

## Application for Sidetrack

**Lease** G23516    **Area/Block** DC 491    **Well Name** 001    **ST** 01    **BP** 00    **Well Type** Exploration  
**Application Status** Approved    **Operator** 00981    Anadarko Petroleum Corporation

**Pay.gov**    **Agency**    **Pay.gov**  
**Amount:** \$1,959    **Tracking ID:** EWL-AST-13167    **Tracking ID:** 25ATHMO8

### General Well Information

<b>API Number</b> 608234002001	<b>Approval Date</b> 05/28/2013	<b>Approved By</b> Mark Hasenkampf
<b>Date of Request</b> 05/26/2013	<b>Req Spud Date</b> 05/27/2013	<b>Kickoff Point</b> 15257
<b>Water Depth (ft.)</b> 8169	<b>Drive Size (in)</b> 36	<b>Mineral Code</b> Hydrocarbon
<b>RKB Elevation</b> 87	<b>Drive Depth (ft.)</b> 8576	<b>Subsea BOP</b> Yes
<b>Verbal Approval Date</b>		<b>Verbal Approval By</b>

### Proposed Well Location

#### Surface Location

<b>LEASE (OCS)</b> G23520	<b>Area/Block</b> DC 535	<b>Authority</b> Federal Lease	
<b>Entered NAD 27 Data</b>	<b>Calculated NAD 27 Departures</b>	<b>Calculated NAD 27 X-Y Coordinates</b>	
<b>Lat:</b> 28.45270185	N 1820	<b>X</b>	1445419.843085
<b>Lon:</b> -87.60702959	W 3980	<b>Y</b>	10325860.277264
<b>Surface Plan</b> S 7533	<b>Plan Lease (OCS)</b> G23520	<b>Area/Block</b>	DC 535

#### Bottom Location

<b>LEASE (OCS)</b> G23516	<b>Area/Block</b> DC 491		
<b>Entered NAD 27 Data</b>	<b>Calculated NAD 27 Departures</b>	<b>Calculated NAD 27 X-Y Coordinates</b>	
<b>Lat:</b> 28.46275528	S 1818	<b>X</b>	1448599.821076
<b>Lon:</b> -87.59718694	W 7160	<b>Y</b>	10329498.424625
<b>Bottom Plan</b> S 7533	<b>Plan Lease (OCS)</b> G23516	<b>Area/Block</b>	DC 491

### Approval Comments

#### Mitigations:

In response to the request accompanying your plan for a hydrogen sulfide (H2S) classification, the area in which the proposed drilling operations are to be conducted is hereby classified, in accordance with 30 CFR 250.490(c), as "H2S present." Accordingly, comply with the appropriate requirements of 30 CFR 250.490.

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### Geologic Information

<b>H2S Designation</b> Known	<b>H2S TVD</b>
<b>Anticipated Geologic Markers</b>	
<b>Name</b>	<b>Top MD</b>
Cotton Valley Shale	18000
Cotton Valley Lime	20467
Norphlet	23115
Louann Salt	23790

### Rig Information

<b>RIG SPECIFICATIONS</b>		<b>ANCHORS</b>	No
<b>Rig Name</b>	ENSCO 8506	<b>ID Number</b>	51262
<b>Type</b>	DP SEMISUBMERSIBLE	<b>Constucted Year</b>	2012
<b>Function</b>	DRILLING	<b>Refurbished Year</b>	
<b>Shipyard</b>	KFELS SINGAPORE		
<b>RATED DEPTHS</b>			
<b>Water Depth</b>	10000	<b>Drill Depth</b>	35000
<b>CERTIFICATES</b>			
<b>ABS/DNV</b>		<b>Coast Guard</b>	
<b>SAFE WELDING AREA</b>			
<b>Approval Date</b>	12/11/2012	<b>District</b>	2
<b>Remarks</b>			

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Number	Question	Response	Response Text
1	Will you maintain quantities of mud and mud material (including weight materials and additives) sufficient to raise the entire system mud weight 1/2	NO	A minimum of 1,000 sacks of barite will be kept available on board.
2	If hydrocarbon-based or synthetic-based drilling fluids were used, is the drilling rig outfitted for zero discharge, and will zero discharge procedure?	NO	
3	If drilling the shallow casings strings riserless, will you maintain kill weight mud on the rig and monitor the wellbore with an ROV to ensure that it	N/A	
4	If requesting a waiver of the conductor casing, have you submitted a log to government agency G&G that is with in 500 feet of the proposed bottor	N/A	
5	Will the proposed operation be covered by an EPA Discharge Permit? (please provide permit number in comments for this question)	YES	Region 4 Permit #GEG460893
6	Will all wells in the well bay and related production equipment be shut-in when moving on to or off of an offshore platform, or from well to we	N/A	
7	Is the calculated daily volume possible from an uncontrolled blowout of this well greater than the daily volume included in the worst case discharge	NO	
8	Has the drilling rig been approved for the use of digital BOP testing? If yes, which version?	YES	SureTec Version 2.4

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### Permit Attachments

File Type	File Description	Status
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### Required Attachments

pdf	Drilling prognosis and summary of drilling, cementing, and mud processes	Attached
pdf	Directional Program	Attached
pdf	Proposed Well Location Plat	Attached
pdf	Engineering Calculation	Attached
pdf	BOP stack certification including statement regarding any modifications made since last certification	Attached
pdf	Proposed Wellbore Schematic	Attached
pdf	BOP & Diverter Schematics with Operating Procedures	Attached
pdf	Blind-shear ram capability and certification	Attached
pdf	Pore pressure (PP), Mud Weight (MW), and Fracture Gradient (FG) Plot	Attached

### Optional/Supplemental Attachments

pdf	Safe Welding Area Drawing	Attached
pdf	ABS/DNV Certificate	Attached
pdf	U.S. Coast Guard Certificate	Attached
pdf	Departure List	Attached
pdf	24. Ensco 8506 Section I - Gen. Arrangement Drawings	Attached
pdf	14. PE Certification	Attached
pdf	22. NTL 2010 N10 Statement of Compliance	Attached
pdf	21. WCST - Level 1	Attached
pdf	20. Accidental Disconnect of Marine Riser	Attached
pdf	19. Well Control Procedures	Attached
pdf	18. Positive & Negative Test Procedures	Attached
pdf	17. Suspension of Ops for Adverse Conditions	Attached

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pdf	16. API RP 65 Part 2 Compliance Questions	Attached
pdf	15. Geological Prognosis	Attached
pdf	25. Ensco 8506 Section II - Regulatory Certificates & Docs	Attached
pdf	26. Ensco 8506 Section IV - EEP	Attached
pdf	27. Ensco 8506 H2S Certificates	Attached
pdf	28. Ensco 8506 H2S Plan - Approved	Attached
pdf	23. 9.875 x 11.875 Casing and Liner Hangar	Attached

### Contacts Information

<b>Name</b>	Teri Powell
<b>Company</b>	00981                      Anadarko Petroleum Corporation
<b>Phone Number</b>	832-636-1261
<b>E-mail Address</b>	teri.powell@anadarko.com
<b>Contact Description</b>	
<b>Name</b>	Stacey Ferrell
<b>Company</b>	00981                      Anadarko Petroleum Corporation
<b>Phone Number</b>	832-636-8899
<b>E-mail Address</b>	stacey.ferrell@anadarko.com
<b>Contact Description</b>	
<b>Name</b>	Bridget O'Farrell-Villarreal
<b>Company</b>	00981                      Anadarko Petroleum Corporation
<b>Phone Number</b>	832-636-1694
<b>E-mail Address</b>	bridget.ofarrell-villarreal@anadarko.com
<b>Contact Description</b>	

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<b>Name</b>	Jill Fowler
<b>Company</b>	00981                      Anadarko Petroleum Corporation
<b>Phone Number</b>	832-636-1554
<b>E-mail Address</b>	jill.fowler@anadarko.com
<b>Contact Description</b>	
<b>Name</b>	Gaylene Reier
<b>Company</b>	00981                      Anadarko Petroleum Corporation
<b>Phone Number</b>	832-636-3096
<b>E-mail Address</b>	gaylene.reier@anadarko.com
<b>Contact Description</b>	
<b>Name</b>	Bob Quitzau
<b>Company</b>	00981                      Anadarko Petroleum Corporation
<b>Phone Number</b>	832-636-1551
<b>E-mail Address</b>	robert.quitzau@anadarko.com
<b>Contact Description</b>	Drilling Engineer
<b>Name</b>	Ryan Smith
<b>Company</b>	00981                      Anadarko Petroleum Corporation
<b>Phone Number</b>	832-636-1487
<b>E-mail Address</b>	ryan.smith2@anadarko.com
<b>Contact Description</b>	Drilling Engineer

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Lease G23516 Area/Block DC 491 Well Name 001 ST 01 BP 00 Well Type Exploration  
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### Well Design Information

Interval Number 1		Type	Casing	Name			Conductor	
Section Number	Casing Size (in)	Casing Weight (lb/ft)	Casing Grade	Burst Rating	Collapse Rating (psi)	Depth (ft) MD TVD		Pore Pressure (ppg)
1	28.000	218.5	X-56	2630	950	9186	9186	8.7

GENERAL INFORMATION			PREVENTER INFORMATION			TEST INFORMATION		
Hole Size (in)	32.000		Type	No Preventers		Annular Test (psi)	0	
Mud Weight (ppg)	8.9		Size (in)	N/A		BOP/Diverter Test (psi)	0	
Mud Type Code	Water Base		Wellhead Rating (psi)	0		Test Fluid Weight (ppg)	0.0	
Fracture Gradient (ppg)	9.4		Annular Rating (psi)	0		Casing/Liner Test (psi)	0	
Liner Top Depth (ft)	8253.0		BOP/Diverter Rating (psi)	0		Formation Test (ppg)	0.0	
Cement Volume (cu ft)	1700							

Interval Number 2		Type	Casing	Name			Surface	
Section Number	Casing Size (in)	Casing Weight (lb/ft)	Casing Grade	Burst Rating	Collapse Rating (psi)	Depth (ft) MD TVD		Pore Pressure (ppg)
1	22.000	224.2	X- 80	6360	3870	11393	11393	9.1

GENERAL INFORMATION			PREVENTER INFORMATION			TEST INFORMATION		
Hole Size (in)	26.000		Type	Blowout		Annular Test (psi)	3500	
Mud Weight (ppg)	9.1		Size (in)	18.75		BOP/Diverter Test (psi)	5000	
Mud Type Code	Water Base		Wellhead Rating (psi)	15000		Test Fluid Weight (ppg)	8.6	
Fracture Gradient (ppg)	10.9		Annular Rating (psi)	10000		Casing/Liner Test (psi)	2400	
Liner Top Depth (ft)	8253.0		BOP/Diverter Rating (psi)	15000		Formation Test (ppg)	10.9	
Cement Volume (cu ft)	3820							

Interval Number 3		Type	Liner	Name			Intermediate	
Section Number	Casing Size (in)	Casing Weight (lb/ft)	Casing Grade	Burst Rating	Collapse Rating (psi)	Depth (ft) MD TVD		Pore Pressure (ppg)
1	18.000	116.1	Q125HP	8450	2860	13780	13780	9.4

GENERAL INFORMATION			PREVENTER INFORMATION			TEST INFORMATION		
Hole Size (in)	21.000		Type	Blowout		Annular Test (psi)	4000	
Mud Weight (ppg)	9.7		Size (in)	18.75		BOP/Diverter Test (psi)	5000	
Mud Type Code	Synthetic Base		Wellhead Rating (psi)	15000		Test Fluid Weight (ppg)	9.7	
Fracture Gradient (ppg)	11.3		Annular Rating (psi)	10000		Casing/Liner Test (psi)	2100	
Liner Top Depth (ft)	10409.0		BOP/Diverter Rating (psi)	15000		Formation Test (ppg)	11.3	
Cement Volume (cu ft)	1180							

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Interval Number 4		Type	Liner			Name		Intermediate	
Section Number	Casing Size (in)	Casing Weight (lb/ft)	Casing Grade	Burst Rating	Collapse Rating (psi)	Depth (ft) MD TVD		Pore Pressure (ppg)	
1	16.000	97.0	Q125HP	8740	3150	15257	15257	9.4	

GENERAL INFORMATION			PREVENTER INFORMATION			TEST INFORMATION		
Hole Size (in)	19.000		Type	Blowout		Annular Test (psi)	4500	
Mud Weight (ppg)	9.8		Size (in)	18.75		BOP/Diverter Test (psi)	5000	
Mud Type Code	Synthetic Base		Wellhead Rating (psi)	15000		Test Fluid Weight (ppg)	9.8	
Fracture Gradient (ppg)	12.1		Annular Rating (psi)	10000		Casing/Liner Test (psi)	1500	
Liner Top Depth (ft)	9993.0		BOP/Diverter Rating (psi)	15000		Formation Test (ppg)	12.1	
Cement Volume (cu ft)	1050							

Interval Number 5		Type	Casing			Name		Intermediate	
Section Number	Casing Size (in)	Casing Weight (lb/ft)	Casing Grade	Burst Rating	Collapse Rating (psi)	Depth (ft) MD TVD		Pore Pressure (ppg)	
1	14.000	114.5	T95	9920	9180	15257	15257	10.5	

GENERAL INFORMATION			PREVENTER INFORMATION			TEST INFORMATION		
Hole Size (in)	16.500		Type	Blowout		Annular Test (psi)	5000	
Mud Weight (ppg)	11.0		Size (in)	18.75		BOP/Diverter Test (psi)	5000	
Mud Type Code	Synthetic Base		Wellhead Rating (psi)	15000		Test Fluid Weight (ppg)	12.2	
Fracture Gradient (ppg)	11.7		Annular Rating (psi)	10000		Casing/Liner Test (psi)	2850	
Liner Top Depth (ft)	8253.0		BOP/Diverter Rating (psi)	15000		Formation Test (ppg)	11.7	
Cement Volume (cu ft)	760							

Interval Number 6		Type	Liner			Name		Intermediate	
Section Number	Casing Size (in)	Casing Weight (lb/ft)	Casing Grade	Burst Rating	Collapse Rating (psi)	Depth (ft) MD TVD		Pore Pressure (ppg)	
1	11.875	71.8	Q125-CC	11910	7190	20081	19000	10.7	

GENERAL INFORMATION			PREVENTER INFORMATION			TEST INFORMATION		
Hole Size (in)	14.000		Type	Blowout		Annular Test (psi)	5000	
Mud Weight (ppg)	11.2		Size (in)	18.75		BOP/Diverter Test (psi)	5000	
Mud Type Code	Synthetic Base		Wellhead Rating (psi)	15000		Test Fluid Weight (ppg)	11.2	
Fracture Gradient (ppg)	13.1		Annular Rating (psi)	10000		Casing/Liner Test (psi)	2500	
Liner Top Depth (ft)	14947.0		BOP/Diverter Rating (psi)	15000		Formation Test (ppg)	13.1	
Cement Volume (cu ft)	570							

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Interval Number 7		Type Liner			Name Intermediate			
Section Number	Casing Size (in)	Casing Weight (lb/ft)	Casing Grade	Burst Rating	Collapse Rating (psi)	Depth (ft) MD    TVD		Pore Pressure (ppg)
1	9.875	62.8	Q125 HP	14960	12910	22743	21200	12.4
<b>GENERAL INFORMATION</b>			<b>PREVENTER INFORMATION</b>			<b>TEST INFORMATION</b>		
Hole Size (in)                      12.250			Type                                      Blowout			Annular Test (psi)                      5000		
Mud Weight (ppg)                      12.5			Size (in)                                  18.75			BOP/Diverter Test (psi)                5000		
Mud Type Code                      Synthetic Base			Wellhead Rating (psi)                15000			Test Fluid Weight (ppg)                12.5		
Fracture Gradient (ppg)                14.5			Annular Rating (psi)                10000			Casing/Liner Test (psi)                3000		
Liner Top Depth (ft)                    19294.0			BOP/Diverter Rating (psi)            15000			Formation Test (ppg)                    14.5		
Cement Volume (cu ft)                990								

Interval Number 8		Type Open Hole			Name Open Hole			
Section Number	Casing Size (in)	Casing Weight (lb/ft)	Casing Grade	Burst Rating	Collapse Rating (psi)	Depth (ft) MD    TVD		Pore Pressure (ppg)
1						24321	22684	11.3
<b>GENERAL INFORMATION</b>			<b>PREVENTER INFORMATION</b>			<b>TEST INFORMATION</b>		
Hole Size (in)                      8.500			Type                                      Blowout			Annular Test (psi)                      5000		
Mud Weight (ppg)                      12.2			Size (in)                                  18.75			BOP/Diverter Test (psi)                5000		
Mud Type Code                      Synthetic Base			Wellhead Rating (psi)                15000			Test Fluid Weight (ppg)                0.0		
Fracture Gradient (ppg)                12.9			Annular Rating (psi)                10000			Casing/Liner Test (psi)                0		
Liner Top Depth (ft)			BOP/Diverter Rating (psi)            15000			Formation Test (ppg)                    0.0		
Cement Volume (cu ft)								

PAPERWORK REDUCTION ACT OF 1995 (PRA) STATEMENT: The PRA (44 U.S.C. 3501 et seq. Requires us to inform you that we collect this information to obtain knowledge of equipment and procedures to be used in drilling operations. MMS uses the information to evaluate and approve or disapprove the adequacy of the equipment and/or procedures to safely perform the proposed drilling operation. Responses are mandatory (43 U.S.C. 1334). Proprietary data are covered under 30 CFR 250.196. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB Control Number. Public reporting burden for this form is estimated to average 27 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form for the Information Collection Clearance Officer, Mail Stop 4230, Minerals Management Service, 1849