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Geophysical and Geological Reviews of Exploration Plans and Development Operations Coordination Documents

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Outline

Example Geophysical and Geological Reviews

Data Utilized

Plan Attachments

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Example Geophysical Review

Review : Geophysical Review **Control No:** **Type:** **Received:**

Operator : **Rig Type :**

Lease(s) : **Area/Block :**

Reviewer : Remark :

Completed :

Item	Response Text
1	*The information in the plan is sufficiently adequate, accurate, and comprehensive to perform a geophysical review*
2	*SHALLOW HAZARDS EVALUATION*
2.1	*High Res Survey Report:*
2.2	*HRG Data: (Echo, Sss, Spkr, CDP, Other)*
2.3	*Proximity: (Line#, Shot Point#, Line Spacing)*
2.4	*WD/Seafloor:*
2.5	*Fndn:*
2.6	*Gas:*
2.7	*Fault:*
2.8	*Other:*

Item	Response Text
3	*DEEP SEISMIC EVALUATION*
3.1	*Seismic Data:*
3.2	*Proximity: (Line#, Shot Point#, Line Spacing)*
3.3	*Structure:*
3.4	*Bright Spot:*
3.5	*D Fault:*
3.6	*Domal Material:*
3.7	*Possible Abnormal Pressures:*

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Example Geological Review

Review : Geological Review **Control No:** **Type:** **Received:**

Operator : **Rig Type :**

Lease(s) : **Area/Block :**

Reviewer : Remark :

Completed :

Item	Response Text
1	***Is the information in the plan sufficient to perform a geological review?***
2	***Shallow Hazards:***
3	***Domal material***
4	***Deep bright spots and faults, and other possible lost circulation zones:***
5	***Geopressure and possible abnormal pressure zones:***
6	***Distance from nearest well or platform:***
7	***Geologic setting of the trap:***
8	***H2S information and classification:***
9	***Remarks:***
10	***Geologic review conclusion and recommendations:***

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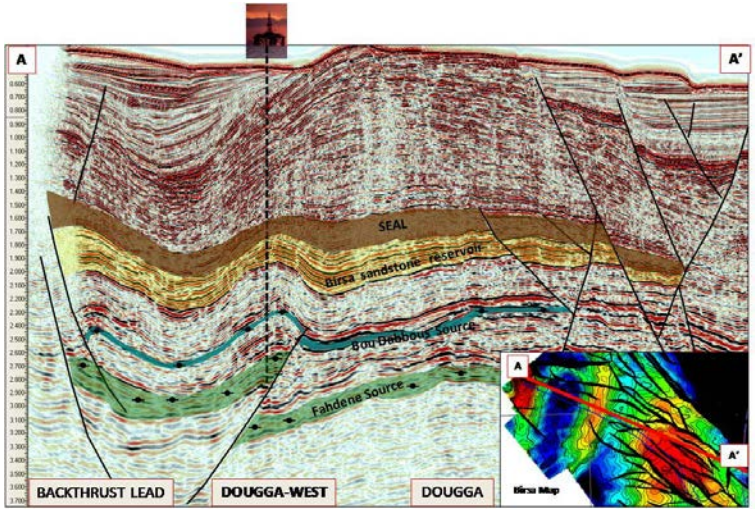
What Do We Use?

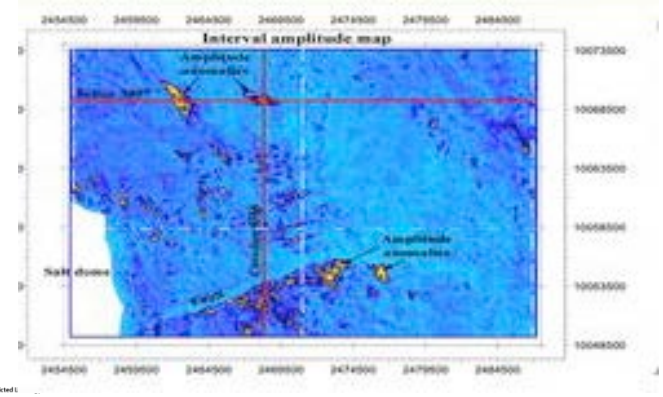
- **Operator Submitted Plan**

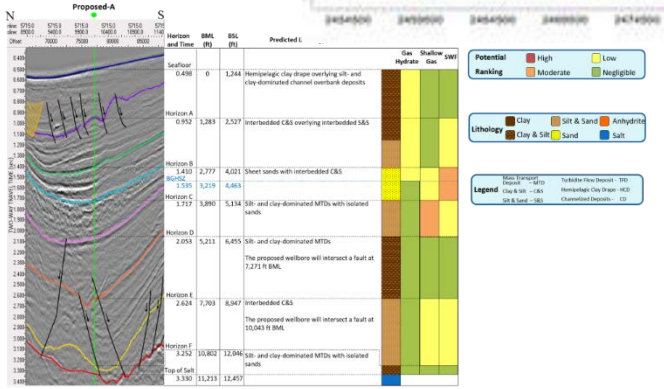
  -- **Maps and cross-sections**

  -- **Hazard Assessments**

  -- **Data at Wells**







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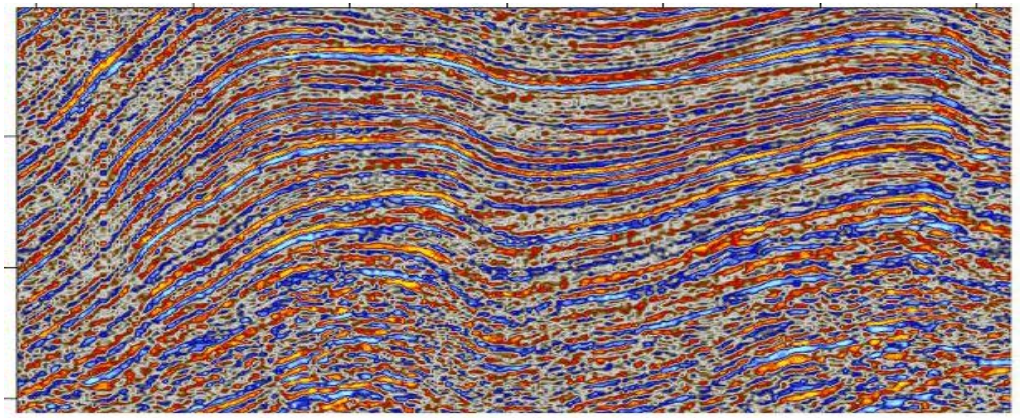
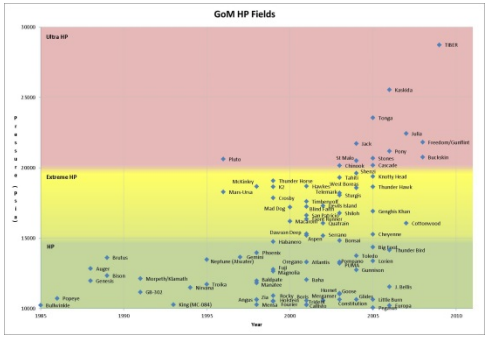
What Do We Use? (cont.)

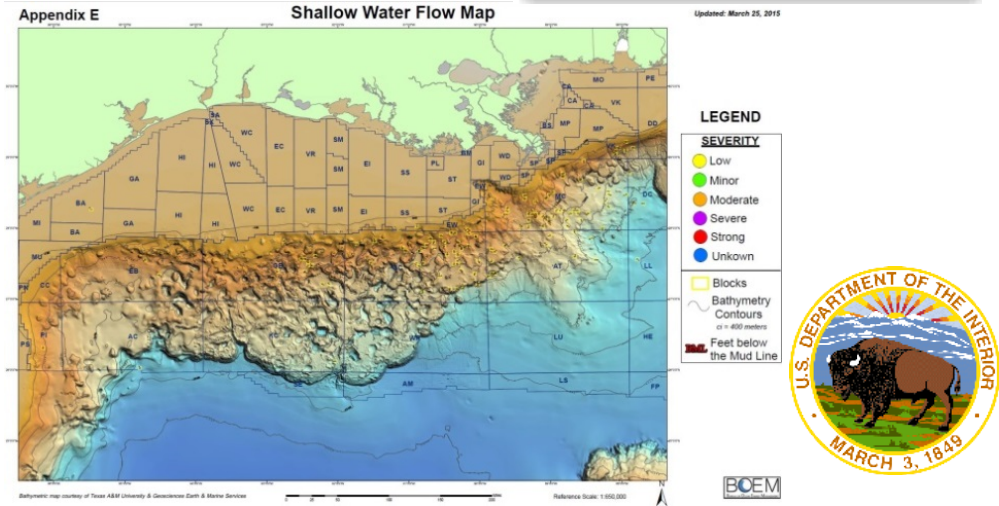
-- In-House Seismic



-- In-House Databases
- IHS formation pressure db
- Hydrogen sulfide (H_2S) db



-- Reference Maps



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Plan Attachments Required for G&G Reviews

- Shallow hazards reports
  - ✓ (usually sent to BOEM months/years prior to Plan)
- Shallow hazards assessments
  - ✓ Site clearance letters
  - ✓ Top-hole prognosis
  - ✓ High resolution seismic lines
- Geologic structure contour maps
- Geologic cross-sections
- 3D/2D Seismic cross-sections
- Biostratigraphic columns

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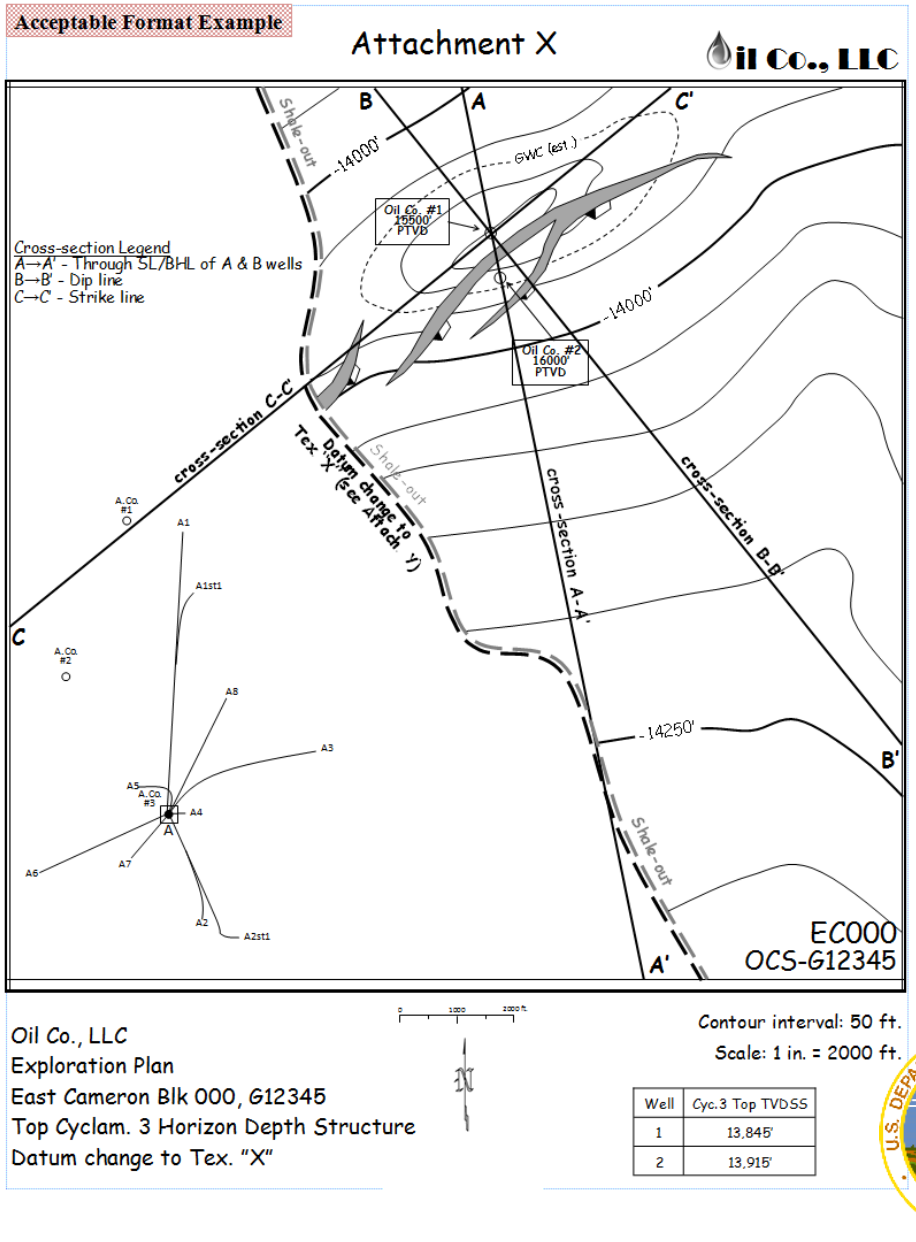
Geologic Structure Contour Maps

- **Wellpaths**
- **Depths to targets**
- **Locations of cross-sections**



Non-proprietary data and interpretation

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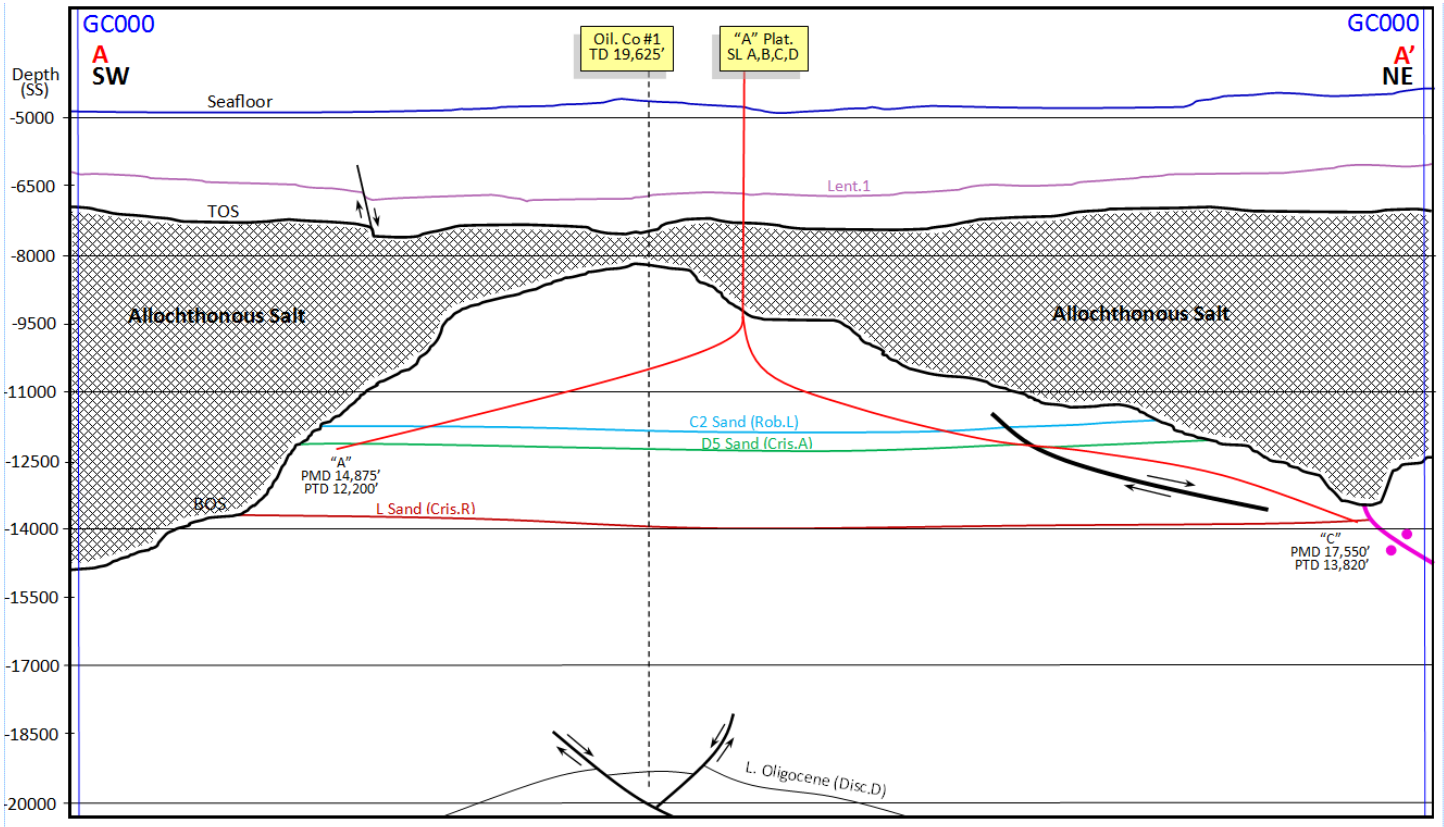
Geologic Cross-sections



Attachment 3B

Acceptable Format Example

Oil Co., LLC

Non-proprietary data and interpretation

Geologic Cross-section A → A'	
Field: Sparta	**Version:** 1.0
Mapped by: K. Kramer	**Date Created:** 4/1/2014

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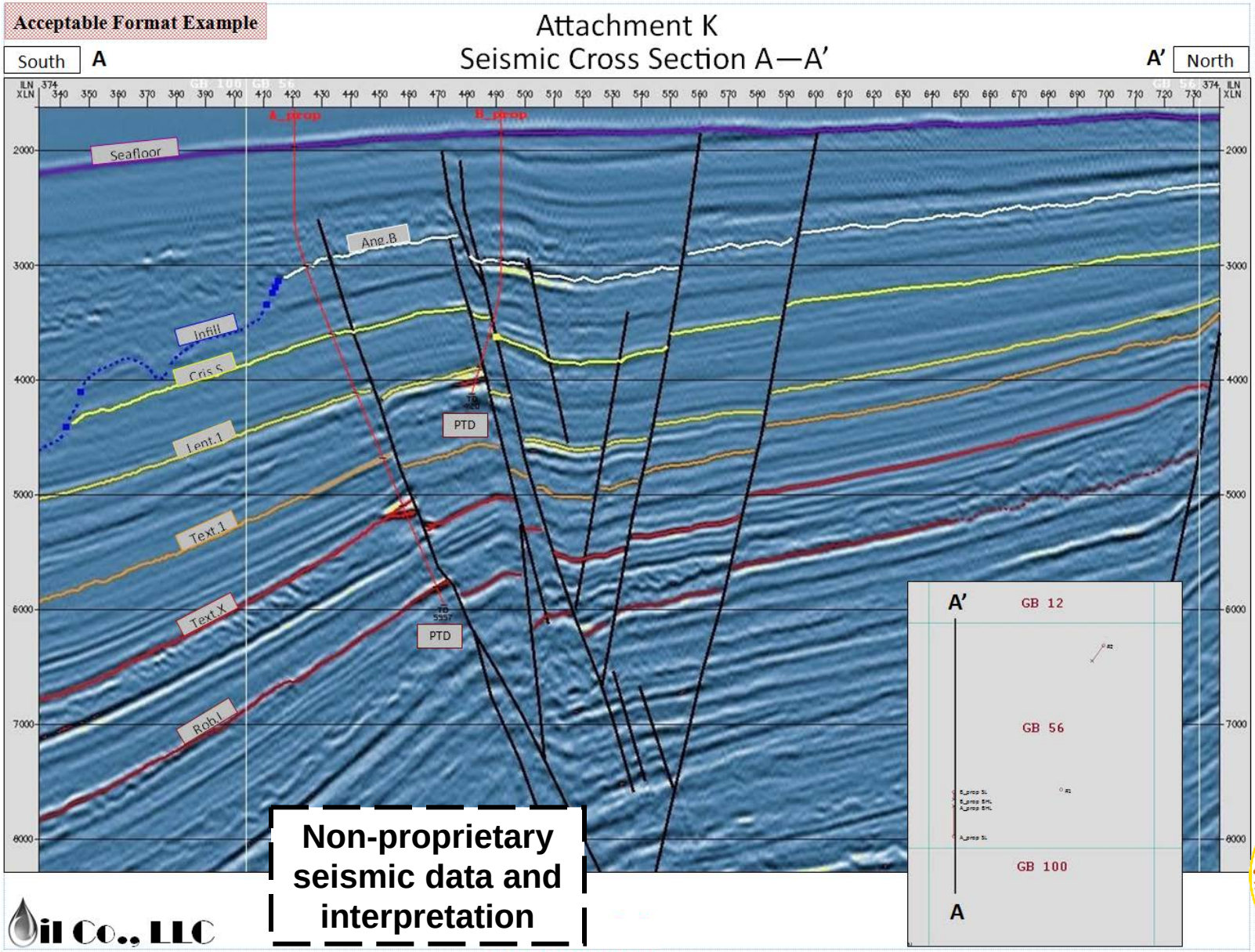
3D/2D Seismic Cross-sections



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Biostratigraphic Columns

Stratigraphic Column
Walker Ridge Block 000 Well A

Age	Depth (ft)	Lithology	Paleo	Targets
	3,750	Water		
Pleistocene	4,000	Unconsolidated drape		
Jurassic Allochthonous Salt	5,000 6,000 7,000 8,000 9,000 10,000 11,000	Salt		
U. Miocene	12,000 13,000	Interbedded Sands and Shales	Tex. X	
M. Miocene	14,000			
L. Miocene	15,000		Disc. B	
Oligocene	16,000 17,000 18,000 19,000 20,000	Marl and Sheet Sands	Rob. A	
Eocene	21,000 22,000 23,000	Turbidite Sands	Glob. bul.	**Target interval** **Wilcox 1 - 22,500**
Paleocene	24,000 25,000		Disc. w.	**Wilcox 2 - 24,950**
Cretaceous	26,000	Carbonate		TD 26,100

Non-proprietary data