G 36746 BLOCK 284  
EUGENE ISLAND AREA, SOUTH ADDITION

GULF OF MEXICO

DATUM: NAD 27 | SPHEROID: CLARKE 1866 | PROJECTION: LAMBERT | ZONE: LA SOUTH

DRAWN BY: JFL  
DATE: 8/18/2023

CHK. BY: RJN  
REV. DATE:

REV. No.:

JOB No.: 23-034

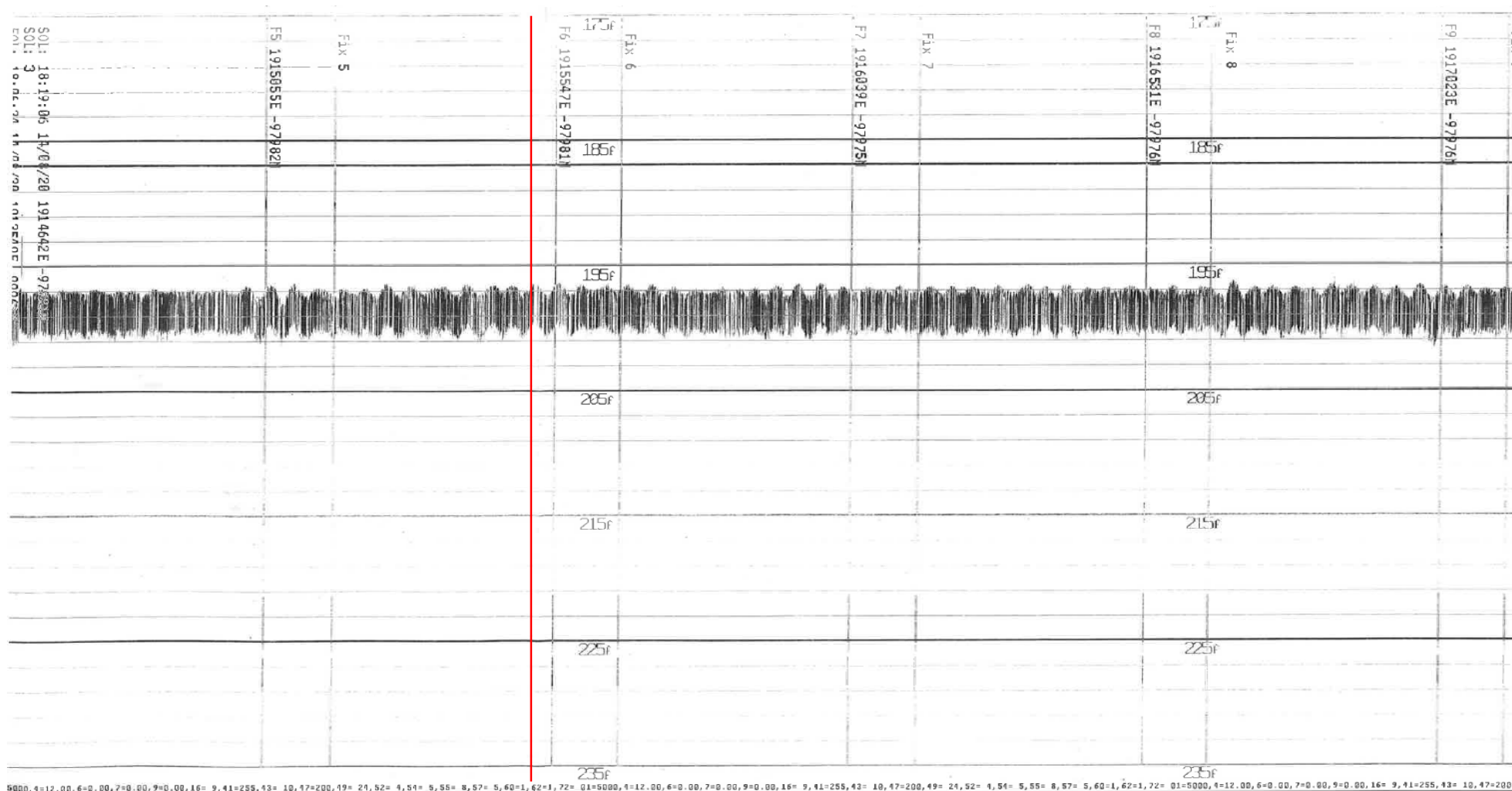
DWG No.: 23-034-WELLMAPS

SCALE: 1"=1,000'

MAP 7 OF 7



EI 284 WELL No.001(1' N of LINE 3)

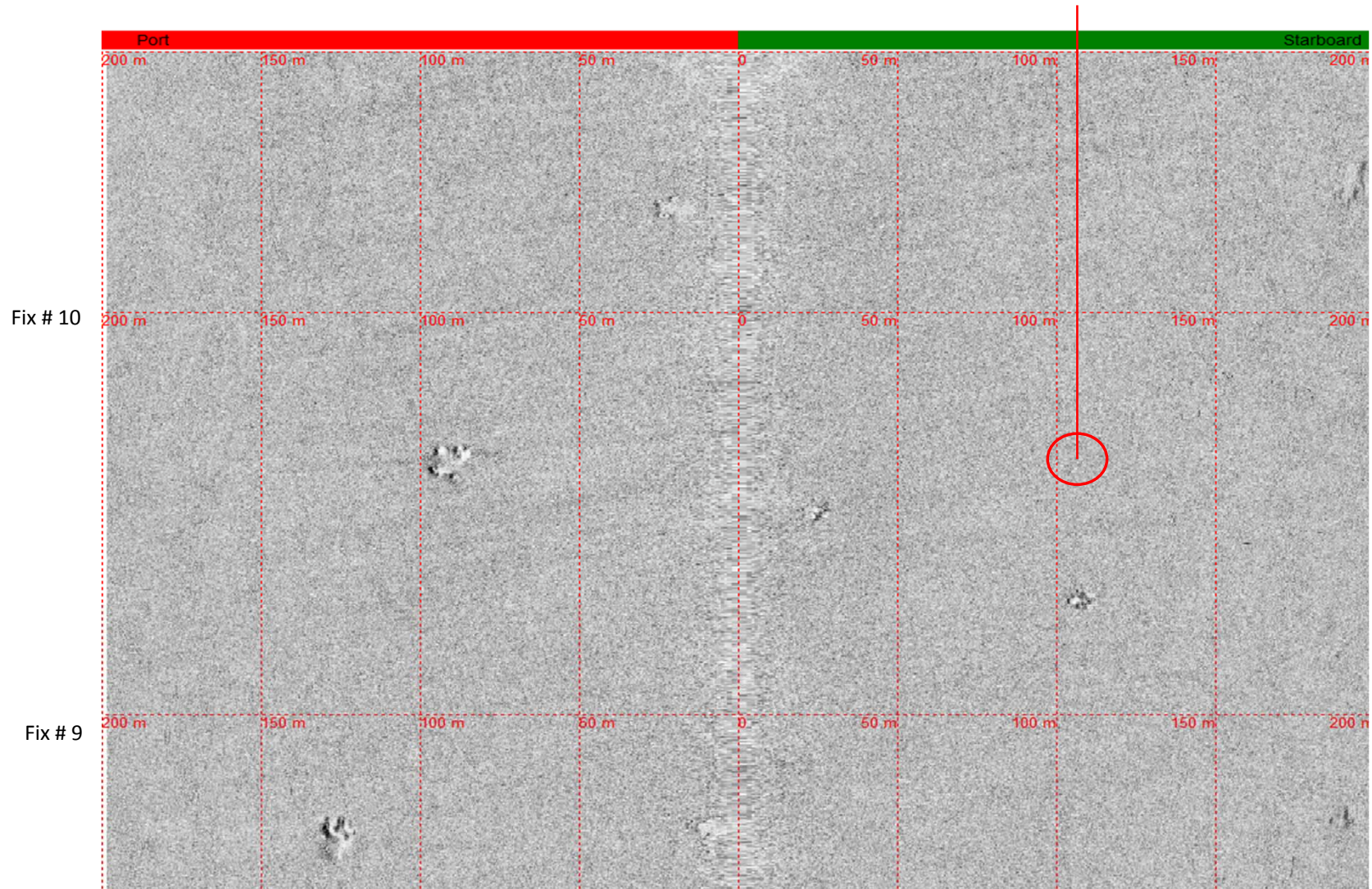


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(225) 673-2163  
[www.echo-offshore.net](http://www.echo-offshore.net)



# SIDESCAN SONAR RECORD

EI 284 WELL No.001 (350' E of LINE 101)



## Project Parameters

Juneau Oil & Gas, LLC  
 Area: EI 284  
 Job No.: 20-033-12  
 Transect Line: 101  
 Direction Shot: 0  
 Acquisition Date: Aug. 14, 2020

## Data Parameters

Source: Edgetech 4200  
 Frequency: 100 kHz  
 Range: 200 meters  
 Fix Interval: 150 meters  
 Setback: 265 feet  
 Line Spacing: 300 meters  
 Vessel: R/V Nikola

**Echo** OFFSHORE LLC

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## MAGNETOMETER RECORD

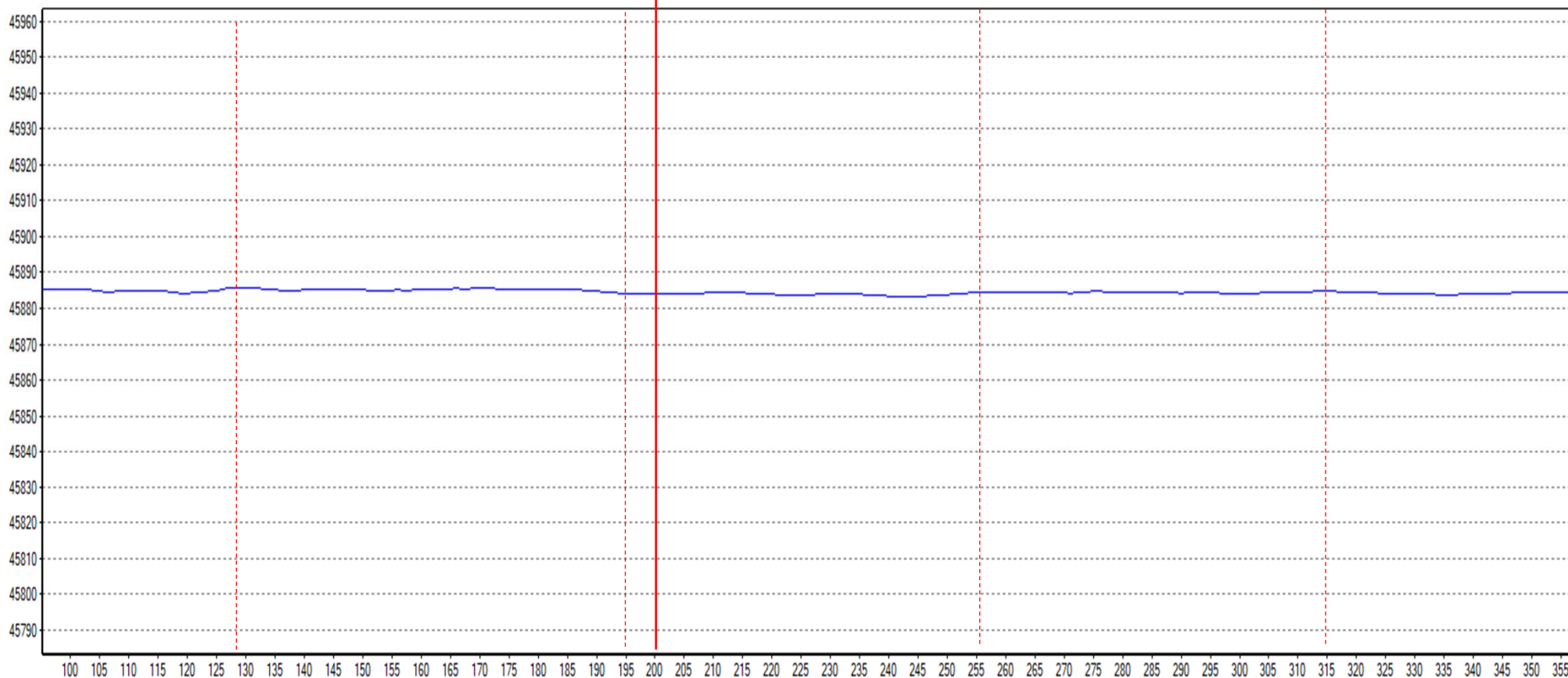
EI 284 WELL No.001 (36' N of LINE 3)

Fix 6

Fix 7

Fix 8

Fix 9



### Project Parameters

Juneau Oil & Gas, LLC  
Area: EI 284  
Job No.: 20-033-12  
Transect Line: 3  
Direction Shot: 90  
Acquisition Date: Aug 14, 2020

### Data Parameters

Source: Marine Magnetics SeaSpy  
Sample Rate: 1 Hz  
Fix Interval: 150 meters  
Setback: 694 feet  
Line Spacing: 300 meters  
Vessel: R/V Nikola

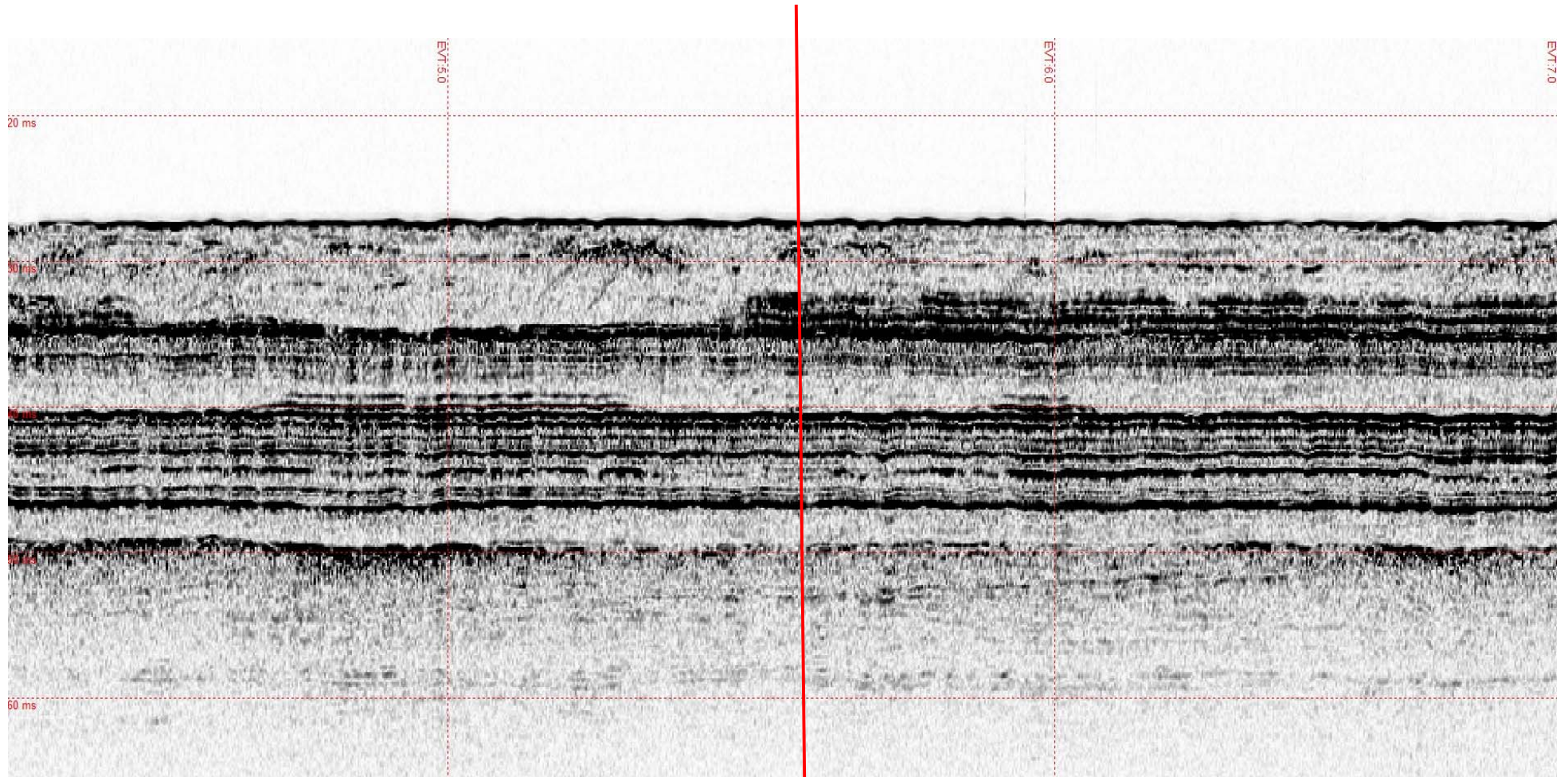
**Echo**)))  
OFFSHORE LLC

36499 Perkins Road  
Prairieville, LA 70769  
(225) 673-2163  
www.echo-offshore.net



## SUBBOTTOM PROFILER RECORD

EI 284' WELL No.001 (5' S of LINE 3A)



### Project Parameters

Juneau Oil & Gas, LLC  
Area: EI 284  
Job No.: 20-033-12  
Transect Line: 3A  
Direction Shot: 180°  
Acquisition Date: Aug 14, 2020

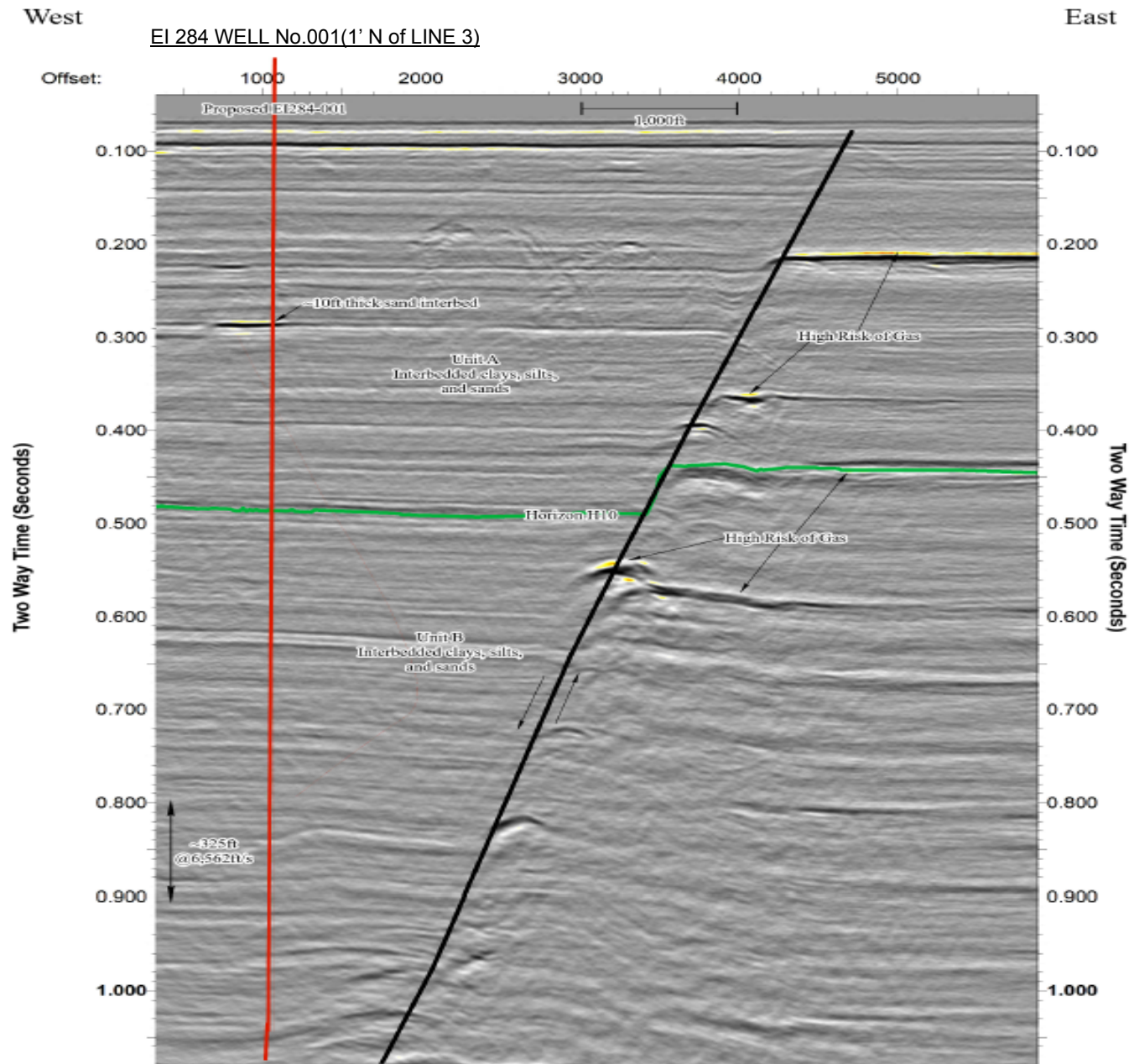
### Data Parameters

Source: Edgetech 216  
Frequency: 2-10 kHz  
Fix Interval: 150 meters  
Scale Interval: 10ms  
Line Spacing: 300 meters  
Vessel: R/V Nikola

**Echo**)))  
OFFSHORE LLC

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Prairieville, LA 70769  
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# PROCESSED 2D HIGH RESOLUTION SEISMIC RECORD

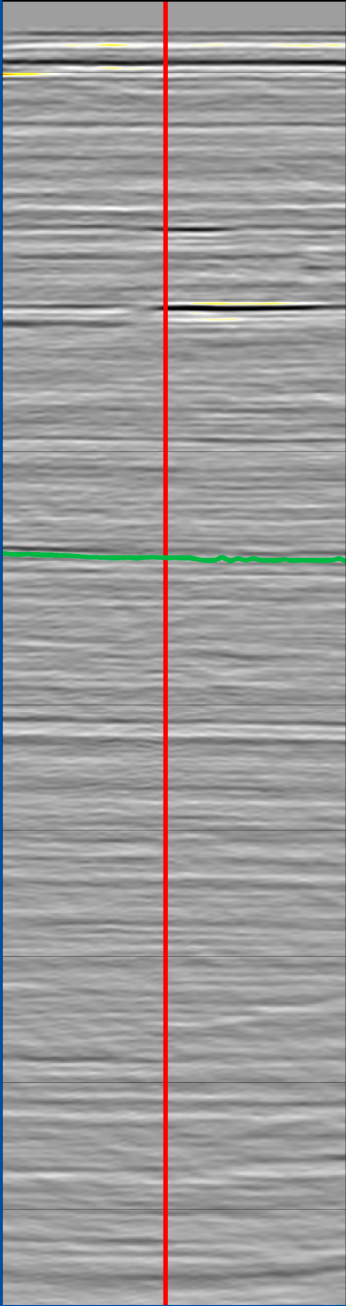


**Project Parameters**  
 Juneau Oil & Gas, LLC  
 Area: EI 284  
 Job No.: 20-033-12  
 Transect Line: 3  
 Direction Shot: 80A  
 Acquisition Date: Aug 14, 2020

**Data Parameters**  
 Source: (2) 20 inch air-guns  
 Filter: 4.6-412  
 Record Length: 2 seconds  
 Fix Interval: 150 meters  
 Line Spacing: 300 meters  
 Vessel: R/V Nikola

**Echo**  
 OFFSHORE LLC

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1,915,444ft E / -97,972ft N Line 3 @ SP 554	Horizon	Subsea Depth (Feet)	BML Depth (Feet)	Horizon TWT (s)	Lithology, Structure & Stratigraphy	Potential Drilling Hazards & Constraints	Risk of Gas	SWF Risk
	Seabed	-197	0	-0.069	Interbedded clays, silts, and minor sands.		Slight	Slight
	Sand/Interbed	-747	-550	-0.283	<10ft thick sand interbed  Interbedded clays, silts, and minor sands.	Minor drilling fluid circulation and wellbore stability problems possible at the sand interbed.	Moderate	Moderate
	Unit A						High	High
	Horizon H10	-1,333	-1,136	-0.485	Interbedded clays, silts, and minor sands.	None predicted.	None predicted	None predicted
	Unit B							

Top Hole Prognosis for Proposed EI284-001 Well Location

## **SECTION 4**

### **HYDROGEN SULFIDE INFORMATION**

#### **4.1 CONCENTRATION**

Walter anticipates encountering 0 ppm H<sub>2</sub>S during the proposed operations.

#### **4.2 CLASSIFICATION**

In accordance with Title 30 CFR 250.490(c), Walter requests that the area of proposed operations be classified by the BOEM as H<sub>2</sub>S absent. The justification for this is based on the following wells which were drilled to stratigraphic equivalent of the well proposed in this EP.

<b>Lease Number</b>	<b>Area/Block</b>	<b>API Number</b>	<b>MD</b>
G 17990	EI 299 #001	17-710-41543-00	19,510'
G 23876	EI 280 #001	17-710-41569-00	17,474'
G 02901	EI 281 #001	17-710-41051-00	15,095'

#### **4.3 H<sub>2</sub>S CONTINGENCY PLAN**

An H<sub>2</sub>S 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**

### **BIOLOGICAL, PHYSICAL AND SOCIOECONOMIC INFORMATION**

#### **5.1 DEEPWATER BENTHIC COMMUNITIES**

Activities proposed in this EP are in water depths less than 300 meters (984 feet); therefore, information as outlined in Attachment A of NTL No. 2009-G40, "Deepwater Benthic Communities," is not provided.

#### **5.2 TOPOGRAPHIC FEATURES (BANKS)**

Activities proposed in this EP 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."

#### **5.3 TOPOGRAPHIC FEATURES STATEMENT (SHUNTING)**

Activities proposed under this EP 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."

#### **5.4 LIVE BOTTOMS (PINNACLE TREND FEATURES)**

Eugene Island Block 284 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."

#### **5.5 LIVE BOTTOMS (LOW RELIEF)**

Eugene Island Block 284 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."

#### **5.6 POTENTIALLY SENSITIVE BIOLOGICAL FEATURES MAP**

Eugene Island Block 284 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.

#### **5.7 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	<i>Trichechus manatus latirostris</i>	T	--	X	Florida (peninsular)
Whale, Blue	<i>Balaenoptera masculus</i>	E	X <sup>1</sup>	--	None
Whale, Bryde's <sup>4</sup>	<i>Balaenoptera brydei/edeni</i>	E	X	--	None
Whale, Fin	<i>Balaenoptera physalus</i>	E	X <sup>1</sup>	--	None
Whale, Humpback	<i>Megaptera novaeangliae</i>	E	X <sup>1</sup>	--	None
Whale, North Atlantic Right	<i>Eubalaena glacialis</i>	E	X <sup>1</sup>	--	None
Whale, Rice's <sup>4</sup>	<i>Balaenoptera ricei</i>	E	X	--	None
Whale, Sei	<i>Balaenopiera borealis</i>	E	X <sup>1</sup>	--	None
Whale, Sperm	<i>Physeter catodon</i> (=macrocephalus)	E	X	--	None
Terrestrial Mammals					
Mouse, Beach (Alabama, Choctawatchee, Perdido Key, St. Andrew)	<i>Peromyscus polionotus</i>	E	-	X	Alabama, Florida (panhandle) beaches
Birds					
Plover, Piping	<i>Charadrius melodus</i>	T	-	X	Coastal Texas, Louisiana, Mississippi, Alabama and Florida (panhandle)
Crane, Whooping	<i>Grus Americana</i>	E	-	X	Coastal Texas
Crane, Mississippi sandhill	<i>Grus canadensis pulla</i>	E	-	X	Coastal Mississippi
Curlew, Eskimo	<i>Numenius borealis</i>	E	-	X	none
Falcon, Northern Aplomado	<i>Falco femoralis septentrionalis</i>	E	-	X	none
Knot, Red	<i>Calidris canutus rufa</i>	T	-	X	None
Stork, Wood	<i>Mycteria americana</i>	T	-	X	None
Reptiles					
Sea Turtle, Green	<i>Chelonia mydas</i>	T/E <sup>3</sup>	X	X	None
Sea Turtle, Hawksbill	<i>Eretmochelys imbricata</i>	E	X	X	None
Sea Turtle, Kemp's Ridley	<i>Lepidochelys kempli</i>	E	X	X	None
Sea Turtle, Leatherback	<i>Dermochelys coriacea</i>	E	X	X	None
Sea Turtle, Loggerhead	<i>Caretta caretta</i>	T	X	X	Texas, Louisiana, Mississippi, Alabama, Florida
Fish					
Sturgeon, Gulf	<i>Acipenser oxyrinchus</i> (=oxyrhynchus) <i>desotoi</i>	T	X	X	Coastal Louisiana, Mississippi, Alabama and Florida (panhandle)
Shark, Oceanic Whitetip	<i>Carcharhinus longimanus</i>	E	X	—	None



Species	Scientific Name	Status	Potential Presence		Critical Habitat Designated in the Gulf of Mexico
			Lease Area	Coastal	
Sawfish, Smalltooth	<i>Pristis pectinate</i>	E	-	X	None
Grouper, Nassau	<i>Epinephelus striatus</i>	T	-	X	None
Ray, Giant Manta	<i>Manta birostris</i>	E	X	--	None
<b>Corals</b>					
Coral, Elkhorn	<i>Acopora palmate</i>	T	X <sup>2</sup>	X	Florida Keys and Dry Tortugas
Coral, Staghorn	<i>Acopora cervicornis</i>	T	X	X	Florida
Coral, Boulder Star	<i>Orbicella franksi</i>	T	X	X	none
Coral, Lobed Star	<i>Orbicella annularis</i>	T	X	X	None
Coral, Mountainous Star	<i>Orbicella faveolate</i>	T	X	X	None
Coral, Rough Cactus	<i>Mycetophyllia ferox</i>	T	-	X	None

Abbreviations: E = Endangered; T = Threatened

- 1 The Blue, Fin, Humpback, North Atlantic Right, and Sei Whales are rare or extralimital in the Gulf of Mexico and are unlikely to be present in the lease area.
- 2 According to the 2017 EIS, Elkhorn Coral, while uncommon, has been found in the Flower Garden Banks. (BOEM 2017-009)
- 3 Green Sea Turtles are considered threatened throughout the Gulf of Mexico; however, the breeding population off the coast of Florida is considered endangered.
- 4 The Bryde's whale, also known as the Bryde's whale complex, is a collection of baleen whales that are still being researched to determine if they are the same species or if they are individual species of whales. In 2021, the Rice's whale, formerly known as the Gulf of Mexico Bryde's whale, was determined to be a separate species. There are less than 100 Rice's whales living in the Gulf of Mexico year-round. These whales retain all the protections of the Gulf of Mexico Bryde's whale under the Endangered Species Act while the regulations are being updated to reflect the name change. Other Bryde's whales are migratory and may enter the Gulf of Mexico; however, the migratory Bryde's whales are rare or extralimital in the Gulf of Mexico and are unlikely to be present in the lease area.

## 5.8 ARCHAEOLOGICAL REPORT

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

## 5.9 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."

## 5.10 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 6**

### **WASTES AND DISCHARGES INFORMATION**

#### **6.1 PROJECTED GENERATED WASTES**

“Wastes You Will Generate, Treat and Downhole Dispose or Discharge to the Gulf of Mexico” is included as **Attachment 6-A**.

#### **6.2 MODELING REPORT**

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

ATTACHMENT 6-A

WASTE ESTIMATED TO BE GENERATED, TREATED AND/OR DOWNHOLE DISPOSED OR DISCHARGED TO THE GOM						
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	Water based drilling fluid	10,186 bbl/well	339 bbl/day/well	Discharge overboard	No	
Cuttings wetted with water-based fluid	Cuttings generated while using water based drilling fluids	5102 bbl/well	85 bbl/day/well	Discharge overboard	No	
Cuttings wetted with synthetic-based fluid	Cuttings generated while using synthetic based drilling fluid.	2869 bbl/well	48 bbls/day/well	Treated cuttings will be discharged overboard while drilling SBM interval. Cuttings will pass through cuttings dryer to reduce ROC percentage in compliance with EPA and then shunt through downpipe below water line	No	
Will humans be there? If yes, expect conventional waste						
EXAMPLE: Sanitary waste water	Sanitary waste from living quarters	X bbl/well	X bbl/hr/well	chlorinate and discharge overboard	No	
Domestic waste	Gray water	8000 bbls/total	5 bbls/hr/well	Processed through DNV Class approved treatment tank and discharge	No	
Sanitary waste	Human body treat waste discharge from toilets	2500 bbls total	2 bbls/hr/well	Chlorinate and discharge overboard	No	
Is there a deck? If yes, there will be Deck Drainage						
Deck Drainage	Rain water and rig wash	28,000 bbls total	19 bbls/hr/well/dependent on rainfall	Oily water is treated in one of four sperators and discharged through Port side caisson (cutting chute) below sea level	No	
Will you conduct well treatment, completion, or workover?						
Well treatment fluids	Viscous and casing wash spacers using HEC and small amounts sodium	200 bbls/well	3 bbls/day/well	Discharge overbaord	No	
Well completion fluids	Calcium Chloride	500 bbls/well	9 bbls/day/well	Discharge overboard	No	
Workover fluids	NA	NA	NA	NA	NA	
Miscellaneous discharges. If yes, only fill in those associated with your activity.						
Desalinization unit discharge	NA	NA	NA	NA	NA	
Blowout prevent fluid	NA	NA	NA	NA	NA	
Ballast water	NA	NA	NA	NA	NA	
Bilge water	NA	NA	NA	NA	NA	
Excess cement at seafloor	Cement slury	NA	NA	NA	No	
Fire water	NA	NA	NA	NA	NA	
Cooling water	NA	NA	NA	NA	NA	
Will you produce hydrocarbons? If yes fill in for produced water.						
Produced water	Formation water	20,000 bbls	833 bbls/hr	Discharge overboard	No	
Please enter individual or general to indicate which type of NPDES permit you will be covered by?			GMG290129			

## SECTION 7 AIR EMISSIONS INFORMATION

### 7.1 EMISSIONS WORKSHEETS AND SCREENING QUESTIONS

Screen Questions for EP's	Yes	No
Is any calculated Complex Total (CT) Emission amount (tons) associated with your proposed exploration 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
Are your proposed exploration activities located east of 87.5° W longitude?		X
Do you expect to encounter H <sub>2</sub> S 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

### 7.2 SUMMARY INFORMATION

There are no existing facilities or activities co-located with the currently proposed activities; therefore, the Complex Total Emissions are the same as the Plan Emissions and are provided in **Attachment 7-A**.

This information was calculated by: Greer Malbrough  
281-578-3388  
greer.malbrough@jccteam.com

**EP - AIR QUALITY****OMB Control No. 1010-0151  
OMB Approval Expires: 08/31/2023**

<b>COMPANY</b>	Walter Oil & Gas Corporation
<b>AREA</b>	Eugene Island
<b>BLOCK</b>	284
<b>LEASE</b>	OCS-G 36746
<b>FACILITY</b>	N/A
<b>WELL</b>	Well Location 001
<b>COMPANY CONTACT</b>	Greer Malbrough
<b>TELEPHONE NO.</b>	281-698-8525
<b>REMARKS</b>	Drill, complete, test well, install subsea tree/ wellhead utilizing independent leg jack-up MODU.

AIR EMISSIONS COMPUTATION FACTORS

Fuel Usage Conversion Factors	Natural Gas Turbines				Natural Gas Engines		Diesel Recip. Engine		Diesel Turbines			
	SCF/hp-hr	9.524			SCF/hp-hr	7.143	GAL/hp-hr	0.0514	GAL/hp-hr	0.0514		

Equipment/Emission Factors	units	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3	REF.	DATE	Reference Links
Natural Gas Turbine	g/hp-hr		0.0086	0.0086	0.0026	1.4515	0.0095	N/A	0.3719	N/A	AP42 3.1-1& 3.1-2a	4/00	<a href="https://www3.epa.gov/ttnchie1/ap42/ch03/final/c03s01.pdf">https://www3.epa.gov/ttnchie1/ap42/ch03/final/c03s01.pdf</a>
RECIP. 2 Cycle Lean Natural Gas	g/hp-hr		0.1293	0.1293	0.0020	6.5998	0.4082	N/A	1.2009	N/A	AP42 3.2-1	7/00	<a href="https://www3.epa.gov/ttn/chie1/ap42/ch03/final/c03s02.pdf">https://www3.epa.gov/ttn/chie1/ap42/ch03/final/c03s02.pdf</a>
RECIP. 4 Cycle Lean Natural Gas	g/hp-hr		0.0002	0.0002	0.0020	2.8814	0.4014	N/A	1.8949	N/A	AP42 3.2-2	7/00	<a href="https://www3.epa.gov/ttn/chie1/ap42/ch03/final/c03s02.pdf">https://www3.epa.gov/ttn/chie1/ap42/ch03/final/c03s02.pdf</a>
RECIP. 4 Cycle Rich Natural Gas	g/hp-hr		0.0323	0.0323	0.0020	7.7224	0.1021	N/A	11.9408	N/A	AP42 3.2-3	7/00	<a href="https://www3.epa.gov/ttn/chie1/ap42/ch03/final/c03s02.pdf">https://www3.epa.gov/ttn/chie1/ap42/ch03/final/c03s02.pdf</a>
Diesel Recip. < 600 hp	g/hp-hr	1	1	1	0.0279	14.1	1.04	N/A	3.03	N/A	AP42 3.3-1	10/96	<a href="https://www3.epa.gov/ttnchie1/ap42/ch03/final/c03s03.pdf">https://www3.epa.gov/ttnchie1/ap42/ch03/final/c03s03.pdf</a>
Diesel Recip. > 600 hp	g/hp-hr	0.32	0.182	0.178	0.0055	10.9	0.29	N/A	2.5	N/A	AP42 3.4-1 & 3.4-2	10/96	<a href="https://www3.epa.gov/ttn/chie1/ap42/ch03/final/c03s04.pdf">https://www3.epa.gov/ttn/chie1/ap42/ch03/final/c03s04.pdf</a>
Diesel Boiler	lbs/bbl	0.0840	0.0420	0.0105	0.0089	1.0080	0.0084	5.14E-05	0.2100	0.0336	AP42 1.3-6; Pb and NH3: WebFIRE (08/2018)	9/98 and 5/10	<a href="https://cfpub.epa.gov/webfire/">https://cfpub.epa.gov/webfire/</a>
Diesel Turbine	g/hp-hr	0.0381	0.0137	0.0137	0.0048	2.7941	0.0013	4.45E-05	0.0105	N/A	AP42 3.1-1 & 3.1-2a	4/00	<a href="https://www3.epa.gov/ttnchie1/ap42/ch03/final/c03s01.pdf">https://www3.epa.gov/ttnchie1/ap42/ch03/final/c03s01.pdf</a>
Dual Fuel Turbine	g/hp-hr	0.0381	0.0137	0.0137	0.0048	2.7941	0.0095	4.45E-05	0.3719	0.0000	AP42 3.1-1& 3.1-2a; AP42 3.1-1 & 3.1-2a	4/00	<a href="https://cfpub.epa.gov/webfire/">https://cfpub.epa.gov/webfire/</a>
Vessels – Propulsion	g/hp-hr	0.320	0.1931	0.1873	0.0047	7.6669	0.2204	2.24E-05	1.2025	0.0022	USEPA 2017 NEI;TSP refer to Diesel Recip. > 600 hp reference	3/19	<a href="https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data">https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data</a>
Vessels – Drilling Prime Engine, Auxiliary	g/hp-hr	0.320	0.1931	0.1873	0.0047	7.6669	0.2204	2.24E-05	1.2025	0.0022	USEPA 2017 NEI;TSP refer to Diesel Recip. > 600 hp reference	3/19	
Vessels – Diesel Boiler	g/hp-hr	0.0466	0.1491	0.1417	0.4400	1.4914	0.0820	3.73E-05	0.1491	0.0003	USEPA 2017 NEI;TSP (units converted) refer to Diesel Boiler Reference	3/19	
Vessels – Well Stimulation	g/hp-hr	0.320	0.1931	0.1873	0.0047	7.6669	0.2204	2.24E-05	1.2025	0.0022	USEPA 2017 NEI;TSP refer to Diesel Recip. > 600 hp reference	3/19	<a href="https://www3.epa.gov/ttn/chie1/ap42/ch03/final/c03s01.pdf">https://www3.epa.gov/ttn/chie1/ap42/ch03/final/c03s01.pdf</a>
Natural Gas Heater/Boiler/Burner	lbs/MMscf	7.60	1.90	1.90	0.60	190.00	5.50	5.00E-04	84.00	3.2	AP42 1.4-1 & 1.4-2; Pb and NH3: WebFIRE (08/2018)	7/98 and 8/18	
Combustion Flare (no smoke)	lbs/MMscf	0.00	0.00	0.00	0.57	71.40	35.93	N/A	325.5	N/A	AP42 13.5-1, 13.5-2	2/18	
Combustion Flare (light smoke)	lbs/MMscf	2.10	2.10	2.10	0.57	71.40	35.93	N/A	325.5	N/A	AP42 13.5-1, 13.5-2	2/18	
Combustion Flare (medium smoke)	lbs/MMscf	10.50	10.50	10.50	0.57	71.40	35.93	N/A	325.5	N/A	AP42 13.5-1, 13.5-2	2/18	
Combustion Flare (heavy smoke)	lbs/MMscf	21.00	21.00	21.00	0.57	71.40	35.93	N/A	325.5	N/A	AP42 13.5-1, 13.5-2	2/18	<a href="https://www3.epa.gov/ttn/chie1/ap42/ch13/final/C13S05_02-05-18.pdf">https://www3.epa.gov/ttn/chie1/ap42/ch13/final/C13S05_02-05-18.pdf</a>
Liquid Flaring	lbs/bbl	0.42	0.0966	0.0651	5.964	0.84	0.01428	5.14E-05	0.21	0.0336	AP42 1.3-1 through 1.3-3 and 1.3-5	5/10	<a href="https://www3.epa.gov/ttnchie1/ap42/ch01/final/c01s03.pdf">https://www3.epa.gov/ttnchie1/ap42/ch01/final/c01s03.pdf</a>
Storage Tank	tons/yr/tank						4.300				2014 Gulfwide Inventory; Avg emiss (upper bound of 95% CI)	2017	<a href="https://www.boem.gov/environment/environmental-studies/2014-gulfwide-emission-inventory">https://www.boem.gov/environment/environmental-studies/2014-gulfwide-emission-inventory</a>
Fugitives	lbs/hr/component						0.0005				API Study	12/93	<a href="https://www.api.org/">https://www.api.org/</a>
Glycol Dehydrator	tons/yr/dehydrator						19.240				2011 Gulfwide Inventory; Avg emiss (upper bound of 95% CI)	2014	<a href="https://www.boem.gov/environment/environmental-studies/2011-gulfwide-emission-inventory">https://www.boem.gov/environment/environmental-studies/2011-gulfwide-emission-inventory</a>
Cold Vent	tons/yr/vent						44.747				2014 Gulfwide Inventory; Avg emiss (upper bound of 95% CI)	2017	<a href="https://www.boem.gov/environment/environmental-studies/2014-gulfwide-emission-inventory">https://www.boem.gov/environment/environmental-studies/2014-gulfwide-emission-inventory</a>
Waste Incinerator	lb/ton		15.0	15.0	2.5	2.0	N/A	N/A	20.0	N/A	AP 42 2.1-12	10/96	<a href="https://www3.epa.gov/ttnchie1/ap42/ch02/final/c02s01.pdf">https://www3.epa.gov/ttnchie1/ap42/ch02/final/c02s01.pdf</a>
On-Ice – Loader	lbs/gal	0.043	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003	USEPA NONROAD2008 model; TSP (units converted) refer to Diesel Recip. <600 reference	2009	<a href="https://www.epa.gov/moves/nonroad2008a-installation-and-updates">https://www.epa.gov/moves/nonroad2008a-installation-and-updates</a>
On-Ice – Other Construction Equipment	lbs/gal	0.043	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003	USEPA NONROAD2008 model; TSP (units converted) refer to Diesel Recip. <600 reference	2009	
On-Ice – Other Survey Equipment	lbs/gal	0.043	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003	USEPA NONROAD2008 model; TSP (units converted) refer to Diesel Recip. <600 reference	2009	
On-Ice – Tractor	lbs/gal	0.043	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003	USEPA NONROAD2008 model; TSP (units converted) refer to Diesel Recip. <600 reference	2009	
On-Ice – Truck (for gravel island)	lbs/gal	0.043	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003	USEPA NONROAD2008 model; TSP (units converted) refer to Diesel Recip. <600 reference	2009	
On-Ice – Truck (for surveys)	lbs/gal	0.043	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003	USEPA NONROAD2008 model; TSP (units converted) refer to Diesel Recip. <600 reference	2009	
Man Camp - Operation (max people/day)	tons/person/day		0.0004	0.0004	0.0004	0.006	0.001	N/A	0.001	N/A	BOEM 2014-1001	2014	<a href="https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/BOEM_Newsroom/Library/Publications/2014-1001.pdf">https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/BOEM_Newsroom/Library/Publications/2014-1001.pdf</a>
Vessels - Ice Management Diesel	g/hp-hr	0.320	0.1931	0.1873	0.0047	7.6669	0.2204	2.24E-05	1.2025	0.0022	USEPA 2017 NEI;TSP refer to Diesel Recip. > 600 hp reference	3/19	<a href="https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data">https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data</a>
Vessels - Hovercraft Diesel	g/hp-hr	0.320	0.1931	0.1873	0.0047	7.6669	0.2204	2.24E-05	1.2025	0.0022	USEPA 2017 NEI;TSP refer to Diesel Recip. > 600 hp reference	3/19	<a href="https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data">https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data</a>

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

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

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

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

AIR EMISSIONS CALCULATIONS - 1ST YEAR

COMPANY	AREA		BLOCK	LEASE	FACILITY	WELL					CONTACT	PHONE	REMARKS												
Walter Oil & Gas Corporation	Eugene Island		284	OCS-G 36746	N/A	Well Location 001					Greer Malbrough	281-698-8525	Drill, complete, test well, install subsea tree/ wellhead utilizing independent leg jack-up MODU.												
OPERATIONS	EQUIPMENT	EQUIPMENT ID	RATING	MAX. FUEL	ACT. FUEL	RUN TIME		MAXIMUM POUNDS PER HOUR									ESTIMATED TONS								
	Diesel Engines		HP	GAL/HR	GAL/D																				
	Nat. Gas Engines		HP	SCF/HR	SCF/D																				
	Burners		MMBTU/HR	SCF/HR	SCF/D	HR/D	D/YR	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3
DRILLING	VESSELS- Drilling - Propulsion Engine - Diesel	Jack-up Rig	16975	873.295851	20959.10	24	31	11.98	7.23	7.01	0.17	286.92	8.25	0.00	45.00	0.08	4.45	2.69	2.61	0.06	106.74	3.07	0.00	16.74	0.03
	VESSELS- Drilling - Propulsion Engine - 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS- Drilling - Propulsion Engine - 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS- Drilling - Propulsion Engine - 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Vessels - Diesel Boiler		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Vessels – Drilling Prime Engine, Auxiliary		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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FACILITY INSTALLATION	VESSELS - Heavy Lift Vessel/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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
			BPD																						
DRILLING	Liquid Flaring		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WELL TEST	COMBUSTION FLARE - no smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - light smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - medium smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - heavy smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
ALASKA-SPECIFIC SOURCES	VESSELS		kW			HR/D	D/YR																		
	VESSELS - Ice Management Diesel		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00
2023 Facility Total Emissions								11.98	7.23	7.01	0.17	286.92	8.25	0.00	45.00	0.08	4.45	2.69	2.61	0.06	106.74	3.07	0.00	16.74	0.03
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES																1,998.00			1,998.00	1,998.00	1,998.00		52,109.04	
	60.0																								
DRILLING	VESSELS- Crew Diesel	(2 x 2065hp)	4130	212.47198	5099.33	24	31	2.91	1.76	1.71	0.04	69.81	2.01	0.00	10.95	0.02	1.08	0.65	0.63	0.02	25.97	0.75	0.00	4.07	0.01
	VESSELS - Work Diesel	(2 x 2065hp)	4130	212.47198	5099.33	24	31	2.91	1.76	1.71	0.04	69.81	2.01	0.00	10.95	0.02	1.08	0.65	0.63	0.02	25.97	0.75	0.00	4.07	0.01
	VESSELS - Tugs Diesel	(3 x 4200hp)	12600	648.219601	15557.27	24	2	8.89	5.36	5.20	0.13	212.97	6.12	0.00	33.40	0.06	0.21	0.13	0.12	0.00	5.11	0.15	0.00	0.80	0.00
FACILITY INSTALLATION	VESSELS - 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS - Crew 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS - Supply 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRODUCTION	VESSELS - Support 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ALASKA-SPECIFIC SOURCES	On-Ice Equipment			GAL/HR	GAL/D																				
	Man Camp - Operation (maximum people per day)		PEOPLE/DAY																						
	VESSELS		kW			HR/D	D/YR																		
	On-Ice – Loader			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00
	On-Ice – Other Construction Equipment			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00
	On-Ice – Other Survey Equipment			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00
	On-Ice – Tractor			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00
	On-Ice – Truck (for gravel island)			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00
	On-Ice – Truck (for surveys)			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00
	Man Camp - Operation		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00
	VESSELS - Hovercraft Diesel		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2023 Non-Facility Total Emissions								14.72	8.88	8.61	0.21	352.59	10.14	0.00	55.30	0.10	2.38	1.44	1.39	0.03	57.05	1.64	0.00	8.95	0.02

AIR EMISSIONS CALCULATIONS - 2ND YEAR

COMPANY	AREA		BLOCK	LEASE	FACILITY	WELL					CONTACT	PHONE	REMARKS												
Walter Oil & Gas Corporation	Eugene Island		284	OCS-G 36746	N/A	Well Location 001					Greer Malbrough	281-698-8525	Drill, complete, test well, install subsea tree/ wellhead utilizing independent leg jack-up MODU.												
OPERATIONS	EQUIPMENT	EQUIPMENT ID	RATING	MAX. FUEL	ACT. FUEL	RUN TIME		MAXIMUM POUNDS PER HOUR									ESTIMATED TONS								
	Diesel Engines		HP	GAL/HR	GAL/D																				
	Nat. Gas Engines		HP	SCF/HR	SCF/D																				
	Burners		MMBTU/HR	SCF/HR	SCF/D	HR/D	D/YR	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3
DRILLING	VESSELS- Drilling - Propulsion Engine - Diesel	Jack-Up	16975	873.295851	20959.10	24	84	11.98	7.23	7.01	0.17	286.92	8.25	0.00	45.00	0.08	12.07	7.28	7.06	0.18	289.22	8.32	0.00	45.36	0.08
	VESSELS- Drilling - Propulsion Engine - 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	VESSELS- Drilling - Propulsion Engine - 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	VESSELS- Drilling - Propulsion Engine - 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Vessels - Diesel Boiler		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	Vessels – Drilling Prime Engine, Auxiliary		0	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
FACILITY INSTALLATION	VESSELS - Heavy Lift Vessel/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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
			BPD																						
DRILLING	Liquid Flaring		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
WELL TEST	COMBUSTION FLARE - no smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - light smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - medium smoke			208333.3		24	2	2.19	2.19	2.19	0.12	14.87	7.49	--	67.81	--	0.05	0.05	0.05	0.00	0.36	0.18	--	1.63	--
	COMBUSTION FLARE - heavy smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
ALASKA-SPECIFIC SOURCES	VESSELS		kW			HR/D	D/YR																		
	VESSELS - Ice Management Diesel		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	
2024 Facility Total Emissions								14.16	9.41	9.20	0.29	301.80	15.74	0.00	112.82	0.08	12.12	7.34	7.12	0.18	289.58	8.50	0.00	46.99	0.08
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES																1,998.00			1,998.00	1,998.00	1,998.00		52,109.04	
	60.0																								
DRILLING	VESSELS- Crew Diesel	(2 x 2065hp)	4130	212.47198	5099.33	24	84	2.91	1.76	1.71	0.04	69.81	2.01	0.00	10.95	0.02	2.94	1.77	1.72	0.04	70.37	2.02	0.00	11.04	0.02
	VESSELS - Work Diesel	(2 x 2065hp)	4130	212.47198	5099.33	24	84	2.91	1.76	1.71	0.04	69.81	2.01	0.00	10.95	0.02	2.94	1.77	1.72	0.04	70.37	2.02	0.00	11.04	0.02
	VESSELS - Tugs Diesel	(3 x 4200hp)	12600	648.219601	15557.27	24	2	8.89	5.36	5.20	0.13	212.97	6.12	0.00	33.40	0.06	0.21	0.13	0.12	0.00	5.11	0.15	0.00	0.80	0.00
FACILITY INSTALLATION	VESSELS - 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	VESSELS - Crew 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	VESSELS - Supply 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
PRODUCTION	VESSELS - Support 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
ALASKA-SPECIFIC SOURCES	On-Ice Equipment			GAL/HR	GAL/D																				
	Man Camp - Operation (maximum people per day)		PEOPLE/DAY																						
	VESSELS		kW			HR/D	D/YR																		
	On-Ice – Loader			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	
	On-Ice – Other Construction Equipment			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	
	On-Ice – Other Survey Equipment			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	
	On-Ice – Tractor			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	
	On-Ice – Truck (for gravel island)			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	
	On-Ice – Truck (for surveys)			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	
	Man Camp - Operation		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00
	VESSELS - Hovercraft Diesel		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2024 Non-Facility Total Emissions								14.72	8.88	8.61	0.21	352.59	10.14	0.00	55.30	0.10	6.09	3.67	3.56	0.09	145.84	4.19	0.00	22.88	0.04



# AIR EMISSIONS CALCULATIONS

COMPANY	AREA	BLOCK	LEASE	FACILITY	WELL					
Walter Oil & Gas Corporation	Eugene Island	284	OCS-G 36746	N/A	Well Location 001					
Year	Facility Emitted Substance									
	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3	
	2023	4.45	2.69	2.61	0.06	106.74	3.07	0.00	16.74	0.03
	2024	12.12	7.34	7.12	0.18	289.58	8.50	0.00	46.99	0.08
	Allowable	1998.00			1998.00	1998.00	1998.00		52109.04	

## SECTION 8 OIL SPILL INFORMATION

### 8.1 OIL SPILL RESPONSE PLANNING

All the proposed activities and facilities in this EP will be covered by the Oil Spill Response Plan (OSRP) filed by Walter Oil & Gas Corporation (Company No. 00730) dated July 2023 and last approved on February 3, 2022. Walter's biennial update was found in compliance on August 28, 2023 (OSRP Control No. 0-370).

### 8.2 SPILL RESPONSE SITES

Primary Response Equipment Location	Preplanned Staging Location
Houma, LA	Houma, LA
Harvey, LA	Leeville, LA
Leeville, LA	Fourchon, LA
	Venice, LA

### 8.3 OSRO INFORMATION

Walter Oil & Gas Corporation's primary equipment provider is Clean Gulf Associates (CGA). Clean Gulf Associates Services, LLC (CGAS) will provide closest available personnel, as well as a CGAS supervisor to operate the equipment.

### 8.4 WORST CASE SCENARIO DETERMINATION

Category	Regional OSRP WCD - Drilling	EP WCD - Drilling
Type of activity	Exploratory Drilling	Exploratory Drilling
Facility location (area/block)	EW 963	EI 284
Facility designation	Well Location B	001
Distance to nearest shoreline (miles)	73	60
Storage tanks (bbl)	0	0
Uncontrolled blowout (bbl)	241,839	315,237
<b>Total volume (bbl)</b>	<b>241,839</b>	<b>315,237</b>
Type of oil(s) (crude, condensate, diesel)	Crude Oil	Condensate
API gravity	36°	51°

Walter has determined that the worst-case scenario from the activities proposed in this EP does not supersede the worst-case scenario from our approved Regional OSRP because the product is a higher-grade condensate.

	EW 963, Well Location B	EI 284, Well 001
Amount remaining after 24hrs natural evaporation/dispersion (ADIOS Model)	200,726	192,295

Since Walter Oil & Gas Corporation has the capability to respond to the worst-case spill scenario included in our Regional OSRP approved on February 3, 2022, and biennial update found to be in compliance on August 28, 2023, and since the worst-case scenario determined for our EP does not replace the worst-case scenario in our Regional OSRP, Walter Oil & Gas Corporation hereby certifies that Walter Oil & Gas Corporation 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 EP.

#### **8.5 OIL SPILL RESPONSE DISCUSSION**

The Oil Spill Response Discussion is included as **Attachment 8-A**.

#### **8.6 MODELING REPORT**

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

## *SPILL RESPONSE DISCUSSION*

For the purpose of NEPA and Coastal Zone Management Act analysis, the largest spill volume originating from the proposed activity would be a well blowout during drilling operations, estimated to be 315,237 barrels of condensate with an API gravity of 51°.

### Land Segment and Resource Identification

Trajectories of a spill and the probability of it impacting a land segment have been projected utilizing information in the BOEM Oil Spill Risk Analysis Model (OSRAM) for the Central and Western Gulf of Mexico available on the BOEM website. The results are shown in **Figure 1**. The BOEM OSRAM identifies a 3% probability of impact to the shorelines of Cameron Parish/Louisiana within 10 days. Cameron Parish includes the east side of Sabine Lake, Sabine National Wildlife Refuge, Calcasieu Lake, Lacassine National Wildlife Refuge (inland) and Grand Lake. Cameron Parish also includes the area along the coastline from Sabine Pass to Big Constance Lake in Rockefeller Wildlife Refuge. This region is composed of open public beaches, marshlands and swamps. It serves as a habitat for numerous birds, finfish and other animals, including several rare, threatened and endangered species.

### Response

Walter will make every effort to respond to the Worst Case Discharge as effectively as practicable. A description of the response equipment under contract to contain and recover the Worst Case Discharge is shown in **Figure 2**.

Using the estimated chemical and physical characteristics of condensate, an ADIOS weathering model was run on a similar product from the ADIOS oil database. The results indicate 39% or approximately 122,942 barrels of condensate would be evaporated/dispersed within 24 hours, with approximately 192,295 barrels remaining.

<b>Natural Weathering Data: EI 284, Well 001</b>	<b>Barrels of Oil</b>
WCD Volume	315,237
Less 39% natural evaporation/dispersion	122,942
Remaining volume	192,295

**Figure 2** outlines equipment, personnel, materials and support vessels as well as temporary storage equipment available to respond to the worst case discharge. The volume accounts for the amount remaining after evaporation/dispersion at 24 hours. The list estimates individual times needed for procurement, load out, travel time to the site and deployment. **Figure 2** also indicates how operations will be supported.

Walter's Oil Spill Response Plan includes alternative response technologies such as dispersants. Strategies will be decided by Unified Command based on a safety analysis, the size of the spill, weather and potential impacts. Although unlikely, if aerial dispersants are utilized, 8 sorties

(9,600 gallons) from the DC-3 aircraft and 4 sorties (8,000 gallons) from the Basler aircraft would provide a daily dispersant capability of 7,540 barrels. Slick containment boom and sorbent boom would be immediately called out and on-scene as soon as possible. Offshore response strategies may include collection of condensate with sorbent boom (inside hard boom), attempting to skim utilizing CGA spill response equipment, with a total derated skimming capacity of 388,040 barrels. Temporary storage associated with skimming equipment equals 22,796 barrels. If additional storage is needed, various storage barges with a total capacity 368,000+ bbls may be mobilized and centrally located to provide temporary storage and minimize off-loading time. **Safety is first priority. Air monitoring will be accomplished and operations deemed safe prior to any containment/skimming attempts.**

If the spill went unabated, shoreline impact in Cameron Parish, Louisiana would depend upon existing environmental conditions. Shoreline protection would include the use of CGA's near shore and shallow water skimmers with a totaled derated skimming capacity of 147,915 barrels. Temporary storage associated with skimming equipment equals 1,845 barrels. If additional storage is needed, various storage barges with a total capacity 153,000 bbls may be mobilized and centrally located to provide temporary storage and minimize off-loading time. Onshore response may include the deployment of shoreline boom on beach areas, or protection and sorbent boom on vegetated areas. Through plan holder membership with CGA, AMPOL will ensure access to 81,450 feet of 18" shoreline protection boom. **Figure 2** outlines individual times needed for procurement, load out, travel time to the site and deployment. Strategies would be based upon surveillance and real time trajectories that depict areas of potential impact given actual sea and weather conditions. Applicable Area Contingency Plans (ACPs), Geographic Response Plans (GRPs), and Unified Command (UC) will be consulted to ensure that environmental and special economic resources are correctly identified and prioritized to ensure optimal protection. Shoreline protection strategies depict the protection response modes applicable for oil spill clean-up operations. As a secondary resource, the State of Louisiana Initial Oil Spill Response Plan will be consulted as appropriate to provide detailed shoreline protection strategies and describe necessary action to keep the oil spill from entering Louisiana's coastal wetlands. The UC should take into consideration all appropriate items detailed in Tactics discussion of this Appendix. The UC and their personnel have the option to modify the deployment and operation of equipment to allow for a more effective response to site-specific circumstances. Walter's contract Incident Management Team has access to the applicable ACP(s) and GRP(s).

Based on the anticipated worst case discharge scenario, Walter can be onsite with contracted oil spill recovery equipment with adequate response capacity to contain and recover surface hydrocarbons, and prevent land impact, to the maximum extent practicable, within an estimated 62 hours (based on the equipment's Effective Daily Recovery Capacity (EDRC)).

### **Initial Response Considerations**

Actual actions taken during an oil spill response will be based on many factors to include but not be limited to:

- Safety
- Weather
- Equipment and materials availability
- Ocean currents and tides
- Location of the spill
- Product spilled
- Amount spilled
- Environmental risk assessments
- Trajectory and product analysis
- Well status, i.e., shut in or continual release

Walter will take action to provide a safe, aggressive response to contain and recover as much of the spilled oil as quickly as it is safe to do so. In an effort to protect the environment, response actions will be designed to provide an “in-depth” protection strategy meant to recover as much oil as possible as far from environmentally sensitive areas as possible. Safety will take precedence over all other considerations during these operations.

Coordination of response assets will be supervised by the designation of a SIMOPS group as necessary for close quarter vessel response activities. Most often, this group will be used during source control events that require a significant number of large vessels operating independently to complete a common objective, in close coordination and support of each other. This group must also monitor the subsurface activities of each vessel (ROV, dispersant application, well control support, etc.). The SIMOPS group leader reports to the Source Control Section Chief.

In addition, these activities will be monitored by the Incident Management Team (IMT) and Unified Command via a structured Common Operating Picture (COP) established to track resource and slick movement in real time.

Upon notification of a spill, the following actions will be taken:

- Information will be confirmed
- An assessment will be made and initial objectives set
- OSROs and appropriate agencies will be notified
- ICS 201, Initial Report Form completed
- Initial Safety plan will be written and published
- Unified Command will be established
  - Overall safety plan developed to reflect the operational situation and coordinated objectives
  - Areas of responsibility established for Source Control and each surface operational site
  - On-site command and control established

## Offshore Response Actions

### Equipment Deployment

#### *Surveillance*

- Surveillance Aircraft: within two hours of QI notification, or at first light
- Provide trained observer to provide on site status reports
- Provide command and control platform at the site if needed
- Continual surveillance of oil movement by remote sensing systems, aerial photography and visual confirmation
- Continual monitoring of vessel assets using vessel monitoring systems

#### *Dispersant application assets*

- Put ASI on standby
- With the FOSC, conduct analysis to determine appropriateness of dispersant application (refer to Section 18)
- Gain FOSC approval for use of dispersants on the surface
- Deploy aircraft in accordance with a plan developed for the actual situation
- Coordinate movement of dispersants, aircraft, and support equipment and personnel
- Confirm dispersant availability for current and long range operations
- Start ordering dispersant stocks required for expected operations

#### *Containment boom*

- Call out early and expedite deployment to be on scene ASAP
- Ensure boom handling and mooring equipment is deployed with boom
- Provide continuing reports to vessels to expedite their arrival at sites that will provide for their most effective containment
- Use Vessels of Opportunity (VOO) to deploy and maintain boom

#### *Oceangoing Boom Barge*

- Containment at the source
- Increased/enhanced skimmer encounter rate
- Protection booming

#### *In-situ Burn assets*

- Determine appropriateness of in-situ burn operation in coordination with the FOSC and affected SOSC
- Determine availability of fire boom and selected ignition systems
- Start ordering fire boom stocks required for expected operations
- Contact boom manufacturer to provide training & tech support for operations, if required
- Determine assets to perform on water operation
- Build operations into safety plan
- Conduct operations in accordance with an approved plan
- Initial test burn to ensure effectiveness

### *Dedicated off-shore skimming systems*

#### *General*

- Deployed to the highest concentration of oil
- Assets deployed at safe distance from aerial dispersant and in-situ burn operations

#### *CGA HOSS Barge*

- Use in areas with heaviest oil concentrations
- Consider for use in areas of known debris (seaweed, and other floating materials)

#### *CGA 95' Fast Response Vessels (FRVs)*

- Designed to be a first vessel on scene
- Capable of maintaining the initial Command and Control function for on water recovery operations
- 24 hour oil spill detection capability
- Highly mobile and efficient skimming capability
- Use as far off-shore as safely possible

#### *CGA FRUs*

- To the area of the thickest oil
- Use as far off-shore as allowed
- VOOs 140' – 180' in length
- VOOs with minimum of 18' x 38' or 23' x 50' of optimum deck space
- VOOs in shallow water should have a draft of <10 feet when fully loaded

#### *T&T Koseq Skimming Systems*

- To the area of the thickest oil
- Use as far off-shore as allowed
- VOOs with a minimum of 2,000 bbls storage capacity
- VOOs at least 200' in length
- VOOs with deck space of 100' x 40' to provide space for arms, tanks, and crane
- VOOs for shallow water should be deck barges with a draft of <10 feet when fully loaded

#### *Storage Vessels*

- Establish availability of CGA contracted assets (See Appendix E)
- Early call out (to allow for tug boat acquisition and deployment speeds)
- Phase mobilization to allow storage vessels to arrive at the same time as skimming systems
- Position as closely as possible to skimming assets to minimize offloading time



### *Vessels of Opportunity (VOO)*

- Use Walter's contracted resources as applicable
- Industry vessels are ideal for deployment of Vessel of Opportunity Skimming Systems (VOSS)
- Acquire additional resources as needed
- Consider use of local assets, i.e. fishing and pleasure craft for ISB operations or boom tending
- Expect mission specific and safety training to be required
- Plan with the US Coast Guard for vessel inspections
- Place VOOs in Division or Groups as needed
- Use organic on-board storage if appropriate
- Maximize non-organic storage appropriate to vessel limitations
- Decant as appropriate after approval to do so has been granted
- Assign bulk storage barges to each Division/Group
- Position bulk storage barges as close to skimming units as possible
- Utilize large skimming vessel (e.g. barges) storage for smaller vessel offloading
- Maximize skimming area (swath) to the optimum width given sea conditions and available equipment
- Maximize use of oleophilic skimmers in all operations, but especially offshore
- Nearshore, use shallow water barges and shuttle to skimming units to minimize offloading time
- Plan and equip to use all offloading capabilities of the storage vessel to minimize offloading time

### *Adverse Weather Operations:*

In adverse weather, when seas are  $\geq 3$  feet, the use of larger recovery and storage vessels, oleophilic skimmers, and large offshore boom will be maximized. KOSEQ Arm systems are built for rough conditions, and they should be used until their operational limit (9.8' seas) is met. Safety will be the overriding factor in all operations and will cease at the order of the Unified Command, vessel captain, or in an emergency, "stop work" may be directed by any crew member.

### **Surface Oil Recovery Considerations and Tactics (Offshore and Near-shore Operations)**

#### *Maximization of skimmer-oil encounter rate*

- Place barges in skimming task forces, groups, etc., to reduce recovered oil offloading time
- Place barges alongside skimming systems for immediate offloading of recovered oil when practicable
- Use two vessels, each with heavy sea boom, in an open-ended "V" configuration to funnel surface oil into a trailing skimming unit's organic, V-shaped boom and skimmer (see page 7, *CGA Equipment Guide Book and Tactic Manual* (CGATM))

- Use secondary vessels and heavy sea boom to widen boom swath beyond normal skimming system limits (see page 15, CGATM)
- Consider night-time operations, first considering safety issues
- Utilize all available advanced technology systems ( IR, X-Band Radar, etc.) to determine the location of, and move to, recoverable oil
- Confirm the presence of recoverable oil prior to moving to a new location

#### *Maximize skimmer system efficiency*

- Place weir skimming systems in areas of calm seas and thick oil
- Maximize the use of oleophilic skimming systems in heavier seas
- Place less mobile, high EDRC skimming systems (e.g. HOSS Barge) in the largest pockets of the heaviest oil
- Maximize onboard recovered oil storage for vessels.
- Obtain authorization for decanting of recovered water as soon as possible
- Use smaller, more agile skimming systems to recover streamers of oil normally found farther from the source. Place recovered oil barges nearby

#### *Recovered Oil Storage*

- Smaller barges in larger quantities will increase flexibility for multi-location skimming operations
- Place barges in skimming task forces, groups, etc., to reduce recovered oil offloading time
- Procure and deploy the maximum number of portable tanks to support Vessel of Opportunity Skimming Systems if onboard storage is not available
- Maximize use of the organic recovered oil storage capacity of the skimming vessel

#### *Command, Control, and Communications (C<sup>3</sup>)*

- Publish, implement, and fully test an appropriate communications plan
- Design an operational scheme, maintaining a manageable span of control
- Designate and mark C<sup>3</sup> vessels for easy aerial identification
- Designate and employ C<sup>3</sup> aircraft for task forces, groups, etc.
- Use reconnaissance air craft and Rapid Response Teams (RAT) to confirm the presence of recoverable oil

### **On Water Recovery Group**

When the first skimming vessel arrives on scene, a complete site assessment will be conducted before recovery operations begin. Once it is confirmed that the air monitoring readings for O<sub>2</sub>, LEL, H<sub>2</sub>S, CO, VOC, and Benzene are all within the permissible limits, oil recovery operations may begin.

As skimming vessels arrive, they will be organized to work in areas that allow for the most efficient vessel operation and free vessel movement in the recovery of oil. Vessel groups will vary in structure as determined by the Operations Section of the Unified Command, but will generally consist, at a minimum, of the following dedicated assets:

- 3 to 5 – Offshore skimming vessels (recovery)
- 1 – Tank barge (temporary storage)
- 1 – Air asset (tactical direction)
- 2 – Support vessels (crew/utility for supply)
- 6 to 10 – Boom vessels (enhanced booming )

***Example (Note: Actual organization of TFs will be dependent on several factors including, asset availability, weather, spilled oil migration, currents, etc.)***

The 95' FRV Breton Island out of Venice arrives on scene and conducts an initial site assessment. Air monitoring levels are acceptable and no other visual threats have been observed. The area is cleared for safe skimming operations. The Breton Island assumes command and control (CoC) of on-water recovery operations until a dedicated non-skimming vessel arrives to relieve it of those duties.

A second 95' FRV arrives and begins recovery operations alongside the Breton Island. Several more vessels begin to arrive, including a third 95' FRV out of Galveston, the HOSS Barge (High Volume Open Sea Skimming System) out of Harvey, a boom barge (CGA 300) with 25,000' of 42" auto boom out of Leeville, and 9 Fast Response Units (FRUs) from the load-out location at C-Port in Port Fourchon.

As these vessels set up and begin skimming, they are grouped into task forces (TFs) as directed by the Operations Section of the Unified Command located at the command post.

Initial set-up and potential actions:

- A 1,000 meter safety zone has been established around the incident location for vessels involved in Source Control
- The HOSS Barge is positioned facing the incident location just outside of this safety zone or at the point where the freshest oil is reaching the surface
- The HOSS Barge engages its Oil Spill Detection (OSD) system to locate the heaviest oil and maintains that ability for 24-hour operations

- The HOSS Barge deploys 1,320' of 67" Sea Sentry boom on each side, creating a swath width of 800'
- The Breton Island and H.I. Rich skim nearby, utilizing the same OSD systems as the HOSS Barge to locate and recover oil
- Two FRUs join this group and it becomes TF1
- The remaining 7 FRUs are split into a 2 and 3 vessel task force numbered TF2 and TF3
- A 95' FRV is placed in each TF
- The boom barge (CGA 300) is positioned nearby and begins deploying auto boom in sections between two utility vessels (1,000' to 3,000' of boom, depending on conditions) with chain-link gates in the middle to funnel oil to the skimmers
- The initial boom support vessels position in front of TF2 and TF3
- A 100,000+ barrel offshore tank barge is placed with each task force as necessary to facilitate the immediate offload of skimming vessels

The initial task forces (36 hours in) may be structured as follows:

#### **TF 1**

- 1 – 95' FRV
- 1 – HOSS Barge with 3 tugs
- 2 – FRUs
- 1 – 100,000+ barrel tank barge and associated tug(s)
- 1 – Dedicated air asset for tactical direction
- 8 – 500' sections of auto boom with gates
- 8 – Boom-towing vessels
- 2 – Support vessels (crew/utility)

#### **TF 2**

- 1 – 95' FRV
- 4 – FRUs
- 1 – 100,000+ barrel tank barge and associated tug(s)
- 1 – Dedicated air asset for tactical direction
- 10 – 500' sections of auto boom with gates
- 10 – Boom-towing vessels
- 2 – Support vessels (crew/utility)

#### **TF 3**

- 1 – 95' FRV
- 3 – FRUs
- 1 – 100,000+ barrel tank barge and associated tug(s)
- 1 – Dedicated air asset for tactical direction
- 8 – 500' sections of auto boom with gates
- 8 – Boom-towing vessels
- 2 – Support vessels (crew/utility)

Offshore skimming equipment continues to arrive in accordance with the ETA data listed in figure H.3a; this equipment includes 2 AquaGuard skimmers and 11 sets of Koseq Rigid Skimming Arms. These high volume heavy weather capable systems will be divided into functional groups and assigned to specific areas by the Operations Section of the Unified Command.

At this point of the response, the additional TFs may assume the following configurations:

**TF 4**

- 2 – Sets of Koseq Rigid Skimming Arms w/ associated 200'+ PIDVs
- 1 – AquaGuard Skimmer
- 1 – 100,000+ barrel tank barge and associated tug(s)
- 1 – Dedicated air asset for tactical direction
- 2 – Support vessels (crew/utility)
- 6 – 500' sections of auto boom with gates
- 6 – Boom-towing vessels

**TF 5**

- 3 – Sets of Koseq Rigid Skimming Arms w/ associated 200'+ PIDVs
- 1 – AquaGuard Skimmer
- 1 – 100,000+ barrel tank barge and associated tug(s)
- 1 – Dedicated air asset for tactical direction
- 2 – Support vessels (crew/utility)
- 8 – 500' sections of auto boom with gates
- 8 – Boom-towing vessels

**TF 6**

- 3 – Sets of Koseq Rigid Skimming Arms w/ associated 200'+ PIDVs
- 1 – 100,000+ barrel tank barge and associated tug(s)
- 1 – Dedicated air asset for tactical direction
- 2 – Support vessels (crew/utility)
- 6 – 500' sections of auto boom with gates
- 6 – Boom-towing vessels

**TF 7**

- 3 – Sets of Koseq Rigid Skimming Arms w/ associated 200'+ PIDVs
- 1 – 100,000+ barrel tank barge and associated tug(s)
- 1 – Dedicated air asset for tactical direction
- 2 – Support vessels (crew/utility)
- 6 – 500' sections of auto boom with gates
- 6 – Boom-towing vessels

### CGA Minimum Acceptable Capabilities for Vessels of Opportunity (VOO)

Minimum acceptable capabilities of Petroleum Industry Designed Vessels (PIDV) for conducting Vessel of Opportunity (VOO) skimming operations are shown in the table below. PIDVs are “purpose-built” to provide normal support to offshore oil and gas operators. They include but are not limited to utility boats, offshore supply vessels, etc. They become VOOs when tasked with oil spill response duties.

Capability	FRU	KOSEQ	AquaGuard
Type of Vessel	Utility Boat	Offshore Supply Vessel	Utility Boat
Operating parameters			
Sea State	3-5 ft max	9.8 ft max	3-5 ft max
Skimming speed	≤1 kt	≤3 kts	≤1 kt
Vessel size			
Minimum Length	100 ft	200 ft	100 ft
Deck space for: <ul style="list-style-type: none"><li>• Tank(s)</li><li>• Crane(s)</li><li>• Boom Reels</li><li>• Hydraulic Power Units</li><li>• Equipment Boxes</li></ul>	18x32 ft	100x40 ft	18x32 ft
Communication Assets	Marine Band Radio	Marine Band Radio	Marine Band Radio

**Tactical use of Vessels of Opportunity (VOO):** Walter will take all possible measures to maximize the oil-to-skimmer encounter rate of all skimming systems, to include VOOs, as discussed in this section. VOOs will normally be placed within an On-water recovery unit as shown in figures below.

**Skimming Operations:** PIDVs are the preferred VOO skimming platform. OSROs are more versed in operating on these platforms and the vessels are generally large enough with crews more likely versed in spill response operations. They also have a greater possibility of having on-board storage capacity and the most likely vessels to be under contract, and therefore more readily available to the operator. These vessels would normally be assigned to an on-water recovery group/division (see figure below) and outfitted with a VOSS suited for their size and capabilities. Specific tactics used for skimming operations would be dependent upon many parameters which include, but are not limited to, safety concerns, weather, type VOSS on board, product being recovered, and area of oil coverage. Planners would deploy these assets with the objective of safely maximizing oil- to-skimmer encounter rate by taking actions to minimize non-skimming time and maximizing boom swath. Specific tactical configurations are shown in figures below.

**The Fast Response Unit (FRU):** A self-contained, skid based, skimming system that is deployed from the right side of a vessel of opportunity (VOO). An outrigger holds a 75' long section of air inflatable boom in place that directs oil to an apex for recovery via a Foilex 250 weir skimmer. The outrigger creates roughly a 40' swath width dependent on the VOO beam. The lip of the collection bowl on the skimmer is placed as close to the oil and water interface as possible to maximize oil recovery and minimize water retention. The skimmer then pumps all fluids recovered to the storage tank where it is allowed to settle, and with the approval of the Coast Guard, the water is decanted from the bottom of the tank back into the water ahead of the containment boom to be recycled through the system. Once the tank is full of as much pure recovered oil as possible it is offloaded to a storage barge for disposal in accordance with an approved disposal plan. A second 100 barrel storage tank can be added if the appropriate amount of deck space is available to use as secondary storage.

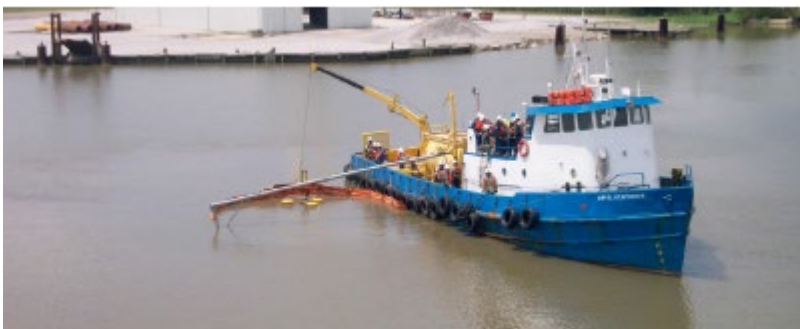
### **Tactical Overview**

*Mechanical Recovery* – The FRU is designed to provide fast response skimming capability in the offshore and nearshore environment in a stationary or advancing mode. It provides a rated daily recovery capacity of 4,100 barrels. An additional boom reel with 440' of offshore boom can be deployed along with the FRU, and a second support vessel for boom towing, to extend the swath width when attached to the end of the fixed boom. The range and sustainability offshore is dependent on the VOO that the unit is placed on, but generally these can stay offshore for extended periods. The FRU works well independently or assigned with other on-water recovery assets in a task force. In either case, it is most effective when a designated aircraft is assigned to provide tactical direction to ensure the best placement in recoverable oil.

*Maximum Sea Conditions* – Under most circumstances the FRU can maintain standard oil spill recovery operations in 2' to 4' seas. Ultimately, the Coast Guard licensed Captain in charge of the VOO (with input from the CGAS Supervisor assigned) will be responsible to determine when the sea conditions have surpassed the vessel's safe operating capabilities.

### **Possible Task Force Configuration** (Multiple VOOs can be deployed in a task force)

- 1 – VOO (100' to 165' Utility or Supply Vessel)
- 1 – Boom reel w/support vessel for towing
- 1 – Tank barge (offshore) for temporary storage
- 1 – Utility/Crewboat (supply)
- 1 – Designated spotter aircraft



**The VOSS (yellow) is being deployed and connected to an out-rigged arm. This is suitable for collection in both large pockets of oil and for recovery of streaming oil. The oil-to-skimmer encounter rate is limited by the length of the arm. Skimming pace is  $\leq 1$  knot.**



**Through the use of an additional VOO, and using extended sea boom, the swath of the VOSS is increased therefore maximizing the oil-to-skimmer encounter rate. Skimming pace is  $\leq 1$  knot.**



**The Koseq Rigid Sweeping Arm:** A skimming system deployed on a vessel of opportunity. It requires a large Offshore or Platform Supply Vessel (OSV/PSV), greater than 200' with at least 100' x 50' of free deck space. On each side of the vessel, a 50' long rigid framed Arm is deployed that consists of pontoon chambers to provide buoyancy, a smooth nylon face, and a hydraulically adjustable mounted weir skimmer. The Arm floats independently of the vessel and is attached by a tow bridle and a lead line. The movement of the vessel forward draws the rubber end seal of the arm against the hull to create a collection point for free oil directed to the weir by the Arm face. The collection weir is adjusted to keep the lip as close to the oil water interface as possible to maximize oil recovery while attempting to minimize excess water collection. A transfer pump (combination of positive displacement, screw type and centrifuge suited for highly viscous oils) pump the recovered liquid to portable tanks and/or dedicated fixed storage tanks onboard the vessel. After being allowed to sit and separate, with approval from the Coast Guard, the water can be decanted (pumped off) in front of the collection arm to be reprocessed through the system. Once full with as much pure recovered oil as possible, the oil is transferred to a temporary storage barge where it can be disposed of in accordance with an approved disposal plan.

## **Tactical Overview**

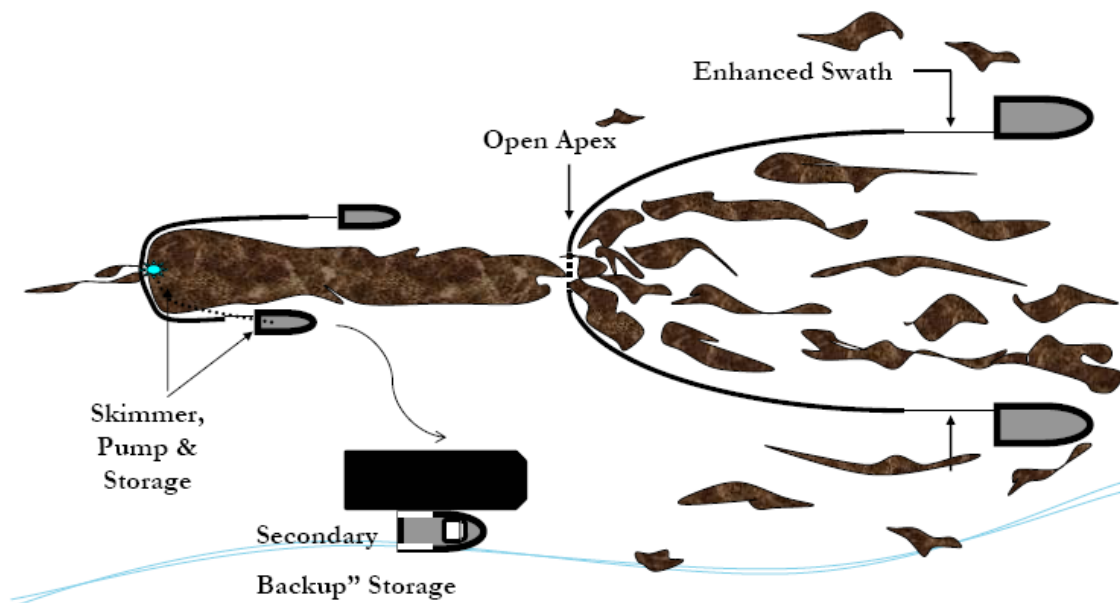
*Mechanical Recovery* – Deployed on large vessels of opportunity (VOO) the Koseq Rigid Sweeping Arms are high volume surge capacity deployed to increase recovery capacity at the source of a large oil spill in the offshore and outer nearshore environment of the Gulf of Mexico. They are highly mobile and sustainable in rougher sea conditions than normal skimming vessels (9.8' seas). The large Offshore Supply Vessels (OSV) required to deploy the Arms are able to remain on scene for extended periods, even when sea conditions pick up. Temporary storage on deck in portable tanks usually provides between 1,000 and 3,000 bbls. In most cases, the OSV will be able to pump 20% of its deadweight into the liquid mud tanks in accordance with the vessels Certificate of Inspection (COI). All storage can be offloaded utilizing the vessels liquid transfer system.

*Maximum Sea Conditions* - Under most circumstances the larger OSVs are capable of remaining on scene well past the Skimming Arms maximum sea state of 9.8'. Ultimately it will be the decision of the VOO Captain, with input from the T&T Supervisor onboard, to determine when the sea conditions have exceeded the safe operating conditions of the vessel.

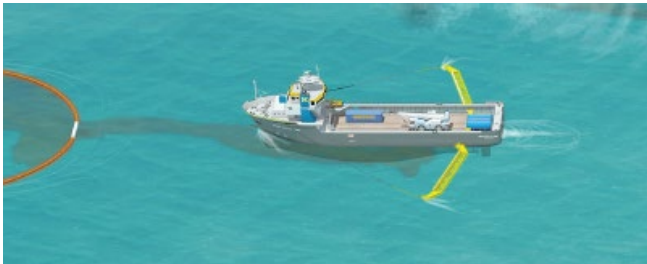
*Command and Control* – The large OSVs in many cases have state of the art communication and electronic systems, as well as the accommodations to support the function of directing all skimming operations offshore and reporting back to the command post.

**Possible Task Force Configuration** (Multiple Koseq VOOs can be deployed in a task force)

- 1 –  $\geq$  200' Offshore Supply Vessels (OSV) with set of Koseq Arms
- 2 to 4 portable storage tanks (500 bbl)
- 1 – Modular Crane Pedestal System set (MCPS) or 30 cherry picker (crane) for deployment
- 1 – Tank barge (offshore) for temporary storage
- 1 – Utility/Crewboat (supply)
- 1 – Designated spotter aircraft
- 4 – Personnel (4 T&T OSRO)



Scattered oil is “caught” by two VOO and collected at the apex of the towed sea boom. The oil moves through a “gate” at that apex, forming a larger stream of oil which moves into the boom of the skimming vessel. Operations are paced at  $\geq 1$ . A recovered oil barge stationed nearby to minimize time taken to offload recovered oil.



This is a depiction of the same operation as above but using KOSEQ Arms. In this configuration, the collecting boom speed dictates the operational pace at  $\geq 1$  knot to minimize entrainment of the oil.

**Clean Gulf Associates (CGA) Procedure for Accessing Member-Contracted and other Vessels of Opportunity (VOOs) for Spill Response**

- CGA has procedures in place for CGA member companies to acquire vessels of opportunity (VOOs) from an existing CGA member's contracted fleet or other sources for the deployment of CGA portable skimming equipment including Koseq Arms, Fast Response Units (FRUs) and any other portable skimming system(s) deemed appropriate for the response for a potential or actual oil spill, WCD oil spill or a Spill of National Significance (SONS).
- CGA uses Port Vision, a web-based vessel and terminal interface that empowers CGA to track vessels through Automatic Identification System (AIS) and terminal activities using a Geographic Information System (GIS). It provides live AIS/GIS views of waterways showing current vessel positions, terminals, created vessel fleets, and points-of-interest. Through this system, CGA has the ability to get instant snapshots of the location and status of all vessels contracted to CGA members, day or night, from any web-enabled PC.

## Near Shore Response Actions

### *Timing*

- Put near shore assets on standby and deployment in accordance with planning based on the actual situation, actual trajectories and oil budgets
- VOO identification and training in advance of spill nearing shoreline if possible
- Outfitting of VOOs for specific missions
- Deployment of assets based on actual movement of oil

### *Considerations*

- Water depth, vessel draft
- Shoreline gradient
- State of the oil
- Use of VOOs
- Distance of surf zone from shoreline

### *Surveillance*

- Provide trained observer to direct skimming operations
- Continual surveillance of oil movement by remote sensing systems, aerial photography and visual confirmation
- Continual monitoring of vessel assets

### *Dispersant Use*

- Generally will not be approved within 3 miles of shore or with less than 10 meters of water depth
- Approval would be at Regional Response Team level (Region 6)

### *Dedicated Near Shore skimming systems*

- FRVs
- Egmpol and Marco SWS
- Operate with aerial spotter directing systems to observed oil slicks

### *VOO*

- Use Walter's contracted resources as applicable
- Industry vessel are usually best for deployment of Vessel of Opportunity Skimming Systems (VOSS)
- Acquire additional resources as needed
- Consider use of local assets, i.e. fishing and pleasure craft
- Expect mission specific and safety training to be required
- Plan with the US Coast Guard for vessel inspections
- Operate with aerial spotter directing systems to oil patches

## **Shoreline Protection Operations**

### *Response Planning Considerations*

- Review appropriate Area Contingency Plan(s)
- Locate and review appropriate Geographic Response and Site Specific Plans
- Refer to appropriate Environmentally Sensitive Area Maps
- Capability for continual analysis of trajectories run periodically during the response
- Environmental risk assessments (ERA) to determine priorities for area protection
- Time to acquire personnel and equipment and their availability
- Refer to the State of Louisiana Initial Oil Spill Response Plan, Deep Water Horizon, dated 2 May 2010, as a secondary reference
- Aerial surveillance of oil movement
- Pre-impact beach cleaning and debris removal
- Shoreline Cleanup Assessment Team (SCAT) operations and reporting procedures
- Boom type, size and length requirements and availability
- Possibility of need for In-situ burning in near shore areas
- Current wildlife situation, especially status of migratory birds and endangered species in the area
- Check for Archeological sites and arrange assistance for the appropriate state agency when planning operations that may impact these areas

### *Placement of boom*

- Position boom in accordance with the information gained from references listed above and based on the actual situation
- Determine areas of natural collection and develop booming strategies to move oil into those areas
- Assess timing of boom placement based on the most current trajectory analysis and the availability of each type of boom needed. Determine an overall booming priority and conduct booming operations accordingly. Consider:
  - Trajectories
  - Weather forecast
  - Oil Impact forecast
  - Verified spill movement
  - Boom, manpower and vessel (shallow draft) availability
  - Near shore boom and support material, (stakes, anchors, line)

### *Beach Preparation - Considerations and Actions*

- Use of a 10 mile go/no go line to determine timing of beach cleaning
- SCAT reports and recommendations
- Determination of archeological sites and gaining authority to enter
- Monitoring of tide tables and weather to determine extent of high tides
- Pre cleaning of beaches by moving waste above high tide lines to minimize waste

- Determination of logistical requirements and arranging of waste removal and disposal
- Staging of equipment and housing of response personnel as close to the job site as possible to maximize on-site work time
- Boom tending, repair, replacement and security (use of local assets may be advantageous)
- Constant awareness of weather and oil movement for resource re-deployment as necessary
- Earthen berms and shoreline protection boom may be considered to protect sensitive inland areas
- Requisitioning of earth moving equipment
- Plan for efficient and safe use of personnel, ensuring:
  - A continual supply of the proper Personal Protective Equipment
  - Heating or cooling areas when needed
  - Medical coverage
  - Command and control systems (i.e. communications)
  - Personnel accountability measures
- Remediation requirements, i.e., replacement of sands, rip rap, etc.
- Availability of surface washing agents and associated protocol requirements for their use (see National Contingency Plan Product Schedule for list of possible agents)
- Discussions with all stakeholders, i.e., land owners, refuge/park managers, and others as appropriate, covering the following:
  - Access to areas
  - Possible response measures and impact of property and ongoing operations
  - Determination of any specific safety concerns
  - Any special requirements or prohibitions
  - Area security requirements
  - Handling of waste
  - Remediation expectations
  - Vehicle traffic control
  - Domestic animal safety concerns
  - Wildlife or exotic game concerns/issues

### *Inland and Coastal Marsh Protection and Response*

#### *Considerations and Actions*

- All considered response methods will be weighed against the possible damage they may do to the marsh. Methods will be approved by the Unified Command only after discussions with local Stakeholder, as identified above.
  - In-situ burn may be considered when marshes have been impacted
- Passive clean up of marshes should be considered and appropriate stocks of sorbent boom and/or sweep obtained.
- Response personnel must be briefed on methods to traverse the marsh, i.e.,
  - use of appropriate vessel
  - use of temporary walkways or road ways
- Discuss and gain approval prior cutting or moving vessels through vegetation
- Discuss use of vessels that may disturb wildlife, i.e., airboats

- Safe movement of vessels through narrow cuts and blind curves
- Consider the possibility that no response in a marsh may be best
- In the deployment of any response asset, actions will be taken to ensure the safest, most efficient operations possible. This includes, but is not limited to:
  - Placement of recovered oil or waste storage as near to vessels or beach cleanup crews as possible.
  - Planning for stockage of high use items for expeditious replacement
  - Housing of personnel as close to the work site as possible to minimize travel time
  - Use of shallow water craft
  - Use of communication systems appropriate ensure command and control of assets
  - Use of appropriate boom in areas that I can offer effective protection
  - Planning of waste collection and removal to maximize cleanup efficiency
- Consideration or on-site remediation of contaminated soils to minimize replacement operations and impact on the area

**Decanting Strategy**

Recovered oil and water mixtures will typically separate into distinct phases when left in a quiescent state. When separation occurs, the relatively clean water phase can be siphoned or decanted back to the recovery point with minimal, if any, impact. Decanting therefore increases the effective on-site oil storage capacity and equipment operating time. FOSC/SOSC approval will be requested prior to decanting operations. This practice is routinely used for oil spill recovery.

**CGA Equipment Limitations**

The capability for any spill response equipment, whether a dedicated or portable system, to operate in differing weather conditions will be directly in relation to the capabilities of the vessel the system is placed on. Most importantly, however, the decision to operate will be based on the judgment of the Unified Command and/or the Captain of the vessel, who will ultimately have the final say in terminating operations. Skimming equipment listed below may have operational limits which exceed those safety thresholds. As was seen in the Deepwater Horizon (DWH) oil spill response, vessel skimming operations ceased when seas reached 5-6 feet and vessels were often recalled to port when those conditions were exceeded. Systems below are some of the most up-to-date systems available and were employed during the DWH spill.

Boom	3 foot seas, 20 knot winds
Dispersants	Winds more than 25 knots Visibility less than 3 nautical miles Ceiling less than 1,000 feet.
FRU	8 foot seas
HOSS Barge/OSRB	8 foot seas
Koseq Arms	8 foot seas
OSRV	4 foot seas



**Environmental Conditions in the GOM**

Louisiana is situated between the easterly and westerly wind belts, and therefore, experiences westerly winds during the winter and easterly winds in the summer. Average wind speed is generally 14-15 mph along the coast. Wave heights average 4 and 5 feet. However, during hurricane season, Louisiana has recorded wave heights ranging from 40 to 50 feet high and winds reaching speeds of 100 mph. Because much of southern Louisiana lies below sea level, flooding is prominent.

Surface water temperature ranges between 70 and 80 ° F during the summer months. During the winter, the average temperature will range from 50 and 60 ° F.

The Atlantic and Gulf of Mexico hurricane season is officially from 1 June to 30 November. 97% of all tropical activity occurs within this window. The Atlantic basin shows a very peaked season from August through October, with 78% of the tropical storm days, 87% of the minor (Saffir-Simpson Scale categories 1 and 2) hurricane days, and 96% of the major (Saffir-Simpson categories 3, 4 and 5) hurricane days occurring then. Maximum activity is in early to mid September. Once in a few years there may be a hurricane occurring "out of season" - primarily in May or December. Globally, September is the most active month and May is the least active month.

**FIGURE 1**  
**TRAJECTORY BY LAND SEGMENT**

Trajectory of a spill and the probability of it impacting a land segment have been projected utilizing Walter's WCD and information in the BOEM Oil Spill Risk Analysis Model (OSRAM) for the Central and Western Gulf of Mexico available on the BOEM website using 10 day impact. The results are tabulated below.

Area/Block	OCS-G	Launch Area	Land Segment and/or Resource	Conditional Probability (%)
Drill, complete Well No. 001	G36746	C40	Jefferson, TX	1
<b>EI 284, Well 001</b>			<b>Cameron, LA</b>	<b>3</b>
			Vermilion, LA	1
<i>60 miles from shore</i>			Terrebonne, LA	2

**WCD Scenario– BASED ON WELL BLOWOUT DURING DRILLING OPERATIONS (60 miles from shore)**  
192,295 bbls of condensate (Volume considering natural weathering)  
API Gravity 51°

**FIGURE 2 – Equipment Response Time to EI 284, Well 001**

*Dispersants/Surveillance*

Dispersant/Surveillance	Dispersant Capacity (gal)	Persons Req.	From	Hrs to Procure	Hrs to Loadout	Travel to site	Total Hrs
ASI							
Basler 67T	2000	2	Houma	2	2	0.5	4.5
DC 3	1200	2	Houma	2	2	0.7	4.7
Aero Commander	NA	2	Houma	2	2	0.5	4.5

*Offshore Response*

Offshore Equipment Pre-Determined Staging	EDRC	Storage Capacity	VOO	Persons Required	From	Hrs to Procure	Hrs to Loadout	Hrs to GOM	Travel to Spill Site	Hrs to Deploy	Total Hrs
CGA											
HOSS Barge	76285	4000	3 Tugs	12	Harvey	6	0	12	18	2	38
95' FRV	22885	249	NA	6	Galveston	2	0	2	10	1	15
95' FRV	22885	249	NA	6	Leeville	2	0	2	5	1	10
95' FRV	22885	249	NA	6	Venice	2	0	3	7	1	13
95' FRV	22885	249	NA	6	Vermilion	2	0	3	2.5	1	8.5
Boom Barge (CGA-300) 42" Auto Boom (25000')	NA	NA	1 Tug 50 Crew	4 (Barge) 2 (Per Crew)	Leeville	8	0	4	14	2	28

Recovered Oil Storage Pre-Determined Staging	EDRC	Storage Capacity	VOO	Persons Required	From	Hrs to Procure	Hrs to Loadout	Hrs to GOM	Travel to Spill Site	Hrs to Deploy	Total Hrs
Enterprise Marine Services LLC (Available through contract with CGA)											
CTCo 2603	NA	25000	1 Tug	6	Amelia	34	0	6	7	1	48
CTCo 2607	NA	23000	1 Tug	6	Amelia	34	0	6	7	1	48
Kirby Offshore (available through contract with CGA)											
RO Barge	NA	80000+	1 Tug	6	Venice	37	0	4	18	1	60
RO Barge	NA	80000+	1 Tug	6	Venice	37	0	4	18	1	60
RO Barge	NA	80000+	1 Tug	6	Venice	37	0	4	18	1	60
RO Barge	NA	80000+	1 Tug	6	Venice	37	0	4	18	1	60

**Staging Area: Fourchon**

Offshore Equipment With Staging	EDRC	Storage Capacity	VOO	Persons Req.	From	Hrs to Procure	Hrs to Loadout	Travel to Staging	Travel to Site	Hrs to Deploy	Total Hrs
T&T Marine (available through direct contract with CGA)											
Aqua Guard Triton RBS (1)	22323	2000	1 Utility	6	Galveston	4	12	12	8.5	2	38.5
Aqua Guard Triton RBS (1)	22323	2000	1 Utility	6	Harvey	4	12	3	8.5	2	29.5
Koseq Skimming Arms (6) Lamor brush	137310	12000	6 OSV	36	Harvey	24	24	3	8.5	2	61.5
CGA											
FRU (2) + 100 bbl Tank (4)	8502	400	2 Utility	12	Vermilion	2	6	5.5	8.5	1	23
FRU (1) + 100 bbl Tank (2)	4251	200	1 Utility	6	Galveston	2	6	12	8.5	1	29.5
FRU (1) + 100 bbl Tank (2)	4251	200	1 Utility	6	Aransas Pass	2	6	16.5	8.5	1	34
FRU (3) + 100 bbl Tank (6)	12753	600	3 Utility	18	Leeville	2	6	2	8.5	1	19.5
FRU (2) + 100 bbl Tank (4)	8502	400	2 Utility	12	Venice	2	6	5	8.5	1	22.5

*Nearshore Response*

Nearshore Equipment Pre-determined Staging	EDRC	Storage Capacity	VOO	Persons Required	From	Hrs to Procure	Hrs to Loadout	Hrs to GOM	Travel to Spill Site	Hrs to Deploy	Total Hrs
CGA											
Mid-Ship SWS	22885	249	NA	4	Leeville	2	0	N/A	48	1	51
Mid-Ship SWS	22885	249	NA	4	Galveston	2	0	N/A	48	1	51
Trinity SWS	21500	249	NA	4	Venice	2	0	N/A	48	1	51
46' FRV	15257	65	NA	4	Aransas Pass	2	0	2	16	1	21
46' FRV	15257	65	NA	4	Leeville	2	0	2	8	1	13
46' FRV	15257	65	NA	4	Vermilion	2	0	2	2.5	1	7.5
46' FRV	15257	65	NA	4	Venice	2	0	2	11	1	16
Enterprise Marine Services LLC (Available through contract with CGA)											
CTCo 2604	NA	20000	1 Tug	6	Amelia	26	0	6	15	1	48
CTCo 2605	NA	20000	1 Tug	6	Amelia	26	0	6	15	1	48
CTCo 2606	NA	20000	1 Tug	6	Amelia	26	0	6	15	1	48
CTCo 2608	NA	23000	1 Tug	6	Amelia	26	0	6	15	1	48
CTCo 2609	NA	23000	1 Tug	6	Amelia	26	0	6	15	1	48
CTCo 5001	NA	47000	1 Tug	6	Amelia	26	0	6	15	1	48

**Staging Area: Cameron**

Nearshore Equipment With Staging	EDRC	Storage Capacity	VOO	Persons Req.	From	Hrs to Procure	Hrs to Load Out	Travel to Staging	Travel to Deployment	Hrs to Deploy	Total Hrs
CGA											
SWS Egmopol	1810	100	NA	3	Galveston	2	2	5	2	1	12
SWS Egmopol	1810	100	NA	3	Leeville	2	2	7	2	1	14
SWS Marco	3588	20	NA	3	Vermilion	2	2	2	2	1	9
SWS Marco	3588	34	NA	3	Leeville	2	2	7	2	1	14
SWS Marco	3588	34	NA	3	Venice	2	2	9.5	2	1	16.5
Foilex Skim Package (TDS 150)	1131	50	NA	3	Vermilion	4	12	2	2	2	22
Foilex Skim Package (TDS 150)	1131	50	NA	3	Galveston	4	12	5	2	2	25
Foilex Skim Package (TDS 150)	1131	50	NA	3	Harvey	4	12	7	2	2	27
4 Drum Skimmer (Magnum 100)	680	100	1 Crew	3	Vermilion	2	2	2	2	1	9
4 Drum Skimmer (Magnum 100)	680	100	1 Crew	3	Harvey	2	2	7	2	1	14
2 Drum Skimmer (TDS 118)	240	100	1 Crew	3	Vermilion	2	2	2	2	1	9
2 Drum Skimmer (TDS 118)	240	100	1 Crew	3	Harvey	2	2	7	2	1	14

*Shoreline Protection*

**Staging Area: Cameron**

Shoreline Protection Boom	VOO	Persons Req.	Storage/Warehouse Location	Hrs to Procure	Hrs to Loadout	Travel to Staging	Travel to Deployment	Hrs to Deploy	Total Hrs
AMPOL (available through CGA membership)									
34,050' 18" Boom	13 Crew	26	New Iberia, LA	2	2	3.5	2	12	21.5
16,000' 18" Boom	7 Crew	14	Chalmette, LA	2	2	7.5	2	6	19.5
900' 18" Boom	1 Crew	2	Morgan City, LA	2	2	5	2	2	13
11,800' 18" Boom	5 Crew	10	Gonzales, LA	2	2	9	2	2	17
16,000' 18" Boom	7 Crew	14	Port Arthur, TX	2	2	1.5	2	6	13.5
2,700' 18" Boom	2 Crew	4	Decatur, GA	2	2	20	2	6	32

Wildlife Response	EDRC	Storage Capacity	VOO	Persons Req.	From	Hrs to Procure	Hrs to Loadout	Travel to Staging	Travel to Deployment	Hrs to Deploy	Total Hrs
CGA											
Wildlife Support Trailer	NA	NA	NA	2	Harvey	2	2	7	1	2	14
Bird Scare Guns (24)	NA	NA	NA	2	Harvey	2	2	7	1	2	14
Bird Scare Guns (12)	NA	NA	NA	2	Galveston	2	2	5	1	2	12
Bird Scare Guns (12)	NA	NA	NA	2	Aransas Pass	2	2	9.5	1	2	16.5
Bird Scare Guns (24)	NA	NA	NA	2	Vermilion	2	2	2	1	2	9
Bird Scare Guns (24)	NA	NA	NA	2	Leeville	2	2	7	1	2	14

Response Asset	Total
Offshore EDRC	388,040
Offshore Recovered Oil Capacity	390,796+
Nearshore / Shallow Water EDRC	147,915
Nearshore / Shallow Water Recovered Oil Capacity	154,845

Since Walter Oil & Gas Corporation has the capability to respond to the worst-case spill scenario included in our Regional OSRP approved on February 3, 2022, and biennial update found to be in compliance on August 28, 2023, and since the worst-case scenario determined for our EP does not replace the worst-case scenario in our Regional OSRP, Walter Oil & Gas Corporation hereby certifies that Walter Oil & Gas Corporation 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 EP.

#### **8.5 OIL SPILL RESPONSE DISCUSSION**

The Oil Spill Response Discussion is included as **Attachment 8-A**.

#### **8.6 MODELING REPORT**

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

## *SPILL RESPONSE DISCUSSION*

For the purpose of NEPA and Coastal Zone Management Act analysis, the largest spill volume originating from the proposed activity would be a well blowout during drilling operations, estimated to be 108,665 barrels of condensate with an API gravity of 51°.

### Land Segment and Resource Identification

Trajectories of a spill and the probability of it impacting a land segment have been projected utilizing information in the BOEM Oil Spill Risk Analysis Model (OSRAM) for the Central and Western Gulf of Mexico available on the BOEM website. The results are shown in **Figure 1**. The BOEM OSRAM identifies a 3% probability of impact to the shorelines of Cameron Parish/Louisiana within 10 days. Cameron Parish includes the east side of Sabine Lake, Sabine National Wildlife Refuge, Calcasieu Lake, Lacassine National Wildlife Refuge (inland) and Grand Lake. Cameron Parish also includes the area along the coastline from Sabine Pass to Big Constance Lake in Rockefeller Wildlife Refuge. This region is composed of open public beaches, marshlands and swamps. It serves as a habitat for numerous birds, finfish and other animals, including several rare, threatened and endangered species.

### Response

Walter will make every effort to respond to the Worst Case Discharge as effectively as practicable. A description of the response equipment under contract to contain and recover the Worst Case Discharge is shown in **Figure 2**.

Using the estimated chemical and physical characteristics of condensate, an ADIOS weathering model was run on a similar product from the ADIOS oil database. The results indicate 48% or approximately 52,159 barrels of condensate would be evaporated/dispersed within 24 hours, with approximately 56,506 barrels remaining.

<b>Natural Weathering Data: EI 284, Well 001</b>	<b>Barrels of Oil</b>
WCD Volume	108,665
Less 48% natural evaporation/dispersion	52,159
Remaining volume	56,506

**Figure 2** outlines equipment, personnel, materials and support vessels as well as temporary storage equipment available to respond to the worst case discharge. The volume accounts for the amount remaining after evaporation/dispersion at 24 hours. The list estimates individual times needed for procurement, load out, travel time to the site and deployment. **Figure 2** also indicates how operations will be supported.

Walter's Oil Spill Response Plan includes alternative response technologies such as dispersants. Strategies will be decided by Unified Command based on a safety analysis, the size of the spill, weather and potential impacts. Although unlikely, if aerial dispersants are utilized, 8 sorties



(9,600 gallons) from the DC-3 aircraft and 4 sorties (8,000 gallons) from the Basler aircraft would provide a daily dispersant capability of 7,540 barrels. Slick containment boom and sorbent boom would be immediately called out and on-scene as soon as possible. Offshore response strategies may include collection of condensate with sorbent boom (inside hard boom), attempting to skim utilizing CGA spill response equipment, with a total derated skimming capacity of 388,040 barrels. Temporary storage associated with skimming equipment equals 22,796 barrels. If additional storage is needed, various storage barges with a total capacity 368,000+ bbls may be mobilized and centrally located to provide temporary storage and minimize off-loading time. **Safety is first priority. Air monitoring will be accomplished and operations deemed safe prior to any containment/skimming attempts.**

If the spill went unabated, shoreline impact in Cameron Parish, Louisiana would depend upon existing environmental conditions. Shoreline protection would include the use of CGA's near shore and shallow water skimmers with a totaled derated skimming capacity of 147,915 barrels. Temporary storage associated with skimming equipment equals 1,845 barrels. If additional storage is needed, various storage barges with a total capacity 153,000 bbls may be mobilized and centrally located to provide temporary storage and minimize off-loading time. Onshore response may include the deployment of shoreline boom on beach areas, or protection and sorbent boom on vegetated areas. Through plan holder membership with CGA, AMPOL will ensure access to 81,450 feet of 18" shoreline protection boom. **Figure 2** outlines individual times needed for procurement, load out, travel time to the site and deployment. Strategies would be based upon surveillance and real time trajectories that depict areas of potential impact given actual sea and weather conditions. Applicable Area Contingency Plans (ACPs), Geographic Response Plans (GRPs), and Unified Command (UC) will be consulted to ensure that environmental and special economic resources are correctly identified and prioritized to ensure optimal protection. Shoreline protection strategies depict the protection response modes applicable for oil spill clean-up operations. As a secondary resource, the State of Louisiana Initial Oil Spill Response Plan will be consulted as appropriate to provide detailed shoreline protection strategies and describe necessary action to keep the oil spill from entering Louisiana's coastal wetlands. The UC should take into consideration all appropriate items detailed in Tactics discussion of this Appendix. The UC and their personnel have the option to modify the deployment and operation of equipment to allow for a more effective response to site-specific circumstances. Walter's contract Incident Management Team has access to the applicable ACP(s) and GRP(s).

Based on the anticipated worst case discharge scenario, Walter can be onsite with contracted oil spill recovery equipment with adequate response capacity to contain and recover surface hydrocarbons, and prevent land impact, to the maximum extent practicable, within an estimated 62 hours (based on the equipment's Effective Daily Recovery Capacity (EDRC)).

### **Initial Response Considerations**

Actual actions taken during an oil spill response will be based on many factors to include but not be limited to:

- Safety
- Weather
- Equipment and materials availability
- Ocean currents and tides
- Location of the spill
- Product spilled
- Amount spilled
- Environmental risk assessments
- Trajectory and product analysis
- Well status, i.e., shut in or continual release

Walter will take action to provide a safe, aggressive response to contain and recover as much of the spilled oil as quickly as it is safe to do so. In an effort to protect the environment, response actions will be designed to provide an “in-depth” protection strategy meant to recover as much oil as possible as far from environmentally sensitive areas as possible. Safety will take precedence over all other considerations during these operations.

Coordination of response assets will be supervised by the designation of a SIMOPS group as necessary for close quarter vessel response activities. Most often, this group will be used during source control events that require a significant number of large vessels operating independently to complete a common objective, in close coordination and support of each other. This group must also monitor the subsurface activities of each vessel (ROV, dispersant application, well control support, etc.). The SIMOPS group leader reports to the Source Control Section Chief.

In addition, these activities will be monitored by the Incident Management Team (IMT) and Unified Command via a structured Common Operating Picture (COP) established to track resource and slick movement in real time.

Upon notification of a spill, the following actions will be taken:

- Information will be confirmed
- An assessment will be made and initial objectives set
- OSROs and appropriate agencies will be notified
- ICS 201, Initial Report Form completed
- Initial Safety plan will be written and published
- Unified Command will be established
  - Overall safety plan developed to reflect the operational situation and coordinated objectives
  - Areas of responsibility established for Source Control and each surface operational site
  - On-site command and control established

## Offshore Response Actions

### Equipment Deployment

#### *Surveillance*

- Surveillance Aircraft: within two hours of QI notification, or at first light
- Provide trained observer to provide on site status reports
- Provide command and control platform at the site if needed
- Continual surveillance of oil movement by remote sensing systems, aerial photography and visual confirmation
- Continual monitoring of vessel assets using vessel monitoring systems

#### *Dispersant application assets*

- Put ASI on standby
- With the FOSC, conduct analysis to determine appropriateness of dispersant application (refer to Section 18)
- Gain FOSC approval for use of dispersants on the surface
- Deploy aircraft in accordance with a plan developed for the actual situation
- Coordinate movement of dispersants, aircraft, and support equipment and personnel
- Confirm dispersant availability for current and long range operations
- Start ordering dispersant stocks required for expected operations

#### *Containment boom*

- Call out early and expedite deployment to be on scene ASAP
- Ensure boom handling and mooring equipment is deployed with boom
- Provide continuing reports to vessels to expedite their arrival at sites that will provide for their most effective containment
- Use Vessels of Opportunity (VOO) to deploy and maintain boom

#### *Oceangoing Boom Barge*

- Containment at the source
- Increased/enhanced skimmer encounter rate
- Protection booming

#### *In-situ Burn assets*

- Determine appropriateness of in-situ burn operation in coordination with the FOSC and affected SOSC
- Determine availability of fire boom and selected ignition systems
- Start ordering fire boom stocks required for expected operations
- Contact boom manufacturer to provide training & tech support for operations, if required
- Determine assets to perform on water operation
- Build operations into safety plan
- Conduct operations in accordance with an approved plan
- Initial test burn to ensure effectiveness

### *Dedicated off-shore skimming systems*

#### *General*

- Deployed to the highest concentration of oil
- Assets deployed at safe distance from aerial dispersant and in-situ burn operations

#### *CGA HOSS Barge*

- Use in areas with heaviest oil concentrations
- Consider for use in areas of known debris (seaweed, and other floating materials)

#### *CGA 95' Fast Response Vessels (FRVs)*

- Designed to be a first vessel on scene
- Capable of maintaining the initial Command and Control function for on water recovery operations
- 24 hour oil spill detection capability
- Highly mobile and efficient skimming capability
- Use as far off-shore as safely possible

#### *CGA FRUs*

- To the area of the thickest oil
- Use as far off-shore as allowed
- VOOs 140' – 180' in length
- VOOs with minimum of 18' x 38' or 23' x 50' of optimum deck space
- VOOs in shallow water should have a draft of <10 feet when fully loaded

#### *T&T Koseq Skimming Systems*

- To the area of the thickest oil
- Use as far off-shore as allowed
- VOOs with a minimum of 2,000 bbls storage capacity
- VOOs at least 200' in length
- VOOs with deck space of 100' x 40' to provide space for arms, tanks, and crane
- VOOs for shallow water should be deck barges with a draft of <10 feet when fully loaded

#### *Storage Vessels*

- Establish availability of CGA contracted assets (See Appendix E)
- Early call out (to allow for tug boat acquisition and deployment speeds)
- Phase mobilization to allow storage vessels to arrive at the same time as skimming systems
- Position as closely as possible to skimming assets to minimize offloading time

### *Vessels of Opportunity (VOO)*

- Use Walter's contracted resources as applicable
- Industry vessels are ideal for deployment of Vessel of Opportunity Skimming Systems (VOSS)
- Acquire additional resources as needed
- Consider use of local assets, i.e. fishing and pleasure craft for ISB operations or boom tending
- Expect mission specific and safety training to be required
- Plan with the US Coast Guard for vessel inspections
- Place VOOs in Division or Groups as needed
- Use organic on-board storage if appropriate
- Maximize non-organic storage appropriate to vessel limitations
- Decant as appropriate after approval to do so has been granted
- Assign bulk storage barges to each Division/Group
- Position bulk storage barges as close to skimming units as possible
- Utilize large skimming vessel (e.g. barges) storage for smaller vessel offloading
- Maximize skimming area (swath) to the optimum width given sea conditions and available equipment
- Maximize use of oleophilic skimmers in all operations, but especially offshore
- Nearshore, use shallow water barges and shuttle to skimming units to minimize offloading time
- Plan and equip to use all offloading capabilities of the storage vessel to minimize offloading time

### *Adverse Weather Operations:*

In adverse weather, when seas are  $\geq 3$  feet, the use of larger recovery and storage vessels, oleophilic skimmers, and large offshore boom will be maximized. KOSEQ Arm systems are built for rough conditions, and they should be used until their operational limit (9.8' seas) is met. Safety will be the overriding factor in all operations and will cease at the order of the Unified Command, vessel captain, or in an emergency, "stop work" may be directed by any crew member.

### **Surface Oil Recovery Considerations and Tactics (Offshore and Near-shore Operations)**

#### *Maximization of skimmer-oil encounter rate*

- Place barges in skimming task forces, groups, etc., to reduce recovered oil offloading time
- Place barges alongside skimming systems for immediate offloading of recovered oil when practicable
- Use two vessels, each with heavy sea boom, in an open-ended "V" configuration to funnel surface oil into a trailing skimming unit's organic, V-shaped boom and skimmer (see page 7, *CGA Equipment Guide Book and Tactic Manual* (CGATM))

- Use secondary vessels and heavy sea boom to widen boom swath beyond normal skimming system limits (see page 15, CGATM)
- Consider night-time operations, first considering safety issues
- Utilize all available advanced technology systems ( IR, X-Band Radar, etc.) to determine the location of, and move to, recoverable oil
- Confirm the presence of recoverable oil prior to moving to a new location

#### *Maximize skimmer system efficiency*

- Place weir skimming systems in areas of calm seas and thick oil
- Maximize the use of oleophilic skimming systems in heavier seas
- Place less mobile, high EDRC skimming systems (e.g. HOSS Barge) in the largest pockets of the heaviest oil
- Maximize onboard recovered oil storage for vessels.
- Obtain authorization for decanting of recovered water as soon as possible
- Use smaller, more agile skimming systems to recover streamers of oil normally found farther from the source. Place recovered oil barges nearby

#### *Recovered Oil Storage*

- Smaller barges in larger quantities will increase flexibility for multi-location skimming operations
- Place barges in skimming task forces, groups, etc., to reduce recovered oil offloading time
- Procure and deploy the maximum number of portable tanks to support Vessel of Opportunity Skimming Systems if onboard storage is not available
- Maximize use of the organic recovered oil storage capacity of the skimming vessel

#### *Command, Control, and Communications (C<sup>3</sup>)*

- Publish, implement, and fully test an appropriate communications plan
- Design an operational scheme, maintaining a manageable span of control
- Designate and mark C<sup>3</sup> vessels for easy aerial identification
- Designate and employ C<sup>3</sup> aircraft for task forces, groups, etc.
- Use reconnaissance air craft and Rapid Response Teams (RAT) to confirm the presence of recoverable oil

### **On Water Recovery Group**

When the first skimming vessel arrives on scene, a complete site assessment will be conducted before recovery operations begin. Once it is confirmed that the air monitoring readings for O<sub>2</sub>, LEL, H<sub>2</sub>S, CO, VOC, and Benzene are all within the permissible limits, oil recovery operations may begin.

As skimming vessels arrive, they will be organized to work in areas that allow for the most efficient vessel operation and free vessel movement in the recovery of oil. Vessel groups will vary in structure as determined by the Operations Section of the Unified Command, but will generally consist, at a minimum, of the following dedicated assets:

- 3 to 5 – Offshore skimming vessels (recovery)
- 1 – Tank barge (temporary storage)
- 1 – Air asset (tactical direction)
- 2 – Support vessels (crew/utility for supply)
- 6 to 10 – Boom vessels (enhanced booming )

***Example (Note: Actual organization of TFs will be dependent on several factors including, asset availability, weather, spilled oil migration, currents, etc.)***

The 95' FRV Breton Island out of Venice arrives on scene and conducts an initial site assessment. Air monitoring levels are acceptable and no other visual threats have been observed. The area is cleared for safe skimming operations. The Breton Island assumes command and control (CoC) of on-water recovery operations until a dedicated non-skimming vessel arrives to relieve it of those duties.

A second 95' FRV arrives and begins recovery operations alongside the Breton Island. Several more vessels begin to arrive, including a third 95' FRV out of Galveston, the HOSS Barge (High Volume Open Sea Skimming System) out of Harvey, a boom barge (CGA 300) with 25,000' of 42" auto boom out of Leeville, and 9 Fast Response Units (FRUs) from the load-out location at C-Port in Port Fourchon.

As these vessels set up and begin skimming, they are grouped into task forces (TFs) as directed by the Operations Section of the Unified Command located at the command post.

Initial set-up and potential actions:

- A 1,000 meter safety zone has been established around the incident location for vessels involved in Source Control
- The HOSS Barge is positioned facing the incident location just outside of this safety zone or at the point where the freshest oil is reaching the surface
- The HOSS Barge engages its Oil Spill Detection (OSD) system to locate the heaviest oil and maintains that ability for 24-hour operations

- The HOSS Barge deploys 1,320' of 67" Sea Sentry boom on each side, creating a swath width of 800'
- The Breton Island and H.I. Rich skim nearby, utilizing the same OSD systems as the HOSS Barge to locate and recover oil
- Two FRUs join this group and it becomes TF1
- The remaining 7 FRUs are split into a 2 and 3 vessel task force numbered TF2 and TF3
- A 95' FRV is placed in each TF
- The boom barge (CGA 300) is positioned nearby and begins deploying auto boom in sections between two utility vessels (1,000' to 3,000' of boom, depending on conditions) with chain-link gates in the middle to funnel oil to the skimmers
- The initial boom support vessels position in front of TF2 and TF3
- A 100,000+ barrel offshore tank barge is placed with each task force as necessary to facilitate the immediate offload of skimming vessels

The initial task forces (36 hours in) may be structured as follows:

#### **TF 1**

- 1 – 95' FRV
- 1 – HOSS Barge with 3 tugs
- 2 – FRUs
- 1 – 100,000+ barrel tank barge and associated tug(s)
- 1 – Dedicated air asset for tactical direction
- 8 – 500' sections of auto boom with gates
- 8 – Boom-towing vessels
- 2 – Support vessels (crew/utility)

#### **TF 2**

- 1 – 95' FRV
- 4 – FRUs
- 1 – 100,000+ barrel tank barge and associated tug(s)
- 1 – Dedicated air asset for tactical direction
- 10 – 500' sections of auto boom with gates
- 10 – Boom-towing vessels
- 2 – Support vessels (crew/utility)

#### **TF 3**

- 1 – 95' FRV
- 3 – FRUs
- 1 – 100,000+ barrel tank barge and associated tug(s)
- 1 – Dedicated air asset for tactical direction
- 8 – 500' sections of auto boom with gates
- 8 – Boom-towing vessels
- 2 – Support vessels (crew/utility)



Offshore skimming equipment continues to arrive in accordance with the ETA data listed in figure H.3a; this equipment includes 2 AquaGuard skimmers and 11 sets of Koseq Rigid Skimming Arms. These high volume heavy weather capable systems will be divided into functional groups and assigned to specific areas by the Operations Section of the Unified Command.

At this point of the response, the additional TFs may assume the following configurations:

**TF 4**

- 2 – Sets of Koseq Rigid Skimming Arms w/ associated 200'+ PIDVs
- 1 – AquaGuard Skimmer
- 1 – 100,000+ barrel tank barge and associated tug(s)
- 1 – Dedicated air asset for tactical direction
- 2 – Support vessels (crew/utility)
- 6 – 500' sections of auto boom with gates
- 6 – Boom-towing vessels

**TF 5**

- 3 – Sets of Koseq Rigid Skimming Arms w/ associated 200'+ PIDVs
- 1 – AquaGuard Skimmer
- 1 – 100,000+ barrel tank barge and associated tug(s)
- 1 – Dedicated air asset for tactical direction
- 2 – Support vessels (crew/utility)
- 8 – 500' sections of auto boom with gates
- 8 – Boom-towing vessels

**TF 6**

- 3 – Sets of Koseq Rigid Skimming Arms w/ associated 200'+ PIDVs
- 1 – 100,000+ barrel tank barge and associated tug(s)
- 1 – Dedicated air asset for tactical direction
- 2 – Support vessels (crew/utility)
- 6 – 500' sections of auto boom with gates
- 6 – Boom-towing vessels

**TF 7**

- 3 – Sets of Koseq Rigid Skimming Arms w/ associated 200'+ PIDVs
- 1 – 100,000+ barrel tank barge and associated tug(s)
- 1 – Dedicated air asset for tactical direction
- 2 – Support vessels (crew/utility)
- 6 – 500' sections of auto boom with gates
- 6 – Boom-towing vessels

### CGA Minimum Acceptable Capabilities for Vessels of Opportunity (VOO)

Minimum acceptable capabilities of Petroleum Industry Designed Vessels (PIDV) for conducting Vessel of Opportunity (VOO) skimming operations are shown in the table below. PIDVs are “purpose-built” to provide normal support to offshore oil and gas operators. They include but are not limited to utility boats, offshore supply vessels, etc. They become VOOs when tasked with oil spill response duties.

Capability	FRU	KOSEQ	AquaGuard
Type of Vessel	Utility Boat	Offshore Supply Vessel	Utility Boat
Operating parameters			
Sea State	3-5 ft max	9.8 ft max	3-5 ft max
Skimming speed	≤1 kt	≤3 kts	≤1 kt
Vessel size			
Minimum Length	100 ft	200 ft	100 ft
Deck space for: <ul style="list-style-type: none"><li>• Tank(s)</li><li>• Crane(s)</li><li>• Boom Reels</li><li>• Hydraulic Power Units</li><li>• Equipment Boxes</li></ul>	18x32 ft	100x40 ft	18x32 ft
Communication Assets	Marine Band Radio	Marine Band Radio	Marine Band Radio

**Tactical use of Vessels of Opportunity (VOO):** Walter will take all possible measures to maximize the oil-to-skimmer encounter rate of all skimming systems, to include VOOs, as discussed in this section. VOOs will normally be placed within an On-water recovery unit as shown in figures below.

**Skimming Operations:** PIDVs are the preferred VOO skimming platform. OSROs are more versed in operating on these platforms and the vessels are generally large enough with crews more likely versed in spill response operations. They also have a greater possibility of having on-board storage capacity and the most likely vessels to be under contract, and therefore more readily available to the operator. These vessels would normally be assigned to an on-water recovery group/division (see figure below) and outfitted with a VOSS suited for their size and capabilities. Specific tactics used for skimming operations would be dependent upon many parameters which include, but are not limited to, safety concerns, weather, type VOSS on board, product being recovered, and area of oil coverage. Planners would deploy these assets with the objective of safely maximizing oil- to-skimmer encounter rate by taking actions to minimize non-skimming time and maximizing boom swath. Specific tactical configurations are shown in figures below.

**The Fast Response Unit (FRU):** A self-contained, skid based, skimming system that is deployed from the right side of a vessel of opportunity (VOO). An outrigger holds a 75' long section of air inflatable boom in place that directs oil to an apex for recovery via a Foilex 250 weir skimmer. The outrigger creates roughly a 40' swath width dependent on the VOO beam. The lip of the collection bowl on the skimmer is placed as close to the oil and water interface as possible to maximize oil recovery and minimize water retention. The skimmer then pumps all fluids recovered to the storage tank where it is allowed to settle, and with the approval of the Coast Guard, the water is decanted from the bottom of the tank back into the water ahead of the containment boom to be recycled through the system. Once the tank is full of as much pure recovered oil as possible it is offloaded to a storage barge for disposal in accordance with an approved disposal plan. A second 100 barrel storage tank can be added if the appropriate amount of deck space is available to use as secondary storage.

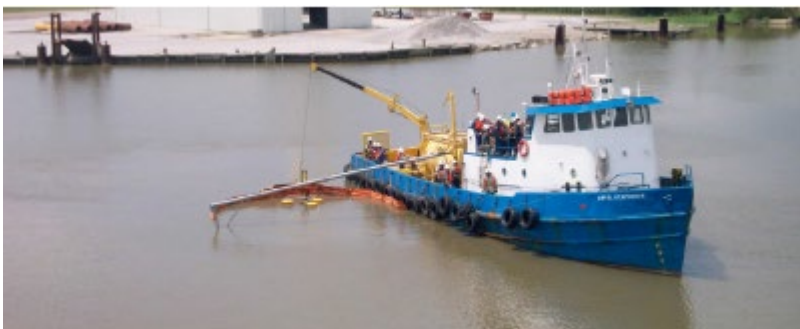
### **Tactical Overview**

*Mechanical Recovery* – The FRU is designed to provide fast response skimming capability in the offshore and nearshore environment in a stationary or advancing mode. It provides a rated daily recovery capacity of 4,100 barrels. An additional boom reel with 440' of offshore boom can be deployed along with the FRU, and a second support vessel for boom towing, to extend the swath width when attached to the end of the fixed boom. The range and sustainability offshore is dependent on the VOO that the unit is placed on, but generally these can stay offshore for extended periods. The FRU works well independently or assigned with other on-water recovery assets in a task force. In either case, it is most effective when a designated aircraft is assigned to provide tactical direction to ensure the best placement in recoverable oil.

*Maximum Sea Conditions* – Under most circumstances the FRU can maintain standard oil spill recovery operations in 2' to 4' seas. Ultimately, the Coast Guard licensed Captain in charge of the VOO (with input from the CGAS Supervisor assigned) will be responsible to determine when the sea conditions have surpassed the vessel's safe operating capabilities.

### **Possible Task Force Configuration** (Multiple VOOs can be deployed in a task force)

- 1 – VOO (100' to 165' Utility or Supply Vessel)
- 1 – Boom reel w/support vessel for towing
- 1 – Tank barge (offshore) for temporary storage
- 1 – Utility/Crewboat (supply)
- 1 – Designated spotter aircraft



**The VOSS (yellow) is being deployed and connected to an out-rigged arm. This is suitable for collection in both large pockets of oil and for recovery of streaming oil. The oil-to-skimmer encounter rate is limited by the length of the arm. Skimming pace is  $\leq 1$  knot.**



**Through the use of an additional VOO, and using extended sea boom, the swath of the VOSS is increased therefore maximizing the oil-to-skimmer encounter rate. Skimming pace is  $\leq 1$  knot.**

**The Koseq Rigid Sweeping Arm:** A skimming system deployed on a vessel of opportunity. It requires a large Offshore or Platform Supply Vessel (OSV/PSV), greater than 200' with at least 100' x 50' of free deck space. On each side of the vessel, a 50' long rigid framed Arm is deployed that consists of pontoon chambers to provide buoyancy, a smooth nylon face, and a hydraulically adjustable mounted weir skimmer. The Arm floats independently of the vessel and is attached by a tow bridle and a lead line. The movement of the vessel forward draws the rubber end seal of the arm against the hull to create a collection point for free oil directed to the weir by the Arm face. The collection weir is adjusted to keep the lip as close to the oil water interface as possible to maximize oil recovery while attempting to minimize excess water collection. A transfer pump (combination of positive displacement, screw type and centrifuge suited for highly viscous oils) pump the recovered liquid to portable tanks and/or dedicated fixed storage tanks onboard the vessel. After being allowed to sit and separate, with approval from the Coast Guard, the water can be decanted (pumped off) in front of the collection arm to be reprocessed through the system. Once full with as much pure recovered oil as possible, the oil is transferred to a temporary storage barge where it can be disposed of in accordance with an approved disposal plan.

### **Tactical Overview**

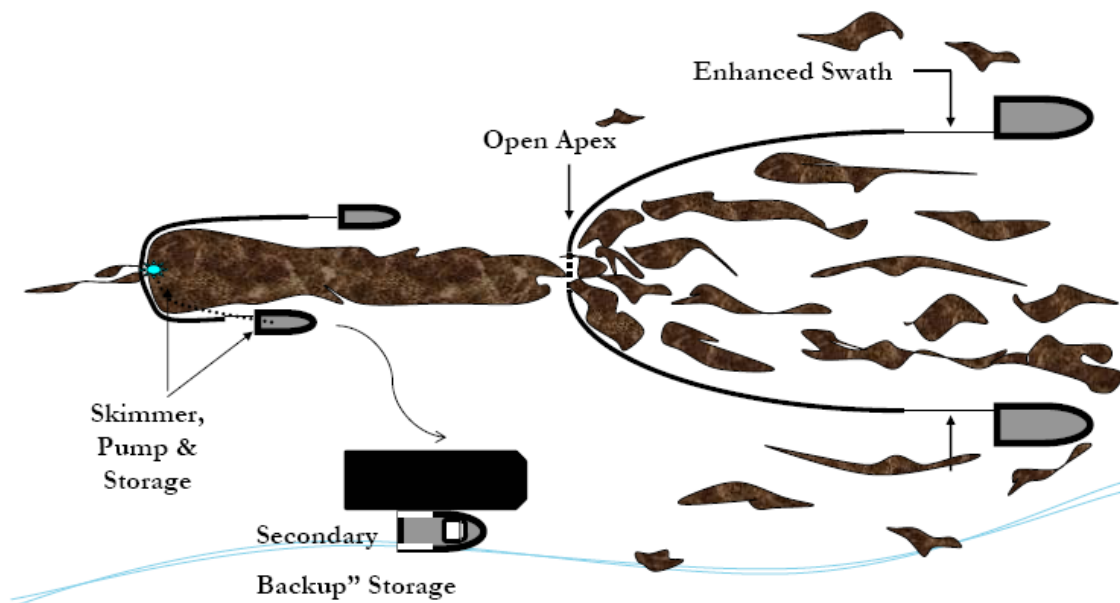
*Mechanical Recovery* – Deployed on large vessels of opportunity (VOO) the Koseq Rigid Sweeping Arms are high volume surge capacity deployed to increase recovery capacity at the source of a large oil spill in the offshore and outer nearshore environment of the Gulf of Mexico. They are highly mobile and sustainable in rougher sea conditions than normal skimming vessels (9.8' seas). The large Offshore Supply Vessels (OSV) required to deploy the Arms are able to remain on scene for extended periods, even when sea conditions pick up. Temporary storage on deck in portable tanks usually provides between 1,000 and 3,000 bbls. In most cases, the OSV will be able to pump 20% of its deadweight into the liquid mud tanks in accordance with the vessels Certificate of Inspection (COI). All storage can be offloaded utilizing the vessels liquid transfer system.

*Maximum Sea Conditions* - Under most circumstances the larger OSVs are capable of remaining on scene well past the Skimming Arms maximum sea state of 9.8'. Ultimately it will be the decision of the VOO Captain, with input from the T&T Supervisor onboard, to determine when the sea conditions have exceeded the safe operating conditions of the vessel.

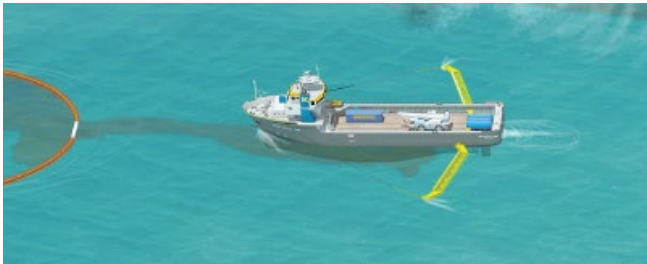
*Command and Control* – The large OSVs in many cases have state of the art communication and electronic systems, as well as the accommodations to support the function of directing all skimming operations offshore and reporting back to the command post.

**Possible Task Force Configuration** (Multiple Koseq VOOs can be deployed in a task force)

- 1 –  $\geq$  200' Offshore Supply Vessels (OSV) with set of Koseq Arms
- 2 to 4 portable storage tanks (500 bbl)
- 1 – Modular Crane Pedestal System set (MCPS) or 30 cherry picker (crane) for deployment
- 1 – Tank barge (offshore) for temporary storage
- 1 – Utility/Crewboat (supply)
- 1 – Designated spotter aircraft
- 4 – Personnel (4 T&T OSRO)



Scattered oil is “caught” by two VOO and collected at the apex of the towed sea boom. The oil moves through a “gate” at that apex, forming a larger stream of oil which moves into the boom of the skimming vessel. Operations are paced at  $\geq 1$ . A recovered oil barge stationed nearby to minimize time taken to offload recovered oil.



This is a depiction of the same operation as above but using KOSDAQ Arms. In this configuration, the collecting boom speed dictates the operational pace at  $\geq 1$  knot to minimize entrainment of the oil.

### **Clean Gulf Associates (CGA) Procedure for Accessing Member-Contracted and other Vessels of Opportunity (VOOs) for Spill Response**

- CGA has procedures in place for CGA member companies to acquire vessels of opportunity (VOOs) from an existing CGA member's contracted fleet or other sources for the deployment of CGA portable skimming equipment including Koseq Arms, Fast Response Units (FRUs) and any other portable skimming system(s) deemed appropriate for the response for a potential or actual oil spill, WCD oil spill or a Spill of National Significance (SONS).
- CGA uses Port Vision, a web-based vessel and terminal interface that empowers CGA to track vessels through Automatic Identification System (AIS) and terminal activities using a Geographic Information System (GIS). It provides live AIS/GIS views of waterways showing current vessel positions, terminals, created vessel fleets, and points-of-interest. Through this system, CGA has the ability to get instant snapshots of the location and status of all vessels contracted to CGA members, day or night, from any web-enabled PC.

## **Near Shore Response Actions**

### *Timing*

- Put near shore assets on standby and deployment in accordance with planning based on the actual situation, actual trajectories and oil budgets
- VOO identification and training in advance of spill nearing shoreline if possible
- Outfitting of VOOs for specific missions
- Deployment of assets based on actual movement of oil

### *Considerations*

- Water depth, vessel draft
- Shoreline gradient
- State of the oil
- Use of VOOs
- Distance of surf zone from shoreline

### *Surveillance*

- Provide trained observer to direct skimming operations
- Continual surveillance of oil movement by remote sensing systems, aerial photography and visual confirmation
- Continual monitoring of vessel assets

### *Dispersant Use*

- Generally will not be approved within 3 miles of shore or with less than 10 meters of water depth
- Approval would be at Regional Response Team level (Region 6)

### *Dedicated Near Shore skimming systems*

- FRVs
- Egmpol and Marco SWS
- Operate with aerial spotter directing systems to observed oil slicks

### *VOO*

- Use Walter's contracted resources as applicable
- Industry vessel are usually best for deployment of Vessel of Opportunity Skimming Systems (VOSS)
- Acquire additional resources as needed
- Consider use of local assets, i.e. fishing and pleasure craft
- Expect mission specific and safety training to be required
- Plan with the US Coast Guard for vessel inspections
- Operate with aerial spotter directing systems to oil patches



## **Shoreline Protection Operations**

### *Response Planning Considerations*

- Review appropriate Area Contingency Plan(s)
- Locate and review appropriate Geographic Response and Site Specific Plans
- Refer to appropriate Environmentally Sensitive Area Maps
- Capability for continual analysis of trajectories run periodically during the response
- Environmental risk assessments (ERA) to determine priorities for area protection
- Time to acquire personnel and equipment and their availability
- Refer to the State of Louisiana Initial Oil Spill Response Plan, Deep Water Horizon, dated 2 May 2010, as a secondary reference
- Aerial surveillance of oil movement
- Pre-impact beach cleaning and debris removal
- Shoreline Cleanup Assessment Team (SCAT) operations and reporting procedures
- Boom type, size and length requirements and availability
- Possibility of need for In-situ burning in near shore areas
- Current wildlife situation, especially status of migratory birds and endangered species in the area
- Check for Archeological sites and arrange assistance for the appropriate state agency when planning operations that may impact these areas

### *Placement of boom*

- Position boom in accordance with the information gained from references listed above and based on the actual situation
- Determine areas of natural collection and develop booming strategies to move oil into those areas
- Assess timing of boom placement based on the most current trajectory analysis and the availability of each type of boom needed. Determine an overall booming priority and conduct booming operations accordingly. Consider:
  - Trajectories
  - Weather forecast
  - Oil Impact forecast
  - Verified spill movement
  - Boom, manpower and vessel (shallow draft) availability
  - Near shore boom and support material, (stakes, anchors, line)

### *Beach Preparation - Considerations and Actions*

- Use of a 10 mile go/no go line to determine timing of beach cleaning
- SCAT reports and recommendations
- Determination of archeological sites and gaining authority to enter
- Monitoring of tide tables and weather to determine extent of high tides
- Pre cleaning of beaches by moving waste above high tide lines to minimize waste

- Determination of logistical requirements and arranging of waste removal and disposal
- Staging of equipment and housing of response personnel as close to the job site as possible to maximize on-site work time
- Boom tending, repair, replacement and security (use of local assets may be advantageous)
- Constant awareness of weather and oil movement for resource re-deployment as necessary
- Earthen berms and shoreline protection boom may be considered to protect sensitive inland areas
- Requisitioning of earth moving equipment
- Plan for efficient and safe use of personnel, ensuring:
  - A continual supply of the proper Personal Protective Equipment
  - Heating or cooling areas when needed
  - Medical coverage
  - Command and control systems (i.e. communications)
  - Personnel accountability measures
- Remediation requirements, i.e., replacement of sands, rip rap, etc.
- Availability of surface washing agents and associated protocol requirements for their use (see National Contingency Plan Product Schedule for list of possible agents)
- Discussions with all stakeholders, i.e., land owners, refuge/park managers, and others as appropriate, covering the following:
  - Access to areas
  - Possible response measures and impact of property and ongoing operations
  - Determination of any specific safety concerns
  - Any special requirements or prohibitions
  - Area security requirements
  - Handling of waste
  - Remediation expectations
  - Vehicle traffic control
  - Domestic animal safety concerns
  - Wildlife or exotic game concerns/issues

### *Inland and Coastal Marsh Protection and Response*

#### *Considerations and Actions*

- All considered response methods will be weighed against the possible damage they may do to the marsh. Methods will be approved by the Unified Command only after discussions with local Stakeholder, as identified above.
  - In-situ burn may be considered when marshes have been impacted
- Passive clean up of marshes should be considered and appropriate stocks of sorbent boom and/or sweep obtained.
- Response personnel must be briefed on methods to traverse the marsh, i.e.,
  - use of appropriate vessel
  - use of temporary walkways or road ways
- Discuss and gain approval prior cutting or moving vessels through vegetation
- Discuss use of vessels that may disturb wildlife, i.e., airboats

- Safe movement of vessels through narrow cuts and blind curves
- Consider the possibility that no response in a marsh may be best
- In the deployment of any response asset, actions will be taken to ensure the safest, most efficient operations possible. This includes, but is not limited to:
  - Placement of recovered oil or waste storage as near to vessels or beach cleanup crews as possible.
  - Planning for stockage of high use items for expeditious replacement
  - Housing of personnel as close to the work site as possible to minimize travel time
  - Use of shallow water craft
  - Use of communication systems appropriate ensure command and control of assets
  - Use of appropriate boom in areas that I can offer effective protection
  - Planning of waste collection and removal to maximize cleanup efficiency
- Consideration or on-site remediation of contaminated soils to minimize replacement operations and impact on the area

**Decanting Strategy**

Recovered oil and water mixtures will typically separate into distinct phases when left in a quiescent state. When separation occurs, the relatively clean water phase can be siphoned or decanted back to the recovery point with minimal, if any, impact. Decanting therefore increases the effective on-site oil storage capacity and equipment operating time. FOSC/SOSC approval will be requested prior to decanting operations. This practice is routinely used for oil spill recovery.

**CGA Equipment Limitations**

The capability for any spill response equipment, whether a dedicated or portable system, to operate in differing weather conditions will be directly in relation to the capabilities of the vessel the system is placed on. Most importantly, however, the decision to operate will be based on the judgment of the Unified Command and/or the Captain of the vessel, who will ultimately have the final say in terminating operations. Skimming equipment listed below may have operational limits which exceed those safety thresholds. As was seen in the Deepwater Horizon (DWH) oil spill response, vessel skimming operations ceased when seas reached 5-6 feet and vessels were often recalled to port when those conditions were exceeded. Systems below are some of the most up-to-date systems available and were employed during the DWH spill.

Boom	3 foot seas, 20 knot winds
Dispersants	Winds more than 25 knots Visibility less than 3 nautical miles Ceiling less than 1,000 feet.
FRU	8 foot seas
HOSS Barge/OSRB	8 foot seas
Koseq Arms	8 foot seas
OSRV	4 foot seas

**Environmental Conditions in the GOM**

Louisiana is situated between the easterly and westerly wind belts, and therefore, experiences westerly winds during the winter and easterly winds in the summer. Average wind speed is generally 14-15 mph along the coast. Wave heights average 4 and 5 feet. However, during hurricane season, Louisiana has recorded wave heights ranging from 40 to 50 feet high and winds reaching speeds of 100 mph. Because much of southern Louisiana lies below sea level, flooding is prominent.

Surface water temperature ranges between 70 and 80 ° F during the summer months. During the winter, the average temperature will range from 50 and 60 ° F.

The Atlantic and Gulf of Mexico hurricane season is officially from 1 June to 30 November. 97% of all tropical activity occurs within this window. The Atlantic basin shows a very peaked season from August through October, with 78% of the tropical storm days, 87% of the minor (Saffir-Simpson Scale categories 1 and 2) hurricane days, and 96% of the major (Saffir-Simpson categories 3, 4 and 5) hurricane days occurring then. Maximum activity is in early to mid September. Once in a few years there may be a hurricane occurring "out of season" - primarily in May or December. Globally, September is the most active month and May is the least active month.

**FIGURE 1**  
**TRAJECTORY BY LAND SEGMENT**

<p>Trajectory of a spill and the probability of it impacting a land segment have been projected utilizing Walter's WCD and information in the BOEM Oil Spill Risk Analysis Model (OSRAM) for the Central and Western Gulf of Mexico available on the BOEM website using 10 day impact. The results are tabulated below.</p>				
Area/Block	OCS-G	Launch Area	Land Segment and/or Resource	Conditional Probability (%)
<p>Drill, TA &amp; mudline suspend Well No. 001</p> <p><b>EI 284, Well 001</b></p> <p><i>60 miles from shore</i></p>	G36746	C40	<p>Jefferson, TX</p> <p><b>Cameron, LA</b></p> <p>Vermilion, LA</p> <p>Terrebonne, LA</p>	<p>1</p> <p><b>3</b></p> <p>1</p> <p>2</p>

**WCD Scenario– BASED ON WELL BLOWOUT DURING DRILLING OPERATIONS (60 miles from shore)**  
56,506 bbls of condensate (Volume considering natural weathering)  
API Gravity 51°

**FIGURE 2 – Equipment Response Time to EI 284, Well 001**

*Dispersants/Surveillance*

Dispersant/Surveillance	Dispersant Capacity (gal)	Persons Req.	From	Hrs to Procure	Hrs to Loadout	Travel to site	Total Hrs
ASI							
Basler 67T	2000	2	Houma	2	2	0.5	4.5
DC 3	1200	2	Houma	2	2	0.7	4.7
Aero Commander	NA	2	Houma	2	2	0.5	4.5

*Offshore Response*

Offshore Equipment Pre-Determined Staging	EDRC	Storage Capacity	VOO	Persons Required	From	Hrs to Procure	Hrs to Loadout	Hrs to GOM	Travel to Spill Site	Hrs to Deploy	Total Hrs
CGA											
HOSS Barge	76285	4000	3 Tugs	12	Harvey	6	0	12	18	2	38
95' FRV	22885	249	NA	6	Galveston	2	0	2	10	1	15
95' FRV	22885	249	NA	6	Leeville	2	0	2	5	1	10
95' FRV	22885	249	NA	6	Venice	2	0	3	7	1	13
95' FRV	22885	249	NA	6	Vermilion	2	0	3	2.5	1	8.5
Boom Barge (CGA-300) 42" Auto Boom (25000')	NA	NA	1 Tug 50 Crew	4 (Barge) 2 (Per Crew)	Leeville	8	0	4	14	2	28

Recovered Oil Storage Pre-Determined Staging	EDRC	Storage Capacity	VOO	Persons Required	From	Hrs to Procure	Hrs to Loadout	Hrs to GOM	Travel to Spill Site	Hrs to Deploy	Total Hrs
Enterprise Marine Services LLC (Available through contract with CGA)											
CTCo 2603	NA	25000	1 Tug	6	Amelia	34	0	6	7	1	48
CTCo 2607	NA	23000	1 Tug	6	Amelia	34	0	6	7	1	48
Kirby Offshore (available through contract with CGA)											
RO Barge	NA	80000+	1 Tug	6	Venice	37	0	4	18	1	60
RO Barge	NA	80000+	1 Tug	6	Venice	37	0	4	18	1	60
RO Barge	NA	80000+	1 Tug	6	Venice	37	0	4	18	1	60
RO Barge	NA	80000+	1 Tug	6	Venice	37	0	4	18	1	60

**Staging Area: Fourchon**

Offshore Equipment With Staging	EDRC	Storage Capacity	VOO	Persons Req.	From	Hrs to Procure	Hrs to Loadout	Travel to Staging	Travel to Site	Hrs to Deploy	Total Hrs
T&T Marine (available through direct contract with CGA)											
Aqua Guard Triton RBS (1)	22323	2000	1 Utility	6	Galveston	4	12	12	8.5	2	38.5
Aqua Guard Triton RBS (1)	22323	2000	1 Utility	6	Harvey	4	12	3	8.5	2	29.5
Koseq Skimming Arms (6) Lamor brush	137310	12000	6 OSV	36	Harvey	24	24	3	8.5	2	61.5
CGA											
FRU (2) + 100 bbl Tank (4)	8502	400	2 Utility	12	Vermilion	2	6	5.5	8.5	1	23
FRU (1) + 100 bbl Tank (2)	4251	200	1 Utility	6	Galveston	2	6	12	8.5	1	29.5
FRU (1) + 100 bbl Tank (2)	4251	200	1 Utility	6	Aransas Pass	2	6	16.5	8.5	1	34
FRU (3) + 100 bbl Tank (6)	12753	600	3 Utility	18	Leeville	2	6	2	8.5	1	19.5
FRU (2) + 100 bbl Tank (4)	8502	400	2 Utility	12	Venice	2	6	5	8.5	1	22.5



*Nearshore Response*

Nearshore Equipment Pre-determined Staging	EDRC	Storage Capacity	VOO	Persons Required	From	Hrs to Procure	Hrs to Loadout	Hrs to GOM	Travel to Spill Site	Hrs to Deploy	Total Hrs
CGA											
Mid-Ship SWS	22885	249	NA	4	Leeville	2	0	N/A	48	1	51
Mid-Ship SWS	22885	249	NA	4	Galveston	2	0	N/A	48	1	51
Trinity SWS	21500	249	NA	4	Venice	2	0	N/A	48	1	51
46' FRV	15257	65	NA	4	Aransas Pass	2	0	2	16	1	21
46' FRV	15257	65	NA	4	Leeville	2	0	2	8	1	13
46' FRV	15257	65	NA	4	Vermilion	2	0	2	2.5	1	7.5
46' FRV	15257	65	NA	4	Venice	2	0	2	11	1	16
Enterprise Marine Services LLC (Available through contract with CGA)											
CTCo 2604	NA	20000	1 Tug	6	Amelia	26	0	6	15	1	48
CTCo 2605	NA	20000	1 Tug	6	Amelia	26	0	6	15	1	48
CTCo 2606	NA	20000	1 Tug	6	Amelia	26	0	6	15	1	48
CTCo 2608	NA	23000	1 Tug	6	Amelia	26	0	6	15	1	48
CTCo 2609	NA	23000	1 Tug	6	Amelia	26	0	6	15	1	48
CTCo 5001	NA	47000	1 Tug	6	Amelia	26	0	6	15	1	48

**Staging Area: Cameron**

Nearshore Equipment With Staging	EDRC	Storage Capacity	VOO	Persons Req.	From	Hrs to Procure	Hrs to Load Out	Travel to Staging	Travel to Deployment	Hrs to Deploy	Total Hrs
CGA											
SWS Egmopol	1810	100	NA	3	Galveston	2	2	5	2	1	12
SWS Egmopol	1810	100	NA	3	Leeville	2	2	7	2	1	14
SWS Marco	3588	20	NA	3	Vermilion	2	2	2	2	1	9
SWS Marco	3588	34	NA	3	Leeville	2	2	7	2	1	14
SWS Marco	3588	34	NA	3	Venice	2	2	9.5	2	1	16.5
Foilex Skim Package (TDS 150)	1131	50	NA	3	Vermilion	4	12	2	2	2	22
Foilex Skim Package (TDS 150)	1131	50	NA	3	Galveston	4	12	5	2	2	25
Foilex Skim Package (TDS 150)	1131	50	NA	3	Harvey	4	12	7	2	2	27
4 Drum Skimmer (Magnum 100)	680	100	1 Crew	3	Vermilion	2	2	2	2	1	9
4 Drum Skimmer (Magnum 100)	680	100	1 Crew	3	Harvey	2	2	7	2	1	14
2 Drum Skimmer (TDS 118)	240	100	1 Crew	3	Vermilion	2	2	2	2	1	9
2 Drum Skimmer (TDS 118)	240	100	1 Crew	3	Harvey	2	2	7	2	1	14

*Shoreline Protection*

**Staging Area: Cameron**

Shoreline Protection Boom	VOO	Persons Req.	Storage/Warehouse Location	Hrs to Procure	Hrs to Loadout	Travel to Staging	Travel to Deployment	Hrs to Deploy	Total Hrs
AMPOL (available through CGA membership)									
34,050' 18" Boom	13 Crew	26	New Iberia, LA	2	2	3.5	2	12	21.5
16,000' 18" Boom	7 Crew	14	Chalmette, LA	2	2	7.5	2	6	19.5
900' 18" Boom	1 Crew	2	Morgan City, LA	2	2	5	2	2	13
11,800' 18" Boom	5 Crew	10	Gonzales, LA	2	2	9	2	2	17
16,000' 18" Boom	7 Crew	14	Port Arthur, TX	2	2	1.5	2	6	13.5
2,700' 18" Boom	2 Crew	4	Decatur, GA	2	2	20	2	6	32

Wildlife Response	EDRC	Storage Capacity	VOO	Persons Req.	From	Hrs to Procure	Hrs to Loadout	Travel to Staging	Travel to Deployment	Hrs to Deploy	Total Hrs
CGA											
Wildlife Support Trailer	NA	NA	NA	2	Harvey	2	2	7	1	2	14
Bird Scare Guns (24)	NA	NA	NA	2	Harvey	2	2	7	1	2	14
Bird Scare Guns (12)	NA	NA	NA	2	Galveston	2	2	5	1	2	12
Bird Scare Guns (12)	NA	NA	NA	2	Aransas Pass	2	2	9.5	1	2	16.5
Bird Scare Guns (24)	NA	NA	NA	2	Vermilion	2	2	2	1	2	9
Bird Scare Guns (24)	NA	NA	NA	2	Leeville	2	2	7	1	2	14

Response Asset	Total
Offshore EDRC	388,040
Offshore Recovered Oil Capacity	390,796+
Nearshore / Shallow Water EDRC	147,915
Nearshore / Shallow Water Recovered Oil Capacity	154,845

## **SECTION 9**

### **ENVIRONMENTAL MONITORING INFORMATION**

#### **9.1 MONITORING SYSTEMS**

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

#### **9.2 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.

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

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

#### **9.3 FLOWER GARDEN BANKS NATIONAL MARINE SANCTUARY**

Eugene Island Block 284 is not located in the Flower Garden Banks National Marine Sanctuary; therefore, relevant information is not required in this EP.

## **SECTION 10**

### **LEASE STIPULATIONS INFORMATION**

#### **10.1 MILITARY WARNING AREA (MWA)**

Eugene Island Block 284 is located within designated MWA-W-59A. The Naval Air Station in New Orleans, LA, will be contacted in order to coordinate and control the electromagnetic emissions and use of vessels and aircraft during the proposed operations.

#### **10.2 MARINE PROTECTED SPECIES**

In accordance with the Federal Endangered Species Act and the Marine Mammal Protection Act, Walter 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 a distance of 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 11**

### **ENVIRONMENTAL MITIGATION MEASURES INFORMATION**

#### **11.1 MEASURES TAKEN TO AVOID, MINIMIZE, AND MITIGATE IMPACTS**

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

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

Walter will utilize a mat style Jack-up rig to drill the wells associated with this plan and it’s very atypical for marine life to become entangled or entrapped in this style of structure. As a precaution, lines extending into the water will be minimized. Any hoses extending to the water’s surface will be configured to minimize the chances of entanglement by marine life. As part of daily pollutions observations, our HSE representative will be trained to look for entangled marine life and take appropriate action.

#### **11.2 INCIDENTAL TAKES**

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

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

See **Section 5.7** for a list of Threatened and Endangered Species, Critical Habitat and Marine Mammal Information.

## SECTION 12

### SUPPORT VESSELS AND AIRCRAFT INFORMATION

#### 12.1 GENERAL

The most practical, direct route from the shorebase as permitted by weather and traffic conditions will be utilized.

The drilling unit, vessels, crew boats and supply boats associated with the operations proposed in this plan will not transit the Bryde's whale area.

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
Tug boat	59,548 gal	3	7 trip/week
Crew boat	75,000 gal	2	7 trip/week
Work boat	100,000 gal	2	7 trip/week
Helicopter	560 gal	1	As needed

#### 12.2 DIESEL OIL SUPPLY VESSELS

Information regarding vessels to be used to supply diesel oil for fuel and other purposes is provided in the table below.

Size of Fuel Supply Vessel (ft)	Capacity of Fuel Supply Vessel	Frequency of Fuel Transfers	Route Fuel Supply Vessel Will Take
180'	1500 bbls	one per week	Shortest route from Shorebase to block

#### 12.3 DRILLING FLUID TRANSPORTATION

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

#### 12.4 SOLID AND LIQUID WASTE TRANSPORTATION

A table, "Wastes You Will Transport and/or Dispose of Onshore," is included as **Attachment 12-A**.

#### 12.5 VICINITY MAP

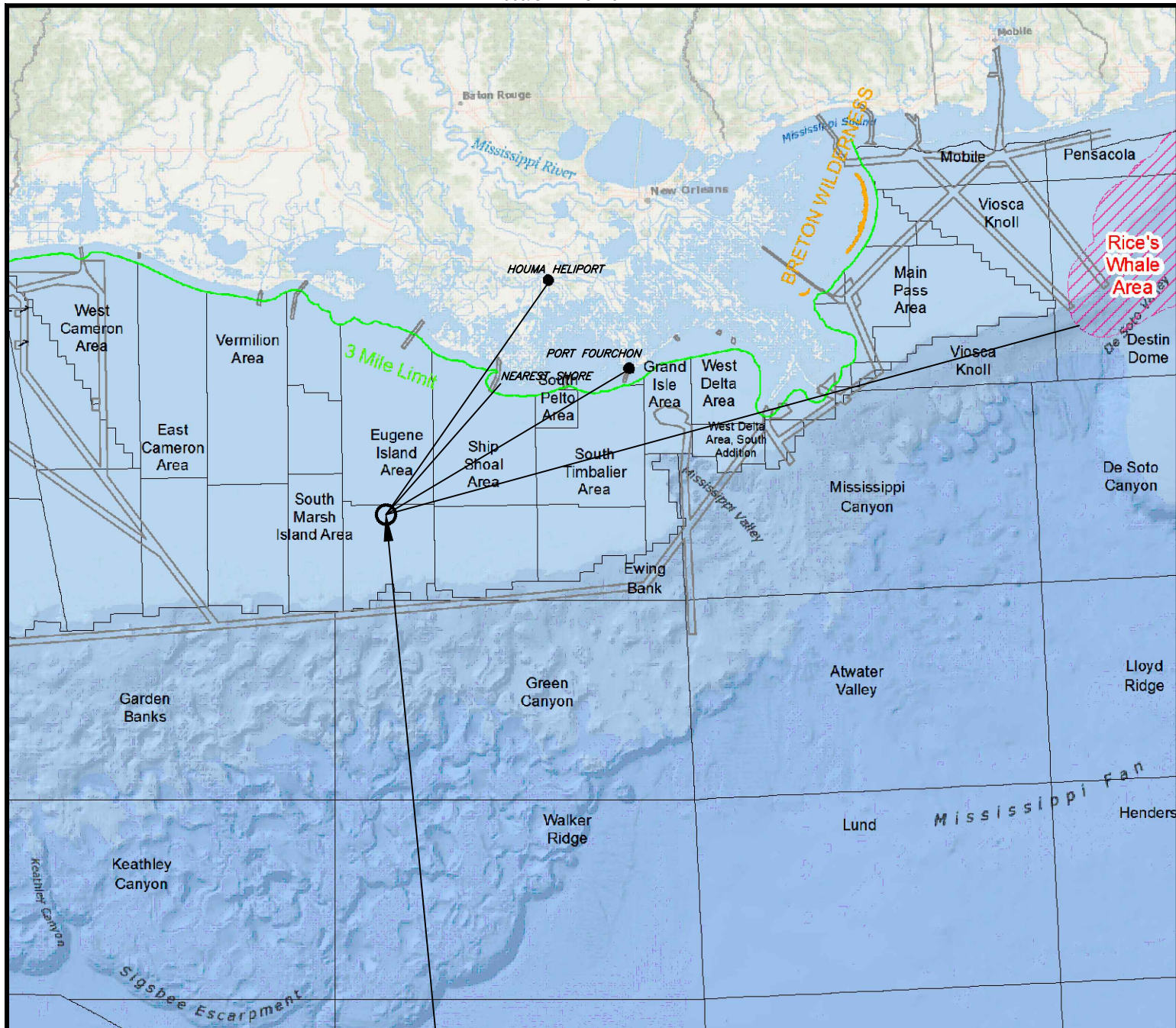
A vicinity map showing the location of the activities proposed herein relative to the shoreline with the distance of the proposed activities from the shoreline and the primary route of the support vessels and aircraft that will be used when traveling between the onshore support facilities and the drilling unit is included as **Attachment 12-B**.

# ATTACHMENT 12-A

## Eugene Island Area, Block 284, Well No. 001 , DRL/ CMPL

Projected Generated Waste		Solid and Liquid Wastes Transportation	Waste Disposal		
Type of Waste	Composition	Transport Method	Name/Location of Facility	Amount	Disposal Method
<b>Will drilling occur ? If yes, fill in the muds and cuttings.</b>					
Oil-based drilling fluid or mud	NA	NA	NA	NA	NA
Synthetic-based drilling fluid or mud	Synthetic fluid	Below deck storage tanks on workboat	M-I SWACO Plat, Fourchon, LA	2496 bbls	Recycle
Cuttings wetted with Water-based fluid	NA		NA	NA	NA
Cuttings wetted with Synthetic-based fluid	NA	NA	NA	NA	NA
Cuttings wetted with oil-based fluids	NA	NA	NA	NA	NA
<b>Will you produce hydrocarbons? If yes fill in for produced sand.</b>					
Produced sand	NA	NA	NA	NA	NA
<b>Will you have additional wastes that are not permitted for discharge? If yes, fill in the appropriate rows.</b>					
Trash and debris (non-recylable)	Paper and plastic	Garbage bags on Supply or Crew boat	HOS Port, Fourchon, LA	57 bags at 40 cuft per bag	Landfill
Used oil	Oily rags, absorbent pads, used oil filters	19 DOT drums on Supply boat	R-360, Fourchon, LA	7 Drums	Incineration
Wash water	NA	NA	NA	NA	NA
Chemical product wastes	Paint, solvents, light bulbs	Storage bins on Supply or Crew boat	Ecoserve, Fourchon, LA	200 lb/yr	Recycle or incinerate
Trash and debris (recyclable)	Batteries	5 gallon drums	Ecoserve, Fourchon, LA	10 gal/yr	Recycled





### SITE OF PROPOSED WELL No.1

~60 STATUTE (52 NAUTICAL) MILES TO TERREBONNE PARISH (NEAREST SHORE)  
 COORDINATE TO NEAREST POINT ON SHORELINE X = 2,119,183 Y = 142,233  
 ~98 STATUTE (85 NAUTICAL) MILES TO PORT FOURCHON, LA  
 ~99 STATUTE (86 NAUTICAL) MILES TO HOUMA HELIPORT, HOUMA, LA  
 ~246 STATUTE (214 NAUTICAL) MILES TO RICE'S WHALE AREA

## VICINITY MAP

THE DISTANCES SHOWN HEREON ARE FROM THE PROPOSED WELL TO THE NEAREST COASTLINE POINT AS OBTAINED FROM NOAA, ENTITLED NOAA MEDIUM RESOLUTION SHORELINE. <[HTTP://SHORELINE.NOAA.GOV/DATA/DATASHEETS/MEDRES.HTML](http://shoreline.noaa.gov/data/datasheets/MEDRES.HTML)>.



WALTER OIL & GAS CORPORATION

**Echo**  
OFFSHORE LLC

36499 Perkins Road  
 Prairieville, Louisiana 70769  
 Tel: 225-673-2163

NOT TO SCALE

### EXPLORATION PLAT

**PROPOSED WELL No.1**  
**OCS-G 36746 BLOCK 284**  
**EUGENE ISLAND AREA, SOUTH ADDITION**

GULF OF MEXICO

DATUM: NAD 27	SPHEROID: CLARKE 1866	PROJECTION: U.T.M.	ZONE: LA SOUTH	DRAWN BY: RJN	CHK. BY: MEK	REV. No.:	JOB No.: 23-034	DWG No.: 23-034EXP
				DATE: 8/18/2023	REV. DATE:	SCALE: N.T.S.	<b>SHEET 1 OF 1</b>	

## SECTION 13

### ONSHORE SUPPORT FACILITIES INFORMATION

#### 13.1 GENERAL

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

Name	Location	Existing/New/Modified
EPS	Fourchon, Louisiana	Existing
Houma Heliport	Houma, Louisiana	Existing

#### 13.2 SUPPORT BASE CONSTRUCTION OR EXPANSION

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

#### 13.3 SUPPORT BASE CONSTRUCTION OR EXPANSION TIMETABLE

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

#### 13.4 WASTE DISPOSAL

The Table, "Wastes You Will Transport and/or Dispose of Onshore," is included as **Attachment 12-A**.

## SECTION 14

### COASTAL ZONE MANAGEMENT ACT (CZMA) INFORMATION

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

Proposed activities are 60 miles from the Louisiana shore. Measures will be taken to avoid or mitigate the probable impacts. Walter will operate in compliance with existing federal and state laws, regulations, and resultant enforceable program policies in Louisiana's Coastal Zone Management Program.

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

Relevant enforceable policies were considered in certifying consistency for Louisiana. A certificate of Coastal Zone Management Consistency for the state of Louisiana is included as **Attachment 14-A**.

**COASTAL ZONE MANAGEMENT  
CONSISTENCY CERTIFICATION  
INITIAL EXPLORATION PLAN  
EUGENE ISLAND BLOCK 284**

**OCS-G 36746**

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

Walter Oil & Gas Corporation

Operator



Certifying Official

8/9/2023

Date

## **SECTION 15 ENVIRONMENTAL IMPACT ANALYSIS**

The Environmental Impact Analysis is included as **Attachment 15-A**.

# Attachment 15-A

## Walter Oil & Gas Corporation (Walter)

### Supplemental Exploration Plan Eugene Island Block 284 OCS-G 36746

#### (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 <sub>2</sub> S releases)	Discarded Trash & Debris
<b>Site-specific at Offshore Location</b>						
Designated topographic features		(1)	(1)		(1)	
Pinnacle Trend area live bottoms		(2)	(2)		(2)	
Eastern Gulf live bottoms		(3)	(3)		(3)	
Benthic communities			(4)			
Water quality		X	X		X	
Fisheries		X	X		X	
Marine Mammals	X(8)	X			X(8)	X
Sea Turtles	X(8)	X			X(8)	X
Air quality	X(9)					
Shipwreck sites (known or potential)			(7)			
Prehistoric archaeological sites			(7)			
<b>Vicinity of Offshore Location</b>						
Essential fish habitat		X	X		X(6)	
Marine and pelagic birds	X				X	X
Public health and safety					(5)	
<b>Coastal and Onshore</b>						
Beaches					X(6)	X
Wetlands					X(6)	
Shore birds and coastal nesting birds					X(6)	X
Coastal wildlife refuges					X	
Wilderness areas					X	

## Footnotes for Environmental Impact Analysis Matrix

- 1) Activities that may affect a marine sanctuary or topographic feature. Specifically, if the well or platform site or any anchors will be on the seafloor within the:
  - 4-mile zone of the Flower Garden Banks, or the 3-mile zone of Stetson Bank;
  - 1000-meter, 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 feet. from any no-activity zone; or
  - Proximity of any submarine bank (500-foot buffer zone) with relief greater than two meters that is not protected by the Topographic Features Stipulation attached to an OCS lease.
- 2) Activities with any bottom disturbance within an OCS lease block protected through the Live Bottom (Pinnacle Trend) Stipulation attached to an OCS lease.
- 3) Activities within any Eastern Gulf OCS block where seafloor habitats are protected by the Live Bottom (Low-Relief) Stipulation attached to an OCS lease.
- 4) Activities on blocks designated by the BOEM as being in water depths 300 meters or greater.
- 5) Exploration or production activities where H<sub>2</sub>S 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.

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

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

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



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

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

Species	Scientific Name	Status	Potential Presence		Critical Habitat Designated in the Gulf of Mexico	Gulf of Mexico Range
			Lease Area	Coastal		
Corals						
Coral, Elkhorn	<i>Acopora palmate</i>	T	X <sup>2</sup>	X	Florida	Flower Garden Banks and Florida
Coral, Staghorn	<i>Acopora cervicornis</i>	T	X	X	Florida	Florida
Coral, Boulder Star	<i>Orbicella franksi</i>	T	X	X	Flower Garden Banks and Florida	Flower Garden Banks and Florida
Coral, Lobed Star	<i>Orbicella annularis</i>	T	X	X	Flower Garden Banks and Florida	Flower Garden Banks and Florida
Coral, Mountainous Star	<i>Orbicella faveolate</i>	T	X	X	Flower Garden Banks and Florida	Flower Garden Banks and Florida
Coral, Rough Cactus	<i>Mycetophyllia ferox</i>	T	-	X	Florida	Florida and Southern Gulf of Mexico
Coral, Pillar	<i>Dendrogyra cylindrus</i>	T	-	X	Florida	Florida

Abbreviations: E = Endangered; T = Threatened

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

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

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

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

## **(B) Analysis**

### **Site-Specific at Eugene Island Block 284**

Proposed operations consist of the drilling and completion of 1 well location (EI284 001).

Operations will be conducted with a Jack-up Rig.

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

The operations proposed will utilize pile-driving.

### **1. Designated Topographic Features**

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

**Physical disturbances to the seafloor:** Eugene Island Block 284 is 21.1 miles from the closest designated Topographic Features Stipulation Block (Fishnet Bank); therefore, no adverse impacts are expected.

**Effluents:** Eugene Island Block 284 is 21.1 miles from the closest designated Topographic Features Stipulation Block (Fishnet 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-meter depth. At this depth, the oil is found only at concentrations several orders of magnitude lower than the amount shown to have an effect on corals. Because the crests of topographic features in the Northern Gulf of Mexico are found below 10 meters, oil from a surface spill is not expected to reach their sessile biota. Oil from a subsurface spill is not applicable due to the distance of these blocks from a topographic area. The activities proposed in this plan will be covered by Walter's Regional OSRP (refer to information submitted in **Section 8**).

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

potentially sensitive biological features in the GOM are shallower than 10 meters (33 feet), and only the Flower Garden Banks are shallower than 20 meters (66 feet).

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

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

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

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

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

With the exception of special Federal management areas or designated exclusion areas, dispersants have been preapproved for surface use, which provides the USCG On-Scene Coordinator with the authority to approve the use of dispersants. However, that approval would only be granted upon completion of the protocols defined in the appropriate Area Contingency Plan (ACP) and the Regional Response Team (RRT) Dispersant Plan. The protocols include conducting an environmental benefit analysis to determine if the dispersant use will prevent a substantial threat to the public health or welfare or minimize serious environmental damage. The Regional Response Team would be notified immediately to provide technical support and guidance in determining if the dispersant use meets the established criteria and provide an environmental benefit. Additionally, there is currently no preapproval for subsea dispersant injection and the USCG On-

Scene Coordinator must approve use of this technology before any subsea application. Due to the unprecedented volume of dispersants applied for an extended period of time, the U.S. National Response Team has developed guidance for atypical dispersant operations to ensure that planning and response activities will be consistent with national policy (BOEM 2017-007).

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

Due to the distance of these blocks from a topographic area and the coverage of the activities proposed in this plan by Walter's Regional OSRP (refer to information submitted in **Section 8**), impacts to topographic features from surface or sub-surface oil spills are not expected.

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

## **2. Pinnacle Trend Area Live Bottoms**

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

**Physical disturbances to the seafloor:** Eugene Island Block 284 is 197 miles from the closest live bottom (pinnacle trend) area; therefore, no adverse impacts are expected.

**Emissions (noise / sound):** All routine OCS oil-and gas-related activities have some element of sound generation. Common sound sources include propeller cavitation, rotating machinery, and reciprocating machinery, which are associated with routine OCS oil-and gas-related activities such as vessel traffic, drilling, construction, and oil and gas production, processing, and transport. Sound introduced into the marine environment as a result of human activities has the potential to affect marine organisms. Although there is little information available on sound detection and sound-mediated behaviors for marine invertebrates, the overall impacts on pinnacle and low-relief feature communities from anthropogenic noise are expected to be negligible (BOEM 2017-009). Additionally, Eugene Island Block 284 is 197 miles from the closest live bottom (pinnacle trend) area; therefore, no adverse impacts are expected.

**Effluents:** Eugene Island Block 284 is 197 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-meter depth. At this depth, the oil is found only at concentrations several orders of magnitude lower than the amount shown to have an effect on marine organisms. Oil from a subsurface spill is not expected to impact pinnacle trend area live bottoms due to the distance of these blocks from a live bottom (pinnacle trend) area and the coverage of the activities proposed in this plan by Walter's Regional OSRP (refer to information submitted in **Section 8**).

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

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

### **3. Eastern Gulf Live Bottoms**

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

**Physical disturbances to the seafloor:** Eugene Island Block 284 is not located in an area characterized by the existence of live bottoms, and this lease does not contain a Live-Bottom Stipulation requiring a photo documentation survey and survey report.

**Emissions (noise / sound):** All routine OCS oil-and gas-related activities have some element of sound generation. Common sound sources include propeller cavitation, rotating machinery, and reciprocating machinery, which are associated with routine OCS oil-and gas-related activities such as vessel traffic, drilling, construction, and oil and gas production, processing, and transport. Sound introduced into the marine environment as a result of human activities has the potential to affect marine organisms. Although there is little information available on sound detection and sound-mediated behaviors for marine invertebrates, the overall impacts on pinnacle and low-relief feature communities from anthropogenic noise are expected to be negligible (BOEM 2017-009). Additionally, Eugene Island Block 284 is not located in an area characterized by the existence of live bottoms; therefore, no adverse impacts are expected.

**Effluents:** Eugene Island Block 284 is not located in an area characterized by the existence of live bottoms; therefore, no adverse impacts are expected.

**Accidents:** It is unlikely that an accidental surface or subsurface spill would occur from the proposed 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-meter depth. At this depth, the oil is found only at concentrations several orders of magnitude lower than the amount shown to have an effect on marine invertebrates. Oil from a subsurface spill is not expected to impact Eastern Gulf live bottoms due to the distance of these blocks from a live bottom area and coverage of the activities proposed in this plan by Walter's Regional OSRP (refer to information submitted in **Section 8**).

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

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

#### **4. Deepwater Benthic Communities**

There are no IPFs (including emissions (noise / sound), effluents, physical disturbances to the seafloor, wastes sent to shore for treatment or disposal, and accidents) from the proposed activities that are likely to cause impacts to deepwater benthic communities.

Operations proposed in this plan are in water depths of 197 feet. High-density deepwater benthic communities are found only in water depths greater than 984 feet (300 meters); therefore, Walter's proposed operations in Eugene Island Block 284 are not likely to impact deepwater benthic communities.

#### **5. Water Quality**

Potential IPFs that could result in water quality degradation from the proposed operations in Eugene Island Block 284 include disturbances to the seafloor, effluents, 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.

**Effluents:** Levels of contaminants in drilling muds and cuttings and produced water discharges, discharge-rate restrictions and monitoring and toxicity testing are regulated by the EPA NPDES permit, thereby eliminating many significant biological or ecological effects. Operational discharges are not expected to cause significant adverse impacts to water quality. Additionally, an



analysis of the best available information from the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion on the Federally Regulated Oil and Gas Program Activities in the Gulf of Mexico (NMFS, 2020) concludes that exposures to toxicants in discharges from oil and gas activities are not likely to adversely affect ESA-listed species.

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

#### *Drilling Fluid Spills*

Water-based fluid (WBF) and Synthetic-based fluid (SBF) spills may result in elevated turbidity, which would be short term, localized, and reversible. The WBF is normally discharged to the seafloor during riserless drilling, which is allowable due to its low toxicity. For the same reasons, a spill of WBF would have negligible impacts. The SBF has low toxicity, and the discharge of SBF is allowed to the extent that it adheres onto drill cuttings. Both USEPA Regions 4 and 6 permit the discharge of cuttings wetted with SBF as long as the retained SBF amount is below a prescribed percent, meets biodegradation and toxicity requirements, and is not contaminated with the formation oil or PAH. A spill of SBF may cause a temporary increase in biological oxygen demand and locally result in lowered dissolved oxygen in the water column. Also, a spill of SBF may release an oil sheen if formation oil is present in the fluid. Therefore, impacts from a release of SBF are considered to be minor. Spills of SBF typically do not require mitigation because SBF sinks in water and naturally biodegrades, seafloor cleanup is technically difficult, and SBF has low toxicity. (BOEM 2017-009)

#### *Chemical Spills*

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

#### *Oil Spills*

Oil spills have the greatest potential of all OCS oil-and gas-related activities to affect water quality. Small spills (<1,000 barrels) are not expected to substantially impact water quality in coastal or offshore waters because the oil dissipates quickly through dispersion and weathering while still at sea. Reasonably foreseeable larger spills ( $\geq 1,000$  barrels), however, could impact water quality in coastal and offshore waters (BOEM 2017-007). However, based on data provided in the BOEM 2016 Update of Occurrence Rates for Offshore Oil Spills, it is unlikely that an accidental surface or subsurface spill of a significant volume would occur from the proposed activities. Between 2001 and 2015 OCS operations produced eight billion barrels of oil and spilled 0.062 percent of this oil,

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

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

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

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

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

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

The activities proposed in this plan will be covered by Walter's Regional Oil Spill Response Plan, which discusses potential response actions in more detail (refer to information submitted in **Section 8**).

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

## **6. Fisheries**

There are multiple species of fish in the Gulf of Mexico, including the endangered and threatened species listed in **Table 1** at the beginning of this Environmental Impact Assessment. More information regarding the endangered Gulf sturgeon (**Item 20.2**), oceanic whitetip shark (**Item 20.3**), and giant manta ray (**Item 20.4**) can be found below. Potential IPFs that could cause impacts to fisheries as a result of the proposed operations in Eugene Island Block 284 include physical disturbances to the seafloor, emissions (noise / sound), effluents, 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.

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

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

the noise generated by large vessel traffic typically results from propeller cavitation and falls within 40-150 Hz (Hildebrand, 2009; McKenna et al., 2012). This range is similar to that of fish vocalizations and hearing and could result in a masking effect.

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

Pulsed sounds generated by OCS oil-and gas-related activities (e.g., impact-driven piles and airguns) can potentially cause behavioral response, reduce hearing sensitivity, or result in physiological injury to fishes and invertebrate resources.

Impact pile-driving during OCS construction and on-lease seismic activity are both temporally and spatially limited activities. The effects of these sound-producing activities would extend only to communities of fishes and invertebrates within a relatively small area. Benthic fishes and invertebrates could receive sound waves propagated through the water and sound waves propagated through the substrate. However, Wardle et al. (2001) found that, although fishes and invertebrates associated with a reef exhibited a brief startle response when exposed to pulsed low-frequency signals, disruption of diurnal patterns was not observed. Fishes disturbed by the noise were observed to resume their previous activity within 1-2 seconds and only exhibited flight response if the airguns were visible when discharged (Wardle et al., 2001). Other studies of fishes exposed to pulsed anthropogenic sound signals in natural environments have produced a wide range of results suggesting that species, experience, and motivation are very important factors, and indicating that habituation may occur (Engås et al., 1996; Løkkeborg et al., 2012; Popper et al., 2014). Organisms in close proximity to a pulsed sound source are at increased risk of barotrauma. A signal with a very rapid rise and peak pressures that vary substantially from the static pressure at the receiver's location can cause physiological injury or mortality (Popper et al., 2014). However, the range at which physiological injury may occur is short (<10 meters; <33 feet) and, given fish avoidance behavior, the potential for widespread impacts to populations as a result of physiological injury is negligible.

Support vessel traffic, drilling, production facilities, and other sources of continuous sounds contribute to a chronic increase in background noise, with varying areas of effect that may be influenced by the sound level, frequencies, and environmental factors (Hildebrand, 2009;

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

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

### *Pile-Driving*

Walter will monitor for marine life both before and during the proposed pile driving operations from a vantage point which will allow Walter to monitor according to the 157-meter range noted in the National Marine Fisheries Service “Biological Opinion on the Federally Regulated Oil and Gas Program Activities in the Gulf of Mexico” (NMFS 2020), *Table 94, Additional distance over which the daily cumulative exposure to pile-driving sound can affect the hearing of sea turtles and sperm whales* (refer to information submitted in **Section 1**).

Walter will also adhere to requirements as set forth in Notices to Lessees and guidelines listed in **Section 5**, **Section 9**, and **Section 11** of the Supplemental Exploration Plan, as applicable, to avoid or minimize impacts to any of the species listed in the ESA as a result of these operations.

**Effluents:** Effluents such as drilling fluids and cuttings discharges contain components and properties which are detrimental to fishery resources. Moderate petroleum and metal contamination of sediments and the water column can occur out to several hundred meters down current from the discharge point. Offshore discharges are expected to disperse and dilute to very near background levels in the water column or on the seafloor within 3,000 meters of the discharge point and are expected to have negligible effect on fisheries. Additionally, an analysis of the best available information from the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion on the Federally Regulated Oil and Gas Program Activities in the Gulf of Mexico (NMFS, 2020) concludes that exposures to toxicants in discharges from oil and gas activities are not likely to adversely affect ESA-listed species.

**Accidents:** Collisions between support vessels and ESA-listed fish, would be unusual events; however, should one occur, death or injury to ESA-listed fish is possible. Contract vessel operators can avoid protected aquatic species and reduce potential deaths by maintaining a vigilant watch

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

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

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

An accidental oil spill has the potential to cause some detrimental effects on fisheries; however, it is unlikely that such an event would occur from the proposed 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 Walter's Regional OSRP (refer to information submitted in **Section 8**).

There are no other IPFs (including wastes sent to shore for treatment or disposal) from the proposed activities that are likely to cause impacts to fisheries.

## **7. Marine Mammals**

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

occurring baleen whale in the northern Gulf of Mexico and has been sighted off western Florida and in the De Soto Canyon region. Florida manatees have been sighted along the entire northern GOM but are mainly found in the shallow coastal waters of Florida, which are unassociated with the proposed actions. A complete list of all endangered and threatened marine mammals in the GOM may be found in **Table 1** at the beginning of this Environmental Impact Assessment. More information regarding the endangered Rice's whale can be found in **Item 20.1** below. Potential IPFs to marine mammals as a result of the proposed operations in Eugene Island Block 284 include emissions (noise / sound), effluents, discarded trash and debris, and accidents.

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

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

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

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

### *Pile-Driving*

Exposure to sound from pile driving activities may result in temporary hearing loss or other behavioral responses in sperm whales, including some local displacement from the area for as long as the pile driving activity is occurring. An analysis of the best available information from the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion concludes that the potential impacts of this exposure are not anticipated to have adverse effects because sperm whales are expected to be moving and less likely to remain stationary during pile driving activities.

Walter will monitor for marine life both before and during the proposed pile driving operations from a vantage point which will allow Walter to monitor according to the 157-meter range noted in the National Marine Fisheries Service “Biological Opinion on the Federally Regulated Oil and Gas Program Activities in the Gulf of Mexico” (NMFS 2020), *Table 94, Additional distance over which the daily cumulative exposure to pile-driving sound can affect the hearing of sea turtles and sperm whales* (refer to information submitted in **Section 1**).

Mid-frequency cetaceans (i.e., sperm whales) sound exposure thresholds in the “Biological Opinion on the Federally Regulated Oil and Gas Program Activities in the Gulf of Mexico” (NMFS 2020), are such that temporary or permanent hearing loss and displacement could occur during pile driving activities. However, although NMFS anticipated that exposure to sound from pile driving for sperm whales would result in TTS or other behavioral responses, including some local displacement from the area for as long as the pile driving is occurring, the potential duration of exposure for an animal to accumulate levels in the area is less likely, because sperm whales are expected to be moving and less likely to remain stationary during pile driving events.



Walter will also adhere to requirements as set forth in Notices to Lessees and guidelines listed in **Section 5**, **Section 9**, and **Section 11** of the Supplemental Exploration Plan, as applicable, to avoid or minimize impacts to any of the species listed in the ESA as a result of these operations.

**Effluents:** Drilling fluids and cuttings discharges contain components which may be detrimental to marine mammals. Most operational discharges are diluted and dispersed upon release. Any potential impact from drilling fluids would be indirect, either as a result of impacts on prey items or possibly through ingestion in the food chain (API, 1989).

**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, 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).

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

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

**Accidents:** Collisions between support vessels and marine mammals, including cetaceans, would be unusual events, however, should one occur, death or injury to marine mammals is possible. Contract vessel operators can avoid marine mammals and reduce potential deaths by maintaining a vigilant watch for marine mammals and maintaining a safe distance of 500 meters or greater from baleen whales, 100 meters or greater from sperm whales, and a distance of 50 meters or greater from all other aquatic protected species, with the exception of animals that approach the vessel. If unable to identify the marine mammal, the vessel will act as if it were a baleen whale

and maintain a distance of 500 meters or greater. If a manatee is sighted, all vessels in the area will operate at “no wake/idle” speeds in the area, while maintaining proper distance. When assemblages of cetaceans are observed, including mother/calf pairs, vessel speeds will be reduced to 10 knots or less. Vessel personnel should use a Gulf of Mexico reference guide that includes identifying information on marine mammals, sea turtles, and other marine protected species (i.e., Endangered Species Act listed species such as Gulf sturgeon, giant manta ray, or oceanic whitetip shark) that may be encountered in the Gulf of Mexico Outer Continental Shelf (OCS).

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

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

These proposed operations will not utilize moon pools to conduct activities. Walter will utilize a mat style Jack-up rig to drill the wells associated with this plan and it’s very atypical for marine life to become entangled or entrapped in this style of structure. As a precaution, lines extending into the water will be minimized. Any hoses extending to the water’s surface will be configured to minimize the chances of entanglement by marine life. As part of daily pollution observations, Walter’s HSE representative will be trained to look for entangled marine life and take appropriate action.

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 impact cetacean behavior and/or distribution, thereby causing additional stress to the animals. The effect of oil dispersants on cetaceans is not known. Removing oil from the surface would reduce the likelihood of oil adhering to marine mammals. Laboratory experiments have shown that the dispersants used during the Deepwater Horizon response are cytotoxic to sperm whale cells; however, it is difficult to determine actual exposure levels in the GOM. Therefore, dispersants will only be used if approved by the Regional Response Team in coordination with the RRT Dispersant Plan and RRT Biological Assessment for Dispersants. The

acute toxicity of oil dispersant chemicals included in Walter'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 Walter's OSRP (refer to information submitted in accordance with **Section 8**).

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

NMFS Protected Resources Contacts for the Gulf of Mexico:

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

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

## **8. Sea Turtles**

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

**Emissions (noise / sound):** Noise from drilling activities, support vessels, and helicopters (i.e., non-impulsive anthropogenic sound) may elicit a startle reaction from sea turtles, but this is a temporary disturbance. Responses to sound exposure may include lethal or nonlethal injury, temporary hearing impairment, behavioral harassment and stress, or no apparent response. Vessels are the greatest contributors to increases in low-frequency ambient sound in the sea (Andrew et al. 2011). Sound levels and tones produced are generally related to vessel size and speed. Larger vessels generally emit more sound than smaller vessels, and vessels underway with a full load, or those pushing or towing a load, are noisier than unladen vessels. Routine OCS helicopter traffic would not be expected to disturb animals for extended periods, provided pilots do not alter their flight patterns to more closely observe or photograph marine mammals. Helicopters, while flying offshore, generally maintain altitudes above 700 feet during transit to and from a working area, and at an altitude of about 500 feet between platforms. The duration of the effects resulting from a startle response is expected to be short-term during routine flights and the potential effects will

be insignificant to sea turtles. Therefore, we find that any disturbance that may result from aircraft associated with the proposed action is not likely to adversely affect sea turtles. Construction and operational sounds other than pile driving should have insignificant effects on sea turtles; effects would be limited to short-term avoidance of construction activity itself rather than the sound produced. As a result, sound sources associated with support vessel movement as part of the proposed operations are insignificant and therefore are not likely to adversely affect sea turtles. Overall noise impacts on sea turtles from the proposed activities are expected to be negligible to minor depending on the location of the animal(s) relative to the sound source and the frequency, intensity, and duration of the source. The National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion Appendix C explains how operators must implement measures to minimize the risk of vessel strikes to protected species and report observations of injured or dead protected species. This guidance should also minimize the chance of sea turtles being subject to the increased noise level of a service vessel in very close proximity.

### *Pile-Driving*

Walter will monitor for marine life both before and during the proposed pile driving operations from a vantage point which will allow Walter to monitor according to the 157-meter range noted in the National Marine Fisheries Service “Biological Opinion on the Federally Regulated Oil and Gas Program Activities in the Gulf of Mexico” (NMFS 2020), *Table 94, Additional distance over which the daily cumulative exposure to pile-driving sound can affect the hearing of sea turtles and sperm whales* (refer to information submitted in **Section 1**).

Per the “Biological Opinion on the Federally Regulated Oil and Gas Program Activities in the Gulf of Mexico” (NMFS 2020), sea turtle Exposure to sound from pile driving activities may result in hearing loss and temporary loss of available habitat for sea turtles, including some local displacement from the area for as long as the pile driving activity is occurring. An analysis of the best available information from the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion concludes that the impact of this exposure is not anticipated to be significant for adult sea turtles because the continuous “banging” of a pile should provide ample warning to avoid the immediate pile-driving area. Juvenile sea turtles may be motivated to remain in *Sargassum* habitat and may not leave the area, which could cause hearing loss; the juveniles that do leave the area may be adversely affected by being displaced from *Sargassum* habitat. The annual number of predicted disturbances of oceanic juveniles is relatively low. Walter will also adhere to requirements as set forth in Notices to Lessees and guidelines listed in **Section 5**, **Section 9**, and **Section 11** of the Supplemental Exploration Plan, as applicable, to avoid or minimize impacts to any of the species listed in the ESA as a result of these operations.

**Effluents:** Drilling fluids and cuttings discharges are not known to be lethal to sea turtles. Most operational discharges are diluted and dispersed upon release. Any potential impact from drilling fluids would be indirect, either as a result of impacts on prey items or possibly through ingestion in the food chain (API, 1989).

**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, 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).

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

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

**Accidents:** Collisions between support vessels and sea turtles would be unusual events, however, should one occur, death or injury to sea turtles is possible. Contract vessel operators can avoid sea turtles and reduce potential deaths by maintaining a vigilant watch for sea turtles and maintaining a safe distance of 50 meters or greater when they are sighted, with the exception of sea turtles that approach the vessel. Vessel crews should use a reference guide to help identify the five species of sea turtles that may be encountered in the Gulf of Mexico OCS as well as other marine protected species (i.e., Endangered Species Act listed species). Contract vessel operators will comply with the measures included in Appendix C of the NMFS Biological Opinion and requirements of the Protected Species Lease Stipulation, except under extraordinary circumstances when the safety of the vessel or crew is in doubt or the safety of life at sea is in question.

Vessel crews must report sightings of any injured or dead protected sea turtle species immediately, regardless of whether the injury or death is caused by their vessel, to the State Coordinators for the Sea Turtle Stranding and Salvage Network (STSSN) at [http://www.sefsc.noaa.gov/species/turtles/stranding\\_coordinators.htm](http://www.sefsc.noaa.gov/species/turtles/stranding_coordinators.htm) (phone numbers vary by state). Additional information may be found at the following website: <https://www.fisheries.noaa.gov/report>. Any injured or dead protected species should also be

reported to [takereport.nmfs@noaa.gov](mailto:takereport.nmfs@noaa.gov). In addition, if the injury or death was caused by a collision with the operator's vessel, an entrapment within the operator's equipment or vessel (e.g. moon pool), or an entanglement within the operator's equipment, the operator must further notify BOEM and BSEE within 24 hours of the strike or entrapment/entanglement by email to [protectedspecies@boem.gov](mailto:protectedspecies@boem.gov) and [protectedspecies@bsee.gov](mailto:protectedspecies@bsee.gov). If the vessel is the responsible party, it is required to remain available to assist the respective salvage and stranding network as needed.

These proposed operations will not utilize moon pools to conduct activities. Walter will utilize a mat style Jack-up rig to drill the wells associated with this plan and it's very atypical for marine life to become entangled or entrapped in this style of structure. As a precaution, lines extending into the water will be minimized. Any hoses extending to the water's surface will be configured to minimize the chances of entanglement by marine life. As part of daily pollution observations, Walter's HSE representative will be trained to look for entangled marine life and take appropriate action. The procedures found in Appendix J of the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion will be employed to free entrapped or entangled marine life safely.

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 Walter's Regional Oil Spill Response Plan (refer to information submitted in accordance with **Section 8**).

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

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

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

## 9. Air Quality

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

The projected air emissions identified in **Section 7** 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. Eugene Island Block 284 is beyond the 200-kilometer (124 mile) buffer for the Breton Wilderness Area and is 60 miles from the coastline. Therefore, no special mitigation, monitoring, or reporting requirements apply with respect to air emissions.

Accidents and blowouts can release hydrocarbons or chemicals, which could cause the emission of air pollutants. However, these releases should not impact onshore air quality because of the prevailing atmospheric conditions, emission height, emission rates, and the distance of Eugene Island Block 284 from the coastline. There are no other IPFs (including effluents, physical disturbances to the seafloor, and wastes sent to shore for treatment or disposal) from the proposed activities that are likely to impact air quality.

#### **10. Shipwreck Sites (known or potential)**

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

Potential IPFs that could impact known or unknown shipwreck sites as a result of the proposed operations in Eugene Island Block 284 include disturbances to the seafloor and accidents. Should Walter discover any evidence of a shipwreck, they will immediately halt operations within a 1000-foot radius, report to BOEM within 48 hours, and make every reasonable effort to preserve and protect that cultural resource.

**Physical Disturbances to the seafloor:** Eugene Island Block 284 is not located in or adjacent to an OCS block indicating a high probability for occurrence of shipwrecks. No sonar targets, magnetic anomalies, or other features on the geophysical data were recorded which were interpreted as possible shipwrecks within 1,000 feet of the proposed well location. Therefore, no adverse impacts are expected.

**Accidents:** An accidental oil spill has the potential to cause some detrimental effects to shipwreck sites if the release were to occur subsea. However, it is unlikely that an accidental oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). The activities proposed in this plan will be covered by Walter's Regional Oil Spill Response Plan (refer to information submitted in accordance with **Section 8**).

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

## 11. Prehistoric Archaeological Sites

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

Potential IPFs which could impact prehistoric archaeological sites as a result of the proposed operations in Eugene Island Block 284 include physical disturbances to the seafloor and accidents. No sonar targets, magnetic anomalies, or other features on the geophysical data were recorded which were interpreted as possible high probability areas for prehistoric habitation within 1,000 feet of the proposed well location in Eugene Island Block 284. Therefore, no adverse impacts are expected. Should Walter discover any object of prehistoric archaeological significance, they will immediately halt operations within a 1000-foot radius, report to BOEM within 48 hours, and make every reasonable effort to preserve and protect that cultural resource.

**Physical Disturbances to the seafloor:** Eugene Island Block 284 is not located in or adjacent to an OCS block with a high probability for occurrence of archaeological sites; therefore, no adverse impacts are expected.

**Accidents:** An accidental oil spill has the potential to cause some detrimental effects to prehistoric archaeological sites if the release were to occur subsea. However, it is unlikely that an accidental oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). The activities proposed in this plan will be covered by Walter's Regional Oil Spill Response Plan (refer to information submitted in accordance with **Section 8**).

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

### Vicinity of Offshore Location

## 12. Essential Fish Habitat (EFH)

Potential IPFs that could cause impacts to EFH as a result of the proposed operations in Eugene Island Block 284 include physical disturbances to the seafloor, effluents, and accidents. EFH includes all estuarine and marine waters and substrates in the Gulf of Mexico.

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



**Effluents:** 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 operational waste discharges. Levels of contaminants in drilling muds and cuttings and produced-water discharges, discharge-rate restrictions, and monitoring and toxicity testing are regulated by the EPA NPDES permit, thereby eliminating many significant biological or ecological effects. Operational discharges are not expected to cause significant adverse impacts to EFH.

**Accidents:** An accidental oil spill has the potential to cause some detrimental effects on EFH. Oil spills that contact coastal bays and estuaries, as well as OCS waters when pelagic eggs and larvae are present, have the greatest potential to affect fisheries. However, it is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). The activities proposed in this plan will be covered by Walter's Regional OSRP (refer to information submitted in **Section 8**).

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

### **13. Marine and Pelagic Birds**

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

#### **Emissions:**

##### *Air Emissions*

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

##### *Noise / Sound Emissions*

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

The use of explosives for decommissioning activities may potentially kill one or more birds from barotrauma if a bird (or several birds because birds may occur in a flock) is present at the location of the severance. For the impact of underwater sound, a threshold of 202 dB sound exposure level (SEL) for injury and 208 dB SEL for barotrauma was recommended for the Brahryramphus

marmoratus, a diving seabird (USDOI, FWS, 2011). However, the use of explosive severance of facilities for decommissioning are not included in these proposed operations, therefore these impacts are not expected.

**Accidents:** An oil spill would cause localized, low-level petroleum hydrocarbon contamination. However, it is unlikely that an oil spill would occur from the proposed 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 Walter's Regional OSRP (refer to information submitted in **Section 8**).

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

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

Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g., helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), "Think About It" (*previously "All Washed Up: The Beach Litter Problem"*). Thereafter, all personnel will view the marine trash and debris training video annually. Offshore personnel will also receive an explanation from Walter 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.

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

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

#### **14. Public Health and Safety Due to Accidents.**

There are no IPFs (including emissions, effluents, physical disturbances to the seafloor, wastes sent to shore for treatment or disposal, and accidents, including an accidental H<sub>2</sub>S releases) 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<sub>2</sub>S absent.

### **Coastal and Onshore**

#### **15. Beaches**

Potential IPFs from the proposed activities that could cause impacts to beaches include accidents and discarded trash and debris.

**Accidents:** Oil spills contacting beaches would have impacts on the use of recreational beaches and associated resources. Due to the distance from shore (60 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 Walter's Regional OSRP (refer to information submitted in **Section 8**).

**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, 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).

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

Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-

related personnel (e.g., helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), “Think About It” (*previously “All Washed Up: The Beach Litter Problem”*). Thereafter, all personnel will view the marine trash and debris training video annually. Offshore personnel will also receive an explanation from Walter management or the designated lease operator management that emphasizes their commitment to waste management in accordance with NTL No. 2015-G03-BSEE.

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

## **16. Wetlands**

Potential IPFs from the proposed activities that could cause impacts to wetlands include accidents and discarded trash and debris.

**Accidents:** 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 (60 miles) and the response capabilities that would be implemented, no impacts are expected. The activities proposed in this plan will be covered by Walter’s Regional OSRP (refer to information submitted in **Section 8**).

**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, 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).

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

Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g., helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), “Think About It” (*previously “All Washed Up: The Beach Litter Problem”*). Thereafter, all personnel will view the marine trash and debris training video annually. Offshore personnel will also receive an

explanation from Walter management or the designated lease operator management that emphasizes their commitment to waste management in accordance with NTL No. 2015-G03-BSEE.

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

## **17. Shore Birds and Coastal Nesting Birds**

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

**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 (60 miles) and the response capabilities that would be implemented, no impacts are expected. The activities proposed in this plan will be covered by Walter's Regional OSRP (refer to information submitted in **Section 8**).

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

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

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

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

## **18. Coastal Wildlife Refuges**

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

**Accidents:** An accidental oil spill from the proposed 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 (60 miles) and the response capabilities that would be implemented, no impacts are expected. The activities proposed in this plan will be covered by Walter's Regional OSRP (refer to information submitted in **Section 8**).

**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).

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

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

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

## **19. Wilderness Areas**

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

**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 (161 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 Walter's Regional OSRP (refer to information submitted in **Section 8**).

**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).

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

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

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

## **20. Other Environmental Resources Identified**

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

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

The Rice’s whale (née Gulf of Mexico Bryde’s whale) is the only commonly occurring baleen whale in the northern Gulf of Mexico and has been sighted off western Florida and in the De Soto Canyon region. The core Rice’s whale area is over 210 miles from the proposed operations. Additionally, vessel traffic associated with the proposed operations will not flow through the Rice’s whale area. Therefore, there are no IPFs from the proposed operations that are likely to impact the Rice’s whale. Additional information on marine mammals may be found in **Item 7**.

It is important to note that, NTL 2023-G01-BOEM includes recommendations and guidance for lessees and operators regarding suggested measures to expand protections for the Rice’s whale, during the period when BOEM and BSEE are engaged in a reinitiated consultation with NMFS on the 2020 Biological Opinion. The mitigation measures identified in the guidance document do not have the force of law and per an accompanying Fact Sheet issued by the agencies, are “intended to be used as voluntary precautionary measures taken during BOEM’s ongoing reinitiated consultation with NMFS.” In the NTL and Fact Sheet, these measures are recommended for implementation “as practicable” within the expanded Rice’s Whale Area until the NTL is revoked by BOEM. However, Eugene Island Block 284 is not located within or beyond this area.

### **20.2 – Gulf Sturgeon**

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

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



Species Act listed species such as Gulf sturgeon, giant manta ray, or oceanic whitetip shark) that may be encountered in the Gulf of Mexico Outer Continental Shelf (OCS).

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

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

Due to the distance from the nearest identified Gulf sturgeon critical habitat (141.7 miles) and the response capabilities that would be implemented during a spill, no significant adverse impacts are expected to the Gulf sturgeon. Considering the information from the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion, the location of this critical habitat in relation to proposed operations, the likely dilution of oil reaching nearshore areas, and the on-going weathering and dispersal of oil over time, we do not anticipate the effects from oil spills will appreciably diminish the value of Gulf sturgeon designated critical habitat for the conservation of the species. The activities proposed in this plan will be covered by Walter's Regional OSRP (refer to information submitted in **Section 8**).

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

Although pile driving operations will be conducted as previously noted, due to the distance from the nearest identified Gulf sturgeon critical habitat (141.7 miles, using the closest area / block location as a measuring point; Eugene Island Block 284) sound emissions from pile driving are not expected to impact Gulf sturgeons.

**Discarded trash and debris:** Trash and debris are not expected to impact the Gulf sturgeon. There will only be a limited amount of marine debris, if any, resulting from the proposed activities. 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).

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

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

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

### **20.3 – Oceanic Whitetip Shark**

Oceanic whitetip sharks may be found in tropical and subtropical waters around the world, including the Gulf of Mexico (Young 2016). According to the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion, Essential Fish Habitat (EFH) for the oceanic whitetip shark includes localized areas in the central Gulf of Mexico and Florida Keys. Oceanic whitetip sharks were listed as threatened under the Endangered Species Act in 2018 due to worldwide overfishing. Oceanic whitetip sharks had an abundant worldwide population, which has been threatened in recent years by inadequate regulatory measures governing fisheries;

therefore, there is little research regarding the impact of oil and gas operations on oceanic whitetip sharks (NMFS, 2020). IPFs that have been determined by NMFS to be discountable to oceanic whitetip sharks include vessel strike, emissions (noise / sound), discharges, entanglement and entrapment, and marine debris. IPFs that could cause impacts to oceanic whitetip sharks as a result of the proposed operations in Eugene Island Block 284 include accidents. Additional information on ESA-listed fish may be found in **Item 6**.

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

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

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

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

activities proposed in this plan will be covered by Walter's Regional OSRP (refer to information submitted in **Section 8**).

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

There will only be a limited amount of marine debris, if any, resulting from the proposed activities. 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).

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

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

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

## **20.4 – Giant Manta Ray**

According to the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion, the giant manta ray lives in tropical, subtropical, and temperate oceanic waters and productive coastlines throughout the Gulf of Mexico. While uncommon in the Gulf of Mexico,

there is a population of approximately 70 giant manta rays in the Flower Garden Banks National Marine Sanctuary (Miller and Klimovich 2017). Giant manta rays were listed as threatened under the Endangered Species Act in 2018 due to worldwide overfishing. Giant manta rays had an abundant worldwide population, which has been threatened in recent years by inadequate regulatory measures governing fisheries; therefore, there is little research regarding the impact of oil and gas operations on giant manta rays (NMFS, 2020). IPFs that have been determined by NMFS to be discountable to giant manta rays include vessel strike, emissions (noise / sound), discharges, entanglement and entrapment, and marine debris. IPFs that could cause impacts to giant manta rays as a result of the proposed operations in Eugene Island Block 284 include accidents. Additional information on ESA-listed fish may be found in **Item 6**.

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

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

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

There is little information available on the impacts of oil spills or dispersants on giant manta rays. It is expected that exposure of oil or dispersants to giant manta rays would likely result in effects similar to other marine species, including fitness reduction and the possibility of mortality (NMFS, 2020). It is possible that a small number of giant manta rays could be impacted by an oil spill in

the Gulf of Mexico. However, due to the distance to the Flower Garden Banks (31 miles), the low population dispersed throughout the Gulf of Mexico, and the response capabilities that would be implemented during a spill, no significant adverse impacts are expected to impact giant manta rays. Additionally, it is unlikely that such an event would occur from the proposed activities (refer to **Item 5**, Water Quality). The activities proposed in this plan will be covered by Walter's Regional OSRP (refer to information submitted in **Section 8**).

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

There will only be a limited amount of marine debris, if any, resulting from the proposed activities. 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).

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

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

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

## 20.5 – Loggerhead Sea Turtle

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

There are multiple IPFs that may impact loggerhead sea turtles (see **Item 8**). However, the closest loggerhead critical habitat is located 212.5 miles from Eugene Island Block 284; therefore, no adverse impacts are expected to the critical habitat. Additionally, considering the information from the National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion, we do not expect proposed operations to affect the ability of *Sargassum* to support adequate prey abundance and cover for loggerhead turtles.

## 20.6 - Protected Corals

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

Protected Corals							
	Elkhorn Coral <i>Acopora palmate</i>	Staghorn Coral <i>Acopora cervicornis</i>	Boulder Star Coral <i>Orbicella franksi</i>	Lobed Star Coral <i>Orbicella annularis</i>	Mountainous Star Coral <i>Orbicella faveolate</i>	Rough Cactus Coral <i>Mycetophyllia ferox</i>	Pillar Coral <i>Dendrogyra cylindrus</i>
Designated Critical Habitat	<b>Flower Garden Banks National Marine Sanctuary</b>						
	East Flower Garden Bank		X	X	X		
	West Flower Garden Bank		X	X	X		
	Rankin Bank		X	X	X		
	Rankin Bank		X	X	X		
	Geyer Bank		X	X	X		

McGrail Bank			X	X	X		
<b>Florida (outside of planning area)</b>							
Martin County					X		
Palm Beach County	X	X	X	X	X		X
Broward County	X	X	X	X	X	X	X
Miami-Dade County	X	X	X	X	X	X	X
Monroe County	X	X	X	X	X	X	X

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

**Accidents:** It is unlikely that an accidental surface or subsurface spill would occur from the proposed operations (refer to statistics in **Item 5**, Water Quality). Oil spills cause damage to corals only if the oil contacts the organisms. Due to the distance from the Flower Garden Banks National Marine Sanctuary (31 miles) and other critical coral habitats, no adverse impacts are expected. The operations proposed in this plan will be covered by Walter's Regional OSRP (refer to information submitted in **Section 8**).

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

## 20.7 - Endangered Beach Mice

There are four subspecies of endangered beach mouse that are found in the dune systems along parts of Alabama and northwest Florida. Due to the location of Eugene Island Block 284 and the beach mouse critical habitat (above the intertidal zone), there are no IPFs that are likely to impact endangered beach mice.

## 20.8 - Navigation

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



### **(C) IMPACTS ON PROPOSED 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 its location in the Gulf, Eugene Island Block 284 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. Drilling & completion
  - a. Secure well
  - b. Secure rig / platform
  - c. Evacuate personnel

Drilling activities will be conducted in accordance with NTL No.'s 2008-G09, 2009-G10, and 2010-N10.

2. Structure Installation

Operator will not conduct structure 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

## **SECTION 16**

### **ADMINISTRATIVE INFORMATION**

#### **16.1 EXEMPTED INFORMATION DESCRIPTION**

The proposed bottomhole location of the planned well has been removed from the Public Information copy of this EP as well as any discussions of the target objectives, geologic or geophysical data, and interpreted geology.

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