UNITED STATES MEMORANDUM	GOVERNMENT April 11, 2024												
To:	Publi	Public Information											
From:	Plan Coordinator, OLP, Plans Section (GM 235D)												
Subject: Control # Type Lease(s) Operator Description	-	C Information copy of plan N-10237 Initial Exploration Plan OCS-G36941 Block - 389 Eugene Island A W & T Offshore, Inc. Drill and complete an Exploratory well surface locations; Well sites A, B, c	from :	four	possible								
Rig Type	-	Not Found											

Attached is a copy of the subject plan.

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

Henry Emembolu Plan Coordinator



## **INITIAL EXPLORATION PLAN**

## LEASE OCS-G 36941 EUGENE ISLAND BLOCK 389

Contact Information: Valerie Land Regulatory Manager 5718 Westheimer Rd., Suite 700 Houston, Texas 77057 713-624-7272 (Direct) 713-626-8525 (Main) vland@wtoffshore.com

Date Submitted: February 20, 2024	No. of Copies Sub	No. of Copies Submitted:					
Plan Control No.: N-10237	Proprietary:	1 & CD					
Plans Coordinator: Henry Emembolu	Public:	1 & CD					
PUBLIC COPY							



INITIAL EXPLORATION PLAN LEASE OCS-G 36941 EUGENE ISLAND BLOCK 389

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### APPENDIX A: PLAN CONTENTS

#### A.1 Plan Information Form

Under this Initial Exploration Plan W&T Offshore, Inc. proposes to drill and complete an exploratory well to a geologic target as detailed in Appendix C. This plan details four (4) possible surface locations, Well Sites A, B, C and D, from which the exploratory well can be drilled. For details on these well locations, please refer to *Attachment A-1*, "Form BOEM-0137" included at the end of this section.

If either A or C location is used, we will utilize Platform Rig installed on a drilling platform. For more information on this drilling platform installation, please refer to Appendix M – Related Facilities and Operations Information. If either B or D well sites are used, we may utilize a moored semisubmersible rig to drill the well.

#### A.2 Location

Also included as *Attachment A-2* is the Well Location Plat depicting the proposed surface locations of each proposed well along with the water depths.

Additionally, included as *Attachments A-3, A-4, A-5,* and *A-6* are bathymetry maps for each location.

#### A.3 Safety and Pollution Prevention Features

Safety features on the drilling unit will include well control, pollution prevention, and blowout prevention equipment as described in Title 30 CFR Part 250, Subparts C, D, E, and G; and as further clarified by BSEE Notices to Lessees, and current policy making invoked by the BSEE/BOEM, Environmental Protection Agency, and the U.S. Coast Guard. Appropriate life rafts, life jackets, ring buoys, etc., will always be maintained on the facility.

Pollution prevention measures include installation of curbs, gutters, drip pans, and drains on drilling deck areas to collect all contaminants and debris.

#### A.4 Storage Tanks and Production Vessels

All facility tanks with an oil storage capacity of 25 bbls or more as defined in Title 30 CFR 254.6, and are associated with these operations, are detailed in the table below.

Type of Storage Tank	Type of Facility	Tank Capacity (bbls)	Number of Tanks	Total Capacity (bbls)	Fluid Gravity (API)	
Fuel Oil (Marine Diesel)	PF Rig	2 x 60 bbls 2 x 160 bbls	4	440 bbls	NA	

Fuel Oil					
(Marine	Semi-Submersible	8,000 bbls	2	16,000 bbls	NA
Diesel)					

#### A.5 Additional Measures

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

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

#### **OCS PLAN INFORMATION FORM**

General Information           Type of OCS Plan:         X         Exploration Plan (EP)         Development Operations Coordination Document (DOCD)																		
	velop	pment Operations Coordination Document (DOCD)																
Company Name: W&T Offshore,	Inc.			BOEN	M Opera	tor N	Number: 01284											
Address: 5718 Westheimer Rd.				Conta	act Perso	n: V	Valerie Land, Regulatory Manager											
Suite 700 Phone Number:								713-624-7272										
Houston, Texas 77057	s: vla	vland@wtoffshore.com																
If a service fee is required under 30	Am	nount F	Paid: \$17,392.00	Receip	t No. 7659	5802	031											
	e (V	(WCD) Information																
Lease: G36941 A	Lease: G36941Area: EIBlock: 389									NA								
Objective(s); X Oil X	0	Onshore Support Base: Fourchon, La																
Well Name: A     Total Volume of WCD: 99,348 bbls     API Gravity: 33°																		
Distance to closest land (Miles): 78	8 miles		Volume fro	om unco	ontrolled	blow	vout: 6	6.45 MM bbls										
Have you previously provided info	rmation	to verify th	e calculation	ns and a	ssumptio	ons fo	or you	r WCD?		Yes	Х	No						
If so, please provide the Plan Contr	ol No. o	f the EP or	DOCD with	n which	this info	rmati	ion wa	as provided:										
Do you propose using new or unus	ual techi	nology to c	onduct your	activitie	es?					Yes	Х	No						
Do you propose to use a vessel with	h anchor	s to install	or modify a	structur	re?				Х	Yes		No						
Do you propose any facility that wi	subsea	devel	lopmer	nt?		Yes	Х	No										
Description of Proposed Activities and Tentative Schedule (Mark all that apply)																		
Proposed Activity	y		S	tart Da	ıte			End Date		No. of Days								
Install Drilling Structure ar	nd PF Ri	g	0	5/01/20	25			5/30/2025		30								
Exploration drillin	g		6	5/01/202	25			8/29/2025		ç	00	0						
Well Completion			8	8/30/202	25			9/28/2025			30							
Descripti	on of I						<u> </u>	Descriptio			1.C							
Jackup	V	Drillship					Cais			sion leg pla		1						
Gorilla Jackup Semisubmersible	X	Platform Submers	-					d Platform		npliant tow	er							
DP Semisubmersible							Spar		-	yed tower	D	:						
Dr Semisubmersible Drilling Rig Name (if known):		Barge Ri	g				syste	ting production	Uth	er (Attach	Descr	iption)						
Diffing Kig Name (if known).		D	•	ет	T		D' 1	•										
			escription			rm I					. (8	0						
From (Facility/Area/Block)	)	T	o (Facility/A	Area/Bl	ock)			Diameter (Inches)		Lengt	n (fee	it)						

#### **OCS PLAN INFORMATION FORM (CONTINUED)**

Proposed Well/Structure Location															
Well or Structu structure, refer				well or	•	Previously or DOCD?		ved under an approved EP		Yes	Х	No			
Is this an exististic structure?	ing well or	Yes	X	No		is is an exist No. or Com		l or structure, then list the No.	NA						
Do you plan to	use a subsea	BOP or a	surface	BOP or	n a floa	ting facility	to cond	uct your proposed activities	?		Yes	X	No		
WCD Info								ne of all storage	API Gravity of fluid 33°						
	Surface Lo				Bottom-H	Iole Loo	cation	Completions (for multiple completions, enter separate lines)							
Lease No.	OCS-G 369	941													
Area Name	EI														
Block No.	389														
Blockline Departures (in feet)	N/S Depart	ture: 6087	.34' FNI												
	E/W Depar	ture: 4427	7.48' FW	νL											
Lambert X– Y coordinates	X: 1,959,3														
	Y: -243,64	15													
Latitude/ Longitude	Latitude: 2	27° 59' 48.	191" N												
	Longitude:	91° 27' 3	3.088" V	V											
Water Depth (I	Feet): 360'														
Anchor Radius	s (if applicabl	e) in feet:	NA	I											
Anchor Loca				onstru	iction 1	Barge (If a	anchor	radius supplied above,	not ne	cessar	y)	~ .			
Anchor Name/No.	Area	B	lock			rdinate		Y Coordinate	Leng	th of A	nchor	Chain	on Seafloor		
					X =			Y =							
					X =			Y =							
					X =			Y =							
					X =			Y =							
					X =			Y =							
					X =			Y =							
					X =			Y =							
					X =			Y =							

#### ATTACHMENT A-1 (con'td)

#### **OCS PLAN INFORMATION FORM (CONTINUED)**

Proposed Well/Structure Location															
Well or Structu structure, refer				well or		Previously n or DOCD?		ed under an approved EP		Yes	Х	No			
Is this an existi structure?	ing well or	Yes	X	No		is is an existin No. or Comp		or structure, then list the No.	NA						
Do you plan to	use a subsea	BOP or a s	urface	BOP of	ı a float	ing facility to	o condu	?		Yes	Х	No			
WCD Info							s, volum ls):	API Gravity of fluid							
	Surface Lo				Bottom-Ho	ole Loca	ation	Completions (for multiple completions, enter separate lines)							
Lease No.	OCS-G 369	941													
Area Name	EI														
Block No.	389														
Blockline Departures (in feet)	N/S Depart	ture: 5825.2	3' FSL	r											
	E/W Depar	ture: 6127.6	8' FEL												
Lambert X– Y coordinates	X: 1,963,8														
	Y: -246,23	1													
Latitude/ Longitude	Latitude: 2	27° 59' 22.64	14" N												
	Longitude:	91° 26' 43.	257" V	V											
Water Depth (I	Feet): 470'														
Anchor Radius	s (if applicabl	e) in feet: 3	,280'												
								radius supplied above,	not ne	cessary	y)				
Anchor Name/No.	Area	Blo	ck			rdinate		Y Coordinate	Leng	th of Ai	nchor	Chain	on Seafloor		
					X =			Y =							
					X =			Y =							
					X =			Y =							
					X = X =			Y = Y =							
					$\overline{X} =$			Y =							
					X =			Y =							
					X =			Y =							

#### ATTACHMENT A-1 (cont'd)

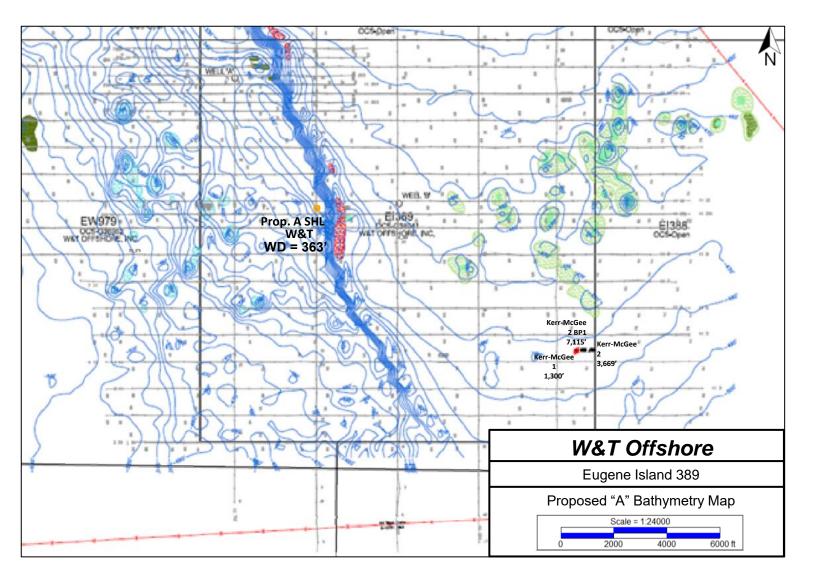
Proposed Well/Structure Location															
	are Name/Number ence previous nar		ning	well or		Previous or DOC		wed under an approved I	EP	Yes		X	No		
Is this an existing structure?	ing well or	Yes	X	No	If the API	s is an exi No. or Co	isting w	ell or structure, then list t D No.	the N	NA					
Do you plan to	use a subsea BO	P or a surf	face I	BOP on	a float	ing facilit	ty to con	duct your proposed activ	vities?			Yes	Х	No	
WCD Info	For wells, volur blowout (bbls/d		ontro	lled		For structu pipelines (	A	API Gravity of fluid							
	Surface Locati	on				Bottom	-Hole L		Completions (for multiple completions, enter separate lines)						
Lease No.	OCS-G 36941														
Area Name	EI														
Block No.	389														
Blockline Departures (in feet)	N/S Departure:	339.34' F	FNL												
	E/W Departure:	878.48'	FWL	1											
Lambert X– Y coordinates	X: 1,955,812														
	Y: -237,897														
Latitude/ Longitude	Latitude: 28° 0	0' 45.037'	" N												
	Longitude: 91°	28' 12.73	33" W	I											
Water Depth (	Feet): 363'														
Anchor Radius	s (if applicable) in	feet: NA													
Anchor Loca							f ancho	or radius supplied abo							
Anchor Name/No.	Area	Block	2			rdinate		Y Coordinate	I	Length o	of Anc	chor C	hain o	on Seafloor	
				2	X =			Y =							
				2	X =			Y =							
				2	X =			Y =							
				2	X =			Y =							
				2	X =			Y =							
				2	X =			Y =							
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				2	X =			Y =							

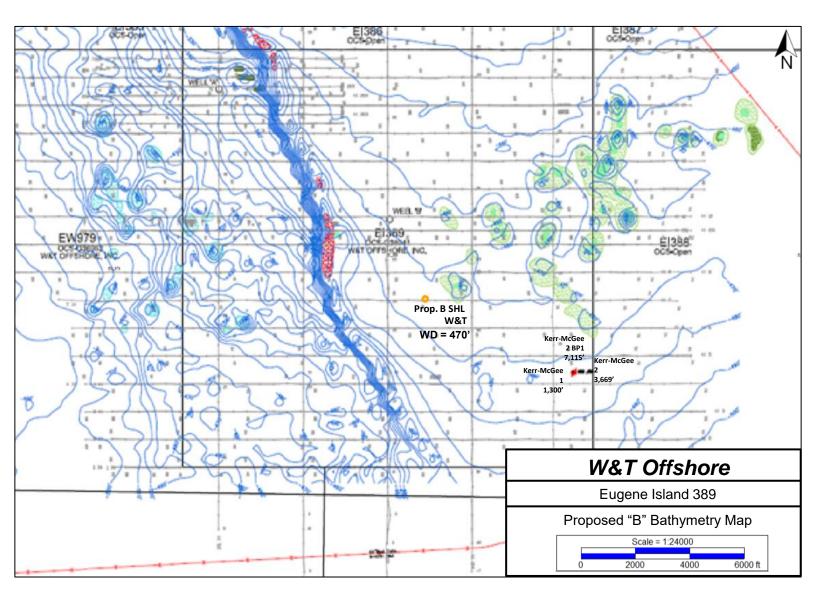
#### ATTACHMENT A-1 (cont'd)

					P	ropo	sed W	ell/Stru	icture Location											
Well or Structu structure, refer				ning	well or		Previo or DO		wed under an approved EP	•	Yes		X	No						
Is this an existi structure?	ing well or		Yes	X	No			xisting we Complex II	ll or structure, then list the O No.	· NA	NA									
Do you plan to	use a subsea	a BOI	P or a surf	face I	3OP on	a float	ting facil	lity to cond	luct your proposed activiti	ies?			Yes	Х	No					
WCD Info	For wells, blowout (b			ontro	lled		For struct		me of all storage and	AP	API Gravity of fluid									
	Surface L	ocatio	0 <b>n</b>				Botton	n-Hole Lo	ocation				(for mi e lines)		completions,					
Lease No.	OCS-G 36	941																		
Area Name	EI																			
Block No.	389																			
Blockline Departures (in feet)	N/S Depar	ture:	4275.23'	FSL																
	E/W Depa	rture:	4418.68	' FEI																
Lambert X– Y coordinates	X: 1,965,5	537	37																	
coordinates	Y: -247,78	81																		
Latitude/ Longitude	Latitude: 2	27° 59	9' 07.32"	N																
	Longitude:	: 91°	26' 24.18	39" W	V															
Water Depth (I									,											
Anchor Radius	s (if applicab	le) in	feet: 3,2	80'																
		Drilli						If ancho	r radius supplied abov						<u> </u>					
Anchor Name/No.	Area		Block				rdinate		Y Coordinate	Lei	ngth o	of An	chor C	hain o	n Seafloor					
					2	X =			Y =											
					2	X =			Y =											
					2	X =			Y =											
					2	X =			Y =											
					2	X =			Y =											
					2	X =			Y =											
					2	X =			Y =											
					2	X =			Y =											

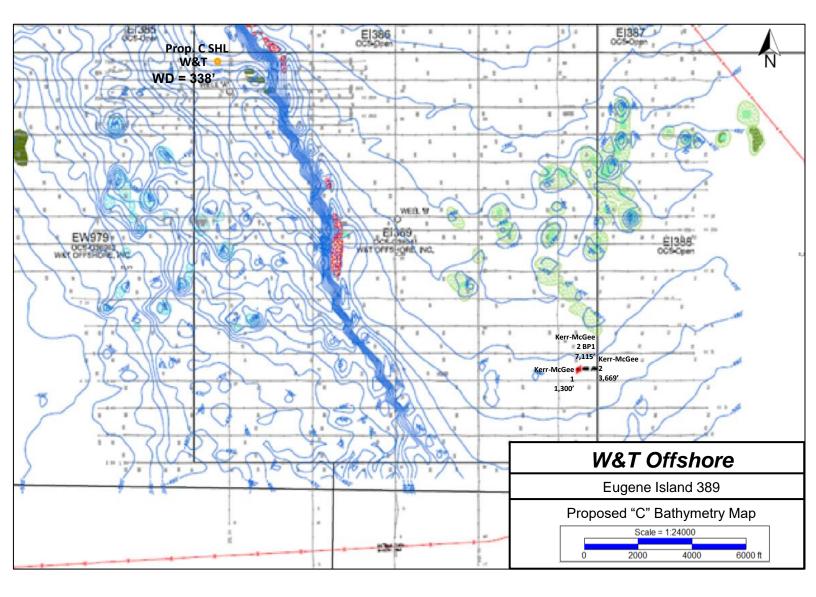
#### ATTACHMENT A-1 (cont'd)

	) 'C' (SL)			Ύ.	= -237,557.66	3			GRD ORTH	
					EI389 DCS-G36941 T OFFSHORE INC					
52			O 'A' (SL)							.68
1,954,933.52			()							1,969,955.68
= 1,9										= 1,9
×						<b>O</b> <sup>'B'</sup> (SL)				×
						1	<b>O</b> <sup>'D'</sup> (SL)			
				PROPOSED	WELL LOO	CATIONS				
LOCATION			LLS 6,087.34' FNL	<b>COORD</b> X = 1,959,361.00	<b>INATES</b> Y = -243,645.00	<b>LATITUDE</b> 27° 59' 48.191"N	<b>LONGITUDE</b> 91° 27' 33.088"W	<b>WD</b> 360'	MD	TVD
'B' (SL)	EI/389	6,127.68' FEL	5,825.23' FSL	X = 1,963,828.00	Y = -246,231.00	27° 59' 22.644"N	91° 26' 43.257"W	465'		
'C' (SL)	EI/389	878.48' FWL	339.34' FNL	X = 1,955,812.00	Y = -237,897.00	28° 00' 45.037"N	91° 28' 12.733"W	335'		
'D' (SL)	EI/389	4,418.68' FEL	4,275.23' FSL	X = 1,965,537.00	Y = -247,781.00	27° 59' 07.320"N	91° 26' 24.189"W	466'		
	1			Y =	 = -252,056.23					
EW9	79							E\	N980	
				Å	ATTACHMENT	A-2				
				PUBLI	C INFORMATI		EXPLORATION PL	AT		
	C	W&T	OFFSHO	DRE		PROPO OC	SED WELLS 'A', 'E S-G 36941 BLOC	3', 'C', K 389	& 'D'	
<b>Echo</b> OFFSHOR	)) 364 Prairievi Tel:	99 Perkins Road ille, Louisiana 70769 225-673-2163	1,000	0 1,000	2,000	E	UGENE ISLAND A SOUTH ADDITIO GULF OF MEXICO			
	-	CLARKE 1866	PROJECTION: LAW		DRAWN BY: F		REV. No.: 1 JOB No.:			-003-EXP_REV1 T 1 OF 1

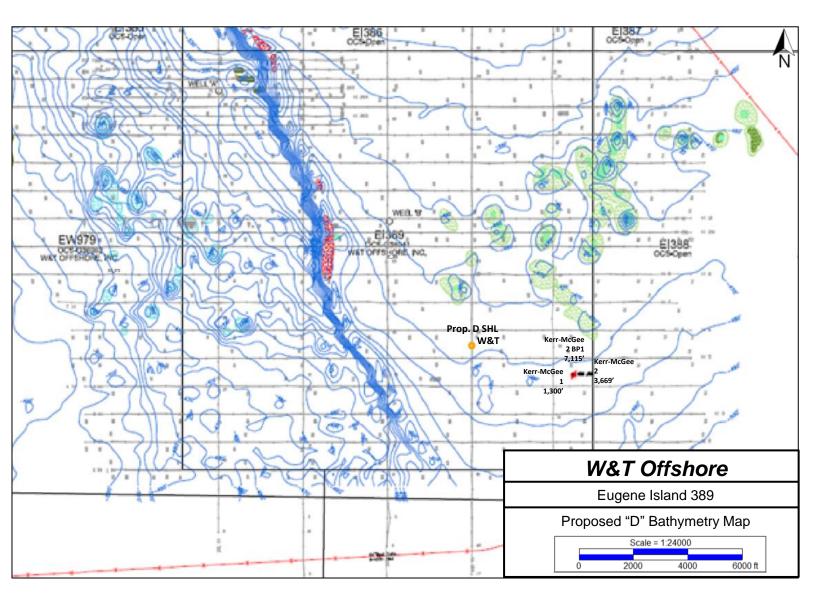




**ATTACHMENT A-4** 



#### ATTACHMENT A-5



**ATTACHMENT A-6** 

### **APPENDIX B: GENERAL INFORMATION**

#### B.1 Description, objectives, and schedule

The following additional permits will need to be filed and approved before the activities under this EP can commence:

Agency	Permit/Application
Bureau of Safety and Environmental	Application for Installation of Fixed OCS
Enforcement, Office of Structure and	Facility
Technical Support Section	
Bureau of Safety and Environmental	Application for Permit to Drill (APD)
Enforcement, District Office	
Environmental Protection Agency	NPDES Permit for Discharging

#### **B.2 Drilling Fluids**

Please refer to Appendix F, "Waste and Discharges Information", *Attachment F-1*, for the volume of drilling fluids being used for this project.

#### B.3 New or Unusual Technology

W&T does not propose to use any new or unusual technology to carry out the proposed exploratory activities.

#### **B.4 Bonding Statement**

The bond requirements for the activities proposed in this EP are satisfied by a \$3,000,000 areawide exploration bond, furnished and maintained according to 30 CFR 556, Subpart I; and Notice to Lessees (NTL) 2015-N04, "General Financial Assurance".

#### B.5 Oil Spill Financial Responsibility (OSFR)

W&T Offshore, Inc.'s (GOM Company No. 01284) oil spill financial responsibility will be updated to include the drilling of the wells proposed in this EP according to 30 CFR Part 253; and NTL No. 2008-N05, "Guidelines for Oil Spill Financial Responsibility for Covered Facilities".

#### B.6 Deepwater Well Control Statement

W&T Offshore, Inc. (GOM Company No. 01284) the financial capability to drill a relief well and conduct other emergency well control operations.

#### **B.7 Suspension of Production**

This lease is under its primary term.

#### **B.8 Blowout Scenario**

If a blowout scenario occurred, all workers on drilling rig would follow preplanned abandonment procedures and hopefully be in their respective deployed lifeboats. If

uncontrolled flow occurred and did not ignite, then it is possible that hydrocarbons could enter the water at 99,348 bbls per day for 135 days (13,411,980 bbls total volume). If the hydrocarbons ignite, then most of the hydrocarbons would burn off and the actual hydrocarbons entering the water would be significantly less.

The most likely blowout scenario would probably occur while tripping the drill string and either no drill pipe is in the hole or only a small portion. Assuming drill pipe is in the hole, then both sets of pipe rams and shear/blind rams would have to fail in order to have uncontrolled flow. In the worst case, there would be no drill pipe in the hole and the blind/shear rams would have to fail. This scenario is used in the worst-case discharge calculations.

#### **Bridging Tendency**

If a blowout scenario occurred, this well would have a very high probability of bridging off based on the analog wells.

#### Surface Intervention

In the early stages of a well control scenario, closing the annular or rams BOPs and installing or closing a drill string check valve would be the first line of defense. Attempts would be made to circulate kill weight mud down the drill pipe and out the choke manifold per standard well control procedures. If circulation down the drill pipe is not possible or if an insufficient amount of drill pipe is in the hole, then the next step is to bullhead kill weight mud into the wellbore using the "lubricate and bleed" method. Depending on the circumstances and seriousness of the problem, there may be other options. It may be possible to rig up a snubbing unit and snub drill pipe into the hole to a sufficient depth to circulate kill weight mud around and kill the well.

#### Drilling a Relief Well

The Eugene Island 389 platform rig will be installed in 358 ft of water. The proposed well will be drilled using a platform rig. If a relief well would be required, a jack-up rig would be the preferred rig. The timeline to acquire a rig and drill a relief well is outlined in the table below:

Action Item	No. of Days
1. Acquire a rig	10
2. Time to move a rig on location	5
3. Drill a relief well	120
Total time to drill relief well	135 days

#### **Methods of Minimizing Blowout Occurrence**

By maintaining primary well control the probability of having a blowout is very low. Primary well control is maintaining sufficient hydrostatic pressure to prevent unwanted flows into the well bore. The keys to maintaining primary control are:

- 1. Pre-planning pore pressure analysis and casing point selection
  - 1. Analysis of offset wire line logs, evaluation of seismic, geologic interpretation, offset mud weights and offset kick information, BHP information.
  - 2. Under pressured or depleted formations should be identified.
  - 3. Analysis of the area and regional fracture gradient (FG) information which would include offset shoe tests and leak off data to verify FG model.
  - 4. Optimize casing program which would include accepted industry safety factors when designing casing strings.
- 2. Preparation of a detailed drilling program. Most programs include the following:
  - 1. Mud Program
  - 2. Cement Program
  - 3. Hydraulic Program
  - 4. BHA and Directional Program
  - 5. Logging Program
  - 6. Detail procedure outlining operational programs through each hole section
- 3. Onsite surveillance consisting of the following:
  - 1. Mud logging with gas, lithology, "d" exponent or other ROP/ pressure computations.
  - 2. Installation and monitoring of pit and flowline devices for the monitoring of fluid levels in the pits and changes in flow rates.
  - 3. Real time resistivity/GR LWD and pore pressure analysis by LWD specialist.
  - 4. Foremen experienced in Gulf of Mexico drilling.
- 4. Office geological and engineering supervision.
  - 1. Real time analysis of LWD information for geological correlations.
  - 2. Real time or daily analysis of LWD for pressure.
- 1. Onsite application of good drilling practices:
  - 1. Keep hole full on trips.
  - 2. Monitoring hole fill-ups via a trip tank.
  - 3. Control drilling in selected cases to prevent overloading the hole with cuttings or formation gas.
  - 4. Minimize swab pressures while tripping.
  - 5. Minimize surge pressures while running casing or drill string.

- 6. Maintaining proper mud rheology's to help minimize estimated circulating density and surge pressures and will also aid in cleaning of the hole of cuttings.
- 7. Know the warning signs of an influx and stay alert to what the hole is "telling".

In the case where the primary well control is lost, proper use of secondary control methods will return the well to primary control. Secondary control is the proper use of well control equipment and techniques to circulate out unwanted inflows. The keys to secondary control are as follows:

- 1. Drilling and pressure control equipment that is properly sized and capable of performing under emergency circumstances:
  - 1. The equipment will be well maintained.
  - 2. The equipment will be tested to BSEE specifications.
  - 3. The equipment will be sized for anticipated pressures, hole sizes and accumulator fluid volumes for 100% closure of the BOP.
  - 4. Well designs where there is adequate kick tolerance.
  - 5. Proper training of crews and rig personnel.

### APPENDIX C: GEOLOGICAL AND GEOPHYSICAL INFORMATION

#### C.1 Geological Description

Proprietary Copy only.

#### C.2 Structure Contour Maps

Proprietary Copy only.

#### C.3 Interpreted 2-D Seismic Lines

Attached to the Shallow Hazard Assessments for each well, please find interpreted 2-D seismic lines. These lines are migrated, annotated with depth scale, and are within 500' of the surface locations of the proposed wells.

#### C.4 Geological Structure Cross-Sections

Proprietary Copy only

#### C.5 Shallow Hazards Report

W&T contracted ECHO Offshore LLC to conduct a high-resolution Geophysical Investigation of Eugene Island Block 389. In addition to all of Block 389, portions of Blocks 384, 385, 386, 387, and 388, Eugene Island Area, were also covered. This field work was conducted between June 27 and July 13, 2022.

A copy of this Geophysical Investigation has been electronically submitted to BOEM under separate submittal.

#### C.6 Shallow Hazard Assessments

Proprietary Copy only.

#### C.7 High-Resolution Seismic Lines

Proprietary Copy only.

#### C.8 Stratigraphic Column

Proprietary Copy only.

#### C.9 Time vs. Depth Tables

Sufficient well control data for the target areas proposed in this EP exist; therefore, seismic time versus depth tables for the proposed well locations are not required.

### APPENDIX D: HYDROGEN SULFIDE INFORMATION

#### D.1 Concentration

W&T does not anticipate encountering any H<sub>2</sub>S during the proposed operations.

#### D.2 Classification

In accordance with Title 30 CFR 250.490(c), W&T requests that the area of proposed activities be classified by the BOEM as  $H_2S$  absent.

### APPENDIX E: BIOLOGICAL, PHYSICAL AND SOCIOECONOMIC INFORMATION

#### E.1 High-Density Deepwater Benthic Communities

This DOCD does not propose activities that could disturb seafloor areas in water depths of 300 meters (984 feet) or greater; therefore, chemosynthetic information is not required.

#### E.2 Topographic Features (Banks)

Activities proposed in this DOCD do not fall within 305 meters (1000 feet) of any designated "no activity zone"; therefore, no map is required.

#### E.3 Live Bottoms (Pinnacle Trend) Map

Our proposed operations in Eugene Island Block 389 are not located within 61 meters (200 feet) of any pinnacle trend feature; therefore, a separate bathymetric map is not required.

#### E.4 Live Bottoms (Low Relief) Stipulation

Our proposed operations in Eugene Island Block 389 are not located within 100 feet of any pinnacle trend feature with vertical relief equal to or greater than 8 feet; therefore, live bottom (low relief) maps are not required.

#### E.5 Potentially Sensitive Biological Features

One of the significant features identified in the site investigation conducted by Echo Offshore LLC is the paleo reef west of the escarpment. It covers an area of approximately 5.6 square miles. It has been recommended that we avoid this reef.

The A well site is located  $\pm 325$  feet to the east of this paleo reef and  $\pm 475$  feet from the significant seabed escarpment to the west. The C well site is located  $\pm 425$  feet east of the paleo reef and 1325 feet to the west of the escarpment.

Both B and D wells are located well east of the escarpment and nowhere near the paleo reef.

#### E.6 Threatened and Endangered Species, Critical Habitat, and Marine Mammal Information

Under Section 7 of the Endangered Species Act (ESA) all federal agencies must ensure that any actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species, or destroy or adversely modify its designated critical habitat.

In accordance with the 30 CFR 250, Subpart B, effective May 14, 2007, and further outlined in Notice to Lessees (NTL) 2008-G04, lessees/operators are required to address site-specific information on the presence of federally listed threatened or endangered species and critical habitat designated under the ESA and marine mammals protected under the Marine Mammal Protection Act (MMPA) in the area of proposes activities under this plan.

NOAA Fisheries currently lists the Sperm Whale, Leatherback Turtle, Green Turtle, Hawksbill Turtle, and the Kemp's Ridley Turtle as endangered and the Loggerhead Turtle and Gulf Sturgeon as threatened. Currently there are no designated critical habitats for the listed species in the Gulf of Mexico Outer Continental Shelf, however, it is possible that one or more of these species could be seen in the area of our operations.

#### E.8 Archaeological Report

Echo Offshore LLC prepared an Archeological Assessment over the projected area in Eugene Island Block 389 and is included in the Geophysical Investigation being submitted under separate cover.

Review of the data obtained during the shallow hazard study does not indicate the presence of any historic period shipwrecks.

There were a total of eight (8) sonar targets and twenty-nine (29) magnetic anomalies were recorded in the study area. Five (5) of the magnetic anomalies have been recommended for avoidance as possible cultural resources.

No features conducive to human settlements were observed from the subbottom records and water depths exceed depths in which prehistoric assessment is required.

If any archeological resource is discovered while conducting our exploratory operations in this lease, W&T Offshore, Inc. will adhere to the guidance in Notice to Lessees (NTL) 2005-G07 and immediately halt operations and report the discovery to the BOEM Regional Director.

### **APPENDIX F: WASTES AND DISCHARGES INFORMATION**

#### F.1 Wastes to be Discharge Overboard

Projected generated wastes as a result of the activities proposed in this Initial Exploration Plan that will be either discharged overboard in accordance with the EPA's general permit or be disposed of downhole are detailed in *Attachment F-1* included in this document.

#### F.2 Wastes to be Transported to Onshore for Disposal

Projected generated wastes as a result of the activities proposed in this Initial Exploration Plan that will be transported to an onshore facility for disposal are detailed in *Attachment F-2* included in this document.

# TABLE 1: WASTES TO BE GENERATED, TREATED AND DOWNHOLE DISPOSED OF OR DISCHARGED TO THE GOM

Please specify if the amount reported is a total or per well amount

Projected generated waste			Projected ocea	n discharges		Downhole Disposal
Type of Waste	Composition	Projected Amount	Discharge Rate	Discharge Method		Answer yes or no
/ill drilling occur? If yes, you should list m	uds and cuttings					
	Water, NaCl (salt), PHPA polymer,					
Water-based drilling fluid	bentonite (gel), Barium Sulfate (barite)	7800 bbls	200 bbls/day max	Discharge		No
Cuttings wetted with water-based fluid		2000 bbls	100 bbls/day max	Discharge		No
Cuttings wetted with synthetic-based fluid	NA	NA	NA	NA		NA
ill humans be there? If yes, expect conve	ntional waste					
Domestic waste	Sanitary waste from living quarters	1200 gal/day	30 gal/person/day	Remove solids, Chlorinate and discharge overboard		No
Sanitary waste	Gray water	800 gal/day	20 gal/person/day	Discharge overboard		No
there a deck? If yes, there will bedeck dra	ainago					
Deck Drainage	Rainwater	0 – 4000 bbls	varies	Amounts depend on rainfall amounts. Oil & grease removed, tested, then discharge overboard		No
ill you conduct well treatment, completion		-				
Well treatment fluids	Viscous pills and spacers with HEC and small amounts of sodium	200 bbls	200 bbls/well	Discharge overboard		No
Well completion fluids	Calcium Chloride	500 bbls	500 bbls/well	Discharge overboard		No
Workover fluids						NA
iscellaneous discharges? If yes, only fill i	n those associated with your activity					
Desalinization unit discharge	NA	NA	NA	NA		NA
Blowout preventer fluid	NA	NA	NA	NA		NA
Ballast water	NA	NA	NA	NA		NA
Bilge water	NA	NA	NA	NA		NA
Excess cement at seafloor	NA	NA	NA	NA		NA
Fire water	NA	NA	NA	NA		NA
Cooling water	NA	NA	NA	NA		NA
ill you produece hydrocarbons? If yes, fil	l in for produced water	•				
Produced water		500 bbls/day	500 bbls/day	Oil and grease sample taken; discharge overboard		No
ease enter individual or general to indica	te which type of NPDES permit you wil	ll be covered by			1	
DTE: If you will not have a type of waste for t	he activity being applied for, enter NA for	all columns in the row.	NOTE: All discharged with requirements of	l wastes should comply the NPDES permit.		

**ATTACHMENT F-1** 

### TABLE 2. WASTES THAT WILL BE TRANSPORTED AND DISPOSED OF ONSHORE

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

Projected generate	d wastes	Solid and Liquid Wastes transportation		Waste Dispo						
Type of Waste	Composition	Transportation Method	Name/location of facility	Amount	Disposal method					
Vill drilling occur? If yes, fill in the mu	ds and cuttings									
Oil-based drilling fluid or mud	NA	NA	NA	NA	NA					
Synthetic-based drill fluid or mud	NA	NA	NA	NA	NA					
Cuttings wetted with Water-based fluid	NA	NA	NA	NA	Will be discharged overboard (see Table 1)					
Cuttings wetted with oil-based fluids	NA	NA	NA	NA	NA					
Completion fluids	CaCl2	Store in tanks	Ecoserv, Fourchon, LA	100 bbls/well	Transported via support vessel to shorebase for disposal or recycle.					
ill you produce hydrocarbons? If yes, the	n fill in for produced sand.	NA	NA	NA	Flow full well stream to EC338 /					
Produced sand										
/ill you have additional wastes that are not es, fill in the appropriate rows.	permitted for discharge? If									
Trash and debris	Paper and Plastic	Garbage bags on supply or crew boat	Galiano Waste, Galiano, LA	30 bags @ 40 cu.ft./bag	Landfill					
Used oil	Oily rags, abosorbent pads, used oil filters, engine oil	DOT drums on supply boat	Omega Waste Management, Patterson, LA	10 drums/well	Incineration or recycle					
Wash water	NA	NA	NA	NA	NA					
Chemical product wastes	Paint, solvents, light bulbs	DOT drums on supply boat	Hidco, Abbeville, LA	100 lbs/well	Hazardous waste					
Cooking oil		5 gal jugs	GJ Land & Marine, Morgan City, LA	5 x 5 gal jugs/well	Recycled					
Misc.	Batteries	5 gal drum	ESSI or NOV, Broussard, LA	As needed	Recycled					

### APPENDIX G: AIR EMISSIONS INFORMATION

#### G.1 Screening Questions

Screen Procedures for EP's	Yes	No
Is any calculated Complex Total (CT) Emission amount (tons) associated with your		Х
proposed development activities more than 90% of the amounts calculated using the		
following formulas: $CT = 3400D^{2/3}$ for CO, and $CT = 33.3D$ for the other air pollutants		
(where D = distance to shore in miles)?		
Do your emission calculations include any emission reduction measures or modified		Х
emission factors?		
Does or will the facility complex associated with your proposed development and		Х
production activities process production from eight or more wells?		
Do you expect to encounter H <sub>2</sub> S at concentrations greater than 20 parts per million		Х
(ppm)?		
Do you propose to flare or vent natural gas in excess or criteria set for the under		Х
250.1105(a)(2) and (3)?		
Do you propose to burn produced hydrocarbon liquids?		Х
Are your proposed development and production activities located within 25 miles (40		Х
kilometers) from shore?		
Are your proposed development and production activities located within 124 miles		Х
(200 kilometers) of the Breton Wilderness Area?		

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 the table below. This information is compiled on the summary form of the set of worksheet included as *Attachment G-1*.

Air Pollutant	Plan Emission Amounts (tons)	Calculated Exemption Amounts (tons)	Calculated Complex Total Emission Amounts (tons)
Total Suspended Particulates (TSP)	26.82	2597.40	26.82
Particulate Matter 10 (PM <sub>10</sub> )	16.18		16.18
Particulate Matter (PM <sub>2.5</sub> )	15.70		15.70
Sulphur Dioxide (SO <sub>2</sub> )	0.39	2597.40	0.39
Nitrogen Oxides (NOx)	642.57	2597.40	642.57
Volatile Organic Compounds (VOC)	18.48	2597.40	18.48
Lead (Pb)	0.00		0.00
Carbon Monoxide (CO)	100.79	62069.08	100.79
Ammonia (NH <sub>2</sub> )	0.19		0.19

This information was calculated by:

Valerie Land, Regulatory Manager 713-624-7242 <u>vland@wtoffshore.com</u>

#### DOCD/DPP - AIR QUALITY

COMPANY	W&T Offshore, Inc.
AREA	El
BLOCK	389
LEASE	G36941
FACILITY	
WELL	A, B, and C
COMPANY CONTACT	Valerie Land
TELEPHONE NO.	713-624-7272
REMARKS	Drill and complete Well Locations A, B, and C

LEASE TER	M PIPELINE CO	ONSTRUCTION INFORMATION:
YEAR	NUMBER OF	TOTAL NUMBER OF CONSTRUCTION DAYS
	PIPELINES	
2024	0	Exploratory only
2025		
2026		
2027		
2028		
2029		
2030		
2031		
2032		
2033		

**ATTACHMENT G-1** 

OMB Control No. 1010-0151 OMB Approval Expires: 08/31/2023

#### AIR EMISSIONS CALCULATIONS - 1ST YEAR

COMPANY	AREA		BLOCK	LEASE	FACILITY	WELL					CONTACT		PHONE		REMARKS										
W&T Offshore, Inc.	EI		389	G36941		A, B, and C	ТІМГ				Valerie Land		713-624-7272		Drill and complet	e Well Locations	A, B, and C			<b>F</b> 9					
OPERATIONS	EQUIPMENT Diesel Engines	EQUIPMENT ID	RATING HP	MAX. FUEL GAL/HR	GAL/D	RUN					MAXINU	JM POUNDS PE	RHOUR							Eð	TIMATED TO	JN5			
	Nat. Gas Engines		HP	SCF/HR	SCF/D				-	-															
DRILLING	Burners VESSELS- Drilling - Propulsion Engine - Diesel	Semisubmersible	MMBTU/HR 26,400	SCF/HR 1358.1744	SCF/D 32596.19	HR/D 24	D/YR 120	TSP 18.62	PM10 11.24	PM2.5 10.90	SOx 0.27	NOx 446.23	12.83	Pb 0.00	CO 69.99	NH3 0.13	TSP 26.82	PM10 16.18	PM2.5 15.70	<b>SOx</b> 0.39	NOx 642.57	VOC 18.48	Pb 0.00	CO 100.79	NH3 0.19
	VESSELS- Drilling - Propulsion Engine - Diesel	Semisubiliersible	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 Vessels - Diesel Boiler		0	U	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	0.00 0.00	0.00 0.00	0.00 0.00	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
	VESSELS - Pipeline Laying Vessel - Diesel VESSELS - Pipeline Burying - Diesel		0 0	0 0	0.00 0.00	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	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	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	Dring PF	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	RECIP.<600hp Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00		0.00	
	RECIP.>600hp Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00		0.00	
	VESSELS - Shuttle Tankers VESSELS - Well Stimulation		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
	Natural Gas Turbine		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	
	Diesel Turbine Dual Fuel Turbine		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00
	RECIP. 2 Cycle Lean Natural Gas		ő	0	0.00	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	
	RECIP. 4 Cycle Lean Natural Gas		0	0	0.00 0.00	0	0		0.00 0.00	0.00	0.00	0.00 0.00	0.00		0.00			0.00	0.00	0.00 0.00	0.00	0.00		0.00	
	RECIP. 4 Cycle Rich Natural Gas Diesel Boiler		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	0.00	0.00 0.00	0.00 0.00	 0.00	0.00 0.00	0.00
	Natural Gas Heater/Boiler/Burner		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
	MISC. STORAGE TANK		BPD	SCF/HR	COUNT	1	1						0.00									0.00			
	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 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		0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00		0.00 0.00	
	COLD VENT				0	1	1						0.00									0.00			
	FUGITIVES GLYCOL DEHYDRATOR				0	0	0						0.00 0.00									0.00 0.00			
	WASTE INCINERATOR		0		0	0	0		0.00	0.00	0.00	0.00		-	0.00			0.00	0.00	0.00	0.00			0.00	
	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
	COMBUSTION FLARE - no smoke 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		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 Facility Total Emissions		0			0	0	0.00 18.62	0.00	0.00	0.00	0.00 446.23	0.00	0.00	0.00 69.99	0.00 0.13	0.00 26.82	0.00 16.18	0.00	0.00	0.00 642.57	0.00 18.48	0.00	0.00	0.00
EXEMPTION	DISTANCE FROM LAND IN MILES							10.02	11.24	10.50	0.27	440.25	12.05	0.00	03.33	0.15		10.10	13.70				0.00		0.13
CALCULATION	78.0					-	-										2,597.40			2,597.40	2,597.40	2,597.40		62,069.08	
	VESSELS- Crew Diesel VESSELS - Supply Diesel		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	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 - Tugs Diesel		0 0	0	0.00	ů 0	Ő	0.00	0.00	0.00	0.00	0.00	0.00	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 - Support Diesel, Laying		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 - Support Diesel, Burying VESSELS - Crew Diesel		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	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
	VESSELS - Material Tug Diesel VESSELS - Crew Diesel		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	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	]		1.8.6	BAC						1						-	1					
	VESSELS On-Ice – Loader		kW	0	0.0	HR/D 0	<b>D/YR</b> 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	Ő	0.00	0.00	0.00	0.00	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 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 – Tractor On-Ice – Truck (for gravel island)			0	0.0 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	0.00 0.00	0.00 0.00	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 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	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00	0.00 0.00	0.00
	Non-Facility Total Emissions						5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

#### AIR EMISSIONS CALCULATIONS - 2ND YEAR

COMPANY	AREA	1	BLOCK	LEASE	FACILITY	WELL					CONTACT		PHONE		REMARKS												
W&T Offshore, Inc.	EI		389	G36941		A, B, and C					Valerie Land		713-624-7272		Drill and complet	te Well Locations											
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	<u>co</u>	NH3		
DRILLING	VESSELS- Drilling - Propulsion Engine - Diesel	Semisubmersible	26400	1358.1744	32596.19	24	120	18.62	11.24	10.90	0.27	446.23	12.83	0.00	69.99	0.13	26.82	16.18	15.70	0.39	642.57	18.48	0.00	100.79	0.19		
	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	0.00	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	0.00	0.00 0.00	0.00 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		
PIPELINE	VESSELS - Pipeline Laying Vessel - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
INSTALLATION	VESSELS - Pipeline Burying - 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		
FACILITY INSTALLATIO	N 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		
PRODUCTION	RECIP.<600hp Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00		0.00			
	RECIP.>600hp Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00		0.00			
	VESSELS - Shuttle Tankers		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 - Well Stimulation		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		
	Natural Gas Turbine		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			
	Diesel Turbine		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			
	Dual Fuel Turbine RECIP. 2 Cycle Lean Natural Gas		0	0	0.00 0.00	0	0	0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00	0.00 0.00	0.00	0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00	0.00 0.00	0.00		
	RECIP. 2 Cycle Lean Natural Gas		0	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			
	RECIP. 4 Cycle Rich Natural Gas		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			
	Diesel Boiler		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		
	Natural Gas Heater/Boiler/Burner		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		
	MISC.		BPD	SCF/HR	COUNT	Ū	Ŭ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	STORAGE TANK				0	1	1						0.00									0.00					
	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			
	COLD VENT				0	1	1						0.00									0.00					
	FUGITIVES				0	0	0						0.00									0.00					
	GLYCOL DEHYDRATOR			_	0	1	1						0.00									0.00					
	WASTE INCINERATOR		0			0	0		0.00	0.00	0.00	0.00			0.00			0.00	0.00	0.00	0.00			0.00			
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																				
202	VESSELS - Ice Management Diesel 25 Facility Total Emissions	-	0			0	0	0.00 18.62	0.00	0.00	0.00	0.00 446.23	0.00 12.83	0.00	0.00 69.99	0.00 0.13	0.00 26.82	0.00 16.18	0.00 15.70	0.00	0.00 642.57	0.00 18.48	0.00	0.00 100.79	0.00		
EXEMPTION	DISTANCE FROM LAND IN MILES																										
CALCULATION	78.0																2,597.40			2,597.40	2,597.40	2,597.40		62,069.08			
DRILLING	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		
	VESSELS - Tugs 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		
PIPELINE	VESSELS - Support Diesel, Laying		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		
INSTALLATION	VESSELS - Support Diesel, Burying		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		
FACILITY	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		
INSTALLATION	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		
PROPUSTION	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	8	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								1 1				1							1			1		
	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		
				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			U																							
	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 gravel island) On-Ice – Truck (for surveys)		-	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		
	On-Ice – Truck (for gravel island) On-Ice – Truck (for surveys) Man Camp - Operation		0	0	0.0	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 0.00	0.00 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) On-Ice – Truck (for surveys)		0 0	0	0.0	0 0 0 0	0 0 0 0	0.00	0.00	0.00	0.00	0.00	0.00	  0.00 <b>0.00</b>	0.00		0.00	0.00	0.00	0.00	0.00	0.00		0.00			

#### AIR EMISSIONS CALCULATIONS - 3RD YEAR

COMPANY	AREA		BLOCK	LEASE	FACILITY	WELL			r	1	CONTACT		PHONE		REMARKS													
W&T Offshore. Inc.	El		389	G36941	TAGIEITT	A. B. and C					Valerie Land		713-624-7272		Drill and complet	te Well Location	is A, B, and C											
OPERATIONS	EQUIPMENT	EQUIPMENT ID	RATING	MAX. FUEL	ACT. FUEL	1 1 -	TIME				MAXIMU	M POUNDS PE		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	Semisubmersible	26400	1358.1744	32596.19	24	120	18.62	11.24	10.90	0.27	446.23	12.83	0.00	69.99	0.13	26.82	16.18	15.70	0.39	642.57	18.48	0.00	100.79	0.19			
	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			
PIPELINE	VESSELS - Pipeline Laying Vessel - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
INSTALLATION	VESSELS - Pipeline Burying - 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			
	· · · · · · · · · · · · · · · ·					-	-																					
FACILITY INSTALLAT	ICVESSELS - 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			
PRODUCTION	RECIP.<600hp Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00		0.00				
	RECIP.>600hp Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00		0.00				
	VESSELS - Shuttle Tankers VESSELS - Well Stimulation		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00			
	Natural Gas Turbine		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			
	Diesel Turbine		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				
	Dual Fuel Turbine		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			
	RECIP. 2 Cycle Lean Natural Gas		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				
	RECIP. 4 Cycle Lean Natural Gas		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				
	RECIP. 4 Cycle Rich Natural Gas		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				
	Diesel Boiler		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			
	Natural Gas Heater/Boiler/Burner		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			
	MISC.		BPD	SCF/HR	COUNT																							
	STORAGE TANK				0	1	1						0.00									0.00						
	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				
	COLD VENT				0	1	1						0.00									0.00						
	FUGITIVES				0	0	0						0.00									0.00						
	GLYCOL DEHYDRATOR				0	1	1						0.00									0.00						
-	WASTE INCINERATOR		0			0	0		0.00	0.00	0.00	0.00			0.00			0.00	0.00	0.00	0.00			0.00				
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	VESSELS		kW			HR/D	D/YR																					
SOURCES							D/TK						0.00															
202	VESSELS - Ice Management Diesel 6 Facility Total Emissions		0			0	0	0.00	0.00	0.00	0.00	0.00 446.23	0.00	0.00	0.00 69.99	0.00 0.13	0.00 26.82	0.00 16.18	0.00 15.70	0.00	0.00 642.57	0.00	0.00	0.00 100.79	0.00			
EXEMPTION								10.02	11.24	10.00	0.21	440.20	12.00	0.00	00.00	0.10	10.01	10.10	10.70	0.00	042.07	10.40	0.00	100.10	0.10			
CALCULATION	DISTANCE FROM LAND IN MILES																2,597.40			2,597.40	2,597.40	2,597.40		62,069.08				
	78.0																											
DRILLING	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			
	VESSELS - Tugs Diesel VESSELS - Support Diesel, Laying		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			
PIPELINE INSTALLATION	VESSELS - Support Diesel, Laying VESSELS - Support Diesel, Burying		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	0.00			
INSTALLATION	VESSELS - Support Diesel, Burying VESSELS - Crew Diesel		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00	0.00 0.00	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			
FACILITY	VESSELS - Supply Diesel 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			
INSTALLATION	VESSELS - Material rug 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				GAL/HR	GAL/D																							
SOURCES	On-Ice Equipment			GAL/HR	GAL/D																							
	Man Camp - Operation (maximum people per day)		PEOPLE/DAY	-		110/0	DA/D						<u> </u>		]					<u> </u>		<u> </u>	<u> </u>					
	VESSELS		kW	0	0.0	HR/D	D/YR	0.00	0.00	0.00	0.00	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 – 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) On-Ice – Truck (for surveys)			0	0.0 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	0.00 0.00	0.00 0.00	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	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			
	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			
			0	-			0																0.00					
202	6 Non-Facility Total Emissions							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			

#### AIR EMISSIONS CALCULATIONS - 4TH YEAR

Mather form	COMPANY	AREA	BLOCK	LEASE	FACILI	Y WELL	L				CONTACT		PHONE		REMARKS										
Image: Bar and the state of		EI													Drill and complet	te Well Locations	s A, B, and C								
Image: stand base: stand	OPERATIONS						UN TIME				MAXIMU	JM POUNDS PE	ER HOUR							ES	STIMATED TO	ONS			
Image: Property of the								-																	
Halls         Bate         App         Diff         Pictor         Pictor        Pictor        Pictor								TSP	PM10	PM2 5	SOx	NOv	VOC	Ph	0.0	NH3	TSP	PM10	PM2.5	SOr	NOv	VOC	Ph	00	NH3
	DRILLING																								0.19
Select 101:         Select 101:     <			0	0			0																		0.00
Number of the state of th			0	0			0																		0.00
Mac-alk part wards       Mac-alk		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
NHM-1       NHM-1       N <th<< td=""><td></td><td>Vessels - Diesel Boiler</td><td>0</td><td></td><td></td><td>0</td><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.00</td></th<<>		Vessels - Diesel Boiler	0			0	0																		0.00
Mather form		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
Bits	PIPELINE		0	0			0																		0.00
Control         Control <t< td=""><td>INSTALLATION</td><td>VESSELS - Pipeline Burying - Diesel</td><td>0</td><td>0</td><td>0.00</td><td>0</td><td>0</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td></t<>	INSTALLATION	VESSELS - Pipeline Burying - 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
Introduction         Introduction<	FACILITY INSTALLATION	N 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
Passes - integration         S	PRODUCTION		0	0			0																		
NERGE			0	0			0																		
Name And Parting         No.         No.        No.         No.			0	0			0																		0.00 0.00
Deter Impine         Perter Im			0	0			0																		
Individuant			0	0			0	0.00						0.00			0.00						0.00		
BC:01 - 0 reservices         C:0 -		Dual Fuel Turbine	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
HEP-A GON MARIGNO         I        I         I         I			0	0			0																		
Image loop         Image l			0	0		0	0																		
Imple Control proteines         Imple Control			0	0	0.00	0	0																		
NUME         NUME <th< td=""><td></td><td></td><td>0</td><td>0</td><td>0.00</td><td>0</td><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0.00 0.00</td></th<>			0	0	0.00	0	0																		0.00 0.00
Sindee interm         Sindee i			BPD	SCE/H			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
Downstructure         Downstru			5.5	001/11	0	1	1						0.00									0.00			
Constructure and constructure andin constructure andia constructure and constructure				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	
CHMIRTING PLARE- Lawy strutz         C        C         C         C<				0		0	0																		
COLUMPS         ColuMPS <t< td=""><td></td><td></td><td></td><td>0</td><td></td><td>0</td><td>0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>				0		0	0																		
Image: Processing of the second of				0		0	0	0.00	0.00		0.00	0.00			0.00		0.00	0.00		0.00	0.00			0.00	
Carbon Constraint					0	1	1																		
MACE PARAMEMON         O        O        O         O </td <td></td> <td></td> <td></td> <td></td> <td>0</td> <td>0</td> <td>0</td> <td></td> <td>-</td>					0	0	0																		-
Description         Description <thdescription< th=""> <thdescription< th=""></thdescription<></thdescription<>			0		0				0.00	0.00	0.00		0.00		0.00			0.00	0.00	0.00	0.00	0.00		0.00	
NELL TST COMUSITOR LAGE - name         O        O         O	DRILLING		0			0	0	0.00					0.00	0.00		0.00	0.00					0.00	0.00		0.00
Objective Function         Objective Functi         Objective Function         Objective	WELL TEST			0		0	0																		
Condensitivity First - may make Auge Sympt First - may make by State - may make may make by State - may may make may make may make may				0		0	0																		
CMUSION FAME - sup or an interpretation of a state of		-		0		0	0																		
SUNCE         Vescals         org         org        org         org         or				0		0	0																		
WESSELS-ice Management Dised         O        O         O         O<	ALASKA-SPECIFIC SOURCES	VESSELS	kW			HR/D	D D/YR																		
EXEMPTION CALCULMO         Distribution         Proprint         Proproproprint         Proprint         P	201		0			0	0														0.00				0.00
CLARCOR IN         70								10.02	11.24	10.90	0.27	440.23	12.03	0.00	09.99	0.13	20.02	10.10	15.70	0.39	042.57	10.40	0.00	100.79	0.19
SRLLING         VESSELS-Crew Diese         O <th>CALCULATION</th> <th></th> <th>2,597.40</th> <th></th> <th></th> <th>2,597.40</th> <th>2,597.40</th> <th>2,597.40</th> <th></th> <th>62,069.08</th> <th></th>	CALCULATION																2,597.40			2,597.40	2,597.40	2,597.40		62,069.08	
VESELS - Supply Disedi         0			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
VESELS - Tugo Deset         0         0         0.0         0.00			0	0			0																		0.00
PIPELINE         VESSE15 - Support Dises, Laying         0        0			0	0			0																		0.00
NSTALLATION       VESSELS - Support Dises! Burying VESSELS - Crew Dises!       0       <	PIPELINE	VESSELS - Support Diesel, Laying	0	0			0		0.00		0.00			0.00	0.00		0.00					0.00	0.00	0.00	0.00
VESSELS - Supply Diesel         0	INSTALLATION		0	0			0																		0.00
FACILITY         VESSELS - Material Tug Desel         0			0	0			0																		0.00
NSTALLATION         VESSELS - Circle Dise <sup>2</sup> O        O         O        O         <			0	0			0																		0.00
VESSELs - supply Diese!         0			0	0			0																		0.00 0.00
PRODUCTION       VESSELS - Support Diese        0       0       0       0       0       0.00	INSTALLATION		0	0			0																		0.00
ALSKA-SPECIFIC SOURCES         Once Equipment         Once Track (for grave island) On-loe – Track (for grave island) On-loe – Track (for grave island)         PEOPLE/DAY (bream-Operation (maximup equipment)         PEOPLE/DAY (bream-Operation)         PEOPLE/DAY (bream-Operation (maximu	PRODUCTION		ů ů	0			0																		0.00
Sources         Marcan - Operation maximum people gray         PEOPLE/DAY         Image: Construction Sequence maximum sequenco maximum sequence maximum sequence maximum sequenc	ALASKA-SPECIFIC																								
VESSELS         KW         KW         MR/D         D/YR         V        V        <	SOURCES			GAL/H	R GAL/	,																			
On-lce - Loader         O         0	1			<u> </u>																					$\square$
On-lce - Other Construction Equipment       0       0.0       0.0       0.00 <td></td> <td></td> <td>kW</td> <td><u>^</u></td> <td>0.0</td> <td>HR/D</td> <td>D/YR</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td></td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td></td> <td>0.00</td> <td>0.00</td>			kW	<u>^</u>	0.0	HR/D	D/YR	0.00	0.00	0.00	0.00	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-lce - Other Survey Equipment       0       0.0       0.0       0.0       0.0       0.00				0		0	0																		0.00
On-lee - Tractor       0       0.0       0.0       0.0       0.00				0		0	0																		0.00 0.00
On-lce - Truck (for gravel island)       0       0.0       0.0       0.0       0.00				0		0	0																		0.00
On-lce - Truck (for surveys)       O       0       0       0       0       0       0.00 <td></td> <td></td> <td></td> <td>0</td> <td></td> <td>0</td> <td>0</td> <td></td> <td>0.00</td>				0		0	0																		0.00
Man Camp - Operation       0       0       0       0.00 <td></td> <td></td> <td></td> <td>0</td> <td></td> <td>0</td> <td>0</td> <td></td> <td>0.00</td>				0		0	0																		0.00
VESSELS - Hovercraft Diesel 0 0 0.00 0.00 0.00 0.00 0.00 0.00 0.0			0		0.0	0	0																		1.00
2027 Non-Facility Total Emissions			0			0	0							0.00		0.00							0.00		0.00
	202	27 Non-Facility Total Emissions						0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

#### AIR EMISSIONS CALCULATIONS - 5TH YEAR

COMPANY	AREA		BLOCK	LEASE	FACILITY	WELL					CONTACT		PHONE		REMARKS												
W&T Offshore, Inc.	El		389	G36941		A, B, and C					Valerie Land		713-624-7272		Drill and complete	e Well Locations	A, B, and C										
OPERATIONS	EQUIPMENT Diesel Engines	EQUIPMENT ID	RATING HP	MAX. FUEL GAL/HR	ACT. FUEL GAL/D	RUN	TIME				MAXIMU	IM POUNDS PE	RHOUR							ES	TIMATED TO	INS					
<b></b> +	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		
	VESSELS- Drilling - Propulsion Engine - Diesel	Semisubmersible	26400	1358.1744	32596.19	24	120	18.62	11.24	10.90	0.27	446.23	12.83	0.00	69.99	0.13	26.82	16.18	15.70	0.39	642.57	18.48	0.00	100.79	0.19		
	VESSELS- Drilling - Propulsion Engine - Diesel		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00	0.00	0.00 0.00	0.00	0.00	0.00 0.00	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 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	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		0.00	0 0	Ő	0.00	0.00	0.00	0.00	0.00	0.00	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		
	VESSELS - Pipeline Laying Vessel - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
	VESSELS - Pipeline Burying - Diesel		U	U	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 - 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		
	RECIP.<600hp Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00		0.00			
	RECIP.>600hp Diesel VESSELS - Shuttle Tankers		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00	0.00 0.00	0.00	0.00 0.00	0.00 0.00	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 - Well Stimulation		0	0	0.00	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		
	Natural Gas Turbine		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			
	Diesel Turbine		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			
	Dual Fuel Turbine		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		
	RECIP. 2 Cycle Lean Natural Gas RECIP. 4 Cycle Lean Natural Gas		0	0	0.00 0.00	0	0		0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00		0.00 0.00			0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00		0.00 0.00			
	RECIP. 4 Cycle Rich Natural Gas		0	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			
	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		
	Natural Gas Heater/Boiler/Burner		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		
	MISC. STORAGE TANK		BPD	SCF/HR	COUNT	1	1						0.00									0.00					
	COMBUSTION FLARE - no smoke			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			
	COMBUSTION FLARE - light smoke			Ő		Ő	Ő	0.00	0.00	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			
	COLD VENT				0	1	1						0.00									0.00					
	FUGITIVES GLYCOL DEHYDRATOR				0	0	0						0.00 0.00									0.00 0.00					
	WASTE INCINERATOR		0		0	Ó	0		0.00	0.00	0.00	0.00			0.00			0.00	0.00	0.00	0.00	0.00		0.00			
DRILLING L	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 C	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		LVA/	0		0	0 D/YR	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00		0.00			
SOURCES	VESSELS VESSELS - Ice Management Diesel		<b>kW</b>			HR/D	D/YR 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		
2028 F	Facility Total Emissions							18.62	11.24	10.90	0.27	446.23	12.83	0.00	69.99	0.13	26.82	16.18	15.70	0.39	642.57	18.48	0.00	100.79	0.19		
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES																2,597.40			2,597.40	2,597.40	2,597.40		62,069.08			
DRILLING V	78.0 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- Crew Diesel		0	0	0.00 0.00	0	0	0.00	0.00	0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	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 - Tugs 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 - Support Diesel, Laying		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 - Support Diesel, Burying		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 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	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		
V	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		
	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																						
SUURCES	Man Camp - Operation (maximum people per day)	+	PEOPLE/DAY							<u> </u>	+																
	VESSELS		kW			HR/D	D/YR		İ	1																	
	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		
c	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		
C	On les Trester				0.0	U	U	0.00	0.00	0.00	0.00	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 On-Ice – Truck (for gravel island)			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	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00		0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	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) On-Ice – Truck (for surveys) Man Camp - Operation		0	0	0.0	0 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 0.00	0.00 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) On-Ice – Truck (for surveys)		0 0	0	0.0	0 0 0 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			

#### AIR EMISSIONS CALCULATIONS - 6TH YEAR

COMPANY	AREA		BLOCK	LEASE	FACILITY	WELL					CONTACT		PHONE		REMARKS										
W&T Offshore, Inc.	EI		389	G36941		A, B, and C					Valerie Land		713-624-7272		Drill and complet	e Well Locations	A, B, and C								
OPERATIONS	EQUIPMENT Diesel Engines	EQUIPMENT ID	RATING HP	MAX. FUEL GAL/HR	ACT. FUEL GAL/D	RUN	TIME				MAXIMU	IM POUNDS PE	RHOUR							ES	TIMATED TO	NS			
<u> </u>	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	со	NH3
DRILLING	VESSELS- Drilling - Propulsion Engine - Diesel	Semisubmersible	26400	1358.1744	32596.19	24	120	18.62	11.24	10.90	0.27	446.23	12.83	0.00	69.99	0.13	26.82	16.18	15.70	0.39	642.57	18.48	0.00	100.79	0.19
	VESSELS- Drilling - Propulsion Engine - Diesel VESSELS- Drilling - Propulsion Engine - Diesel		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	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
PIPELINE INSTALLATION	VESSELS - Pipeline Laying Vessel - Diesel VESSELS - Pipeline Burying - Diesel		0 0	0 0	0.00 0.00	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	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
PRODUCTION	RECIP.<600hp Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00		0.00	
	RECIP.>600hp Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00		0.00	
	VESSELS - Shuttle Tankers		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 - Well Stimulation Natural Gas Turbine		0	0	0.00 0.00	0	0	0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00	0.00 0.00	0.00	0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00	0.00 0.00	0.00
	Diesel Turbine		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	
	Dual Fuel Turbine		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
	RECIP. 2 Cycle Lean Natural Gas		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	
	RECIP. 4 Cycle Lean Natural Gas RECIP. 4 Cycle Rich Natural Gas		0	0	0.00 0.00	0	0		0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00		0.00 0.00			0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00		0.00 0.00	
	Diesel Boiler		0	U	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Natural Gas Heater/Boiler/Burner		0	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
	MISC.		BPD	SCF/HR	COUNT																				
	STORAGE TANK COMBUSTION FLARE - no smoke			0	0	1	1						0.00							0.00	0.00	0.00			
	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		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			ů 0		0	Ő	0.00	0.00	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	
	COLD VENT				0	1	1						0.00									0.00			
	FUGITIVES GLYCOL DEHYDRATOR				0	0	0						0.00 0.00									0.00 0.00			
	WASTE INCINERATOR		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	
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
	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	
ALASKA-SPECIFIC	COMBUSTION FLARE - heavy smoke		kW	0		0 HR/D	0 D/YR	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00		0.00	
SOURCES	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
	9 Facility Total Emissions							18.62	11.24	10.90	0.27	446.23	12.83	0.00	69.99	0.13	26.82	16.18	15.70	0.39	642.57	18.48	0.00	100.79	0.19
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES																2,597.40			2,597.40	2,597.40	2,597.40		62,069.08	
DRILLING	78.0 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
	VESSELS - Tugs 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 - Support Diesel, Laying		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
INSTALLATION	VESSELS - Support Diesel, Burying VESSELS - Crew Diesel		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	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
FACILITY	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
INSTALLATION	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
PRODUCTION	VESSELS - Supply Diesel 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
			<u> </u>	-		0	5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SOURCES	On-Ice Equipment			GAL/HR	GAL/D																				
	Man Camp - Operation (maximum people per day) VESSELS		PEOPLE/DAY 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 On-Ice – Tractor			0	0.0 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	0.00 0.00	0.00 0.00	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 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	
	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
2029	9 Non-Facility Total Emissions							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

#### AIR EMISSIONS CALCULATIONS - 7TH YEAR

COMPANY	AREA		BLOCK	LEASE	FACILITY	WELL					CONTACT		PHONE		REMARKS										
W&T Offshore, Inc.	EI		389	G36941		A, B, and C					Valerie Land		713-624-7272		Drill and complet	te Well Locations	A, B, and C								
OPERATIONS	EQUIPMENT Diesel Engines	EQUIPMENT ID	RATING HP	MAX. FUEL GAL/HR	ACT. FUEL GAL/D	RUN 1	TIME				MAXIMU	IM POUNDS PE	RHOUR							ES	TIMATED TO	NS			
	Nat. Gas Engines		HP	SCF/HR	SCF/D																				
	Burners		MMBTU/HR	SCF/HR	SCF/D		D/YR	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	со	NH3
DRILLING	VESSELS- Drilling - Propulsion Engine - Diesel VESSELS- Drilling - Propulsion Engine - Diesel	Semisubmersible	26400	1358.1744	32596.19 0.00	24	120	18.62 0.00	11.24 0.00	10.90 0.00	0.27 0.00	446.23 0.00	12.83 0.00	0.00 0.00	69.99 0.00	0.13 0.00	26.82 0.00	16.18 0.00	15.70 0.00	0.39 0.00	642.57 0.00	18.48 0.00	0.00 0.00	100.79 0.00	0.19 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 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	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
	Vessele Drining Printe Engine, Maximary		5	Ŭ	0.00	Ū	Ũ	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PIPELINE INSTALLATION	VESSELS - Pipeline Laying Vessel - Diesel VESSELS - Pipeline Burying - Diesel		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
			0	0	0.00	U	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
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
	RECIP.<600hp Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00		0.00	
	RECIP.>600hp Diesel VESSELS - Shuttle Tankers		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	 0.00	0.00 0.00	0.00	0.00 0.00	0.00 0.00	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 - Well Stimulation		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
	Natural Gas Turbine		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	
	Diesel Turbine Dual Fuel Turbine		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00
	RECIP. 2 Cycle Lean Natural Gas		0	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	
	RECIP. 4 Cycle Lean Natural Gas		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	
	RECIP. 4 Cycle Rich Natural Gas Diesel Boiler		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	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	 0.00	0.00 0.00	0.00
	Natural Gas Heater/Boiler/Burner		0	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
	MISC. STORAGE TANK		BPD	SCF/HR	COUNT	0	0						#DIV/01									0.00			
	COMBUSTION FLARE - no smoke			0	0	0	0	 0.00	0.00	0.00	0.00	 0.00	#DIV/0! 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 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		0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00		0.00 0.00	
	COLD VENT			0	0	0	0						#DIV/0!							0.00		0.00			
	FUGITIVES				0	0	0						0.00									0.00			
	GLYCOL DEHYDRATOR WASTE INCINERATOR		0		0	0	0		0.00	0.00	0.00	 0.00	#DIV/0!		0.00			0.00	0.00	0.00	0.00	0.00		 0.00	
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		0.00 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	COMBUSTION FLARE - heavy smoke		kW	U		HR/D	D/YR	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00		0.00	
SOURCES	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
	Facility Total Emissions							18.62	11.24	10.90	0.27	446.23	#DIV/0!	0.00	69.99	0.13	26.82	16.18	15.70	0.39	642.57	18.48	0.00	100.79	0.19
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES																2,597.40			2,597.40	2,597.40	2,597.40		62,069.08	
DRILLING	78.0 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		Ő	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 - Tugs 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
PIPELINE INSTALLATION	VESSELS - Support Diesel, Laying VESSELS - Support Diesel, Burying		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	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
	VESSELS - Material Tug Diesel VESSELS - Crew Diesel		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	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
	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	1			DAG																		
	VESSELS On-Ice – Loader		kW	0	0.0	HR/D 0	<b>D/YR</b>	0.00	0.00	0.00	0.00	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 On-Ice – Truck (for gravel island)			0	0.0 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	0.00 0.00	0.00 0.00	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	õ	0.00	0.00	0.00	0.00	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 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
2030	Non-Facility Total Emissions		0			0	U	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2000																									

#### AIR EMISSIONS CALCULATIONS - 8TH YEAR

COMPANY	AREA		BLOCK	LEASE	FACILITY	WELL					CONTACT		PHONE		REMARKS										
W&T Offshore, Inc.	El		389	G36941		A, B, and C					Valerie Land		713-624-7272		Drill and complet	e Well Locations	A, B, and C								
OPERATIONS	EQUIPMENT	EQUIPMENT ID	RATING	MAX. FUEL		RUN	TIME				MAXIMU	M POUNDS PE	RHOUR				-			ES	TIMATED TO	DNS			
	Diesel Engines Nat. Gas Engines		HP HP	GAL/HR SCF/HR	GAL/D 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	со	NH3
DRILLING	VESSELS- Drilling - Propulsion Engine - Diesel	Semisubmersible	26400	1358.1744	32596.19	24	120	18.62	11.24	10.90	0.27	446.23	12.83	0.00	69.99	0.13	26.82	16.18	15.70	0.39	642.57	18.48	0.00	100.79	0.19
	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 VESSELS- Drilling - Propulsion Engine - Diesel		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	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	0.00	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 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
PIPELINE	VESSELS - Pipeline Laying Vessel - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INSTALLATION	VESSELS - Pipeline Burying - 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
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
PRODUCTION	RECIP.<600hp Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00		0.00	
I RODOOTION	RECIP.>600hp Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00		0.00	
	VESSELS - Shuttle Tankers		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 - Well Stimulation		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
	Natural Gas Turbine Diesel Turbine		0	0	0.00 0.00	0	0	 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00	0.00 0.00		0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00	0.00 0.00	
	Dual Fuel Turbine		0	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
	RECIP. 2 Cycle Lean Natural Gas		Ő	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	
	RECIP. 4 Cycle Lean Natural Gas		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	
	RECIP. 4 Cycle Rich Natural Gas		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	
	Diesel Boiler		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
	Natural Gas Heater/Boiler/Burner MISC.		BPD	SCF/HR	0.00 COUNT	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
	STORAGE TANK		515	oor/mix	0	1	1						0.00									0.00			
	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 COLD VENT			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	
	FUGITIVES				0	0	0						0.00									0.00			
	GLYCOL DEHYDRATOR				0	1	1						0.00									0.00			
	WASTE INCINERATOR		0		-	0	0		0.00	0.00	0.00	0.00			0.00			0.00	0.00	0.00	0.00			0.00	
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	
ALASKA-SPECIFIC	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	
SOURCES	VESSELS VESSELS - Ice Management Diesel		kW 0			HR/D	D/YR	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
203	1 Facility Total Emissions		0			0	0	0.00 18.62	0.00	0.00	0.00	0.00 446.23	0.00	0.00	69.99	0.00 0.13	0.00 26.82	0.00 16.18	15.70	0.00	0.00 642.57	0.00 18.48	0.00	0.00	0.00
EXEMPTION	DISTANCE FROM LAND IN MILES																								
CALCULATION	78.0																2,597.40			2,597.40	2,597.40	2,597.40		62,069.08	
DRILLING	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
PIPELINE	VESSELS - Tugs Diesel VESSELS - Support Diesel, Laying		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	0.00
INSTALLATION	VESSELS - Support Diesel, Laying VESSELS - Support Diesel, Burying		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
FACILITY	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
INSTALLATION	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	0.00	0.00 0.00	0.00	0.00
PRODUCTION	VESSELS - Supply Diesel VESSELS - Support Diesel	1	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			0	v		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
SOURCES	On-Ice Equipment			GAL/HR	GAL/D																				
	Man Camp - Operation (maximum people per day)		PEOPLE/DAY																						
	VESSELS		kW	_	0.0	HR/D	D/YR	0.00	0.00	0.00	0.00	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 – Loader			0	0.0 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	0.00 0.00	0.00 0.00	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 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	
000	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
203	1 Non-Facility Total Emissions							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

#### AIR EMISSIONS CALCULATIONS - 9TH YEAR

COMPANY	AREA		BLOCK	LEASE	FACILITY	WELL					CONTACT		PHONE		REMARKS										
W&T Offshore, Inc.	El		389	G36941		A, B, and C					Valerie Land		713-624-7272		Drill and complet	te Well Locations	A, B, and C								
OPERATIONS	EQUIPMENT Diesel Engines	EQUIPMENT ID	RATING HP	MAX. FUEL GAL/HR	ACT. FUEL GAL/D	RUN 1	TIME				MAXIMU	IM POUNDS PE	RHOUR							ES	TIMATED TO	NS			
	Nat. Gas Engines		HP	SCF/HR	SCF/D																				
	Burners		MMBTU/HR	SCF/HR	SCF/D			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 VESSELS- Drilling - Propulsion Engine - Diesel	Semisubmersible	26400	1358.1744	32596.19 0.00	24	120	18.62 0.00	11.24 0.00	10.90 0.00	0.27 0.00	446.23 0.00	12.83 0.00	0.00 0.00	69.99 0.00	0.13 0.00	26.82 0.00	16.18 0.00	15.70 0.00	0.39 0.00	642.57 0.00	18.48 0.00	0.00 0.00	100.79 0.00	0.19 0.00
	VESSELS- Drilling - Propulsion Engine - Diesel		Ő	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 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	0.00 0.00	0.00 0.00	0.00 0.00	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 – Drining Frince Engine, Advinery		0	0	0.00	U	U	0.00	0.00	0.00	0.00	0.00	0.00	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 - Pipeline Laying Vessel - Diesel		0	0	0.00 0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INSTALLATION	VESSELS - Pipeline Burying - Diesel		U	U	0.00	U	U	0.00	0.00	0.00	0.00	0.00	0.00	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
PRODUCTION	RECIP.<600hp Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00		0.00	
	RECIP.>600hp Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	0.00	0.00	0.00	0.00		0.00	
	VESSELS - Shuttle Tankers VESSELS - Well Stimulation		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00
	Natural Gas Turbine		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	
	Diesel Turbine Dual Fuel Turbine		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00
	RECIP. 2 Cycle Lean Natural Gas		0	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	
	RECIP. 4 Cycle Lean Natural Gas		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	
	RECIP. 4 Cycle Rich Natural Gas Diesel Boiler		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	0.00 0.00	0.00 0.00	 0.00	0.00 0.00	
	Natural Gas Heater/Boiler/Burner		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	0.00	0.00	0.00	0.00 0.00
	MISC.		BPD	SCF/HR	COUNT																				
	STORAGE TANK COMBUSTION FLARE - no smoke			0	0	1	1	 0.00	0.00	0.00	 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 - III SINKE			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	
	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 COLD VENT			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	
	FUGITIVES				0	0	0						0.00									0.00			
	GLYCOL DEHYDRATOR				0	1	1						0.00									0.00			
DRILLING	WASTE INCINERATOR		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	0.00
	COMBUSTION FLARE - no smoke		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	
	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	
ALASKA-SPECIFIC	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	
SOURCES	VESSELS VESSELS - Ice Management Diesel		kW 0			HR/D	D/YR	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00
2032	Pressels - ice management Dieser		0			0	0	18.62	11.24	10.90	0.00	446.23	12.83	0.00	69.99	0.00	0.00 26.82	16.18	15.70	0.00	642.57	18.48	0.00	100.79	0.00
EXEMPTION CALCULATION	DISTANCE FROM LAND IN MILES																2,597.40			2,597.40	2,597.40	2,597.40		62,069.08	
	78.0																, 				2,001.40	2,007.40			
	VESSELS- Crew Diesel VESSELS - Supply Diesel		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	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	0.00
	VESSELS - Support Diesel, Laying		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
INSTALLATION	VESSELS - Support Diesel, Burying VESSELS - Crew Diesel		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	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		Ő	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 - 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 VESSELS - Supply Diesel		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	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 - 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	I T	T																T		
	Man Camp - Operation (maximum people per day)		PEOPLE/DAY	1																					
	VESSELS		kW	<u> </u>	0.0	HR/D	D/YR	0.00	0.00	0.00	0.00	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 – Loader On-Ice – Other Construction Equipment			0	0.0 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	0.00 0.00	0.00 0.00	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) On-Ice – Truck (for surveys)			0	0.0 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	0.00 0.00	0.00 0.00	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	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	
	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
2032	Non-Facility Total Emissions							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

#### AIR EMISSIONS CALCULATIONS - 10TH YEAR

COMPANY	AREA	<u>г г</u>	BLOCK	LEASE	FACILITY	WELL	1	1		1	CONTACT		PHONE		REMARKS										
W&T Offshore, Inc.	El		389	G36941	FACILITY	A, B, and C					Valerie Land		713-624-7272		_	lete Well Locatio	ns A, B, and C								
OPERATIONS	EQUIPMENT	EQUIPMENT ID	RATING		ACT. FUEL		TIME					I POUNDS PE								ES	TIMATED TO	ONS			
	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	Semisubmersib	26400	1358.1744	32596.19	24	120	18.62	11.24	10.90	0.27	446.23	12.83	0.00	69.99	0.13	26.82	16.18	15.70	0.39	642.57	18.48	0.00	100.79	0.19
	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
PIPELINE	VESSELS - Pipeline Laying Vessel - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INSTALLATION	VESSELS - Pipeline Burying - 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
FACILITY INSTALLATIC	NVESSELS - 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
PROPUSTION			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	
PRODUCTION	RECIP.<600hp Diesel RECIP.>600hp Diesel		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00	0.00 0.00		0.00		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 - Shuttle Tankers		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 0.00	0.00	0.00	0.00
	VESSELS - Well Stimulation		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
	Natural Gas Turbine		0	ő	0.00	Ő	Ő		0.00	0.00	0.00	0.00	0.00		0.00			0.00	0.00	0.00	0.00	0.00		0.00	
	Diesel Turbine		0	Ő	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	
	Dual Fuel Turbine		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
	RECIP. 2 Cycle Lean Natural Gas		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	
	RECIP. 4 Cycle Lean Natural Gas		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	
	RECIP. 4 Cycle Rich Natural Gas		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	
	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
	Natural Gas Heater/Boiler/Burner		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
	MISC.		BPD	SCF/HR	COUNT																				
					0	1	1						0.00									0.00			
	COMBUSTION FLARE - no smoke			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 0.00	0.00	0.00		0.00	
	COMBUSTION FLARE - medium smoke			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	
	COMBUSTION FLARE - heavy smoke COLD VENT			0	0	1	1	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00	0.00	0.00		0.00	0.00		0.00	
	FUGITIVES				0			-					0.00									0.00		_	
	GLYCOL DEHYDRATOR				Ő	1	1						0.00									0.00			
	WASTE INCINERATOR	8	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	
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			Ő		Ő	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	· · · · · · · · · · · · · · · · · · ·			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	
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
EXEMPTION	3 Facility Total Emissions							18.62	11.24	10.90	0.27	446.23	12.83	0.00	69.99	0.13	26.82	16.18	15.70	0.39	642.57	18.48	0.00	100.79	0.19
CALCULATION	DISTANCE FROM LAND IN MILES																2,597.40			2,597.40	2,597.40	2,597.40		62,069.08	
	78.0																								
DRILLING	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
	VESSELS - Tugs 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
PIPELINE INSTALLATION	VESSELS - Support Diesel, Laying VESSELS - Support Diesel, Burying		0	0	0.00 0.00	0	0	0.00 0.00	0.00 0.00	0.00 0.00	0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00						
INSTALLATION	VESSELS - Support Diesel, Burying		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	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
FACILITY	VESSELS - Material Tug Diesel	1 1	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
INSTALLATION	VESSELS - Crew Diesel		0	0	0.00	Ő	Ő	0.00	0.00	0.00	0.00	0.00	0.00	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	On-Ice Equipment			GAL/HR	GAL/D																				
SOURCES					CAUD		L												L	L	L				ļ
1	Man Camp - Operation (maximum people per day)		PEOPLE/DAY				DAVD	┨─────┤			┥──┤						I	<u>↓</u>							<u> </u>
1	VESSELS On-Ice – Loader		kW	0	0.0	HR/D	D/YR	0.00	0.00	0.00	0.00	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 – Loader On-Ice – Other Construction Equipment			0	0.0 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	0.00	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 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	0.00		0.00	0.00
	On-Ice – Other Survey Equipment 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 – Tractor 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	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
20?	3 Non-Facility Total Emissions							0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

#### AIR EMISSIONS CALCULATIONS

COMPANY		AREA	BLOCK	LEASE	FACILITY	WELL			
W&T Offs	shore, Inc.	389	G36941		A, B, and C				
Year				Facility	Emitted Su	bstance			
	TSP	PM10	PM2.5	SOx	NOx	voc	Pb	со	NH3
2024	26.82	16.18	15.70	0.39	642.57	18.48	0.00	100.79	0.19
2025	26.82	16.18	15.70	0.39	642.57	18.48	0.00	100.79	0.19
2026	26.82	16.18	15.70	0.39	642.57	18.48	0.00	100.79	0.19
2027	26.82	16.18	15.70	0.39	642.57	18.48	0.00	100.79	0.19
2028	26.82	16.18	15.70	0.39	642.57	18.48	0.00	100.79	0.19
2029	26.82	16.18	15.70	0.39	642.57	18.48	0.00	100.79	0.19
2030	26.82	16.18	15.70	0.39	642.57	18.48	0.00	100.79	0.19
2031	26.82	16.18	15.70	0.39	642.57	18.48	0.00	100.79	0.19
2032	26.82	16.18	15.70	0.39	642.57	18.48	0.00	100.79	0.19
2033	26.82	16.18	15.70	0.39	642.57	18.48	0.00	100.79	0.19
Allowable	2597.40			2597.40	2597.40	2597.40		62069.08	

# APPENDIX H: OIL SPILLS INFORMATION

## H.1 Oil Spill Response Planning

W&T Offshore, Inc.'s (GOM Company No. 01284) Regional Oil Spill Response Plan (OSRP) was approved on September 6, 2022. Activities proposed in this DOCD will be covered by the Regional OSRP in accordance with 30 CFR 254.

## • Spill Response Sites

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

#### • OSRO Information

W&T's primary equipment provider is Clean Gulf Associates (CGA). The Marine Spill Response Corporation's (MSRC) STARS network will provide closest available personnel, as well as an MSRC supervisor to operate the equipment.

## H.2 Worst Case Discharge Determination

Category	Regional OSRP WCD	EP WCD
Type of Activity	Drilling	Drilling
Facility Location (Area/Block)	EW910	EI389
Facility Designation	A-8	Well Location A
Distance to Nearest Shoreline (miles)	69 miles	78 miles
Volume Storage tanks (total) Uncontrolled blowout Total Volume	171,412 bbls <b>171,412 bbls</b>	440 99,348 <b>99,788 bbls</b>
Type of Oil(s) (crude, condensate, diesel)	Crude	Crude
API Gravity	25°	33°

W&T 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 for far-shore drilling activities.

Since W&T has the capability to respond to the worst-case spill scenario included in our regional OSRP approved on September 6, 2022, and since the worst-case scenario determined for our EP does

not replace the worst-case scenario in our regional OSRP, I hereby certify that W&T 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 our EP.

## H.3 Oil Spill Response Discussion

Please refer to *Attachment H-1* for the Oil Spill Response Discussion prepared by ForeFront.

FACILITY	INFORMATION
TYPE OF OPERATION	Drilling
FACILITY DESIGNATION	Well Location A
FACILITY LOCATION	Eugene Island Block 389
DISTANCE TO NEAREST SHORELINE	78 Miles
VOLUME Uncontrolled Blowout (Volume Per Day)	122,256 bbls
TYPE OF OIL(S) – (CRUDE OIL, CONDENSATE, DIESEL)	Crude Oil
API GRAVITY	28°

# FACILITY, TANKS, AND PRODUCTION FACILITIES

There are no production vessels associated with the activities in this Exploration Plan (EP); however, there is a storage tank volume of 440 barrels.

# OIL SPILL RESPONSE DISCUSSION

In the event of a spill at Eugene Island Block 389, our primary response would be to utilize the Oil Spill Response Vessels (OSRV) and Oil Spill Response Barge (OSRB) from Clean Gulf Associates (CGA). The initial response would likely be a 95' Fast Response Vessel (FRV) located in Leeville, Louisiana, and the HOSS Barge located in Harvey, Louisiana. The 95' FRV has a derated recovery capacity of 22,885 barrels/day and a storage capacity of 249 barrels. With a maximum prep time of 2.0 hours, a maximum planning run time of 6.9 hours, and a deployment time of 1.0 hour, the response vessel would be on site in approximately 9.9 hours. The HOSS Barge has a derated recovery capacity of 25.9 hours, and a deployment time of 2.0 hours, a maximum planning run time of 2.0 hours, the response barge would be on site in approximately 39.9 hours.

Actual response times are generally quicker than planning times, since the vessel could be mobilized within one hour, weather permitting. As with any spill, additional "cascading" response equipment would be mobilized to the site from various CGA bases, such as Vermilion, Louisiana and Leeville, Louisiana. For spills larger than 100 barrels, dispersants may be mobilized by plane from Airborne Support, Inc. in Houma, Louisiana, pending approval from the U.S.C.G. FOSC and RRT-6.

For planning purposes, based on the worst-case discharge volume coupled with the distance from shore and guidance from Clean Gulf Associates, it is estimated that personnel can be on-scene within 5-24 hours. It is estimated that the spill could be contained within 3.5 days and recovered within 7 to 14 days.

# LAND SEGMENT IDENTIFICATION

According to the risk assessment analysis conducted by the Bureau of Ocean Energy Management as part of their OSRAM project, spills originating in Eugene Island Block 389, Launching Area C040, have the potential for impacting land segments from Calhoun County, Texas to Plaquemines Parish, Louisiana within 30 days of oil persisting on the water. The probability of the impacts are summarized below:

PROBA	BILITY OF LAND IMP		
LAND AREA	3 DAYS	10 DAYS	30 DAYS
Calhoun, TX	-	-	1
Matagorda, TX	-	-	3
Brazoria, TX	-	-	1
Galveston, TX	-	-	5
Jefferson, TX	-	1	5
Cameron, LA	-	3	11
Vermilion, LA	-	1	4
Iberia, LA	-	-	2
St. Mary, LA	-	-	1
Terrebonne, LA	-	2	4
Lafourche, LA	-	-	1
Jefferson, LA	-	_	-
Plaquemines, LA	-	-	2

Note "-" = less than 0.5%.

# **RESOURCE IDENTIFICATION**

The land segment with the highest probability of being impacted by a spill originating from this facility is the Cameron Parish land segment. According to the BOEM OSRAM program, there is a less than 0.5% chance of the spill impacting Cameron Parish within 3 days of the incident. In addition, the OSRAM program predicts a 3% and 11% chance of an oil slick impacting Cameron Parish that persists for 10 days and 30 days, respectively.

Economically, the potentially impacted areas are heavily industrialized, as well as, commercial and recreational fishing centers. The Cameron Parish area is one of the largest staging areas, in the southern Louisiana coastal area, for the oil and gas industry's operations in the Gulf of Mexico, as well as an abundant fishing community. The Rockefeller State Wildlife Refuge and Game Preserve and surrounding areas are of the most critically sensitive sites of economic concerns, should an oil slick threaten the Cameron Parish area. Special emphasis will be made on deployment of containment boom in order to attempt to keep any oil slicks from impacting these areas.

Environmentally, the Cameron Parish area has several shoreline types that could potentially be impacted. These include exposed solid man-made structures, exposed wave-cut platforms in clay, fine- to medium-grained sand beaches, coarse-grained sand beaches, mixed sand and gravel beaches, riprap, exposed tidal flats, sheltered rocky shores and sheltered scarps in mud or clay, sheltered tidal flats, and salt- and brackish-water marshes. The locations of these areas are on maps LA-3, LA-4, LA-5, LA-6, LA-7, LA-11, LA-12, LA-13, LA-14, and LA-15 of the Environmental Sensitivity Index guide maps. The index pages of these maps can be found <u>online</u> as a guide to the species that could be potentially impacted should a spill of significance occur in the area.

# RESPONSE

W&T Offshore, Inc. has ensured, by means of contract, an experienced Incident Management Team as well as an extensive response resource contractor team in order to ensure it is well prepared to address the issues involved with a Worst Case Discharge from Eugene Island Block 389. These contracts include agreements with Clean Gulf Associates, Witt O'Brien's, LLC, HWCG LLC, AMPOL, and E3 OMI, LLC.

Once identification and assessment of the spill has occurred, W&T Offshore, Inc. would activate mobilization of the contracted resources. The resources involved would involve mechanical recovery, storage, aerial surveillance, dispersants, subsea containment and subsea dispersant, *in-situ* burning, shoreline protection, and wildlife rehabilitation and support. These tactics are discussed below:

#### Mechanical Recovery

Mechanical recovery would involve the use of skimmers, oil spill response vessels, and fast response units to recover floating oil in open water. The resources for these operations are available from the contracted OSRO Clean Gulf Associates. A list of offshore skimming equipment, along with recovery rates and estimated response times, is available on the Offshore On-Water Recovery Activation List.

#### Oil Storage

In order to properly support the off-shore skimming vessels to be involved in the Worst Case Discharge Scenario, it is likely that additional temporary storage equipment will be necessary to store the recovered product for disposal. If this proves to be the case, the required storage tanks and/or barges will be secured at the time of the incident from contracts maintained with Clean Gulf Associates. A list of barges is available on the Oil Storage Table.

#### Aerial Surveillance

In order to ensure accurate location, estimation, and tracking of any spill, it is the policy of W&T Offshore, Inc. to utilize aircraft over flights, as warranted, to continually track the spill by obtaining GPS coordinates of the leading edge, center, and trailing edge of the slick. Personnel trained in spill spotter detection will obtain the visual and GPS data during each over flight. This up-to-the-minute information is vital in developing the necessary trajectories needed for an appropriate spill response. The Aerial Surveillance Table lists the resources available for this response capability.

#### Offshore Aerial Dispersants and Offshore Boat Spray Dispersants

Three types of dispersants are presently approved and available in the Gulf Coast area. These are COREXIT 9527, COREXIT 9500, and Accell Clean ® DWD. The most rapid way of acquiring dispersants in the event of an incident is through W&T Offshore, Inc.'s contract with Clean Gulf Associates. The three types of dispersants can be applied using either aerial or vessel based equipment. For vessel-based applications, the dispersant will be applied directly to the slick from the deck of a vessel using fire monitoring equipment. The primary resource for this will be Clean Gulf Associates. Aerial dispersant application is available through Clean Gulf Associate's agreement with Airborne Support, Inc. located in Houma, Louisiana. The equipment available for both vessel dispersant and aerial dispersant is listed on the Offshore Boat Spray Dispersant Table and the Offshore Aerial Dispersant Table.

# **RESPONSE (CONTINUED)**

#### Subsea Containment

In the event of a subsea sources control issue emanating from a blowout well, W&T Offshore, Inc. has entered into a contract with HWCG LLC to obtain the resources of the Helix Fast Response System (HFRS). The Helix Fast Response System is composed of the Q4000 Intervention Vessel, Helix Producer I Processing Vessel, Containment System, Tanker Unloading System, Subsea Capping Stacks, Top Hat, and Risers and Umbilicals. W&T Offshore, Inc. has additional contracts in place for the deployment of containment equipment as well as subsea dispersant application and monitoring.

#### In-Situ Burning

Conditions permitting, *in-situ* burning is another response operation to be considered. The primary type of equipment necessary for *in-situ* burning is "Fire Boom". This type of containment boom is capable of retaining burning oil with risks of significant damage to the boom. After a thorough consideration of all aspects involved with *in-situ* burning between W&T Offshore, Inc. and the Federal On-Scene Commander, the following procedures and considerations should be taken into account:

- Before ignition, ensure that the wind direction will not carry the smoke from any potential fire in the direction of a community or other sensitive resources.
- At the time of ignition, special care must be taken to ensure that the ignition source is located at a safe distance from the concentration of oil.
- The safest burn system at this point is to release burning gelled fuel from a heli-torch from heights of several hundred feet above the spill. If necessary, hand-held igniters can be released from vessels several hundred feet away.

#### Shoreline Protection

Should an oil slick persist and threaten shorelines, response strategies would be put into effect. The resources available for nearshore and shoreline response are given on the Shoreline Protection and Nearshore Skimming Equipment Table.

#### Wildlife Rehabilitation and Support

In the event that wildlife is impacted by a spill, the decision to capture and attempt to clean and rehabilitate any oiled wildlife will be made by the trustee agency in given area impacted. No handling or capture of any animals will be conducted without consultation and approval by the agency trustee's representative at the scene. Once the decision has been made that wildlife in the area have been sufficiently impacted to warrant a rehabilitation project, the incident management team will mobilize technical specialists to conduct the rehabilitation project. The equipment utilized to conduct the rehabilitation project will depend heavily on the species impacted. In general, the wildlife trailer maintained by Clean Gulf Associates will be mobilized to the scene to provide generalized equipment. More specific equipment will be obtained as needed when determined necessary by the technical specialist and/or agency representatives. The preferred organizations are given on The Wildlife Protection Response and Equipment Tables.

# **120-DAY UNCONTROLLED WELL BLOW OUT CONSIDERATIONS**

Beyond the equipment required for the initial phase of a Worst Case Discharge at this location, additional equipment may be necessary for a sustained response to an un-controlled well blow out for a duration of 120 days. Some additional support that may be necessary will include:

- Ocean-going, as well as inland-going temporary storage barges to store and transport recovered product from the skimming operations.
- A rotation of personnel to relieve the operators of all skimming vessels as well as the shoreline protection crews. Spills of duration will double the required personnel.
- Additional field safety personnel.
- Aircraft for continual monitoring of the incident.
- Infrared spill tracking, such as X-Band Radar, for night time spill tracking and response.
- Full logistical capabilities to maintain the response equipment as well as personnel.
- Sufficient communications equipment.
- Sufficient decontamination equipment and protocols.
- Long term supply of dispersants and fireproof boom in instance of an uncontrolled long-term blowout event.
- A decontamination plan.
- A waste disposal plan.
- A demobilization plan.
- Aircraft for dispersant application.
- Well containment equipment, personnel, and deployment capability for capturing and separating fluids at the source.

		_	Storage							Response	Times (Hou	rs)	
Туре	Quantity	Recovery Rate (EDRC) <sup>1</sup>	(Recovered Oil) <sup>1</sup>	Equipment <sup>2</sup>	Personnel Required <sup>3</sup>	Operating Limitations	Location	Prep (At Site)	Transport (OTR)	Loadout (Staging)	Transit	Deployment	Total ETA
				(4) 5-brush Lamor Skimmers									
				2,640' of 67" Sea Sentry Boom									
CGA-200 HOSS				Aptomar SECurus (infrared camera, HD digital video camer, high output spotlight,	(3) Tugs - 2-								
Barge	1	76,285	4,000	and Rutter X-band Radar)	1,200 HP, 1- 1,800 HP	7' seas	CGA/ Harvey, LA	12	-	-	25.9	2	39.9
				(3) Tugs - 2-1,200 HP, 1-1,800 HP	1,000 11								
				(2) Petroleum Industry Designated Vessel									
				(2) 3-brush Lamor Skimmers									
95' FRV (J.L.				(2) 32' x 3' air inflatable boom	6 (2-CGAS,								
O'Brien)	1	22,885	249	Aptomar SECurus (infrared camera, HD	4-OSRO)	5' seas	CGA/Leeville, LA	2	-	-	6.9	1	9.9
				digital video camer, high output spotlight, and Rutter X-band Radar)									
				(2) 3-brush Lamor Skimmers									
95' FRV (Breton	1	22.885	249	(2) 32' x 3' air inflatable boom	6 (2-CGAS,	5' seas	CGA/ Venice, LA	2			9	1	12
Isl.)	1	22,885	249	Aptomar SECurus (infrared camera, HD digital video camer, high output spotlight, and Rutter X-band Radar)	4-OSRO)	5 seas	CGA/ Venice, LA	2	-	-	9	1	12
				(2) 3-brush Lamor Skimmers									
95' FRV (H.I. Rich)	1	00.005	249	(2) 32' x 3' air inflatable boom	6 (2-CGAS,	<u></u>	004/1/2	2				1	11.4
95° FRV (H.I. RICH)	1	22,885	249	Aptomar SECurus (infrared camera, HD digital video camer, high output spotlight, and Rutter X-band Radar)	4-OSRO)	6' seas	CGA/ Vermilion, LA	2	-	-	8.4	1	11.4
46' FRV (R.W.	1	15.257	65	(2) 2-brush Lamor Skimmers	4	4' seas	CGA/ Leeville, LA	2			6.9	1	9.9
Armstrong)	1	15,257	00	(2) 23' x 3' air inflatable boom	4	4 Seas	CGA/ Leeville, LA	2	-	-	0.9	1	9.9
46' FRV (Grand	1	15,257	65	(2) 2-brush Lamor Skimmers	4	4' seas	CGA/ Venice, LA	2		-	9	1	12
Bay)				(2) 23' x 3' air inflatable boom									
46' FRV (Bastian	1	15.257	65	(2) 2-brush Lamor Skimmers	4 (2-CGAS,	4' seas	CGA/ Vermilion, LA	2			8.4	1	11.4
Bay)	1	15,257	60	(2) 23' x 3' air inflatable boom	2-OSRO)	4 seas	CGA/ Vermilion, LA	2	-	-	8.4	1	11.4
60' Shallow Water	1	22.885	249	(2) 3-brush Lamor Skimmers	3	2' seas	CGA/ Leeville, LA	2		-	6.9	1	9.9
FRV	I.	22,005	245	(2) 17' x 3' air inflatable boom	3	2 3643	COAV Leeville, LA	2	-	-	0.5	•	5.5
56' Shallow Water				(2) 36" Marco belt skimmer	4 for belt only op (2-CGAS, 2-								
FRV	1	21,500	249	(2) 14' to 16' flat bottom work boats	OSRO) or 8 for full boom	1' seas	CGA/ Vermilion, LA	2	-	-	8.4	1	11.4
				(2) 75' x 3' air inflatable boom	deployment (2-								
Marco SWS	1	3,588	34	Marco Class 1D skimmer	3 (1-CGAS, 2-OSRO)	<1' seas	CGA/ Leeville, LA	2	-	1	6.9	1	10.9
				Foilex 250 weir skimmer									
FRU Unit	3	12,753	500	75' of 53" air inflatable boom	4 (1-CGAS,	4' seas	CGA/ Leeville, LA	2	-	12	10.6	1	25.6
				(1) Petroleum Industry Designated Vessel	3-OSRO)								
				(1) Barge with 25,000' of 43" containment boom									1
Oceangoing Boom Barge -	1			(1) Tug - 1,200 HP	4 (2-OSRO,	2' - 4' seas	CGA/ Leeville, LA	12			15.4	2	29.4
CGA 300		-	-	(2) Petroleum Industry Designated Vessel	2-CGAS)	2 - 4 seas	CGA/ Leeville, LA	12	-	-	15.4	2	29.4
				per 1,000' of boom deployed (1) Support crew boat (supply)	-								
				(1) Support crew boar (suppry)									<u> </u>
Offshore Storage	3		300,000	(1) Tug	6	7' seas	Various <sup>5</sup>	24			24	-	48

EDRC	251,437
Recovered Oil Storage	305,974

<sup>1</sup>Recovery rate and storage provides the total number for the quantity of skimming vessels listed.

<sup>2</sup>Equipment listed is for each skimming vessel.

<sup>3</sup> Personnel number listed is for each skimming vessel.

<sup>4</sup>Response times dependent upon vessel procurement

<sup>5</sup>Barge resources are available through an agreement with CGA. All equipment will be provided on an as-available basis, subject to the terms at the time requested by CGA, or its member. Storage barge storage capacity will vary based on availability and can range from 6,500 bbls to 135,000 bbls.



			SHOREL	NE PROTE	CTION					
			Personnel	Operating			Res	ponse Times (	(Hours)	
Typre of Shoreline Protection	Quantity	Equipment Required <sup>1</sup>	Required	Limitations	Location	Callout	Travel <sup>2</sup>	Loadout	Deployment	Total ETA <sup>3</sup>
18" Containment Boom	13,500'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Belle Chasse, LA	1	3.5	1	2	7.5
10" Containment Boom	500'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Belle Chasse, LA	1	3,5	1	2	4
5" Absorbent Boom	64,000'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Belle Chasse, LA	1	3,5	1	2	4
18" Containment Boom	4,000'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Venice, LA	1	4.5	1	2	8.5
5" Absorbent Boom	32,000'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Venice, LA	1	4.5	1	2	8.5
18" Containment Boom	10,000'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Lake Charles, LA	1	2	1	2	6
5" Absorbent Boom	100'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Lake Charles, LA	1	2	1	2	6
18" Containment Boom	9,700'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ New Iberia, LA	1	1.5	1	2	5.5
5" Absorbent Boom	1,760'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ New Iberia, LA	1	1.5	1	2	5.5
4" Creek Boom	50	(1) Response Vessel	3	2'-3' seas	E3 OMI/ New Iberia, LA	1	1.5	1	2	5.5
18" Containment Boom	2,000'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Morgan City, LA	1	2	1	2	6
5" Absorbent Boom	1,800'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Morgan City, LA	1	2	1	2	6
18" Containment Boom	3,500'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Cut Off, LA	1	3	1	2	7
10" Containment Boom	500'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Cut Off, LA	1	3	1	2	7
5" Absorbent Boom	2.000'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Cut Off, LA	1	3	1	2	7
18" Containment Boom	4,400'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Gonzales, LA	1	2.5	1	2	6.5
10" Containment Boom	800'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Gonzales, LA	1	2.5	1	2	6.5
5" Absorbent Boom	3,200'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Gonzales, LA	1	2.5	1	2	6.5
18" Containment Boom	6,000'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Deer Park, TX	1	4	1	2	8
5" Absorbent Boom	5,000'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Deer Park, TX	1	4	1	2	8
4" Creek Boom	300'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Deer Park, TX	1	4	1	2	8
18" Containment Boom	12,000'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Port Arthur, TX	1	3	1	2	7
10" Containment Boom	150'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Port Arthur, TX	1	3	1	2	7
5" Absorbent Boom	2,000'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Port Arthur, TX	1	3	1	2	7
4" Creek Boom	100'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Port Arthur, TX	1	3	1	2	7
18" Containment Boom	10,000'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Lamarque, TX	1	4.5	1	2	8.5
10" Containment Boom	100'	(1) Response Vessel	3	2'-3' seas	E3 OMI/ Lamarque, TX	1	4.5	1	2	8.5
18" Containment Boom - 100' sections in trailer	11,800'	(1) Response Vessel	3	2'-3' seas	AMPOL/ New Iberia, LA	1	1.5	1	2	5.5
18" Containment Boom - 50' sections in trailer	15,700'	(1) Response Vessel	3	2'-3' seas	AMPOL/ New Iberia, LA	1	1.5	1	2	5.5
18" Containment Boom - in trailer	5,650'	(1) Response Vessel	3	2'-3' seas	AMPOL/ New Iberia, LA	1	1.5	1	2	5.5
Response Trailer with 18" Containment Boom	900'	(1) Response Vessel	3	2'-3' seas	AMPOL/ New Iberia, LA	1	1.5	1	2	5.5
10" Containment Boom	4,150'	(1) Response Vessel	3	2'-3' seas	AMPOL/ New Iberia, LA	1	1.5	1	2	5.5
10" Containment Boom	4,150'	(1) Response Vessel	3	2'-3' seas	AMPOL/ New Iberia, LA	1	1.5	1	2	5.5
18" Containment Boom (Box trailer)	14,000'	(1) Response Vessel	3	2'-3' seas	AMPOL/ Chalmette, LA	1	3.5	1	2	7.5
18" Containment Boom (Cage trailer)	2,000'	(1) Response Vessel	3	2'-3' seas	AMPOL/ Chalmette, LA	1	3.5	1	2	7.5
18" Containment Boom (Box trailer)	14,000'	(1) Response Vessel	3	2'-3' seas	AMPOL/ Port Arthur, TX	1	3	1	2	7
18" Containment Boom (Cage trailer)	2,000'	(1) Response Vessel	3	2'-3' seas	AMPOL/ Port Arthur, TX	1	3	1	2	7
18" Containment Boom - response trailer	900'	(1) Response Vessel	3	2'-3' seas	AMPOL/ Morgan City, LA	1	2	1	2	6
" Containment Boom - 100' sections in trailer	11.800'	(1) Response Vessel	3	2'-3' seas	AMPOL/Gonzales, LA	1	2.5	1	2	6.5

<sup>1</sup>Please refer to the equipment list in Appendix E for a specific list of response vessels available per location.

<sup>2</sup>Travel time to staging area in Vermilion, Louisiana.

<sup>3</sup>Response time dependent on vessel procurement and availability.



	WILDLIFE PROTECTION RESI	PONSE				
Wildlife Debekilitetion Opponization	L a anti-an		Respo	onse Times (H	ours)	
Wildlife Rehabilitation Organization	Location	Callout	Travel	Loadout	Deployment	Total ETA
	7007 Katy Road					
Wildlife Center of Texas	Houston, TX 77024	1.5	4	0.5	1	7
	Phone: 713-861-9453					
	P.O. Box 842					
Wildlife Response Services, LLC	Seabrook, TX 77586	1.5	4	0.5	1	7
	Phone: 713-705-5897					
	4700 Avenue U					
Texas Marine Mammal Stranding Network	Galveston, TX 77551	1.5	4.5	0.5	1	7.5
	Phone: 1-800-9-Mammal					
Levisiere Marine Mennel Of a li	5304 Flanders Drive, Suite B					
Louisiana Marine Mammal Stranding Hotline	Baton Rouge, LA 70808	1.5	2	0.5	1	5
	Phone: 1-877-942-5343					

	WILDLIFE PROTECTION EQUIPMENT									
					Response Times (Hours)					
Supplier	Warehouse	Type of Equipment	Quantity	Staging Area	Callout	Travel	Loadout	Deployment	Total ETA	
CGA	Harvey, LA	Bird scare guns (set of 12)	2	Vermilion LA	1	3	1	1	6	
CGA	Leeville, LA	Bird scare guns (set of 12)	2	Vermilion LA	1	3	1	1	6	
CGA	Vermilion, LA	Bird scare guns (set of 12)	2	Vermilion LA	1	0.5	1	1	3.5	
CGA	Galveston, TX	Bird scare guns (set of 12)	1	Vermilion LA	1	4.5	1	1	7.5	
CGA	Aransas Pass, TX	Bird scare guns (set of 12)	1	Vermilion LA	1	7	1	1	10	
CGA	Harvey, LA	Primary rehabilitation trailer	1	Vermilion LA	1	3	0.5	0.5	5	
CGA	Harvey, LA	Husbandry trailer	1	Vermilion LA	1	3	0.5	0.5	5	
CGA	Harvey, LA	Wildlife Supply Trailer	1	Vermilion LA	1	3	0.5	0.5	5	



#### DISPERSANT STOCKPILES

Supplier and Phone	Location of Dispersants	Туре	Quantity in Gallons
Airborne Support Inc. (ASI) 985-851-6391	Houma, LA	Corexit 9500A (Bulk-ASI)	31,961
Clean Gulf Associates (CGA) 888- CGA-2007	Houma, LA	Corexit 9500A	27,720
Clean Gulf Associates (CGA) 888- CGA-2007	Harvey, LA	Corexit 9500A	84,700
Clean Gulf Associates (CGA) 888-CGA-2007	Houma, LA	Accell Clean ® DWD	5,000
Clean Gulf Associates (CGA) 888-CGA-2007	Harvey, LA	Corexit 9527	990
Clean Caribbean & Americas (CCA) and Oil Spill Response, Limited (OSRL) 954-983-9880	Ft. Lauderdale, FL	Corexit 9500A	30,000
		Total	180,371



AIRCRAFT RESPONSE										
		Warehouse					Respo	onse Times (Ho	urs)	
Aerial Dispersant System	Supplier & Phone		Aerial Dispersant Package	Quantity	Staging Area	Prep at Site	Loadout Time	Transit	Deployment Time	Total ETA
			Dispersant	1,200 Gallons						
	Airborno Support		Spotter Aircraft	1					0.2	4.65
DC-3 Aircraft Spray Aircraft	Airborne Support (ASI) 985-851-6391	Houma, LA	Wildlife Observer	1	Houma, LA	2	2	0.45		
			Ground Personnel	6						
			Crew - Pilots	2						
Twin Commander 690A (N38WA) Spotter	Airborne Support (ASI) 985-851-6391	Houma, LA	No Spraying Capability	N/A	Houma, LA	2	2	0.45	0.2	4.65
Aircraft			Crew - Pilots	1						
			Dispersant	1,650 Gallons						
	Ainhanna Cummant		Spotter Aircraft	1						4.65
BT-67 (N932H) Spray Aircraft	Airborne Support (ASI) 985-851-6391	Houma, LA	Wildlife Observer	1	Houma, LA	2	2	0.45 0	0.2	
	(701) 303-031-0391		Ground Personnel	6						
			Crew - Pilots	2						

#### DISPERSANT USAGE EQUIPMENT

OVER FLIGHT RESPONSE					
AIR TRANSPORTA	TION COMPANY	LOCATION	CAPABILITIES		
		#1 Coquille Drive			
Southern Sea	plane, Inc.	Belle Chasse, LA 70037	Southern Seaplane, Inc. has the ability for an aircraft to be ready for takeoff within (2) hours of notifiying the Qualified Individual of a spill.		
		Phone: 504-394-5633			

#### ATTACHMENT H-1 (cont'd)

Prepared by:

IN-SITU BURNING EQUIPMENT								
				RESPO	NSE TIMES			
ТҮРЕ	QUANTITY	EQUIPMENT	OWNER/ LOCATION	PROCUREMENT OF PERSONNEL AND EQUIPMENT	TRAVEL	LOADOUT		
		500' of Fire Boom on a Boom Reel		24 Hours	3.0 Hours	2.0 Hour		
	2	Boom reel is complete with a hydraulic power pack, breaking system, and integral air inflation system	CGA/Harvey, LA					
Elastic American Marine Hydro-Fire Boom System		(2) Elastec E600 Water Pumps with flow meters, pressure gauges, and suction strainer manifolds						
		(2) Towing packages with 400' of 1" two line, fire hose assemblies with 400' of fire hose						
IN-SITU BURNING PLAN	See Section 19							

Each in situ burn task force shall consist of two vessels of opportunity for towing the boom, a primary control vessel for command and control, general support and transportation of the boom to the site, and if necessary, vessels for deflection booming. Also included with the deployment vessels will be a small igniter boat for setting the igniters.



# **APPENDIX I: ENVIRONMENTAL MONITORING INFORMATION**

## I.1 Monitoring Systems

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

## I.2 Incidental Takes

There is no reason to believe that any of the endangered species or marine mammals listed in the ESA will be "taken" because of the operations proposed under this plan.

To date, 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.

## I.3 Flower Garden Banks National Marine Sanctuary

Lease OCS-G 36941, Eugene Island Block 389, is not located in the Flower Garden Banks National Marine Sanctuary; therefore, the requested information is not required in this EP.

Species	Listing Status	Recovery Plan	Critical Habitat
<u>Green sea</u> <u>turtle</u>	Threatened - North and South Atlantic Distinct Population Segment ( <u>81 FR</u> 20057; April 6, 2016)	October 1991	<u>63 FR 46693;</u> September 2, 1998
Kemp's ridley sea turtle	Endangered ( <u>35 FR 18319;</u> <u>December 2,</u> <u>1970</u> )	September 2011	None
Leatherback sea turtle	Endangered (35 FR 8491; June 2, 1970)	<u>April 1992</u>	<u>44 FR 17710;</u> March 23, 1979
Loggerhead sea turtle	Threatened - Northwest Atlantic Ocean Distinct Population Segment ( <u>76 FR 58868; September 22, 2011</u> )	December 2008	<u>79 FR 39856; July</u> <u>10, 2014</u>
<u>Hawksbill sea</u> <u>turtle</u>	Endangered ( <u>35 FR 8491; June 2, 1970)</u>	December 1993	63 FR 46693; September 2, 1998
<u>Smalltooth</u> <u>sawfish</u>	U.S. Distinct Population Segment Endangered ( <u>68 FR 15674; April 1, 2003</u> )	January 2009	72 FR 45353; October 2, 2009
Gulf sturgeon	Threatened ( <u>56 FR 49653; September 30,</u> <u>1991</u> )	September 1995	<u>68 FR</u> <u>13370;</u> <u>March 19,</u> <u>2003</u>
Nassau grouper	Threatened (81 FR 42268; June 29, 2016)	2018 Recovery Outline	None
Oceanic whitetip shark	Threatened ( <u>83 FR 4153; January 30,</u> 2018)	2018 Recovery Outline	None
<u>Giant manta</u> <u>ray</u>	Threatened (83 FR 2916; January 22, 2018)	December 2019	None
Elkhorn coral	Threatened ( <u>71 FR 26852; May 9, 2006</u> )	March 2015	<u>73 FR</u> <u>72210; November</u> <u>26, 2008</u>

## **ATTACHMENT I-1**

Species	Listing Status	Recovery Plan	Critical Habitat
<u>Staghorn</u> coral	Threatened ( <u>71 FR 26852; May 9, 2006</u> )	March 2015	73 FR 72210; November 26, 2008
Boulder star coral	Threatened ( <u>79 FR 53851; September 10,</u> 2014)	None	None
<u>Mountainous</u> star coral	Threatened ( <u>79 FR 53851; September 10,</u> 2014)	None	None
<u>Lobed star</u> <u>coral</u>	Threatened ( <u>79 FR 53851; September 10,</u> 2014)	None	None
Rough cactus	Threatened ( <u>79 FR 53851; September 10,</u> 2014)	None	None
Pillar coral	Threatened ( <u>79 FR 53851; September 10,</u> <u>2014</u> )	None	None
Sperm whale	Endangered ( <u>35 FR 18319; December 2,</u> <u>1970</u> )	December 2010	None
Rice's whale	Endangered ( <u>84 FR 15446, April 15,</u> 2019); Name Change ( <u>86 FR 47022;</u> <u>August 23, 2021)</u>	September 2020 Recovery Outline	None

# APPENDIX J: LEASE STIPULATIONS INFORMATION

Exploration activities are subject to the following stipulations attached to Lease OCS-G 36941, Eugene Island Block 389.

# J.1 Lease Stipulation No. 4 – Protected Species

Under the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA) the Protected Species Stipulation No. 4 is designed to protect threatened and endangered species, as well as marine mammals, and apply to the exploration, development, construction, and production of the OCS.

W&T and its contractors will adhere to the 2020 Biological Opinion on the Federally Regulated Oil and Gas Program Activities in the GOM, and the following Notices to Lessees (NTLs):

- BOEM NTL No. 2016-G01, "Vessel Strike Avoidance and Injured/Dead Protected Species Reporting";
- BOEM NTL No. 2016-G02 "Implementation of Seismic Survey Mitigation Measures and Protected Species Observer Program"; and
- BSEE NTL No. 2015-G03 "Marine Trash and Debris Awareness and Elimination"

# J.2 Lease Stipulation No. 11 – Timeframe for Decisions on Applications for Permits to Drill (APD) and Applications for Permits to Modify (APM)

This stipulation sets the timing on when APDs and APMs will be reviewed and approved. The 75-days timeframe allows a NEPA review to determine if a step-down review with National Marine Fisheries Service (NMFS) is also required.

# APPENDIX K: ENVIRONMENTAL MITIGATION MEASURES INFORMATION

## K.1 Incidental Takes

W&T will adhere to the reporting requirements as set forth in Appendix C of the NOAA Biological Opinion, as applicable, should the unlikely event of a vessel striking any of the ESA-listed species while conducting operations under this plan.

# APPENDIX L: SUPPORT VESSELS AND AIRCRAFT INFORMATION

## L.1 General

Information is provided in the table below regarding the vessels and aircraft that will be used to support our drilling activities.

Туре	Maximum Fuel Tank Capacity	Maximum Number in Area at Anv Time	Trip Frequency or Duration
Crew Boat	30,000 gallons	1	1 x week
Supply Boat – 220 Class or Larger DP Supply Boat	275,000 bbls	2	2 x week
Helicopter - S76 A/C ++ BHT- 407	383 gallons 147 gallons	1 1	As needed

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

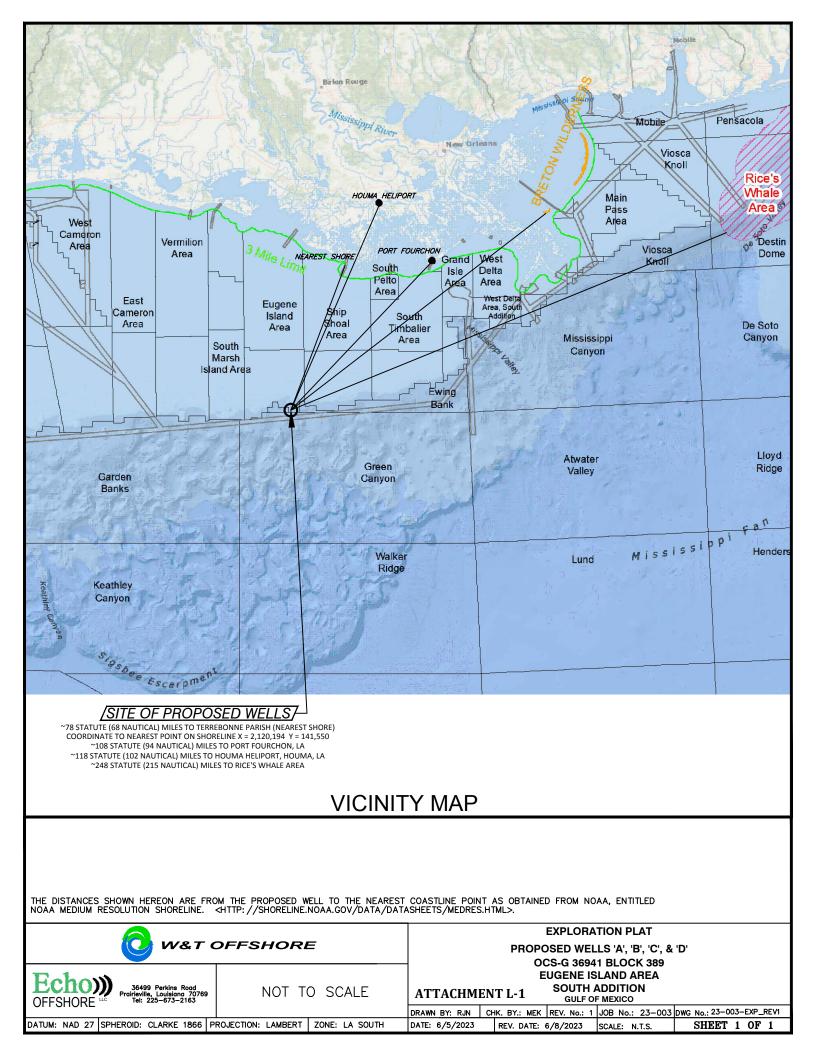
No route taken by these vessels will traverse through the Rice's Whale Area in the eastern portion of the GOM.

## L.2 Diesel Oil Supply Vessels

There will be no use of diesel oil supply vessels during the drilling operations in Eugene Island Block 389.

# L.3 Vicinity Map

Enclosed as *Attachment L-1* is 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.



# APPENDIX M: RELATED FACILITIES AND OPERATIONS INFORMATION

# M.1 Related OCs Facilities and Operations

W&T proposes to drill the prospect using a jacketed platform structure to support a platform rig to drill in 362 feet water depth. An elevation schematic is included below. Current engineering has the mudline framing plan at 169ft x 182ft. A typical jack up rig for this water depth would have a similar footprint.

The proposed jacketed structure would be placed on a materials barge and moved onto location using tugboats, offloaded into the water using a derrick barge, and turned upright by controlling ballast and floatation. The structure will be pinned on the seabed using driven piles. A drilling deck would then be installed on the top of the jacket to accommodate a platform rig. The rig would be either lifted into place using a large derrick barge or lifted onto the platform in modules using one or more platform cranes.

If a discovery is made, this structure could remain to support production facilities and perhaps future drilling, completion, recompletion, and/or workover operations. Alternatively, the prospect could be developed using a smaller jacketed structure or via subsea development tie-back to a nearby host.

If the prospect is uneconomic, the proposed jacketed structure would be unpinned, and floated by controlling ballast and floatation, and moved to be reused at another flex-trend prospect location. The platform would be modified as needed to meet the water depth and air gap requirements at the next location before being moved.

# 2020 NOAA Biological Opinion on the Federally Regulated Oil and Gas Program Activities

<u>Hummer Strike/Pile Driving</u>	
Q. What material will the pipe be made of that is being "driven" during these activities (i.e. aluminum, wood, steel, concrete, etc.)?	Steel pilings are proposed.
Q. Time expected to drive the pile/pin to optimal depth?	9 hours per pile (Conservative total blow count is 17,000 blows per pile to reach target penetration.
Q. Expected depth of penetration below the mudline?	320' BML.
Q. Substrate type that the pipe/pile will be driven into (sand, silt, clay, etc.)?	Sand, silt, clay and carbonate fragments as indicated in the shallow hazard study and soil boring results.
Q. Will the impact hammer be driven from the surface (dry) or below (wet) the surface of the water line?	Wet. We will use an underwater hammer.

## <u>Hammer Strike/Pile Driving</u>

Q. What type of driver (i.e. IHC S-90, S-150)?	Menck MHU 2400S / Menck MHU 3500S
Q. Number of piles/conductors expected to be	4 piles
driven?	
Q. Estimate number of strikes per foot?	53 strikes per foot estimated
Q. Will there be any lag time between	2 second between strikes
strikes?	

# APPENDIX N: ONSHORE SUPPORT FACILITIES INFORMATION

## M.1 General

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

Name	Location	Existing/New/Modified
Fourchon Service Base	Port Fourchon, LA	Existing
MI Drilling Fluids	Port Fourchon, La	Existing

## M.2 Support Base Construction or Expansion

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

# APPENDIX O: COASTAL ZONE MANAGEMENT (CZMA) INFORMATION

Relevant enforceable policies were considered in certifying consistency for Louisiana. A certificate of Coastal Zone Management Consistency for the state of Louisiana is enclosed as *Attachment N-1*.

# Louisiana Coastal Zone Management Consistency Certification

**INITIAL EXPLORATION PLAN** 

# EUGENE ISLAND BLOCK 389 OCS-G 36941

The proposed activities described in detail in this OCS Plan comply with Louisiana's approved Coastal Management Program and will be conducted in a manner consistent with such Program.

W&T Offshore, Inc Lessee or Operator

Value hand

Certifying Official

February 15, 2024

Date

# APPENDIX P: ENVIRONMENTAL IMPACT ANALYSIS (EIA)

Environmental	Impact Producing Factors (IPFs)							
Resources	Emissions (air, noise, light, etc.)	Effluents (muds, cuttings, other discharges to the water column or seafloor	Disturbances	Wastes Sent to Shore for Treatment Or disposal	Accidents (e.g. oil spills, Chemical spills, I-12S releases)	Discarded Trash & Debris		
Site Specific at Offshore Location								
Designated Topographic Feature		(1)	(1)		(1)			
Pinnacle Trend Area; Live Bottoms		(2)	(2)		(2)			
Eastern Gulf live bottoms		(3)	(3)		(3)			
Chemosynthetic communities			(4)					
Water quality		Х	Х		Х			
Fisheries		Х	Х		Х			
Marine mammals	X (8)	Х			X (8)	Х		
Sea turtles	X (8)	Х			X (8)	Х		
Air quality	X (9)							
Shipwreck sites (known or potential)			(7)					
Prehistoric archaeological sites			(7)					
Vicinity of Offshore Location								
Essential fish habitat		Х	Х		X (6)			
Marine and pelagic birds	Х				Х	Х		
Public health and safety					(5)			
Coastal and Onshore								
Beaches					X (6)			
Wetlands					X (6)	Х		
Shorebirds and coastal nesting birds					X (6)			
Coastal wildlife refuges					Х			
Wilderness areas					Х			
Other Resources								

#### 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:
  - a. 4-mile zone of the Flower Garden Banks, or the 3-mile zone of Stetson Bank;
  - b. 1000-m, 1 mile, or 1000-m, 1 mile or 3-mile zone of any topographic feature (submarine bank) protected by the Topographic Features Stipulation attached to an OCS lease;
  - c. Essential Fish Habitat (EFH) criteria of 500 ft. from any no-activity zone; or
  - d. Proximity of any submarine bank (500 ft. buffer zone) with relief greater than 2 meters that is not protected by the Topographic Features Stipulation attached to an OCS lease.
- 2. Activities with any bottom disturbance within an OCS lease block protected through the Live Bottom (Pinnacle Trend) Stipulation attached to an OCS lease.
- 3. Activities within any Eastern Gulf OCS block where seafloor habitats are protected by the Live Bottom (Low-Relief) Stipulation attached to an OCS lease.
- 4. Activities on blocks designated by the BOEM as being in water depths 400 meters or greater.
- 5. Exploration or production activities where H2S concentrations greater than 500 ppm might be encountered.
- 6. All activities that could result in an accidental spill of produced liquid hydrocarbons or diesel fuel that you determine would impact these environmental resources. If the proposed action is located a sufficient distance from a resource that no impact would occur, the EIA can note that in a sentence or two.
- 7. All activities that involve seafloor disturbances, including anchor emplacements, in any OCS block designated by the BOEM as having high probability for the occurrence of shipwrecks or prehistoric sites, including such blocks that will be affected that are adjacent to the lease block in which your planned activity will occur. If the proposed activities are located a sufficient distance from a shipwreck or a prehistoric site that no impact would occur, the EIA can note that in a sentence or two.
- 8. All activities that you determine might have an adverse effect on endangered or threatened marine mammals or sea turtles or their critical habitats.
- 9. Production activities involve transportation of produced fluids to shore using shuttle tankers or barges.

# P.1 Site Specific Analysis

Site-Specific activities at Eugene Island Block 389 analyzed for this submittal include the drilling and completion of four well sites, Well Locations A, B, C, and D. Further activities proposed are the setting of a structure to support a platform rig drilling unit.

# **Designated Topographic Features**

There are no known topographic features located in Eugene Island Block 389; therefore, no impact-producing factors (IPFs) resulting from our drilling and completion activities in this lease block are anticipated to affect any topographic features.

# Pinnacle Trend Area Live Bottoms

There are no live bottom (Pinnacle) trend areas in or near Eugene Island Block 389; therefore, no IPFs resulting from our drilling and completion activities in this lease block are anticipated to affect any pinnacle trend areas.

# Eastern Gulf Live Bottoms

Eugene Island Block 389 is not located near any Eastern Gulf live bottoms (>200 miles); therefore, no IPFs from our drilling and completion operations are anticipated to affect any areas in the Eastern GOM.

# **Chemosynthetic Communities**

The activities proposed for Eugene Island Block 389 are in a water depth of +360 feet. Chemosynthetic Communities are typically found only in water depths greater than 1312 feet (400 meters). As such, our operations proposed in this lease block will have no impact on any chemosynthetic community.

# Water Quality

The IPFs that could result in water quality degradation from the proposed operations in Eugene Island Block 389 include disturbances to the seafloor, effluents, and accidents.

- *Physical disturbances to the seafloor:* Bottom area disturbances resulting from the emplacement of drilling 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.

Accidents: Oil spills have the potential to alter offshore water quality; however, it is unlikely that an accidental surface or subsurface spill would occur from the proposed activities. Between 1980 and 2000, OCS operations produced 4.7 billion barrels of oil and spilled only 0.001 percent of this oil, or 1 bbl for every 81,000 bbl produced. The spill risk related to a diesel spill from drilling operations is even less. Between 1976 and 1985, (years for which data were collected), there were 80 reported diesel spills greater than one barrel associated with drilling activities. Considering that there were 11,944 wells drilled, this is a 0.7 percent probability of an occurrence. If a spill were to occur, the water quality of marine waters would be temporarily affected by the dissolved components and small oil droplets. Dispersion by currents and microbial degradation would remove the oil from the water column and dilute the constituents to background levels. Historically, changes in offshore water quality from oil spills have only been detected during the life of the spill and up to several months afterwards. Most of the components of oil are insoluble in water and therefore float. The activities proposed in this plan will be covered by W&T Offshore, Inc.'s Regional Oil Spill Response Plan (refer to information submitted in Appendix H).

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

# <u>Fisheries</u>

IPFs that could cause impacts to fisheries because of the proposed operations in Eugene Island Block 389 include physical disturbances to the seafloor, effluents, and accidents.

- *Physical disturbances to the seafloor:* The emplacement of a structure or drilling rig in minimal loss of bottom trawling area to commercial fishermen. Pipelines can cause gear conflicts, which result in losses of trawls, 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.
- *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 3000 m of the discharge point and are expected to have negligible on effect on fisheries.
- *Accidents:* An accidental oil spill has the potential to cause some detrimental effects on fisheries; however, it is unlikely that such an event would occur from the

proposed activities (refer to <u>Water Quality</u>). 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 W&T Offshore, Inc.'s Regional OSRP (refer to information submitted in **Appendix H**).

There are no other IPFs (emissions, discarded trash and debris, or wastes sent to shore for disposal) resulting from the proposed activities, which could cause impacts to fisheries.

# <u>Marine Mammals</u>

GulfCet II studies revealed that cetaceans of the continental shelf and shelf-edge were almost exclusively bottlenose dolphin and Atlantic spotted dolphin. Squid eaters, including dwarf and pygmy killer whale, Risso's dolphin, rough-toothed dolphin, and Cuvier's beaked whale, occurred most frequently along the upper slope in areas outside of anticyclones. IPFs that could cause impacts to marine mammals as a result of the proposed operations in Eugene Island Block 389 include emissions, effluents, discarded trash and debris, and accidents.

- *Emissions:* Noise from drilling activities, support vessels and helicopters may elicit a startled reaction from marine mammals. This reaction may lead to disruption of a marine mammal's normal activities. Stress may make them more vulnerable to parasites, disease, environmental contaminants, and/or predation (Majors and Myrick, 1990). There is little conclusive evidence for long-term displacements and population trends for marine mammals relative to noise.
- *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:* Entanglement in, and ingestion of debris have caused the death or serious injury of marine mammals (Laist, 1997; MMC, 1999). The limited amount of marine debris, if any, resulting from the proposed activities is not expected to substantially harm marine mammals. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA).

W&T Offshore, Inc. will operate in accordance with the regulations and also avoid accidental loss of solid waste items by maintaining waste management plans,

manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass.

Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g. helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the OOC Marine Debris video (or Microsoft PowerPoint presentation), "Think About It". Thereafter, all personnel will view the marine trash and debris training video annually.

• *Accidents:* Collisions between support vessels and cetaceans would be unusual events, however, should one occur, death or injury to marine mammals is possible. Contract vessel operators can avoid marine mammals and reduce potential deaths by maintaining a vigilant watch for marine mammals and maintaining a safe distance when they are sighted. Vessel crews should use a reference guide to help identify the twenty-eight species of whales and dolphins, and the single species of manatee that may be encountered in the Gulf of Mexico OCS. Vessel crews must report sightings of any injured or dead protected marine mammal species immediately, regardless of whether the injury or death is caused by their vessel, to the Marine Mammal and Sea Turtle Stranding Hotline at (800) 799-6637, or the Marine Mammal Stranding Network at (305) 8622850. In addition, if the injury or death was caused by a collision with a contract vessel, the BOEMRE must be notified within 24 hours of the strike by email to protectedspecies@boemre.gov. If the vessel is the responsible party, it is required to remain available to assist the respective salvage and stranding network as needed.

Oil spills have the potential to cause sublethal oil-related injuries and spill-related deaths to marine mammals. However, it is unlikely that an accidental oil spill would occur from the proposed activities (refer to <u>Water Quality</u>). Oil spill response activities may increase vessel traffic in the area, which could add to changes in cetacean behavior and/or distribution, thereby causing additional stress to the animals. The effect of oil dispersants on cetaceans is not known. The acute toxicity of oil dispersant chemicals included in W&T Offshore, Inc.'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 the OSRP (refer to information submitted in **Appendix H**).

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

# <u>Sea Turtles</u>

IPFs that could cause impacts to sea turtles as a result of the proposed operations include emissions, effluents, discarded trash and debris, and accidents. GulfCet II studies sighted mostly 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 west of the river (Fritts et at, 1983b; Lohoefener et al., 1990). Deep waters are used by all species as a transitory habitat.

- *Emissions:* Noise from drilling activities, support vessels and helicopters may elicit a startle reaction from sea turtles, but this is a temporary disturbance.
- *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: Entanglement in, and ingestion of, debris have caused the death and serious injury of sea turtles (Balazs, 1985). The limited volume of marine debris, if any, resulting from the proposed activities is not expected to substantially harm sea turtles. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and the Marine Plastic Pollution Research and Control Act, and regulation imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA). W&T Offshore, Inc. will operate in accordance with the regulations and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials. particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass.

Informational placards will be posted on all vessels and facilities having sleeping capacity 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 OOC Marine Debris video (or Microsoft PowerPoint presentation), "Think About It.". Thereafter, all personnel will view the marine trash and debris training video annually.

• *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 safe distance when they are sighted. Vessel crews should use a reference guide to help identify the five species of sea turtles that may be

encountered in the Gulf of Mexico OCS. Vessel crews must report sightings of any injured or dead protected sea turtle species immediately, regardless of whether the injury or death is caused by their vessel, to the Marine Mammal and Sea Turtle Stranding Hotline at (800) 799-6637, or the Marine Mammal Stranding Network at (305) 862-2850. In addition, if the injury or death was caused by a collision with a contract vessel, the BOEM must be notified within 24 hours of the strike by email to <u>protectedspecies@boem.gov</u>. If the vessel is the responsible party, it is required to remain available to assist the respective salvage and stranding network as needed.

As 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 <u>Water Quality</u>). 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 W&T Offshore, Inc.'s Regional Oil Spill Response Plan (refer to information submitted in **Appendix H**).

There are no other IPFs (including physical disturbances to the seafloor and wastes sent to shore for disposal) from the proposed activities, which could impact sea turtles.

## <u>Air Quality</u>

The projected air emissions identified in **Appendix G** 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 389 is not within the 200-kilometer (124 mile) buffer for the Breton Wilderness Area and is 78 miles from the nearest shoreline. Air Emissions calculated for the activities proposed in this Initial Exploration Plan for Eugene Island Block 389 are well below the acceptable allowance; therefore, no special mitigation, monitoring, or reporting is currently required.

• *Accidents:* Accidents and blowouts can release hydrocarbons or chemicals, which could cause the emission of air pollutants. However, these releases would not impact onshore air quality because of the prevailing atmospheric condition, emission height, emission rates, and the distance of Eugene Island Block 389 from the coastline.

There are no other IPFs (including effluents, physical disturbances to the seafloor, discarded trash and debris, or wastes sent to shore for treatment or disposal) from the proposed activities, which could impact air quality.

# Shipwreck Sites (known or potential)

Eugene Island Block 389 was previously listed as an area not known to contain historical shipwrecks; however, it has been well documented that shipwrecks are random and historic shipping routes covered virtually all the northern Gulf of Mexico. As such, an Archaeological Assessment was prepared using the Geophysical Investigation of Eugene Island Block 389 conducted by Echo Offshore, LLC. Based on the survey, there are no shipwrecks observed in or near the area of our proposed operations; therefore, no impacts from our operations are expected to affect any historical shipwreck.

That being stated, should a shipwreck be discovered during our exploratory operations, W&T Offshore, Inc. will report to BOEM any evidence of a shipwreck and make every reasonable effort to preserve and protect that cultural resource.

## Prehistoric Archaeological Sites

The proposed operations covered in this Exploration Plan are being conducted in water depths ranging from 365 feet to 650 feet. Prehistoric sites are found in water depths less than 200 feet. As such, there are no IPFs from our operations that could cause impacts to prehistoric archaeological sites.

# P.2 Vicinity of Offshore Location

# <u>Essential Fish Habitat (EFH)</u>

According to the National Oceanic and Atmospheric Administration (NOAA) Fisheries, EFH in the Gulf of Mexico includes important marine and estuarine habitats such as coral and coral reefs, hard bottoms, seagrasses, mangroves, marshes, algal flats, and substrates such as sand, shell, mud and rock.

IPFs from our proposed activities in Eugene Island Block 389 that could cause impacts to EFH include physical disturbances to the seafloor, effluents, and accidents.

- *Physical disturbances to the seafloor:* The Live Bottom Low Relief Stipulation, the Live Bottom (Pinnacle Trend) Stipulation, and the Eastern Gulf Pinnacle Trend Stipulation would prevent most of the potential impacts on live-bottom communities and EFH from bottom disturbing activities (e.g., anchoring, structure emplacement and removal).
- *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 mud 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 <u>Water Quality</u>). The activities proposed in this plan will be covered by W&T Offshore, Inc.'s Regional OSRP (refer to information submitted in **Appendix H**).

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

#### Marine and Pelagic Birds

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

- *Emissions:* Emissions of pollutants into the atmosphere from these activities are far below concentrations, which could harm coastal and marine birds.
- *Accidents:* An oil spill would cause localized, low-level petroleum hydrocarbon contamination. However, it is unlikely that an oil spill would occur from the proposed activities (refer to <u>Water Quality</u>). 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 be affected to that extent. The activities proposed in this plan will be covered by W&T Offshore, Jnc.'s Regional OSRP (refer to information submitted in **Appendix H**).
- *Discarded trash and debris:* Marine and pelagic birds could become entangled and snared in discarded trash and debris, or ingest small plastic debris, which can cause permanent injuries and death. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA).

W&T Offshore, Inc. will operate in accordance with the regulations and avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass.

Informational placards will be posted on all vessels and facilities having sleeping quarters 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 OOC Marine Debris video (or Microsoft PowerPoint presentation), "Think About It". Thereafter, all personnel will view the marine trash and debris training video annually. Debris, if any from these proposed activities will seldom interact with marine and pelagic birds; therefore, the effects will be negligible.

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

#### Public Health and Safety Due to Accidents

There are no IPFs (emissions, effluents, physical disturbances to the seafloor, wastes sent to shore for treatment or disposal or accidents, including an accidental H2S releases) from the proposed activities, which could cause impacts to public health and safety. In accordance with Title 30 CFR 250.490(c), sufficient information is included in **Appendix D** to justify our request that our proposed activities be classified by BOEM as H2S absent.

# P.3 Coastal and Onshore

## **Beaches**

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

- *Accidents:* Oil spills contacting beaches would have impacts on the use of recreational beaches and associated resources. Eugene Island Block 389 is relatively far from shore (78 miles) and prevailing longshore currents would allow for sufficient time to implement an effective response; therefore, a significant adverse impact is not expected. The activities proposed in this plan will be covered by W&T Offshore, Inc.'s Regional OSRP (refer to information submitted in **Appendix I)**.
- *Discarded trash and debris:* Trash on the beach is recognized as a major threat to the enjoyment and use of beaches. There will only be a limited amount of marine debris, if any, resulting from the proposed activities. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA). W&T Offshore, Inc. will operate in accordance with the regulations and avoid accidental loss of solid waste items by maintaining waste

management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass.

Informational placards will be posted on all vessels and facilities having sleeping quarters 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 OOC Marine Debris video (or Microsoft PowerPoint presentation), "Think About It". Thereafter, all personnel will view the marine trash and debris training annually.

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

#### <u>Wetlands</u>

The National Oceanic and Atmospheric Administration (NOAA) defines wetlands as an area of land that is saturated with water. Wetland habitats serve essential functions in an ecosystem, including acting as water filters, providing flood and erosion control, and furnishing food and homes for fish and wildlife.

Potential IPFs to wetlands from our proposed exploration activities in Eugene Island Block 389 would be from oil spill accidents and possibly from discarded trash and debris.

- *Accidents:* Oil spills could cause impacts to wetlands; however, it is unlikely that an oil spill would occur from the proposed activities (refer to <u>Water Quality</u>). Although oil spills travel along the ocean's current, the proposed surface locations covered in this plan are not relatively close to shore (78 miles). Prevailing longshore currents would allow for sufficient time to implement an effective response; therefore, no impacts are expected. The activities proposed in this plan will be covered by W&T Offshore, Inc.'s Regional OSRP (refer to information submitted in **Appendix H**).
- *Discarded trash and debris:* Coastal wetlands can be impacted by trash and debris carelessly discarded in the Gulf waters. Although the majority of pollutants that make their way to wetlands come from human activity along the coastlines and far inland, oil and gas operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA). W&T Offshore, Inc. will operate in accordance with the regulations and avoid accidental

loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass.

Informational placards will be posted on vessels and every facility that has sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g. helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the OOC Marine Debris video (or Microsoft PowerPoint presentation), "Think About It". Thereafter, all personnel will view the marine trash and debris training video annually.

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

# Shore Birds and Coastal Nesting Birds

Potential IPFs from the proposed exploratory activities that could impact shore birds and coastal nesting birds would be accidental oil spills 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 <u>Water Quality</u>). Although relatively close to shore (78 miles), prevailing longshore currents would allow for sufficient time to implement an effective response; therefore, no impacts are expected. The activities proposed in this plan will be covered by W&T Offshore, Inc.'s Regional OSRP (refer to information submitted in **Appendix H**).
- Discarded trash and debris: Coastal and marine birds are highly susceptible to entanglement in floating, submerged, and beached marine debris: specifically plastic. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA). W&T Offshore, Inc. will operate in accordance with the regulations and avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass.

Informational placards will be posted on vessels and every facility that has sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g. helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the OOC Marine Debris video (or Microsoft PowerPoint presentation), "Think About It". Thereafter, all personnel will view the marine trash and debris training video annually.

There are no other IPFs (emissions, effluents, physical disturbances to the seafloor, or waste sent to shore for treatment or disposal) from the proposed activities that could cause impacts to shore birds and coastal nesting birds.

## **Coastal Wildlife Refuges**

The nearest coastal wildlife refuge, the Breton Sound Wildlife Refuge, is more than 200 kilometers from our proposed drilling operations in Eugene Island Block 389. The only IPF from our operations that could impact a coastal wildlife refuge would be accidental oil spills.

• *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 <u>Water Quality</u>). Although relatively close to shore (78 miles), prevailing longshore currents would allow for sufficient time to implement an effective response; therefore, no impacts are expected. The activities proposed in this plan will be covered by W&T Offshore, Inc.'s Regional OSRP (refer to information submitted in **Appendix H**).

There are no other IPFs (emissions, effluents, physical disturbances to the seafloor, or waste sent to shore for treatment or disposal) from the proposed activities that could cause impacts to coastal wildlife refuges.

# Wilderness Areas

An accidental oil spill from the proposed activities could cause impacts to wilderness areas. However, it is unlikely that a spill would occur from the proposed activities (refer to <u>Water Quality</u>). Although relatively close to shore (78 miles), prevailing longshore currents would allow for sufficient time to implement an effective response; therefore, no significant adverse impacts are expected. The activities proposed in this plan will be covered by W&T Offshore, Inc.'s Regional OSRP (refer to information submitted in **Appendix H**).

# P.3 Other Environmental Resources Identified

A. Impacts on our 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.

- B. Environmental Hazards: During the hurricane season, June through November, the Gulf of Mexico is impacted by an average of ten storms (39-73 mph winds), of which six become hurricanes (>74 mph winds). Due to its location in the gulf, Main Pass Block 108 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.
  - a. The following preventative measures included in this plan may be implemented to mitigate these impacts:
  - b. Drilling:
    - i. Secure Location Platform B
    - ii. Secure jack-up rig
    - iii. Evacuate personnel
  - c. Drilling activities will be conducted in accordance with Title 30 CFR 250, Subparts C and D.
- C. Alternatives No alternatives to the proposed activities were considered to reduce environmental impacts.
- D. Mitigation Measures No mitigation measures other than those required by regulation will be employed to avoid, diminish, or eliminate potential impacts on environmental resources.
- E. 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.
- F. Preparer/Contact If you have any questions regarding this document, please contact:

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# APPENDIX R: ENVIRONMENTAL IMPACT ANALYSIS (EIA)

#### R.1 Exempted Information Description

The proposed bottom-hole locations of the planned wells have been removed from the public information copy of the EP as well as any discussions of the target objectives, geologic or geophysical data, and any interpreted geology.

#### R.2 Bibliography

Not applicable.