



9805 Katy Freeway, Suite G200  
Houston, Texas 77024

Transmitted via email to: [pr.itp.applications.noaa.gov](mailto:pr.itp.applications.noaa.gov)

May 22, 2023

Jolie Harrison, Division Chief  
Permits and Conservation Division, Office of Protected Resources  
1315 East-West Highway, F/PR1 Room 13805  
Silver Spring, Maryland 20910

RE: **Incidental Take Authorization**  
Wellbore Seismic Acquisition (Vertical Seismic Profile)  
Lease OCS-G 16987, Walker Ridge Block 425  
Well No. 004 (API No. 60-812-40145-00)

Ms. Harrison:

Please find the attached request for an incidental take authorization under section 101(a)(5) of the Marine Mammal Protection Act of 1972 (MMPA), as amended, for the potential take of marine mammals incidental to conducting a Borehole Seismic Survey by Murphy Exploration & Production Company – USA (Murphy).

Murphy as the designated operator of Lease OCS-G 16987, Walker Ridge (WR) Block 425; proposes to conduct Seismic Profile (VSP) operations on the following:

**WR 425, Well No. 004**: WR Block 425, Well No. 004, API No. 60-812-40145-00, (Supplemental Exploration Plan, Control No. S-8041), and any sidetrack or bypass thereof. No explosives will be used in this operation.

Murphy's upcoming VSP survey is subject to the provisions of the MMPA and the Regulations Governing Taking Marine Mammals Incidental to Geophysical Surveys Related to Ancillary Oil and Gas Activities in the Gulf of Mexico (50 CFR § 217, Subpart S); therefore, Murphy respectfully requests issuance of a Letter of Authorization for the proposed activities.

In support of this request, please find the attached Letter of Authorization Application.

Murphy is on location with the *Noble Stanley Lafosse Drillship* and ready to conduct the survey as early as June 15, 2023; therefore, Murphy respectfully requests an expedited review.

Should you have any questions or require additional information, please contact Kelley Pisciola, J. Connor Consulting, Inc. at 281-698-8519 or [kelley.pisciola@jccteam.com](mailto:kelley.pisciola@jccteam.com) or Kevin Elrod at 713-380-6128 or [kevin\\_elrod@murphyoilcorp.com](mailto:kevin_elrod@murphyoilcorp.com).

Sincerely,  
**Murphy Exploration & Production Company - USA**

A handwritten signature in black ink, appearing to read "KEVIN ELROD", is written over the typed name.

Kevin Elrod  
Manager, Environmental & Regulatory

/kp

# Attachment 1

## Ancillary Activity G&G Information and LoA Application

### Murphy Exploration & Production Company - USA

#### Walker Ridge Block 425

<b>Contact Person:</b>	
Name:	Kevin Elrod
Title:	Manager, Environmental and Regulatory
Telephone Number:	(713) 380-6128

#### A. Type of Survey

Please indicate which type of survey will be conducted during the planned activity	
<input type="checkbox"/>	<b>Deep Penetration Seismic (greater than 1,500 in<sup>3</sup> total airgun array volume)</b> <ul style="list-style-type: none"><li>• 2D Seismic-towed Streamer</li><li>• 2D Seismic-Sea-floor Cable or Nodes</li><li>• 3D Seismic-towed Streamer</li><li>• 3D Seismic-Sea-floor Cable or Nodes</li><li>• NAZ</li><li>• WAZ</li><li>• 4D (Time Lapse)</li><li>• Vertical Cable</li><li>• Borehole Seismic (VSP)</li></ul>
<input checked="" type="checkbox"/>	<b>Shallow Penetration Seismic (less than 1,500 in<sup>3</sup> total airgun array volume)</b> <ul style="list-style-type: none"><li>• Surface Vessel</li><li>• Surface Vessel and AUV/ROV</li><li>• Borehole Seismic (VSP)</li></ul>
<input type="checkbox"/>	<b>HRG Surveys (no airguns used)</b> <ul style="list-style-type: none"><li>• Surface vessel</li><li>• AUV/ROV</li><li>• Both</li></ul>
<input type="checkbox"/>	<b>Other</b> Describe (if Other):

**B. Date, Location, and Operations Information:**

<b>Question:</b>	<b>Response:</b>
<b>Purpose of the Activity:</b>	<p>Running a zero offset VSP along the WR425-4 wellbore to acquire better quality seismic to well tie within the target Wilcox interval then can be generated using the VSP that was run along the WR425-2 wellbore.</p> <p>The source will be stationary, hung off a rig crane.</p>
<b>Proposed Start Date:</b>	~June 15, 2023
<b>Proposed End Date:</b>	~June 17, 2023
<b>Overall Duration of the Activity (days):</b>	~2 days
<b>Well Name:</b>	Well No. 004 (API No. 60-812-40145-00)
<b>Lease Number(s):</b>	OCS-G 16987
<b>OCS Area(s):</b>	Walker Ridge
<b>OCS Lease Block(s):</b>	425
<b>Range of water depths (ft or m):</b>	8,841'
<b>Average water depth (ft or m):</b>	8,841'
<b>Areal extent of the survey area:</b> (in OCS lease blocks or km <sup>2</sup> ) (Attach GIS file(s) of survey lines and/or survey area perimeter)	1 lease block WR 425 – See attached map
<b>G&amp;G ITR/PEIS Modeling Zone(s) in which the activity will occur (1-7):</b>	7
<b>Number of days during the overall activity period on which the sound source(s) listed in Section C will operate:</b> (If the activity will occur in more than one Modeling Zone, provide the number of operating days within each modeling zone.)	~2 days (24 hours)

### C. Sound Sources:

- List all survey-related instruments that emit acoustic energy into the water column, including but not limited to airgun or airgun arrays, sub-bottom profilers, bubble pulsers, sparkers, side scan sonars, multi-beam sonars, single-beam echosounders, ultra-short baseline (USBL) position systems, pressure inverted echosounder (PIES), etc.
- For airgun arrays, please attach a diagram showing the layout (geometry) of the array and list of airgun sizes.

Array parameter	Array value
Manufacturer	Teledyne Marine
Model	Bolt Model 1500LL Source
Number of guns	6
Total volume (cu.in.)	1350.0 ( 22.1 litres)
Peak to peak in bar-m.	27.8 +/- 0.571 ( 2.78 +/- 0.0571 MPa, ~ 249 db re 1 muPa. at 1m.)
Zero to peak in bar-m.	16.1 ( 1.61 MPa, 244 db re 1 muPa. at 1m.)
RMS pressure in bar-m.	1.44 ( 0.144 MPa, 223 db re 1 muPa. at 1m.)
Primary to bubble (peak to peak)	41.5 +/- 1.79
Bubble period to first peak (s.)	0.119 +/- 0.00781
Maximum spectral ripple (dB): 10.0 - 50.0 Hz.	6.75
Maximum spectral value (dB): 10.0 - 50.0 Hz.	197
Average spectral value (dB): 10.0 - 50.0 Hz.	195
Total acoustic energy (Joules)	25840.1
Total acoustic efficiency (%)	8.5

Gun	Pressure (psi)	Volume (cuin)	Type	x (m.)	y (m.)	z (m.)	delay (s.)	sub-array	p-p contrib (pct.)
1	2000	300	1500LL	0	-0.5	3	0	1	17.9
2	2000	300	1500LL	0	0.5	3	0	1	17.9
3	2000	300	1500LL	2.2	-1	3	0	1	19
4	2000	150	1500LL	2.2	1	3	0	1	14.7
5	2000	150	1500LL	4.4	-1	3	0	1	15.2
6	2000	150	1500LL	4.4	1	3	0	1	15.3

*\*Modeled output using Gundalf software*

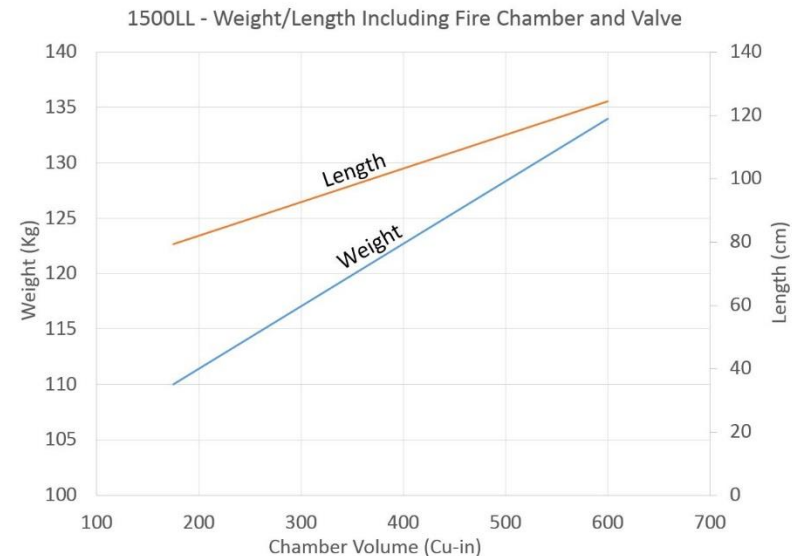
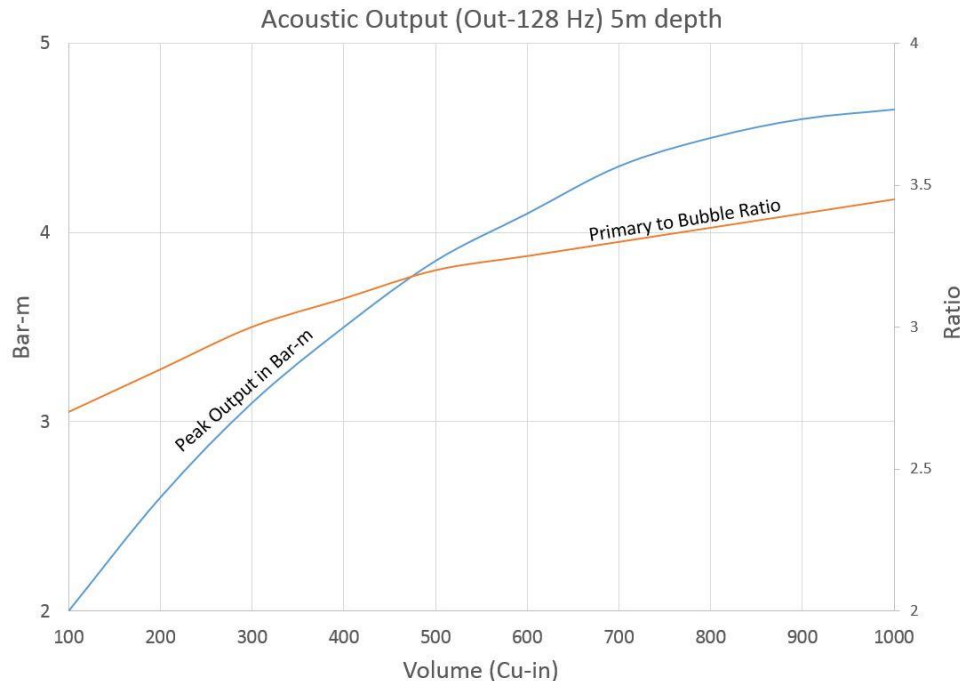
# Teledyne Bolt Model 1500LL Source

## Specifications:

Maximum O.D. 8.73 in./222 mm

Maximum Operating Pressure 2000 PSI / 138 Bar

Chamber Volumes 150-2000 cubic inch / 2.45 - 33 L



Contact Teledyne Bolt for measurements outside of charts range

presented by



**D. Vessel Information:**

<b>Vessel Type</b>	<b>Vessel Name</b>	<b>Registration Number</b>	<b>Registered Owner</b>	<b>Typical survey speed (knots)</b>	<b>Highest Travelling Speed (knots)</b>	<b>Home Port</b>
DP Drillship	Stanley Lafosse	IMO: 9623336 MMSI 636016002	Noble	NA	NA	Liberia
<b>Vessel/Activity Support Base:</b>		Port Fourchon, LA				
<b>Transit Route:</b> (Describe clearly or attach a map)		Direct from Port Fourchon to lease block.				

**E. Take Estimate:**

*[Insert the “Summary for NOAA” table here after completing all required inputs on the “Applicant Data Entry” spreadsheet in the Take Calculator Excel file or alternative tool developed with/by NMFS]*

Attached (Attachment 2).

# Attachment 2

## Gulf of Mexico Seismic Survey Exposure Calculator

Compute estimated marine animal exposures based on user-defined seasonal schedule, survey configuration, and location.

### Instructions:

- Select the survey type and zone number (2-7, operations in Zone 1 are not covered by the incidental take regulations) from the drop down lists (click in the cell to see the dropdown arrow)

- Type in the number of days of acquisition per season in the "Schedule" section (Winter: December - March, Summer: April - November)

Report tables are automatically updated based on user selections.

### Zone Map:

Parameters	
Survey Type	COIL
Zone Number	7

Schedule	
Season	# days
Summer	2
Winter	0

Exposures by Metric			
	Summer	Winter	Total
<b>Level A</b>			
<b>Low-Frequency Hearing Group</b>			
Bryde's whale	< 0.01	< 0.01	< 0.01
<b>High-Frequency Hearing Group</b>			
Kogia (dwarf, pygmy sperm whale)	0.50	< 0.01	0.50
<b>Level B</b>			
<b>Low-Frequency Hearing Group</b>			
Bryde's whale	< 0.01	< 0.01	< 0.01
<b>Mid-Frequency Functional Hearing Group</b>			
Beaked whales (Cuvier/Blainville/Gervais)	86.77	< 0.01	86.77
Bottlenose dolphin	0.39	< 0.01	0.39
Short-finned pilot whale	2.04	< 0.01	2.04
Sperm whale	9.54	< 0.01	9.54
Atlantic spotted dolphin	< 0.01	< 0.01	< 0.01
Clymene dolphin	38.36	< 0.01	38.36
False killer whale	13.96	< 0.01	13.96
Fraser's dolphin	6.54	< 0.01	6.54
Killer whale	1.40	< 0.01	1.40
Melon-headed whale	25.80	< 0.01	25.80
Pantropical spotted dolphin	380.88	< 0.01	380.88
Pygmy killer whale	12.34	< 0.01	12.34
Risso's dolphin	6.37	< 0.01	6.37
Rough-toothed dolphin	14.91	< 0.01	14.91
Spinner dolphin	8.94	< 0.01	8.94
Striped dolphin	19.93	< 0.01	19.93
<b>High-Frequency Hearing Group</b>			
Kogia (dwarf, pygmy sperm whale)	4.74	< 0.01	4.74

Level A Color Legend:	
	Level A SEL
	Level A Peak

\*If no color highlight, both Level A peak and SEL are <0.01

Total take, including Level B Scaling (where appropriate)		
Summer	Winter	Total
< 0.01	< 0.01	< 0.01
86.77	< 0.01	86.77
0.39	< 0.01	0.39
2.04	< 0.01	2.04
9.54	< 0.01	9.54
< 0.01	< 0.01	< 0.01
38.36	< 0.01	38.36
13.96	< 0.01	13.96
6.54	< 0.01	6.54
1.40	< 0.01	1.40
25.80	< 0.01	25.80
380.88	< 0.01	380.88
12.34	< 0.01	12.34
6.37	< 0.01	6.37
14.91	< 0.01	14.91
8.94	< 0.01	8.94
19.93	< 0.01	19.93
5.24	< 0.01	5.24



## F. Monitoring and Mitigation Plans:

Question:	Response:
Please indicate which set of monitoring and mitigation measures from the ITR apply to the planned activity:	All monitoring and mitigation measures in the ITRs applicable to Airgun Surveys with a total volume less than 1,500 cubic inches will be followed.  Appendix F of BOEM NTL No. 2009-G34  Appendices A, B, and C to NMFS 2020 BiOp for the GoMex Oil and Gas Program
Confirm that you will apply this set of monitoring and mitigation measures during the activity:	Yes, we will apply these measures during the VSP survey.

## G. Attach Certification

*Attach a certification signed by an authorized company official attesting that you will conduct your ancillary activity in accordance with the performance standards in 30 CFR 550.202(a), (b), (d), and (e) and any applicable protection measures listed in Appendix F of BOEM NTL No. 2009-G34 Reissued: June 19, 2020.*

Certification attached (Attachment 3).

## Attachment 3

### ANCILLARY ACTIVITIES CERTIFICATION

#### WALKER RIDGE BLOCK 425

#### LEASE OCS-G 16987

The proposed ancillary activities identified in this notification will be conducted in accordance with the performance standards in 30 CFR 550.202 (a)(b)(d) and (e) and applicable protective measures listed in Appendix F of BOEM NTL No. 2009-G34.

Reissued: June 19, 2020

Murphy Exploration & Production Company - USA

Lessee or Operator



A handwritten signature in black ink, appearing to be 'J. W.', is written over a horizontal line. The signature is cursive and extends to the right of the line.

Certifying Official

May 23, 2023

Date

## **H. Location Plat**

### **Map of Survey Area and Transit Route**

Attachments 4 and 5.

# Attachment 4

Y=9,646,560.00'

WR381

NOTES:

1. DP RIG STANLEY LAFOSSE SPUDDED WELL ON MAY 01, 2023.
2. FINAL SURFACE LOCATION REPRESENTS AFT ROTARY POSITION AT TIME OF SPUD IN.
3. OBSERVED ITRF COORDINATES (C-NAV, CURRENT REALIZATION AND EPOCH) TRANSFORMED TO NAD83(2011) VIA HTDP PROCESS EQUIVALENT TO "EPSG:7807, ITRF2008 TO NAD83(2011) (1)".
4. NAD83(2011) COORDINATES TRANSFORMED TO NAD27 VIA NADCON 2.1, EQUIVALENT TO "EPSG:1241, NAD27 TO NAD83 (1)" WHERE NAD83(2011) AND NAD83(86) ARE CONSIDERED FUNCTIONALLY THE SAME.
5. THE NUMBER OF SIGNIFICANT FIGURES OF THE COORDINATE VALUES AND DISTANCES SHOWN HEREON IS FOR THE SAKE OF MAINTAINING COMPUTATIONAL PRECISION/INTER CONVERTIBILITY AND SHOULD NOT BE CONSTRUED AS AN EXPRESSION OF ABSOLUTE SPATIAL ACCURACY.



FINAL SURFACE LOCATION OCS-G-16987 WELL No. 004	
X=	2,452,459.88'
Y=	9,636,283.58'
Lat=	26°32'05.298"N
Lon=	90°30'57.481"W
NAD83	
Lat=	26°32'06.352"N
Lon=	90°30'57.544"W

**WR425** □  
OCS-G-16987  
MURPHY □

WR426 □

## WALKER RIDGE AREA

OCS-G-16987  
Well No. 004 ST00BP00  
2,740.12'  
OCS-G-16987  
Well No. 001,002  
5,563.58'

WR469 □

OCS-G-16987  
Well No. 003,CH003  
OCS-G-16997  
Well No. 002,CH002  
OCS-G-16997  
Well No. CH004

Y=9,630,720.00'

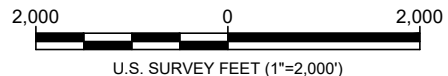
X=2,455,200.00'

### PUBLIC INFORMATION

I, ROBERT M. FROST, HEREBY CERTIFY THAT THE ABOVE FINAL SURFACE LOCATION IS CORRECT.

NOT CERTIFIED UNLESS  
ROBERT M. FROST  
License No. 4573  
*Robert M. Frost*  
ROBERT M. FROST  
PROFESSIONAL LAND SURVEYOR  
LOUISIANA REGISTRATION No. 4573

**MURPHY**  
OCS-G-16987 Well No. 004 ST00BP00  
BLOCK 425 - WALKER RIDGE AREA



PREPARED BY:



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

JOB: 211345	DRW: TRV	DATE: MAY 2, 2023
CKD: EJB	APP: RMF	SHEET 1 of 1
DOC: 211345-OII-DRW-ASD-004-01		



# Attachment 5

Murphy Exploration & Production Company - USA

Vicinity Map

Walker Ridge Block 425

