PERMITS AND CONSERVATION DIVISION, OFFICE OF PROTECTED RESOURCES,
1315 EAST-WEST HIGHWAY, F/PR1 ROOM 13805,
SILVER SPRING, MD 20910

To whom it may concern,

Please find the attached request for an incidental take authorization under section 1010(a)(5) of the Marine Mammal Protection Act of 1972, as amended, for the take of marine mammal's incidental to conduct shallow water seismic survey by Oceaneering International (OII) on behalf Oceaneering International (OII)

OII plans to conduct a shallow Seismic Survey in West Delta Block 146 from November 2025 to December 2025 in order to collect sufficient data to assist Oceaneering test and validate onboard equipment. Because Fugro's activities have the potential to cause Level B harassment of marine mammals, we are requesting a Letter of Authorization.

If you have any questions, please feel free to reach contact Ben Williams 210-765-1760 or email bwilliams4@oceaneering.com

Sincerely

Ben Williams
Project Manager
SSR - Survey - Geo
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LETTER OF AUTHORIZATION APPLICATION

BOEM CONTROL NUMBER: L25-006

REQUESTED PERIOD OF EFFECTIVENESS:
START DATE: November 2025
END DATE: December 2025

A. TYPE OF SURVEY:

Please indicate which type of survey will be used in the proposed activity

__ Deep Penetration Seismic (greater than 1,500 in^3 total airgun array volume)

- 2D Seismic-towed Streamer
- 2D Seismic-Seafloor Cable or Nodes
- 3D Seismic-towed Streamer
- 3D Seismic-Seafloor Cable or Nodes
- NAZ
- WAZ
- 4D (Time Lapse) Seismic OBN
- Vertical Cable
- Borehole Seismic (VSP)

___ Shallow Penetration Seismic (less than 1,500 in^3 total airgun array volume)

- Surface Vessel
- Surface Vessel and AUV/ROV
- Borehole Seismic (VSP)

__ HRG Surveys (no airguns used)

- Surface vessel
- AUV/ROV
- Both

___ Other

Describe (if Other):

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B. SURVEY AREA AND OPERATIONAL PLAN:

Question:	**Response**
Purpose of Activity	Testing and verification of equipment
Location: (Lease Block(s), Facility or Prospect Name, Lat/Lon, etc.)	West Delta 146 28°38'15.438"N 89°28'21.946"W
Overall Duration of the Activity (days):	6 days (Mobilization to Demobilization)
Areal extent of the survey area: (in OCS lease blocks or km^2) (Attach GIS file(s) of survey lines and/or survey area perimeter)	Within WD146 bounds Shape file attached separately
Water Depth Range:	130 - 161 m
G&G ITR/PEIS Modeling Zone(s) in which the activity will occur (1-7):	Modeling Zone 2
Number of days during the overall activity period on which the sound source(s) listed in Section C will operate: (If the activity will occur in more than one Modeling Zone, provide the number of operating days within each modeling zone.)	3 days Seasonal distribution of days used in Take Estimates shown in Section D: Summer = 0 days Winter = 3 days

C. SOUND SOURCES:

The source type to be used during this survey will be one sparker towed by a source vessel Ocean Intervention 2
The Air gun array will also be towed behind the source vessel Ocean Intervention 2

Energy Source	**Manufacturer**	**Model**	**Total Array Volume & Number of Elements** (cubic inches or Liters.)	**Source Level (SL) in dB re 1µPa@1m in water** (RMS)	**Source Level (SL) in dB re 1µPa@1m in water** (Peak to Peak)	**Operating Frequency** (Hz, kHz, range)	**Pulse Duration** (seconds, milli-seconds)	**Pulse Rate (or Cycle)** (Pulses per second or minute)	**Towing Depth of the Source** (ft or m)	**Towing Depth of the Receiver(s)** (ft or m)	**Duration of Use** (Number of Days or Percent of Active Sound Source Days)
Sparker	Applied Acoustics	Dura Spark 400	400 tips	205-215dB re 1uPa @ 1m	215-230dB re 1uPa @ 1m	0-6250 Hz	0.5-1.5 ms	1 sec	Receiver is OBN on seabed	Receiver is OBN on seabed	3 days
Air Gun Array	Teledyne	Bolt 1900LL-XT (4 x 40 ci @ cu.in.)	160 cu.in. total	200–205 dB re 1 µPa@1m	210–215 dB re 1 µPa@1m	20–450 Hz	1–2 seconds	1–3 seconds	Receiver is OBN on seabed	Receiver is OBN on seabed	3 days

D. TAKE ESTIMATE:

User Selections

Parameters	
Survey Type	*Single Airgun*
Zone Number	*2*
Array	*4130cuin*

# of Days per Month					
jan	0	may	0	sep	0
feb	0	jun	0	oct	0
mar	0	jul	0	nov	3
apr	0	aug	0	dec	0

Exposures by Metric

F.H.G	Species	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total (No Level B Scaling)	Level A Colour Legend
Level A															Level A SEL > Level A Peak
LF	Rice's whale	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	**< 0.01**	Level A Peak > Level A SEL
	Kogia spp.[a]	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	**< 0.01**	**Total (Including Level B Scaling)**
Level B															
LF	Rice's whale	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	**< 0.01**	**< 0.01**
MF	Atlantic spotted dolphin	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	17.69	< 0.01	**17.69**	**17.69**
	Bottlenose dolphin	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	81.50	< 0.01	**81.50**	**81.50**
	Clymene dolphin	< 0.01	< 0.01	< 0.01	< 0s.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	**< 0.01**	**< 0.01**
	Beaked whales[b]	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	**< 0.01**	**< 0.01**
	Fraser's dolphin[d]	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.02	< 0.01	**0.02**	**0.02**
	Blackfish[c]	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	**< 0.01**	**< 0.01**
	Pantropical spotted dolphin	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	**< 0.01**	**< 0.01**
	Risso's dolphin	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	**< 0.01**	**< 0.01**
	Rough-toothed dolphin[d]	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	1.38	< 0.01	**1.38**	**1.38**
	Short-finned pilot whale	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	**< 0.01**	**< 0.01**
	Sperm whale	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	**< 0.01**	**< 0.01**
	Spinner dolphin	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	**< 0.01**	**< 0.01**
	Striped dolphin	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	**< 0.01**	**< 0.01**
HF	Kogia spp.[a]	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	**< 0.01**	**< 0.01**

[a] kogia guild density
[b] beaked whale guild density
[c] blackfish guild density
[d] Roberts et al. (2015) dataset (annual density)

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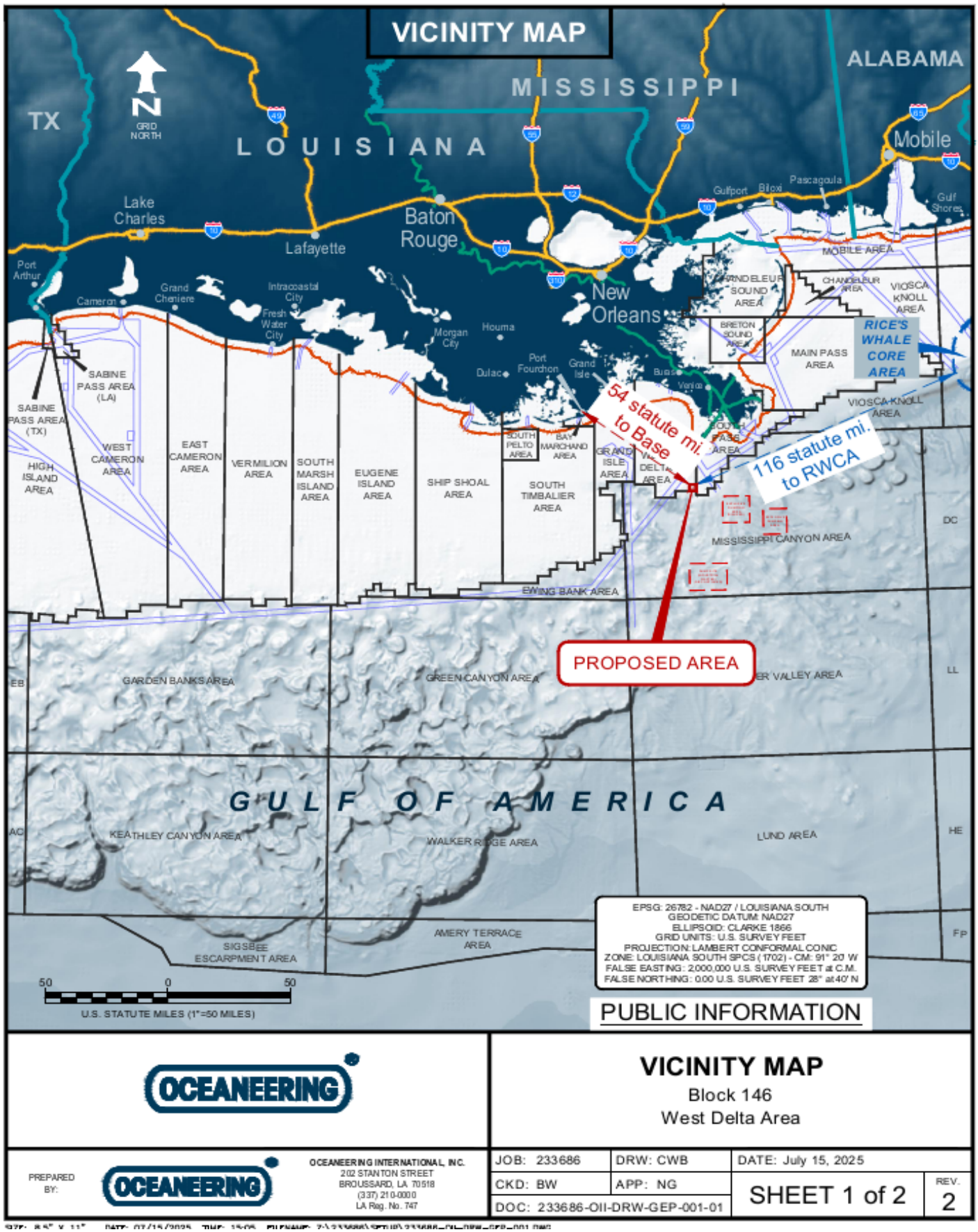
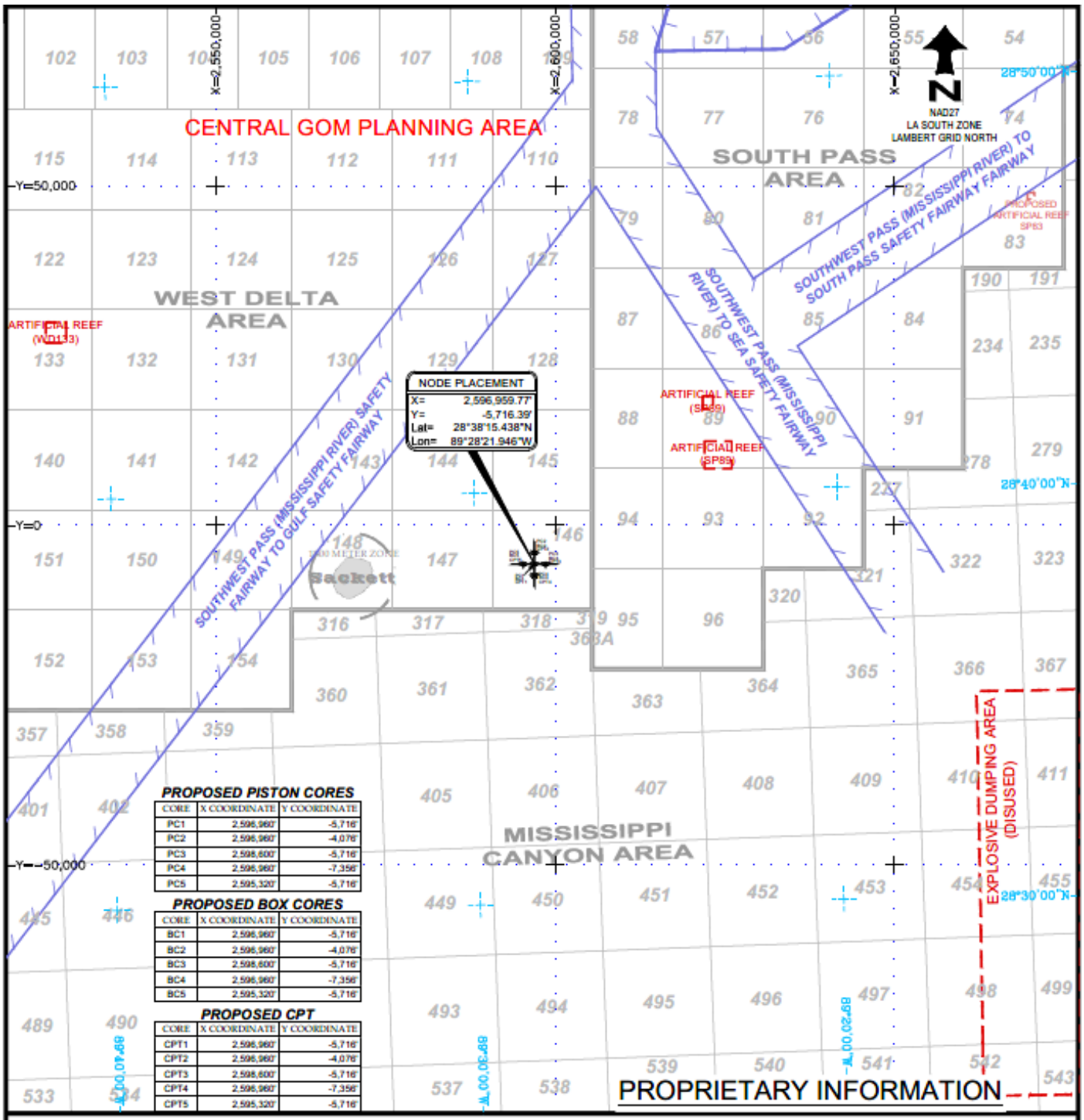
E. MITIGATION AND MONITORING EFFORTS:

Question:	**Response:**
Please indicate which set of monitoring and mitigation measures from the ITR apply to the planned activity:	Mitigations will include the following: Prior to the start of acquisition, visual monitoring will be conducted for the presence of protected species. A soft start approach will be utilized where the sparker array will be increased from the lowest power setting to full power over a period of 20 minutes. Visual monitoring for protected species will be conducted throughout the acquisition period.
Confirm that you will apply this set of monitoring and mitigation measures during the activity:	Yes

F. MAP OF SURVEY AREA AND TRANSIT ROUTE:





PROPOSED PISTON CORES

CORE	X COORDINATE	Y COORDINATE
PC1	2,596,960'	-5,716'
PC2	2,596,960'	-4,076'
PC3	2,598,600'	-5,716'
PC4	2,596,960'	-7,356'
PC5	2,595,320'	-5,716'

PROPOSED BOX CORES

CORE	X COORDINATE	Y COORDINATE
BC1	2,596,960'	-5,716'
BC2	2,596,960'	-4,076'
BC3	2,598,600'	-5,716'
BC4	2,596,960'	-7,356'
BC5	2,595,320'	-5,716'

PROPOSED CPT

CORE	X COORDINATE	Y COORDINATE
CPT1	2,596,960'	-5,716'
CPT2	2,596,960'	-4,076'
CPT3	2,598,600'	-5,716'
CPT4	2,596,960'	-7,356'
CPT5	2,595,320'	-5,716'

PROPOSED
2.2 NAUTICAL LINE MILES
2.5 STATUTE MILES

20,000 0 20,000
U.S. SURVEY FEET (1"=20,000')

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PROPOSED GEOPHYSICAL SURVEY

Block 146
West Delta Area

PREPARED BY: OCEANEERING

OCEANEERING INTERNATIONAL, INC.
202 STANTON STREET
BROUSSARD, LA 70518
(337) 210-0000
LA Reg. No. 747

JOB: 233686	DRW: CWB	DATE: JULY 15, 2025
CKD: BW	APP: NG	SHEET 2 of 2
DWG: 233686-OII-DRW-GEP-003		REV. 2

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