

Standard Operating Procedures Drilling Operations Field Operations, GOM



Prepared by the Drilling Team

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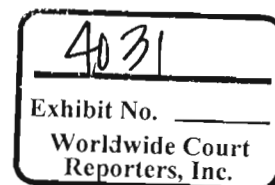
Dave Trocquet

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Sponsor – John McCarroll

June 15, 2008

Highly Confidential



IMS020-011185



Drilling

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Standard Operating Procedure E-Well APDs Field Operations, GOM



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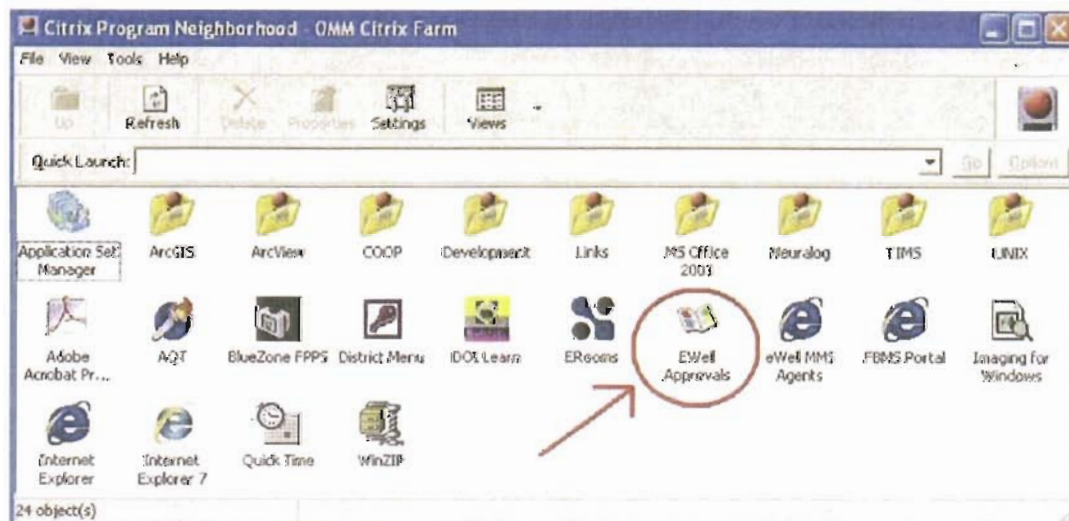
June 15, 2008

Drilling EWell APD's

1. Click on "Citrix Program Neighborhood" on the desktop.



2. Click on "EWell Approvals" in Citrix Program Neighborhood.



- Once you have accessed the EWell Site, click on the "Well Drilling Status Summary" which is located underneath the Well Permit Applications and Revisions. This will give you access to all submittals permitted for drilling, sidetrack, and bypass operations.

MMS Home What's New Help Suggestions Logout U.S. Department of the Interior

EWell Approval You are not logged in...

MMS Main Menu

WELL PERMIT APPLICATIONS AND REVISIONS

- Well Drilling Status Summary
- Well Modification Status Summary
- Geological and Geophysical Review

WELL REPORTS

- Rig Movement Notification Report
- Well Activity Report
- Open Hole Data Report
- End of Operation Report
- Correction Report

NON HURRICANE-RELATED INCIDENT AND PIPELINE DAMAGE REPORTS

- Incident Reports
- Pipeline Damage Reports

- After you have clicked on the Well Drilling Status Summary, it will take you to the EWell login screen. Enter your "User ID" and "Password" and click "Login".

MMS Home What's New Help Suggestions Logout U.S. Department of the Interior

EWell Approval You are not logged in...

WARNING:

This is a United States Government computer system, maintained by the Department of the Interior, to provide Official Unclassified U.S. Government information only. Use of this computer system by any authorized or unauthorized user constitutes consent to monitoring, retrieval, and disclosure by authorized personnel. USERS HAVE NO REASONABLE EXPECTATION OF PRIVACY IN THE USE OF THIS SYSTEM. Unauthorized use may subject violators to criminal, civil, and/or disciplinary action.

Login

User ID:

Password:

5. Select type of "Wells", type of "Permit to View" and "Status". You may also query by "District" or "Base API" or "Bottom Lease". The following are an explanation of headings:
 - A) Under the "Wells" heading, you may choose "All", "Not Completed" or "Completed". This selection refers to the wellbore status in TIMS.
 - B) Under the "Status" heading, there are 8 possible selections: "All" – Will query all permit statuses except Pending and Returned, "Submitted" – Will only query a permit that has been initially submitted, "Pre-approval" – Will only query a permit that has been placed in pre-approval by a field engineer, "Pending" – Will only query permits that are pending from the operator and have not been submitted, "Resubmitted" – Will only query permits that have been resubmitted, "Approved" – Will only query permits that have been approved, "Returned" – Will only query permits that have been returned to the operator for corrections, "In-Review" – Will only query permits that are in review.
 - C) The "District" heading allows you to select permits from one or all Districts. The "Base API" allows you to query a permit by its 10 digit API Number and the "Bottom Lease" allows you to query a permit by its Bottom Lease Number. The "Timeframe" heading allows you to query permits from the previous 3 months, previous 6 months, previous year and all permits.
 - D) After you have selected your Query Criteria, click the submit button.

MMS Well Drilling Approval
U.S. Department of the Interior
Welcome RINAUDOM, you are logged in.

Permit Status Summary

Please enter the following information

Query Criteria:

Wells:
☒ All ☐ Not Completed ☐ Completed

Type of Permits to view:
☒ APD/RPD - Application/Revision for Permit to Drill
 ☐ AST/RST - Application/Revision to Sitetrack
 ☐ ABP/RBP - Application/Revision to Bypass

Status:
☐ All (no Pending, Returned) ☐ Pending ☐ Returned
☐ Submitted ☐ Resubmitted ☒ In-review
☐ Pre-approval ☐ Approved

District:
 New Orleans District
 Houma District
 Lafayette District
 Lake Jackson District
 Lake Charles District
 All

Timeframe: previous 3 months

OR OR

Base API: Bottom Lease:

Submit

6. After you have clicked the "Submit" button, the following screen will be displayed.

Type of Permits to view:

☒ APD/RPD - Application/Revision for Permit to Drill ☐ AST/RST - Application/Revision to Sidetrack ☐ ABP/RBP - Application/Revision to Bypass

Status:

☐ All (no Pending, Returned) ☐ Pending ☐ Returned

☐ Submitted ☐ Resubmitted ☒ In-review

☐ Pre-approval ☐ Approved

District:
 New Orleans District
 Houma District
 Lafayette District
 Lake Jackson District
 Lake Charles District
 All

OR

Base API:
 Bottom Lease:

Timeframe: previous 3 months

Submit

View Permit Report

	API	Operator Name	WELL			BOTTOM			SURFACE			PERMIT TYPE	PERMIT		Payment Status
			Name	ST	BP	Area	Block	Lease	Area	Block	Lease		Status	Last Action Date	
<input type="radio"/>	unassigned	Walter Oil & Gas Corporation	001	00	00	EI	383	G24914	EI	383	G24914	New Well	In-review	02/27/2008	Paid
<input type="radio"/>	unassigned	Callon Petroleum Operating Company	003	00	00	GB	782	G20797	GB	782	G20797	New Well	In-review	02/28/2008	Not Paid

View Permit Report

7. You may then select the permit by clicking on the radio button next to the permit and selecting the "View Permit" button. The "Report" button will allow you to view the permits report.

View Permit Report

	API	Operator Name	WELL			BOTTOM			SURFACE			PERMIT TYPE	PERMIT		Payment Status
			Name	ST	BP	Area	Block	Lease	Area	Block	Lease		Status	Last Action Date	
<input checked="" type="radio"/>	unassigned	Walter Oil & Gas Corporation	001	00	00	EI	383	G24914	EI	383	G24914	New Well	In-review	02/27/2008	Paid
<input type="radio"/>	unassigned	Callon Petroleum Operating Company	003	00	00	GB	782	G20797	GB	782	G20797	New Well	In-review	02/28/2008	Not Paid

View Permit Report

8. Once the permit is selected, click the "Status" tab and select "In-Review". You will then select the "Submit" button to place the permit In-Review. This will allow you to create a geological and/or geophysical review. If it is a platform well, only the first well will need both, after that, only a geological is needed. An exploratory well will need both unless it is within 100' of a previously drilled well's surface location in water depths <1312' or within 500' of a previously drilled well in water depths >1312'. If that is the case, only a geological review is needed.

MMS Well Drilling Approval U.S. Department of the Interior

Home What's New Help Suggestions Logout

Status View Calculation G&G Review Main Menu

Status History

In-Review

Return Submittal

Pre-Approval

Approval

25561 Area Block: HI 170 Well: 007 ST: 00 BP: 00

New Well Operator: LLOO Exploration Offshore, Inc. District: Lake Jackson District

Payment Status: Paid on 26-Feb-2008 1 25 PM Agency Tracking ID: EWL-APD-6339 Pay.gov Tracking ID: 14UUQ7J

Status: In-review

Comments to Operator:

Submit Cancel

Status History

Status	Date	Updated by	Comments to Operator
Pending	02/22/2008	benoitd	User Generated
Submitted	02/26/2008	benoitd	
In-review	02/27/2008	FOWLERR	Ready to review 2/27/2008
Returned	03/11/2008	FOWLERR	For correction as per items E-mailed this date
Resubmitted	03/17/2008	benoitd	

9. The below screen will allow you to create either a Geological and/or a Geophysical Review by checking the box next to the review and selecting the "Create Review" Button.

MMS Well Drilling Approval U.S. Department of the Interior

Home What's New Help Suggestions Logout

Status View Calculation G&G Review Main Menu

Generate Reviews

Lease: 015616 Area Block: 00 782 Well: 013 ST: 00 BP: 00

Permit Type: New Well Operator: BP Exploration & Production Inc. District: Houma District

Payment Status: Paid on 11-Mar-2008 12:45 PM Agency Tracking ID: EWL-APD-6455 Pay.gov Tracking ID: 24UJL6HU

Select all that apply:

☐ Geological Review

☐ Geophysical Review

Create Review

G & G Reviews have not been created yet

10. This screen verifies the G&G Review you have selected. This screen is accessed by clicking on the G&G Review tab and going to Generate reviews.

MMS Home What's New Help Suggestions Logout U.S. Department of the Interior

Status View Calculation G&G Review Main Menu

Generate Reviews

Lease: 023193 AreaBlock: HI 47 Well: 004 ST: 00 BP: 00

Permit Type: New Well Operator: Tana Exploration Company LLC District: Lake Jackson District

Payment Status: Paid on 03 Feb 2008 3:08 PM Agency Tracking ID: EWL-APD-6316 Pay.gov Tracking ID: 24U3KQM

Select all that apply:

☐ Geological Review

☐ Geophysical Review

Current Geological and Geophysical APD Reviews					
	Review	APD Sent	APD Received	Review Completed	Info Adequate
<input type="radio"/>	Geological Review	02/21/2008	02/27/2008	02/27/2008	Y
<input type="radio"/>	Geophysical Review	02/21/2008	02/27/2008	02/27/2008	Y

11. Go through each tab to verify all information has been inputted and they are correct according to regulations. First page to look at is the general well information page.

MMS Home What's New Help Suggestions Logout U.S. Department of the Interior

Status View Calculation G&G Review Main Menu

General Well Information

Well: 004 ST: 00 BP: 00

Tana Exploration Company LLC District: Lake Jackson District

008 3:08 PM Agency Tracking ID: EWL-APD-6316 Pay.gov Tracking ID: 24U3KQM

Approval Date	API Well Number
	not assigned

Area Block	Well Name	Well Type
HI 47	004	Exploration

Well ID	Location (ft)	Drive Size (inch)	Drive Depth (ft)
02	100	24	355

Mineral Code	Request Spud Date (mm/dd/yyyy)	Subsea BOP
Hydrocarbon	03/01/2008	N

PROPOSED WELL LOCATION

Nad27(GOMLPacific)

SURFACE LOCATION

☒ LEASE (OCS): 023193 AreaBlock: HI 47 ☐ State Lease ☐ Right of Use and Easement

Latitude				Longitude			
Degrees	Minutes	Seconds	Decimal	Degrees	Minutes	Seconds	Decimal
29	24	55.909	29.41580906	-93	52	19.667	-93.87212972

Calculated NAD27 Data

NAD27 Departures NS	1314 S	NAD27 Departures EW	2230 E
NAD27 Y Coordinates	611154.077110	NAD27 X Coordinates	3631965.829584

Surface Plan

Plan Control ID	Lease (OCS)	Area/Block	Well Name
S	023193	HI 47	G

12. On the "General Well Information" page, you are checking to see if a subsea BOP stack is used or not, the surface and bottom hole locations match the plats, OSFR's and the proposed spud date.

MMS		Home	What's New	Help	Suggestions	Logout	U.S. Department of the Interior	
Well Drilling Approval								
Status View Calculation G&G Review Main Menu								
General Well Information								
Lease: G25561 AreaBlock: HI 170 Well: 007 ST: 00 BP: 00								
Permit Type: New Well Operator: LLOG Exploration Offshore, Inc. District: Lake Jackson District								
Payment Status: Paid on 26-Feb-2008 1:25 PM Agency Tracking ID: EWL-APD-6339 Pay.gov Tracking ID: 24UJ07J								
Date Of Request		Approval Date		API Well Number				
02/26/2008				not assigned				
Bottom Lease		Area Block		Well Name		Well Type		
G25561		HI 170		007		Exploration		
Water Depth (ft):		RKB Elevation (ft):		Drive Size (inch):		Drive Depth (ft):		
50		100		48		350		
Mineral Code:		Request Spud Date (mm/dd/yyyy):				Subsea BOP:		
Hydrocarbon		03/15/2008				N		
PROPOSED WELL LOCATION								
Nad27(GOMLPacific)								
SURFACE LOCATION								
<input checked="" type="radio"/> LEASE (OCS):		G25561 AreaBlock: HI 170		<input type="radio"/> State Lease		<input type="radio"/> Right of Use and Easement		
Latitude				Longitude				
Degrees	Minutes	Seconds	Decimal	Degrees	Minutes	Seconds	Decimal	
29	11	14.322	29.18731167	-94	3	43.801	-94.06216694	
Calculated NAD27 Data								
NAD27 Departures NS		5093 N		NAD27 Departures EW		4193 W		
NAD27 Y Coordinates		525547.051745		NAD27 X Coordinates		3575028.976788		
Surface Plan		Lease (OCS)		Area/Block		Well Name		
Plan Control ID		G25561		HI 170		F		

13. Next page to review is the "Plan Information" page.

- A) On this page you are checking to see if it is approved through our Plans Section. Underneath the Final Action box, you will see either an A which means the plan is approved or a C which means you have to go through TIMS to check the status. For moored rigs, you have to go to TIMS and confirm the anchor pattern radius submitted with the permit is within the anchor pattern radius approved in TIMS.

MMS	Home	What's New	Help	Suggestions	Logout	U.S. Department of the Interior
Well Drilling Approval						
Status	View	Calculation	G&G Review	Main Menu		

Plan Information

Lease: G25561 Area Block: HI 170 Well: 007 ST: 00 BP: 00

Permit Type: New Well Operator: LLOG Exploration Offshore, Inc. District: Lake Jackson District

Payment Status: Paid on 26-Feb-2008 1:25 PM Agency Tracking ID: EWL-APD-6339 Pay.gov Tracking ID: 24UJQ7J

SURFACE:

Plan Code/Type/Number	RueNumber	Water Depth (ft)	Plan Well Name	Final Action	Final Date
R/EP/4087		55	F	A	11/18/2004

Lease: G25561 Area Block: HI 170 State Lease:

NAD27 Departures NAD27 X-Y Coordinates NAD27 X-Y Differential

Longitude: -94.06216746 4193_W 3575028.81
Latitude: 29.18731156 5093_N 525547 0.17

BOTTOM:

Plan Code/Number/Type	RueNumber	Water Depth (ft)	Plan Well Name	Final Action	Final Date
R/EP/4087		55	G	A	11/18/2004

Lease: G25561 Area Block: HI 170

NAD27 Departures NAD27 X-Y Coordinates

Longitude: -94.06164332 4423_W 3575258.81
Latitude: 29.18321238 6575_N 524065

- B) Log into TIMS, select Component, select Plans, select Query Plan Sites, type in Bottom Lease. Execute Query, highlight Plan, select Plan Details and information related to the Plan can be viewed. To check the Plans approved anchor pattern radius select the Wells tab and confirm the Anchor Radius in Feet is greater than the anchor pattern radius submitted with the permit.

14. Underneath the "Q & A" tab, you want to verify all questions are answered correctly and that question 5 has an EPA Discharge Permit Number.

MMS Home What's New Help Suggestions Logout U.S. Department of the Interior

Status View Calculation G&G Review Main Menu

Questions

Lease: Q25561 AreaBlock: H1170 Well: 007 ST: 00 BP: 00

Permit Type: New Well Operator: LLOG Exploration Offshore, Inc. District: Lake Jackson District

Payment Status: Paid on 26-Feb-2008 1:25 PM Agency Tracking ID: EWL-APD-6339 Paygov Tracking ID: 24UUQ7J

Question	YES	NO	N/A	Remarks
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 ppg or more?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. If hydrocarbon-based drilling fluids were used, is the drilling rig outfitted for zero discharge and will zero discharge procedures be followed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. If drilling the shallow casings strings riserless, will you maintain kill weight mud on the rig and monitor the wellbore with an RCV to ensure that it is not flowing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. If requesting a waiver of the conductor casing, have you submitted a log to MMS G&G that is within 500 feet of the proposed bottom hole location for the proposed surface casing point?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5. Will the proposed operation be covered by an EPA Discharge Permit? (please provide permit number in comments for this question)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	GIG 290180
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 well on the platform? if not, please explain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

15. The "Rigs" page is very useful in evaluating the chosen rig. Here you want to check to see if the certificates are up to date, whether it is using anchors, the water depth and rig rating and if the safe welding area has been approved.

MMS Home What's New Help Suggestions Logout U.S. Department of the Interior

Status View Calculation G&G Review Main Menu

Rig Information

Lease: Q25561 AreaBlock: H1170 Well: 007 ST: 00 BP: 00

Permit Type: New Well Operator: LLOG Exploration Offshore, Inc. District: Lake Jackson District

Payment Status: Paid on 26-Feb-2008 1:25 PM Agency Tracking ID: EWL-APD-6339 Paygov Tracking ID: 24UUQ7J

RIG SPECIFICATIONS		ANCHORS	
Rig Name:	MOBILE LECTER PENTAP	YES	<input type="radio"/> NO <input checked="" type="radio"/>
Type:	SUBMERSIBLE	ID Number:	30405
Function:	DR	Years Refurbished:	null
Shipper:	HOUSTON	Drill Depth:	25000
Years Constructed:	1982	Coast Guard:	030000000
CERTIFICATES		District:	Houston District
APPROVAL	8/5/09/2000		
SAFE WELDING AREA			
Approval Date:	11/07/2007		
Remarks:			

16. Ensure that the casings and tests are correct according to regulations. If there is a **RED** error in the validation area, check validity of error and if necessary, return permit back to operator. You get to these two pages by clicking on the "Calculation" tab and going through worksheet/calculations.

MMS		Home	What's New	Help	Suggestions	Logout	U.S. Department of the Interior	
Well Drilling Approval								
Status View Calculation G&G Review Main Menu								

Summary of Calculations

Lease: G23193 Area Block: H147 Well: 004 ST: 00 BP: 00

Permit Type: NewWell Operator: Tana Exploration Company LLC District: Lake Jackson District

Payment Status: Paid on 20-Feb-2008 3:08 PM Agency Tracking ID: EWL-APD-6316 Pay.gov Tracking ID: 24UI3KOM

Water Depth (ft.)	RKB Elevation (ft.)	Drive Size (in.)	Drive Depth (ft.)	Subsea BOP
32	100	24	355	N

Interval Number	Interval Type	Casing	Interval Name	Conductor
1	1			

Sec. No	Size (in)	WT (lbs)	Grade	MD (ft)	TVD (ft)	PP (ppg)	Collapse (psi)	Burst (psi)	Load (psi)	
									Top	Bottom
1	16.000	65.0	H-40	900	900	8.7	630	1640	392	75

INTERVAL DATA		70% MYP (psi)		CEMENT (cuft)		VALIDATION	
MW (ppg)	9.2	MASP (psi)					
FG (ppg)	10.3	BHP	913	FG	392	Required	760
FIT (ppg)	0.0	PROD		0	Proposed	797	
TFW (ppg)	9.2	TUBULAR TEST		PREVENTER TEST			
LINER LAP (ft)	n/a	Required Casing Test		200	Required Diverter Test	200	
		Proposed Test		250	Proposed Test	250	
						Design: OK	
						Cement: OK	
						Tubular: OK	
						Preventer: OK	

Interval Number	Interval Type	Casing	Interval Name	Surface
2	2			

Sec. No	Size (in)	WT (lbs)	Grade	MD (ft)	TVD (ft)	PP (ppg)	Collapse (psi)	Burst (psi)	Load (psi)	
									Top	Bottom
1	10.750	45.5	K-55	3500	3500	9.3	2090	3580	1981	764

INTERVAL DATA		70% MYP (psi)		CEMENT (cuft)		VALIDATION	
MW (ppg)	9.8	MASP (psi)					
FG (ppg)	13.5	BHP	3477	FG	1981	Required	1600
FIT (ppg)	13.5	PROD		0	Proposed	2065	
TFW (ppg)	9.8	TUBULAR TEST		PREVENTER TEST			
LINER LAP (ft)	n/a	Required Casing Test		1981	Required BOP Test	2481	
		Proposed Test		2269	Proposed Test	5000	
						Design: OK	
						Cement: OK	
						Tubular: OK	
						Preventer: OK	

17. You want to verify if the casing size and BOP agree with one another.

MMS	Home	What's New	Help	Suggestions	Logout	U.S. Department of the Interior
	Well Drilling Approval					
Status View Calculation G&G Review Main Menu						

WORKSHEET INFORMATION

Lease: G25561 Area Block: H1 170 Well: 007 ST: 00 BP: 00

Permit Type: New Well Operator: LLOG Exploration Offshore, Inc. District: Lake Jackson District

Payment Status: Paid on 26-Feb-2008 1:25 PM Agency Tracking ID: EWL-APD-8339 Pay.gov Tracking ID: 24UJQ7J

CASING

Interval Number: 1		Type: Casing	Name: Conductor				
Section Number	Casing Size (in)	Casing Weight (lb/ft)	Casing Grade	Burst Rating (psi)	Collapse Rating (psi)	Depth (ft)	Pore Pressure (ppg)
						MD	TVD
1	20.000	133.0	J-55	3000	1500	900	900 8.5
GENERAL INFORMATION:		PREVENTER INFORMATION:		TEST INFORMATION:			
Hole Size (in)	24.000	Preventer Type	DIV	Annular Test (psi)	0		
Mud Weight (ppg)	9.5	Preventer Size (in)	30	BOP/Diverter Test (psi)	200		
Mud Type Code	WBM	Wellhead Rating (psi)	3000	Test Fluid Weight (ppg)	9.3		
Fracture Gradient (ppg)	12.0	Annular Rating (psi)	0	Casing/Liner Test (psi)	200		
Liner Top Depth (ft)		BOP/Diverter Rating (psi)	0	Formation Test (ppg)	0.0		
Cement Volume (cu ft)	3723						

Interval Number: 2		Type: Casing	Name: Surface				
Section Number	Casing Size (in)	Casing Weight (lb/ft)	Casing Grade	Burst Rating (psi)	Collapse Rating (psi)	Depth (ft)	Pore Pressure (ppg)
						MD	TVD
1	16.000	84.0	Q-125HC	8768	1910	3500	3500 8.5
GENERAL INFORMATION:		PREVENTER INFORMATION:		TEST INFORMATION:			
Hole Size (in)	20.000	Preventer Type	BOP	Annular Test (psi)	3500		
Mud Weight (ppg)	10.0	Preventer Size (in)	18.75	BOP/Diverter Test (psi)	5000		
Mud Type Code	WBM	Wellhead Rating (psi)	5000	Test Fluid Weight (ppg)	10.0		
Fracture Gradient (ppg)	14.0	Annular Rating (psi)	5000	Casing/Liner Test (psi)	2940		
Liner Top Depth (ft)		BOP/Diverter Rating (psi)	5000	Formation Test (ppg)	13.5		
Cement Volume (cu ft)	3529						

18. The tab with the most information you have to verify is the "Permit Attachments" section. You will check the attachments and ensure they follow regulations, check pay.gov attachments and record the numbers if permit not approved. verify whether Lance Labiche or Jane Powers has approved the mooring design.

MMS		Home	What's New	Help	Suggestions	Logout	U.S. Department of the Interior
Well Drilling Approval							
Status View Calculation G&G Review Main Menu							
Permit Attachments							
Lease: G25561 Area Block: H1170 Well: 007 ST: 00 BP: 00							
Permit Type: NewWell Operator: LLOG Exploration Offshore, Inc. District: Lake Jackson District							
Payment Status: Paid on 26-Feb-2008 1 25 PM Agency Tracking ID: EWL-APD-6339 Pay.gov Tracking ID: 24UJQZJ							
REQUIRED ATTACHMENTS (see Allowed File Types list below)							
Allowed File Type(s)	File Description	Status	Command				
PDF	Drilling prognosis and summary of drilling, cementing, and mud processes	PDF file attached (size: 30.1 kb)	View				
PDF	Engineering Calculation	PDF file attached (size: 79.1 kb)	View				
PDF	Proposed Wellbore Schematic	PDF file attached (size: 14.6 kb)	View				
PDF	Proposed Well Location Plat	PDF file attached (size: 182.1 kb)	View				
PDF	Directional Program	PDF file attached (size: 391.0 kb)	View				
PDF	Pore pressure (PP), Mud Weight (MW), and Fracture Gradient (FG) Plot	PDF file attached (size: 32.1 kb)	View				
PDF	BOP & Diverter Schematics with Operating Procedures	PDF file attached (size: 532.4 kb)	View				
OPTIONAL-SUPPLEMENTAL ATTACHMENTS (see Allowed File Types list below)							
Allowed File Type(s)	File Description	Status	Command				
PDF	Departure List	no file attached					
PDF	ABS/DNV Certificate	PDF file attached (size: 279.0 kb)	View				
PDF	U.S. Coast Guard Certificate	PDF file attached (size: 837.7 kb)	View				

19. If all information is correct, approve by clicking status and then approval. You will also need to verify the API number, write your Condition of Approval and check pay.gov status. Check the API number and log the number into district's API database. Click on "Submit".

Status	View	Calculation	G&G Review	Main Menu																																								
<div> <div> Status History In Review Return Submittal Pre-Approval Approval </div> <div> <h2>Status</h2> <p>0193 Area Block: HI 47 Well: 004 SI: 00 BP: 00</p> <p>Operator: New Well Operator: Tana Exploration Company LLC District: Lake Jackson District</p> <p>Payment Status: Paid on 20-Feb-2008 3:08 PM Agency Tracking ID: EWL-APD-6316 Pay.gov Tracking ID: 24U13KOM</p> <p>Status: Approved</p> <p>Comments to Operator:</p> <div> <input type="button" value="Submit"/> <input type="button" value="Cancel"/> </div> </div> </div>																																												
<h3>Status History</h3> <table border="1"> <thead> <tr> <th>Status</th> <th>Date</th> <th>Updated by</th> <th>Comments to Operator</th> </tr> </thead> <tbody> <tr> <td>Pending</td> <td>02/19/2008</td> <td>grothchr</td> <td>User Generated</td> </tr> <tr> <td>Submitted</td> <td>02/20/2008</td> <td>grothchr</td> <td></td> </tr> <tr> <td>In-review</td> <td>02/21/2008</td> <td>FOWLERR</td> <td>Ready to review 2/21/2008</td> </tr> <tr> <td>Returned</td> <td>02/28/2008</td> <td>FOWLERR</td> <td>FOR CORRECTION OF TEST PRESURE ON THE T-5/8" CASING FROM 4295 PSI TO 5102 PSI. (NOTE: BE SURE AND CORRECT THE TEST PRESSURE ON ALL RELATED ATTACHMENTS INCLUDING THE APD INFORMATION SHEET)</td> </tr> <tr> <td>Resubmitted</td> <td>02/29/2008</td> <td>grothchr</td> <td></td> </tr> <tr> <td>In-review</td> <td>02/29/2008</td> <td>FOWLERR</td> <td>Ready to review 2/29/2008</td> </tr> <tr> <td>Returned</td> <td>03/29/2008</td> <td>FOWLERR</td> <td>FOR CORRECTION OF ANNULAR PREVENTER TEST PRESSURE ON SURFACE INTERMEDIATE AND PRODUCTIONS FROM 3000 PSI TO 3500 PSI, OR EXPLANATION OF REASON FOR 3000 PSI TEST</td> </tr> <tr> <td>Resubmitted</td> <td>03/03/2008</td> <td>grothchr</td> <td></td> </tr> <tr> <td>In-review</td> <td>03/03/2008</td> <td>OUTLAWJ</td> <td></td> </tr> </tbody> </table>					Status	Date	Updated by	Comments to Operator	Pending	02/19/2008	grothchr	User Generated	Submitted	02/20/2008	grothchr		In-review	02/21/2008	FOWLERR	Ready to review 2/21/2008	Returned	02/28/2008	FOWLERR	FOR CORRECTION OF TEST PRESURE ON THE T-5/8" CASING FROM 4295 PSI TO 5102 PSI. (NOTE: BE SURE AND CORRECT THE TEST PRESSURE ON ALL RELATED ATTACHMENTS INCLUDING THE APD INFORMATION SHEET)	Resubmitted	02/29/2008	grothchr		In-review	02/29/2008	FOWLERR	Ready to review 2/29/2008	Returned	03/29/2008	FOWLERR	FOR CORRECTION OF ANNULAR PREVENTER TEST PRESSURE ON SURFACE INTERMEDIATE AND PRODUCTIONS FROM 3000 PSI TO 3500 PSI, OR EXPLANATION OF REASON FOR 3000 PSI TEST	Resubmitted	03/03/2008	grothchr		In-review	03/03/2008	OUTLAWJ	
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20. Print out and give Individual Well Report to OA or chief inspector for inspections. This is accessed by going through the "View" tab and scrolling down to the "Inspection Worksheet Report" and clicking on it.

INDIVIDUAL WELL REPORT

GENERAL INFORMATION

API Well Number		District Lake Jackson	Well 007	ST 00	BP 00	Well Type Exploration	Opr No 02058	Operator LLOG Exploration Offshore, Inc.	
Surface Lease OC8-G25561	Surface HI 170	Surface Location E/W 4193 W		N/S 5093 N		Bottom Lease OC8-G25561	Bottom HI 170	Bottom Location E/W 5635 W N/S 3984 N	
Approval Date		Proposed Spud Date 03/15/2008		PA Date (previous wellbore)					

INFORMATION APPROVED ON APD

Drive		48		Drive		350		Water Depth		50		RKB		100				
Hole Size	Casing/Liner Specifications										Cement C/L PL	Test Information				Mud Information		
	Name/Type	Size	Wt/Lt	Grade	Burst	LTD	Depth MD	Depth TVD	Ann	BOP/ DIV		Casing	FIT	Mud Wt	Test Fluid	Type Mud		
24.0	C / C	20.0	133.0	J-55	3060		900	900	3723.0	0	200.0	200.0	0.0	9.5	9.3	WBM		
20.0	S / C	16.0	84.0	Q-	6768		3500	3500	3529.0	3500	5000.0	2940.0	13.5	10.0	10.0	WBM		
14.75	I / C	11.875	71.8	Q-125	10720		9800	9800	1722.0	3500	10000.0	5720.0	17.5	12.5	12.5	SBM		
12.25	I / L	9.625	53.5	Q-125	12390	9500	14534	14000	1921.0	3500	10000.0	1092.0	18.3	16.8	16.8	SBM		
8.5	O / O						16534	16000		3500	10000.0			17.5	0.0	SBM		

RIG INFORMATION

Rig Name	NOBLE LESTER PETTUS	Rig No	30405	Rig Type	SUBMERSIBLE
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MMS, GOM, Field Operations, Standard Operating Procedure (SOP) Notice: This electronic document and attached documents are intended to represent the EWell Drilling process at the time dated on this document. The SOP document covers general system operating procedures and may contain information that is privileged and confidential.



Standard Operating Procedure E-Well Sidetracks/Bypass Field Operations, GOM



Prepared by the Drilling Team

Jarvis Outlaw
Lee Fowler
Ben Coco
Dave Moore
Dave Trocquet
Marty Rinaudo

Sponsor – John McCarroll

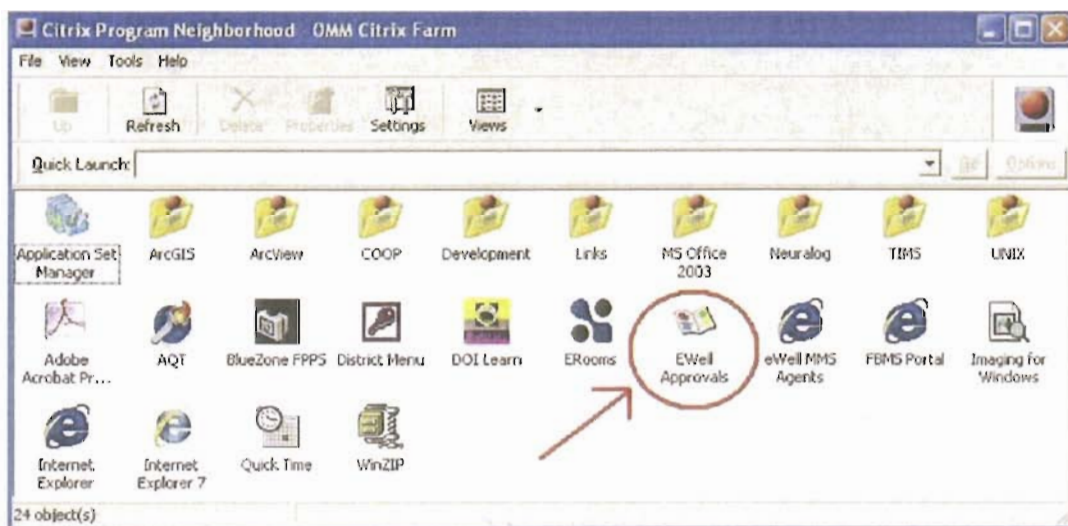
June 15, 2008

Drilling EWELL AST's/ABP's

1. Click on "Citrix Program Neighborhood" on the desktop.



2. Click on "EWELL Approvals" in Citrix Program Neighborhood.



3. Once you have accessed the EWell Site, click on the "Well Drilling Status Summary" which is located underneath the Well Permit Applications and Revisions. This will give you access to all submittals permitted for drilling, sidetrack, and bypass operations.

MMS Home What's New Help Suggestions Logout U.S. Department of the Interior
You are not logged in...

EWell Approval

MMS Main Menu

WELL PERMIT APPLICATIONS AND REVISIONS

- Well Drilling Status Summary
- Well Modification Status Summary
- Geological and Geophysical Review

WELL REPORTS

- Rig Movement Notification Report
- Well Activity Report
- Open Hole Data Report
- End of Operation Report
- Correction Report

NON HURRICANE-RELATED INCIDENT AND PIPELINE DAMAGE REPORTS

- Incident Reports
- Pipeline Damage Reports

4. After you have clicked on the Well Drilling Status Summary, it will take you to the EWell login screen. Enter your "User ID" and "Password" and click "Login".

MMS Home What's New Help Suggestions Logout U.S. Department of the Interior
You are not logged in...

EWell Approval

WARNING:

This is a United States Government computer system, maintained by the Department of the Interior, to provide Official Unclassified U.S. Government information only. Use of this computer system by any authorized or unauthorized user constitutes consent to monitoring, retrieval, and disclosure by authorized personnel. USERS HAVE NO REASONABLE EXPECTATION OF PRIVACY IN THE USE OF THIS SYSTEM. Unauthorized use may subject violators to criminal, civil, and/or disciplinary action.

Login

User ID:

Password:

5. Select type of "Wells", type of "Permit to View" and "Status". You may also query by "District" or "Base API" or "Bottom Lease". The following are an explanation of headings:

- A) Under the "Wells" heading, you may choose "All", "Not Completed" or "Completed". This selection refers to the wellbore status in TIMS.
- B) Under the "Status" heading, there are 8 possible selections: "All" – Will query all permit statuses except Pending and Returned, "Submitted" – Will only query a permit that has been initially submitted, "Pre-approval" – Will only query a permit that has been placed in pre-approval by a field engineer, "Pending" – Will only query permits that are pending from the operator and have not been submitted, "Resubmitted" – Will only query permits that have been resubmitted, "Approved" – Will only query permits that have been approved, "Returned" – Will only query permits that have been returned to the operator for corrections, "In-Review" – Will only query permits that are in review.
- C) The "District" heading allows you to select permits from one or all Districts. The "Base API" allows you to query a permit by its 10 digit API Number and the "Bottom Lease" allows you to query a permit by its Bottom Lease Number. The "Timeframe" heading allows you to query permits from the previous 3 months, previous 6 months, previous year and all permits.
- D) After you have selected your Query Criteria, click the submit button.

MMS Home What's New Help Suggestions Logout U.S. Department of the Interior
Well Drilling Approval
 Welcome OUTLAWJ, you are logged in.

Permit Status Summary

Please enter the following information

Query Criteria:

Wells:
☒ All ☐ Not Completed ☐ Completed

Type of Permits to view:
☐ APD/RPD - Application/Revision for Permit to Drill
☒ AST/RST - Application/Revision to Sideback
☐ ABP/RBP - Application/Revision to Bypass

Status:
☐ All (no Pending, Returned)
☐ Submitted
☐ Pre-approval
☐ Pending
☐ Resubmitted
☐ Approved
☐ Returned
☐ In-Review

District:
 New Orleans District
 Houma District
 Lafayette District
 Lake Jackson District
 Lake Charles District
 All

Base API: **Bottom Lease:**

Timeframe: previous 3 months

Submit

6. After you have clicked the "Submit" button, the following screen will be displayed:

MMS Well Drilling Approval U.S. Department of the Interior
Welcome OUTLAWJ, you are logged in.

Permit Status Summary

Please enter the following information:

Query Criteria:

Wells:
☒ All ☐ Not Completed ☐ Completed

Type of Permits to view:
☐ APD/RPD - Application/Revision for Permit to Drill
☒ AST/RST - Application/Revision to Sidetrack
☐ ABP/RBP - Application/Revision to Bypass

Status:
☐ All (no Pending, Returned)
☒ Submitted
☐ Pre-approval
☐ Pending
☒ Resubmitted
☐ Approved
☐ Returned
☒ In-review

District:
 New Orleans District
 Houma District
 Lafayette District
 Lake Jackson District
 Lake Charles District
 All

Base API: OR Bottom Lease: OR

TimeRange: previous 3 months

Submit

View Permit **Report**

	API	Operator Name	WELL			BOTTOM			SURFACE			PERMIT TYPE	PERMIT		Payment Status
			Name	ST	BP	Area	Block	Lease	Area	Block	Lease		Status	Last Action Date	
<input type="radio"/>	608174097501	TOTAL E&P USA, INC.	A002	01	00	MC	243	019931	MC	243	019931	Revised Sidetrack	Submitted	03/25/2008	n/a
<input type="radio"/>	6081740977	TOTAL E&P USA, INC.	A005	00	00	MC	243	019931	MC	243	019931	Sidetrack	In-review	03/06/2008	Paid

View Permit **Report**

7. You may then select the permit by clicking on the radio button next to the permit and selecting the "View Permit" button. The "Report" button will allow you to view the permits report.

View Permit **Report**

	API	Operator Name	WELL			BOTTOM			SURFACE			PERMIT TYPE	PERMIT		Payment Status
			Name	ST	BP	Area	Block	Lease	Area	Block	Lease		Status	Last Action Date	
<input checked="" type="radio"/>	608174097501	TOTAL E&P USA, INC.	A002	01	00	MC	243	019931	MC	243	019931	Revised Sidetrack	Submitted	03/25/2008	n/a
<input type="radio"/>	6081740977	TOTAL E&P USA, INC.	A005	00	00	MC	243	019931	MC	243	019931	Sidetrack	In-review	03/06/2008	Paid

View Permit **Report**

8. Once the permit is selected, click the "Status" tab and select "In-Review". You will then click the "Submit" button to place the permit In-Review.

MMS Well Drilling Approval U.S. Department of the Interior

Home What's New Help Suggestions Logout

Status View Calculation G&G Review Main Menu

Status History

Lease: G19931 AreaBlock: MC 243 Well: A002 ST: 01 BP: 00

Permit Type: Revised Sidetrack Operator: TOTAL E&P USA, INC District: New Orleans District

Payment Status: Payment not required Agency Tracking ID: n/a Pay.gov Tracking ID: n/a

Status	Date	Updated by	Comments to Operator
Pending	03/24/2008	thorntor	User Generated
Submitted	03/25/2008	rachalep	

9. Go through each tab to verify all information has been inputted and they are correct according to regulations. First page to look at is the "General Well Information" page. On the "General Well Information" page, you are checking to see if a subsea BOP stack is used or not, the surface and bottom hole locations match the plats, OSFR's and the proposed spud date. The API sidetrack/bypass number will not show up on the general well screen and no G&G Reviews are needed for a sidetrack/bypass.

MMS Well Drilling Approval U.S. Department of the Interior

Home What's New Help Suggestions Logout

Status View Calculation G&G Review Main Menu

General Well Information

Lease: G19931 AreaBlock: MC 243 Well: A002 ST: 01 BP: 00

Permit Type: Revised Sidetrack Operator: TOTAL E&P USA, INC District: New Orleans District

Payment Status: Payment not required Agency Tracking ID: n/a Pay.gov Tracking ID: n/a

Approval Date	API Well Number
	608174097581

Area Block	Well Name	Well Type
MC 243	A002	Development

Well Inspection Worksheet Report

Well	Inspection Worksheet Report	Well ID	Drive Size (inch):	Drive Depth (ft):
2816	150		36	3035

Mineral Code: Hydrocarbon Kick Off Point (ft.): 6502 Request Spud Date (mm/dd/yyyy): 01/15/2007 Subsea BOP: N

Verbal Date (mm/dd/yyyy): Approving Official:

PROPOSED WELL LOCATION

NAD27(GOIMPacific)

SURFACE LOCATION

☒ LEASE (OCS): G19931 AreaBlock: MC 243 ☐ State Lease ☐ Right of Use and Easement

Latitude				Longitude			
Degrees	Minutes	Seconds	Decimal	Degrees	Minutes	Seconds	Decimal
28	44	32.002	28.74222269	-88	49	31.478	-88.82541067

Calculated NAD27 Data

NAD27 Departures NS	NAD27 Departures EW
3484 N	5695 E
NAD27 Y Coordinates	NAD27 X Coordinates
10435076.000000	1055595.000000

Surface Plan

Plan Control ID	Lease (OCS)	AreaBlock	Well Name

10. Next page to review is the "Plan Information" page. However, for sidetracks/bypass, a surface or bottom plan is not needed since it was already approved in the original APD.

MMS		Home	What's New	Help	Suggestions	Logout	U.S. Department of the Interior
Well Drilling Approval							
Status	View	Calculation	G&G Review	Main Menu			
Plan Information							
Lease: G19931 AreaBlock: MC 243 Well: A002 ST: 01 BP: 00							
Permit Type: Revised Sidetrack Operator: TOTAL E&P USA, INC District: New Orleans District							
Payment Status: Payment not required Agency Tracking ID: n/a Pay.gov Tracking ID: n/a							
No Surface Plan Available							
No Bottom Plan Available							

11. Underneath the "Q & A" tab, you want to verify all questions are answered correctly and that question 5 has an EPA Discharge Permit Number.

MMS		Home	What's New	Help	Suggestions	Logout	U.S. Department of the Interior
Well Drilling Approval							
Status	View	Calculation	G&G Review	Main Menu			
Questions							
Lease: G19931 AreaBlock: MC 243 Well: A002 ST: 01 BP: 00							
Permit Type: Revised Sidetrack Operator: TOTAL E&P USA, INC District: New Orleans District							
Payment Status: Payment not required Agency Tracking ID: n/a Pay.gov Tracking ID: n/a							
Question		Remarks					
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 ppg or more?	YES NO N/A	325 sks Barite, 200 sks Gel					
2. If hydrocarbon-based drilling fluids were used, is the drilling rig outfitted for zero discharge and will zero discharge procedures be followed?	YES NO N/A						
3. If drilling the shallow casings strings is/are, will you maintain kill weight mud on the rig and monitor the wellbore with an RCV to ensure that it is not flowing?	YES NO N/A						
4. If requesting a waiver of the conductor casing, have you submitted a log to MMS G&G that is within 500 feet of the proposed bottom hole location for the proposed surface casing point?	YES NO N/A						
5. Will the proposed operation be covered by an EPA Discharge Permit? (please provide permit number in comments for this question)	YES NO N/A						
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 well on the platform? If not, please explain.	YES NO N/A						

12. Ensure that the casings and tests are correct according to regulations. You get to these two pages by clicking on the "Calculation" tab and going through worksheet/calculations. You will want to start with the last full casing string the sidetrack/bypass will take place. If there is a **RED** error in the validation area, check validity of error and if necessary, return it back to the operator. Existing casings may contain errors; however, they may be disregarded.

MMS	Home	What's New	Help	Suggestions	Logout	U.S. Department of the Interior
	Well Drilling Approval					
Status View Calculation G&G Review Main Menu						

WORKSHEET INFORMATION

Lease: G19931 AreaBlock: MC 243 Well: A002 ST: 01 BP: 00

Permit Type: Revised Sidetrack Operator: TOTAL E&P USA, INC. District: New Orleans District

Payment Status: Payment not required Agency Tracking ID: n/a Pay.gov Tracking ID: n/a

The Permit to Drill revision/correction applied is described in summary as follows:

Total E&P requests to drill 1-in. deeper to a depth of 50'-11 1/2"/50'10" TVD in the 1-in. the permitted 7500' BOP/SID. Please note cement columns and test procedures are to remain the same. Please see the attached 5-in. 1-in. well bore schematic and drilling summary.

CASING

Interval Number: 1		Type: Casing	Name: Conductor				
Section Number	Casing Size (in)	Casing Weight (lb/ft)	Casing Grade	Burst Rating (psi)	Collapse Rating (psi)	Depth (ft)	Pore Pressure (ppg)
						MD	TVD
1	26.000	202.0	X-56	2820	1170	4070	4068 8.4
GENERAL INFORMATION:		PREVENTER INFORMATION:		TEST INFORMATION:			
Hole Size (in)	30.000	Preventer Type	N/A	Annular Test (psi)		0	
Mud Weight (ppg)	8.5	Preventer Size (in)	N/A	BOP/Diverter Test (psi)		0	
Mud Type Code	GSW	Wellhead Rating (psi)	0	Test Fluid Weight (ppg)		0.0	
Fracture Gradient (ppg)	0.0	Annular Rating (psi)	0	Casing/Liner Test (psi)		0	
Liner Top Depth (ft)	0	BOP/Diverter Rating (psi)	0	Formation Test (ppg)		0.0	
Cement Volume (cu ft)	1800						

If there is a **RED** error in the validation area, check validity of error and if necessary, return it back to the operator. Existing casings may contain errors; however, they may be disregarded.

MMS		Home	What's New	Help	Suggestions	Logout	U.S. Department of the Interior	
Well Drilling Approval								
Status View Calculation G&G Review Main Menu								

Summary of Calculations

Lease: G19931 AreaBlock: MC 243 Well: A002 ST: 01 BP: 00
 Permit Type: Revised Sidetrack Operator: TOTAL E&P USA, INC District: New Orleans District
 Payment Status: Payment not required Agency Tracking ID: n/a Pay.gov Tracking ID: n/a

Water Depth (ft.)	RKB Elevation (ft.)	Drive Size (in.)	Drive Depth (ft.)	Subsea BOP
2816	150	36	3035	N

Interval Number	1	Interval Type	Casing	Interval Name	Conductor					
Sec. No	Size (in)	WT (lbs)	Grade	MD (ft)	TVD (ft)	PP (ppg)	Collapse (psi)	Burst (psi)	Load (psi)	
									Top	Bottom
1	26.000	202.0	X-56	4070	4068	8.4	1170	2820	-581	-1951
INTERVAL DATA		70% MYP (psi)		3878		CEMENT (cuft)				
MW (ppg)	8.5	MASP (psi)				Required		1471		VALIDATION
FG (ppg)	0.0	BHP	1217	FG	-581	Proposed		1800		
FIT (ppg)	0.0	PROD		0						
TFW (ppg)	0.0	TUBULAR TEST				PREVENTER TEST				
LINER LAP (ft)	n/a	Required Casing Test		0		Preventer type unknown, no MASP specified				
		Proposed Test		0		Proposed Test		0		Preventer: NA

Interval Number	2	Interval Type	Casing	Interval Name	Surface					
Sec. No	Size (in)	WT (lbs)	Grade	MD (ft)	TVD (ft)	PP (ppg)	Collapse (psi)	Burst (psi)	Load (psi)	
									Top	Bottom
1	20.000	186.4	X-56	3456	3456	8.5	2514	3979	1708	526
2	20.000	129.3	X-56	5138	5085	8.5	3020	5687	526	356
INTERVAL DATA		70% MYP (psi)		4113		CEMENT (cuft)				
MW (ppg)	8.5	MASP (psi)				Required		1025		VALIDATION
FG (ppg)	10.7	BHP	1708	FG	-1034	Proposed		2500		
FIT (ppg)	10.7	PROD		0						
TFW (ppg)	8.5	TUBULAR TEST				PREVENTER TEST				
LINER LAP (ft)	n/a	Required Casing Test		1708		Required BOP Test		2208		Preventer: OK
		Proposed Test		2000		Proposed Test		5000		

13. The tab with the most information you have to verify is the "Permit Attachments" section. You will check the attachments and ensure they follow regulations, check pay.gov attachments and record the numbers if permit not approved. You will look at the new material as it pertains to the sidetrack/bypass.

Allowed File Type(s)	File Description	Status	Command
PDF	Drilling prognosis and summary of drilling, cementing, and mud processes	PDF file attached (size: 64.9 kb)	View
PDF	Engineering Calculation	PDF file attached (size: 11.4 kb)	View
PDF	Proposed Wellbore Schematic	PDF file attached (size: 195.8 kb)	View
PDF	Proposed Well Location Plat	PDF file attached (size: 2.6 mb)	View
PDF	Directional Program	PDF file attached (size: 27.0 kb)	View
PDF	Pore pressure (PP), Mud Weight (MW), and Fracture Gradient (FG) Plot	PDF file attached (size: 50.3 kb)	View
PDF	BOP & Owerder Schematics with Operating Procedures	PDF file attached (size: 155.8 kb)	View

14. If all information is correct, approve by clicking "Status" and then "Approval". You will also need to verify the API number, write your Condition of Approval and check pay.gov status. Check the API number and log the number into district's API database. Click on "Submit".

Status

Lease: G19931 Area Block: MC 243 Well: A002 ST: 01 BP: 00

Permit Type: Sidetrack Operator: TOTAL E&P USA, INC. District: New Orleans District

Payment Status: Paid on 21-Feb-2008 4:36 PM Agency Tracking ID: EWL-AS7-6323 Pay.gov Tracking ID: 34U16R16

Status:

Comments to Operator:

[Submit](#) [Cancel](#)

15. Print out and give Individual War Report to OA or chief inspector for inspections. This is accessed by going through the "View" tab and scrolling down to the "Inspection Worksheet Report" and clicking on it.

INDIVIDUAL WELL REPORT

GENERAL INFORMATION

API Well Number 5081740377	District New Orleans	Well A005	ST 00	BP 00	Well Type Development	Op# No 01500	Operator TOTAL E&P USA, INC.		
Surface Lease OCS-G19931	Surface MC 243	Surface Location E/W 5701 E	N/S 3445 N			Bottom Lease OCS-G19931	Bottom MC 243	Bottom Location E/W 2316 E	N/S 1203 N
Approval Date	Proposed Spud Date 04/15/2008	PA Date (previous wellbore)							

INFORMATION APPROVED ON APD

Drive	36		Drive		3035		Water Depth		2815		RKB		150				
Hole Size	Casing/Liner Specifications								Cement Cu. Ft.	Test Information				Mud Information			
	Name/Type	Size	Wt/Lt	Grade	Burst	LTD	Depth MD	Depth TVD		Ann	BOF/ DIV	Casing	FIT	Mud Wt	Test Fluid	Type Mud	
30.0	C / C	26.0	202.0	X-56	2820	0	4070	4062	1800.0	0	0.0	0.0	0.0	8.5	0.0	GSW	
24.0	S / C	20.0	166.4	X-56	3979	0	3494	3494	2500.0	3500	5000.0	2000.0	10.7	8.5	8.5	CSW	
	S / C	20.0	129.3	X-56	5687	0	5135	5034	2500.0	3500	5000.0	2000.0	10.7	0.5	0.5	GSW	
17.0	I / C	13.625	88.2	P-110	8830	0	7118	6084	600.0	3500	5000.0	3500.0	11.4	10.2	10.2	SBM	
12.25	P / C	10.625	65.7	125	12110	0	6154	5712	0.0	0	0.0	0.0	0.0	10.4	0.0	SBM	
	P / C	9.625	53.5	Q-125	12390	0	7279	6143	0.0	0	0.0	0.0	0.0	10.4	0.0	SBM	
	P / C	9.625	53.5	L-80	7927	0	9587	7233	0.0	0	0.0	0.0	0.0	10.4	0.0	SBM	
8.5	P / L	7.0	29.0	P-110	11220	6720	9632	7000	417.0	3500	3500.0	3500.0	11.6	10.3	10.3	SBM	

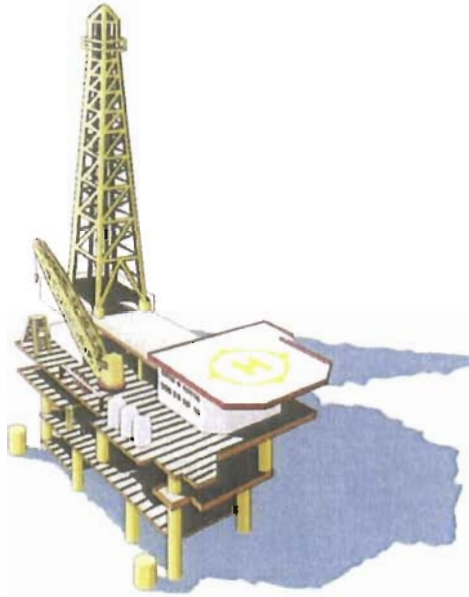
RIG INFORMATION

Rig Name	NABORS SUPER 8 D XUX	Rig No	16026	Rig Type	PLATFORM
----------	----------------------	--------	-------	----------	----------

MMS, GOM, Field Operations, Standard Operating Procedure (SOP) Notice: This electronic document and attachment documents are intended to represent the EWell Drilling process at the time dated on this document. The SOP document covers general system operating procedures and may contain information that is privileged and confidential.



Standard Operating Procedure E-Well WARs Field Operations, GOM



Prepared by the Drilling Team

Jarvis Outlaw
Lee Fowler
Ben Coco
Dave Moore
Royce Buford
Dave Trocquet
Marty Rinaudo

Sponsor – John McCarroll

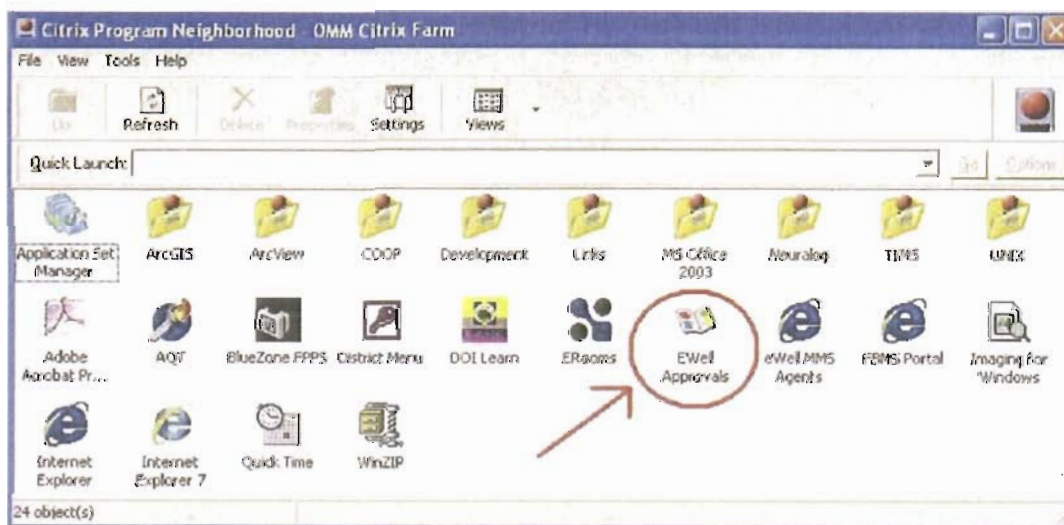
June 18, 2008

Drilling EWell WAR's

1. Click on "Citrix Program Neighborhood" on the desktop.



2. Click on "EWell Approvals" in Citrix Program Neighborhood.



EWell WAR's

3. Once you have accessed the EWell Site, click on the "Well Activity Report" which is located underneath the Well Reports Heading. This will give you access to weekly reports submitted in for all drilling, sidetrack, and bypass operations.

The screenshot shows the MMS EWell Approval website. The header includes navigation links: Home, What's New, Help, Suggestions, Logout, and the U.S. Department of the Interior logo. A status bar at the top right indicates "You are not logged in...". The main content area is titled "MMS Main Menu" and lists several categories of reports under the heading "WELL PERMIT APPLICATIONS AND REVISIONS". Under "WELL REPORTS", the "Well Activity Report" is highlighted with a red circle and a red arrow pointing to a text box that says "Select Well Activity Report tab to open". Other reports listed include "Well Drilling Status Summary", "Well Modification Status Summary", "Geological and Geophysical Review", "Rig Movement Notification Report", "Open Hole Data Report", "End of Operation Report", "Correction Report", "Incident Reports", and "Pipeline Damage Reports".

MMS EWell Approval U.S. Department of the Interior
You are not logged in...

MMS Main Menu

WELL PERMIT APPLICATIONS AND REVISIONS

- [Well Drilling Status Summary](#)
- [Well Modification Status Summary](#)
- [Geological and Geophysical Review](#)

WELL REPORTS

- [Rig Movement Notification Report](#)
- [Well Activity Report](#)
- [Open Hole Data Report](#)
- [End of Operation Report](#)
- [Correction Report](#)

NON HURRICANE-RELATED INCIDENT AND PIPELINE DAMAGE REPORTS

- [Incident Reports](#)
- [Pipeline Damage Reports](#)

4. After you have clicked on the Well Activity Report, it will take you to the EWell login screen. Enter your User ID and Password to Login to EWell.

The screenshot shows the EWell login screen. On the left, there is a "WARNING" section with text about the system being a United States Government computer system. On the right, there is a "Login" section with input fields for "User ID" and "Password". The "User ID" field contains the text "malbrum" and the "Password" field contains a series of dots. A red circle highlights the "User ID" field, and a red arrow points from the "Well Activity Report" link in the previous screenshot to this field. Another red circle highlights the "Password" field, and a red arrow points from the "Enter Password" label to it. Below the input fields are "Login" and "Reset" buttons.

MMS EWell Approval U.S. Department of the Interior
You are not logged in...

WARNING:
This is a United States Government computer system, maintained by the Department of the Interior, to provide Official Unclassified U.S. Government information only. Use of this computer system by any authorized or unauthorized user constitutes consent to monitoring, retrieval, and disclosure by authorized personnel. USERS HAVE NO REASONABLE EXPECTATION OF PRIVACY IN THE USE OF THIS SYSTEM. Unauthorized use may subject violators to criminal, civil, and/or disciplinary action.

Login

Enter User ID
User ID: malbrum

Enter Password
Password:

Login Reset

5. To query Drilling Operations, select the drilling War Type and Status to review the various different drilling operations. Under the "Status" heading, there are 8 possible selections: "All" – Will query all permit statuses except Pending and Returned, "Submitted" – Will only query a permit that has been initially submitted, "Pre-approval" – Will only query a permit that has been placed in pre-approval by a field engineer, "Pending" – Will only query permits that are pending from the operator and have not been submitted, "Resubmitted" – Will only query permits that have been resubmitted, "Approved" – Will only query permits that have been approved, "Returned" – Will only query permits that have been returned to the operator for corrections, "In-Review" – Will only query permits that are in review.

The "District" heading allows you to select permits from one or all Districts. The "Base API" allows you to query a permit by its 10 digit API Number and the "Bottom Lease" allows you to query a permit by its Bottom Lease Number. The "Timeframe" heading allows you to query permits from the previous 3 months, previous 6 months, previous year and all permits.

MMS Home What's New Help Suggestions Logout U.S. Department of the Interior

Well Activity Report

Welcome OUTLAWJ, you are logged in.

WAR Status Summary

Please enter the following information

Query Criteria:

War Type:
☐ All ☐ Unselected ☒ Drilling ☐ Workover

Status:
☐ All (no Pending, Returned) ☐ Submitted ☐ Resubmitted ☐ In-review ☐ preAccepted
☐ Pending ☐ Returned ☐ Accepted

District:
 New Orleans District
 Houma District
 Lafayette District
 Lake Jackson District

Status Date Timeframe: previous 3 months

OR

Base API:

OR

Surface Leases:

No Data Returned

EWELL WAR's

- Click on the radio button beside the appropriate WAR to be reviewed. Once this has been done, hit the "View WAR" button to show the WAR chosen.

View WAR Assign Permit Report												
Base API	Well Name	Operator Name	SURFACE			Status	Changed By	WAR Start	WAR End	Operation Start	Drilling	Workover
			Lease	Area	Block							
4270840627	001	LLOG Exploration Offshore, Inc.	G31040	HI	138	Submitted	Benoit, Debra	04/20/2008	04/26/2008	03/24/2008		

View WAR Assign Permit Report

- Once the WAR is opened, click on the "Status" button located the left hand side of the screen. This tab will allow you to either place the WAR **In-Review**, or check the Status History of it to see if any previous comments were made concerning the WAR.

MMS
[Home](#) [What's New](#) [Help](#) [Suggestions](#) [Logout](#)

Well Activity Report
U.S. Department of the Interior

[Status](#) [View](#) [Main Menu](#)
[Status History](#)
[In-Review](#)
[Return Submittal](#)
[preAccept](#)
[Accept](#)

Well Activity Report

Base API Number: 4270840627 Operation Start Date: 03/24/2008 WAR Start Date: 04/20/2008
 Operation End Date: WAR End Date: 04/26/2008

Well Type: E Operator: LLOG Exploration Offshore, Inc. District: Lake Jackson District

GENERAL INFORMATION

Lease	SURFACE Area	Block	Water Depth	RKB Elevation
G31040	HI	138	52	94

Rig Name	Rig Type	Rig Water Depth	Name
NOBLE LESTER PETTUS	SUBMERSIBLE	85	Carol Eaton

Rig Drilling Depth	Phone
25000	504-833-7700

CURRENT WELLBORE INFORMATION

Wellbore	WELL				BOTTOM			
	Name	ST	BP	Lease	Area	Block		
427084062700	001	00	00	G31040	HI	138		

OP Status	Spud Date	ID Date	MD	IWD	MW	KOP(MD)	Last BOP Test Date	Last BOP Test Pressure	
								Low	High
DRL	03/26/2008		14033	13245	13.3		04/16/2008	250	5000

Narrative

Operation Narrative

4/20/08
Drilled, logged and surveyed 12.25" hole to 13367' raising NW to 12.85 ppg.

4/21/08
Drilled, logged and surveyed 12.25" hole to 13507', CBU raising NW to 13.2 ppg, POOH w/ BHA.

4/22/08
TIH w/ new BHA, washed and reamed @ 9864'-10150', RIH to 12140', washed and reamed to bottom.

Correction Narrative

8. If the WAR has not already been placed **In-Review**, click on it and when it goes to the Status page, click the "Submit" button to place it **In-Review**.

MMS Well Activity Report

Home What's New Help Suggestions Logout U.S. Department of the Interior

Status View Main Menu

Status

Base API Number: 4270340627 Operation Start Date: 03/24/2008 WAR Start Date: 04/20/2008
 Operation End Date: WAR End Date: 04/26/2008
 Well Type: E Operator: LLOG Exploration Offshore, Inc. District: Lake Jackson District

Status:

Comments to Operator:

Status History

Status	Date	Updated by	Comments to Operator
Pending	04/21/2008 02:37 PM	Debra Benoit	User Generated
Submitted	04/29/2008 10:24 AM	Debra Benoit	

9. After the War has been placed In-Review, click on the "View" tab to review the following: "**Contact**" will include the operator's contact person along with his or her phone number and Email address. "**Well Activity Report**" will include the well's general information and an operation narrative for the week. "**Significant Events**" will state the abnormal events that occurred during the week. **Notes** are internal to MMS personnel. "**WAR Attachments**" will have any attachments that the operator submitted. "**Wellbore History**" will show any changes that have been made since the previous APD was approved. "**Assign Permit**" will include the ability to open the approved permit that associated with this WAR.

MMS Well Activity Report

Home What's New Help Suggestions Logout U.S. Department of the Interior

Status **View** Main Menu

Contact
 Well Activity Report
 Significant Events
 Notes
 WAR Attachments
 Wellbore History
 Assign Permit

Status

Base API Number: 4270340627 Operation Start Date: 03/24/2008 WAR Start Date: 04/20/2008
 Operation End Date: WAR End Date: 04/26/2008
 Well Type: E Operator: LLOG Exploration Offshore, Inc. District: Lake Jackson District

Status:

Comments to Operator:

Status History

Status	Date	Updated by	Comments to Operator
Pending	04/21/2008 02:37 PM	Debra Benoit	User Generated
Submitted	04/29/2008 10:24 AM	Debra Benoit	

EWELL WAR's

- You will review the WAR by verifying the narrative dates coincide with dates that are at the top of the page and that the WAR did not start before the operation start date. You will also need to verify the operator work is done in accordance with the approved permit. When the last two digits of the API number are incremented, the Kick-Off Point (KOP) must be entered. An approved permit must be associated with the WAR. This can be found underneath the "Assigned Permit" tab.

MMS		Home What's New Help Suggestions Logout					U.S. Department of the Interior																																																												
Well Activity Report																																																																			
Status View Main Menu		Well Activity Report Base API Number: 4270840627 Operation Start Date: 03/24/2008 WAR Start Date: 04/20/2008 Operation End Date: WAR End Date: 04/26/2008 Well Type: E Operator: LLOG Exploration Offshore, Inc. District: Lake Jackson District																																																																	
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Correction Narrative																																																																			

11. If a significant event occurred during the week of that narrative, it should be captured underneath the Significant Events page. This is accessed by clicking on the "View" tab, and then clicking on "Significant Events".

MMS Well Activity Report

U.S. Department of the Interior

Status View Main Menu

Significant Well Events

Well ID: 4271146889 Operation Start Date: 03/25/2008 WAR Start Date: 04/08/2008
 Operation End Date: 04/18/2008 WAR End Date: 04/18/2008
 Well Type: E Operator: Apache Corporation District: Lake Jackson District

Please select one or more from the list below:

☐ Well Control Equipment Failure ☐ Station Keeping Failure ☐ Other
☐ General Rig Equipment Failure ☐ Kick Occurrence ☐ New Technology Failure
☐ Stack Pipe ☐ Weather and Oceanographic Conditions ☐ Shallow Water Flow
☐ Wellbore Integrity - Intact ☐ H2S Encounter ☐ Lost Returns

Please provide narrative information with regards to any significant events. Provide attachments, if necessary.

12. Click on the "Assigned Permit" tab to access all permits associated with that particular operation. Click on the radio button beside the appropriate permit you are reviewing and click on the "View Permit" button to pull up the permit to review with the narrative. Make sure the casing installations, BOP tests, and cement volume are in accordance with approved procedure.

MMS Well Activity Report

U.S. Department of the Interior

Status View Main Menu

View Permit List

Well ID: 4270840637 Operation Start Date: 03/24/2008 WAR Start Date: 04/20/2008
 Operation End Date: 04/25/2008 WAR End Date: 04/25/2008
 Well Type: E Operator: LLOY Exploration Offshore, Inc. District: Lake Jackson District

War Types:
☒ Onfiling ☐ Workover

View	API (12 digits)	Permit Type	Well Name	ST	GP	Status	Status Date	Primary Operation	UNAssign	Permit Completed
<input type="radio"/>	427084062703	APM	001	00	00	Approved	04/03/2008 %	INFORM	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="radio"/>	427084062703	Revised New Well	001	00	00	Approved	04/01/2008 %	Drill	<input type="checkbox"/>	<input type="checkbox"/>
<input type="radio"/>	427084062703	New Well	001	00	00	Approved	04/01/2008 %	Drill	<input type="checkbox"/>	<input type="checkbox"/>

13. If any discrepancies are found between the WAR and approved permit, the Reviewing Engineer should contact the Operator to resolve any issues. If necessary, the WAR may be returned or an INC may be written. The WAR is returned by clicking on the "Status" button and then on "Return Submittal" button.

MMS Home What's New Help Suggestions Logout U.S. Department of the Interior

Well Activity Report

Status: View Main Menu

Well Activity Report

Brig #/Number: 4270840627 Operation Start Date: 03/24/2009 WAR Start Date: 04/20/2009
 Operation End Date: WAR End Date: 04/26/2009

Well Type: E Operator: LLOO Exploration Offshore, Inc. District: Lake Jackson District

GENERAL INFORMATION

Lease	SURFACE Area	Block	Water Depth	RCD Elevation
031040	HI	139	52	94

Rig Name	Rig Type	Rig Water Depth	Name	Phone
NOBLE LESTER PETTUS	SUBMERSIBLE	35	Carol Eaton	504 833 7700
	Rig Drilling Depth	25000		

CURRENT WELLBORE INFORMATION

Wellbore	WELL			BOTTOM				
	Name	ST	BP	Lease	Area	Block		
4270840627C0	001	C0	00	031040	HI	139		

OP Status	Spud Date	TD Date	MD	TVD	MMV	KOP(MD)	Last BOP Test Date	Last BOP Test Pressure
							Low	High
CRL	03/26/2009		14033	13245	13.3		04/18/2009	250 5000

Narrative

Operation Narrative

4/20/09
 Drilled, logged and surveyed 12.25" hole to 13387' raising MW to 12.85 ppg.

4/21/09
 Drilled, logged and surveyed 12.25" hole to 13507', CSU raising MW to 13.2 ppg, POOH w/ BKL.

4/22/09
 TIR w/ new BHA, washed and reamed @ 9864'-10150', RIR to 12140', washed and reamed to bottom.

14. In the narrative box provided, identify the reason the WAR is being sent back and what corrections need to be made. After your comments have been added, click on the "Submit" button to return back to operator.

MMS Home What's New Help Suggestions Logout U.S. Department of the Interior

Well Activity Report

Status: View Main Menu

Status

Brig #/Number: 4270840627 Operation Start Date: 03/24/2009 WAR Start Date: 04/20/2009
 Operation End Date: WAR End Date: 04/22/2009

Well Type: E Operator: LLOO Exploration Offshore, Inc. District: Lake Jackson District

Status: Returned

Comments to Operator:

Submit Cancel

Status History

Status	Date	Updated by	Comments to Operator
Pending	04/20/2009 02:37 PM	Debra Benoit	User Generated
Submitted	04/29/2009 10:24 AM	Debra Benoit	

15. If there are no problems with the WAR, click on the "Status" button and then on the "Approval" button to approve the WAR. If the WAR is the last WAR, **MAKE SURE** all permits are assigned and checked off as completed, before approving.

MMS Home What's New Help Suggestions Logout U.S. Department of the Interior

Well Activity Report

Status View Main Menu

Status History

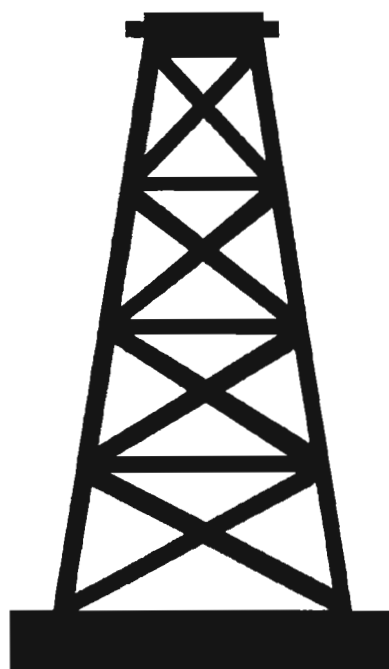
Base API Number 4271140889 Operation Start Date 03/25/2008 WAR Start Date 04/06/2008
Operation End Date 04/18/2008 WAR End Date 04/12/2008

Well Type: E Operator: Apache Corporation District: Lake Jackson District

Status	Date	Updated by	Comments to Operator
Pending	04/15/2008 02:10 PM	Kelly Wade	User Generated
Submitted	04/21/2008 11:47 AM	Kelly Wade	
In-review	04/24/2008 01:30 PM	Laura Blue	
Returned	04/25/2008 11:04 AM	Ronald Fowler	<p>ERROR MESSAGE WHEN ATTEMPTING TO APPROVE THIS WAR: can't update the war status.</p> <p>ERROR [java.lang.Exception: TMS UPDATE FAILED : ORA-20019: ORA-01400: cannot insert NULL into ('TMSSTAB\$'.'WAR_CASING_SECTIONS'.'CASINO_GRADE'), error inserting casing sections]</p>
Resubmitted	04/28/2008 06:46 AM	Kelly Wade	
In-review	04/29/2008 09:33 AM	Laura Blue	
Approved	04/29/2008 03:36 PM	Jarvis Outlaw	

MMS, GOM, Field Operations, Standard Operating Procedure (SOP) Notice: This electronic document and attached documents are intended to represent the EWell Drilling process at the time dated on this document. The SOP document covers general system operating procedures and may contain information that is privileged and confidential.

Standard Operating Procedure E-Well EORs Field Operations, GOM



Prepared by the Drilling Team

Jarvis Outlaw
Lee Fowler
Ben Coco
Dave Moore
Dave Trocquet
Marty Rinaudo

Sponsor – John McCarroll

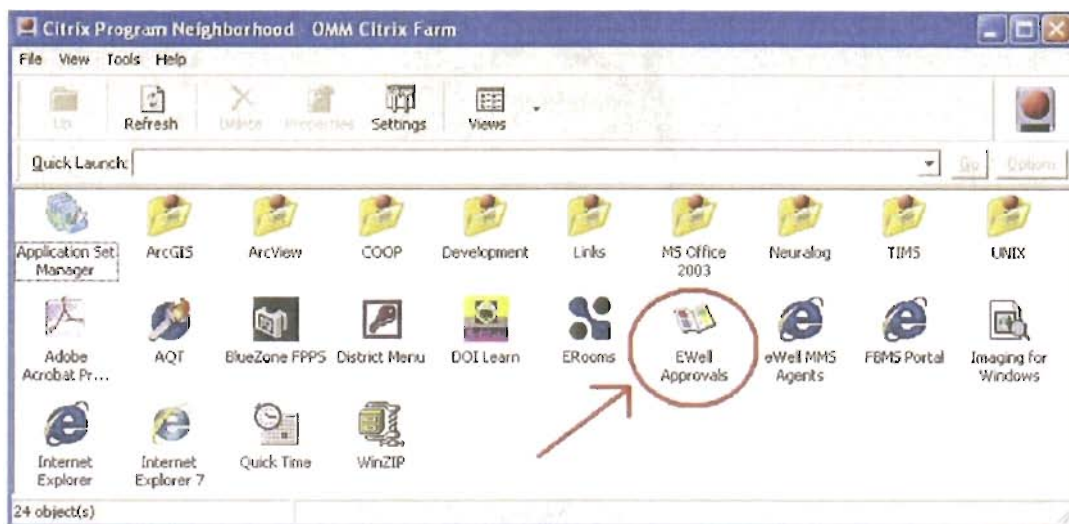
June 15, 2008

Drilling EWell EOR's

1. Click on "Citrix Program Neighborhood" on the desktop.



2. Click on "EWell Approvals" in Citrix Program Neighborhood.



- Once you have accessed the EWell Site, click on the "End of Operations Report" which is located underneath the Well Reports Heading. This will give you access to weekly reports submitted in for all drilling, sidetrack, and bypass operations.

MMS **EWELL Approval** U.S. Department of the Interior
You are not logged in...

MMS Main Menu

WELL PERMIT APPLICATIONS AND REVISIONS

- [Well Drilling Status Summary](#)
- [Well Modification Status Summary](#)
- [Geological and Geophysical Review](#)

WELL REPORTS

- [Rig Movement Notification Report](#)
- [Well Activity Report](#)
- [Open Hole Data Report](#)
- [End of Operation Report](#)
- [Correction Report](#)

NON HURRICANE-RELATED INCIDENT AND PIPELINE DAMAGE REPORTS

- [Incident Reports](#)
- [Pipeline Damage Reports](#)

- After you have clicked on the End of Operations Report, it will take you to the EWell login screen. Enter your "User ID" and "Password" and click on "Login".

MMS **EWELL Approval** U.S. Department of the Interior
You are not logged in...

WARNING:

This is a United States Government computer system, maintained by the Department of the Interior, to provide Official Unclassified U.S. Government information only. Use of this computer system by any authorized or unauthorized user constitutes consent to monitoring, retrieval, and disclosure by authorized personnel. USERS HAVE NO REASONABLE EXPECTATION OF PRIVACY IN THE USE OF THIS SYSTEM. Unauthorized use may subject violators to criminal, civil, and/or disciplinary action.

Login

User ID:

Password:

- To query Drilling Operations, select the drilling EOR Type and Status to review the various different drilling operations. Under the "Status" heading, there are 8 possible selections: **"All"** – Will query all permit statuses except Pending and Returned, **"Submitted"** – Will only query a permit that has been initially submitted, **"Pre-approval"** – Will only query a permit that has been placed in pre-approval by a field engineer, **"Pending"** – Will only query permits that are pending from the operator and have not been submitted, **"Resubmitted"** – Will only query permits that have been resubmitted, **"Approved"** – Will only query permits that have been approved, **"Returned"** – Will only query permits that have been returned to the operator for corrections, **"In-Review"** – Will only query permits that are in review.

The "District" heading allows you to select permits from one or all Districts. The "Base API" allows you to query a permit by its 10 digit API Number and the "Bottom Lease" allows you to query a permit by its Bottom Lease Number. The "Timeframe" heading allows you to query permits from the previous 3 months, previous 6 months, previous year and all permits.

The PET's (Petroleum Engineer Tech) will already have placed the EOR in-review after they have performed their check on their permit. Their check consists of ensuring the borehole dates, hydrocarbon and perforated zones, TD, MD, TVD, and wellbore schematic is consistent with the data found in TIMS.

MMS Home What's New Help Suggestions Logout U.S. Department of the Interior

End of Operation Report

Welcome OUTLAWJ, you are logged in.

EOR Status Summary

Please enter the following information

Query Criteria:

EOR Type:
☐ All ☐ Unselected ☒ Drilling ☐ Workover

Status:
☐ All (no Pending, Returned) ☐ Submitted ☐ Resubmitted ☐ In-review
☐ Accepted ☐ Returned ☐ Pending Not Due ☐ Pending Due

District:
 New Orleans District
 Houma District
 Lafayette District
 Lake Jackson District

Status Date Timeframe: previous 3 months

OR
 Base API:

OR
 Bottom Lease:

Submit

EWell EOR's

- Click on the radio button beside the appropriate EOR to be reviewed. Once this has been done, hit the "View EOR" button to show the EOR chosen.

Select	API	Operator Name	WELL			BOTTOM			Status Date	Status	Due Date	Drilling	Workover
			Name	BP	ST	Lease	Area	Block					
<input checked="" type="radio"/>	427104017001	W & T Offshore, Inc.	002	01	00	G14878	HI	38	05/07/2008	In-review	05/06/2008	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- Once the EOR is opened, click on the "Status" button located the left hand side of the screen. This tab will allow you to either place the EOR *In-Review*, or check the Status History of it to see if any previous comments were made concerning the EOR.

MMS Home What's New Help Suggestions Logout U.S. Department of the Interior

End of Operation Report

Status View Main Menu

Status History
In-Review
Return Submittal
Accept

General Information / Bottom Location

Lease: G14878 Area/Block: H138 Well: 002 ST: 00 BP: 01
API: 427104017001 Report Due Date: 05/06/2008 Operator: W & T Offshore, Inc.

General information

Operation Type: Abandonment

Operational Narrative - Required for Other Operation Type

Well Status	Well Status Date	Total Depth (Surveyed)		KOP (MD) ST/BP
		MD	TVD	
BOREHOLE BYPASSED	02/05/2008	14249	13700	9627

Bottom Location

NAD27

Latitude - Enter degrees, minutes, seconds or decimal				Longitude - Enter degrees, minutes, seconds or decimal			
Degrees	Minutes	Seconds	Decimal	Degrees	Minutes	Seconds	Decimal
29	.29	43.756	29.49548778	-93	49	44.304	-93.82897333

Y Coordinate	North/South Code	North/South Distance	X Coordinate	East/West Code	East/West Distance
640701.749306	N	878	3544411.058879	E	5625

8. After you have checked the status of the EOR, click on the "View" tab to review the permit along with the associated schematic. Each item under the View tab is important for the review. "**Contact**" will include the operator's contact person along with his or her phone number and Email address. "**End Operation Report**" will include the well's general information and the bottom hole location of the well. "**Significant Markers**" data field on the End of Operation Report is identifying the results of drilling of the *Significant Markers Anticipated* reported on the Application for Permit to Drill. Significant markers are major drilling points that the operator expect to encounter in the drilling of the well. These markers could be an unconformity, an ash bed, a predictable time horizon event (Cretaceous/Tertiary boundary), and a significant paleo fossil indicator but in all cases is at least one drilling objective horizon. Namely, the well is being drilled to encounter hydrocarbons in some zone. "**Notes**" may include any notes that the operator wants to submit with the EOR or notes the reviewer has placed with the permit. "**EOR Attachments**" allow you to pull up the wellbore schematic and other items that have been submitted by the operator for you to review pertaining to the permit. "**Hydrocarbon bearing interval**" data field is where the operators identify all producible hydrocarbon zones. These hydrocarbon bearing zone(s) are identified regardless whether the zone(s) will be produced or not. Any hydrocarbon bearing interval with ten feet or greater of pay must be identified on the End of Operation Report. The perforated zone must be within the hydrocarbon bearing interval on the schematic and completions page. "**Completion**" shows all the zones that have produced along with the status of whether they are producing or not. "**Abandonment History**" focuses on what casings have been cut and the depth they were cut. You do not have to view that tab for drilling, mainly will be used for workover applications. "**Subsea Information**" will verify whether the well is a subsea completion or not along with its protection and tree height above mudline.

However, it is not necessary that all the zones identified in *Hydrocarbon Bearing Intervals* be also listed in *Significant Markers Penetrated*. It is possible that the main drilling objective(s) listed in *Significant Markers Anticipated* and *Significant Markers Penetrated* did not contain hydrocarbons but other sands did contain hydrocarbons. In that case the two data fields will contain different names. In other cases the drilling objective listed in significant markers will contain hydrocarbons and will be identify in both fields.

9. For each tab you will compare against the EOR schematic to verify if all the information is correct between one another.

MMS Home What's New Help Suggestions Logout U.S. Department of the Interior

End of Operation Report

Status View Main Menu

View

- Contact
- End Operation Report
- Significant Markers
- Notes
- EOR Attachments
- Hydrocarbon Intervals
- Completion
- Abandonment History
- Subsea Information

General Information / Bottom Location

Lease: G14878 Area/Block: H138 Well: 002 ST: 00 BP: 01

AP#: 427104017001 Report Due Date: 05/05/2008 Operator: W & T Offshore, Inc.

General Information

Operational Narrative - Required for Other Operation Type

Well Status	Well Status Date	Total Depth (Surveyed)		KOP (MD) ST/BP
		MD	TVD	
BOREHOLE BYPASSED	02/05/2008	14249	13700	9627

Bottom Location

NAD27

Latitude - Enter degrees, minutes, seconds or decimal				Longitude - Enter degrees, minutes, seconds or decimal			
Degrees	Minutes	Seconds	Decimal	Degrees	Minutes	Seconds	Decimal
29	29	43.756	29.49548778	-93	49	44.304	-93.82897333

Y Coordinate	North/South Code	North/South Distance	X Coordinate	East/West Code	East/West Distance
640701.749306	N	818	3644411.058879	E	5625

10. "Significant Markers" data field on the End of Operation Report is identifying the results of drilling of the *Significant Markers Anticipated* reported on the Application for Permit to Drill. Significant markers are major drilling points that the operator expect to encounter in the drilling of the well. These markers could be an unconformity, an ash bed, a predictable time horizon event (Cretaceous/Tertiary boundary), and a significant paleo fossil indicator but in all cases is at least one drilling objective horizon. Namely, the well is being drilled to encounter hydrocarbons in some zone.

MMS Home What's New Help Suggestions Logout U.S. Department of the Interior

End of Operation Report

Status View Main Menu

Significant Markers

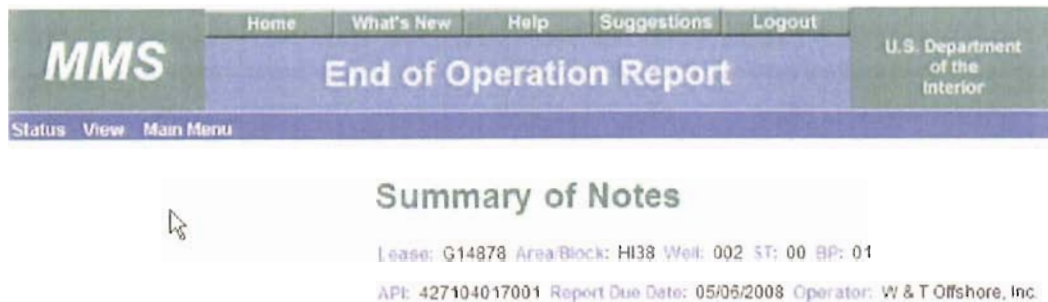
Lease: G14878 Area/Block: H138 Well: 002 ST: 00 BP: 01

AP#: 427104017001 Report Due Date: 05/05/2008 Operator: W & T Offshore, Inc.

Significant Geologic Markers

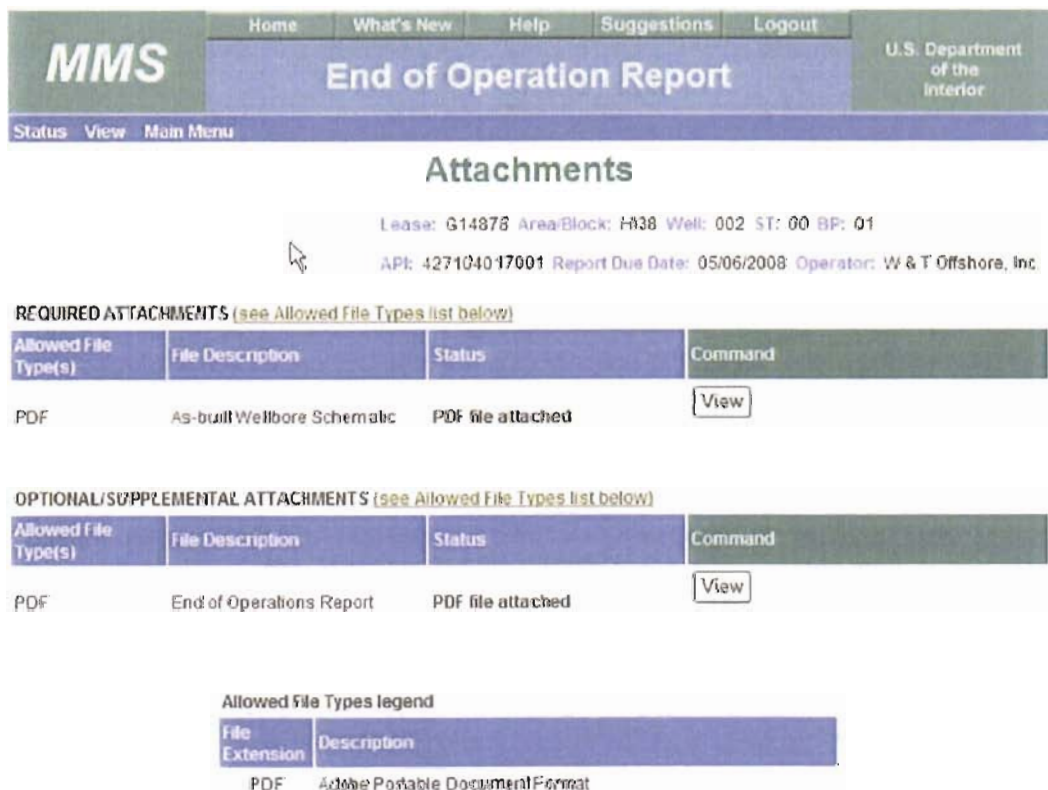
Marker Name	Reason Marker Not Penetrated	Top MD
Cns R	Not reached	 nbsp;nbsp;

11. **"Notes"** may include any notes that the operator wants to submit with the EOR or notes the reviewer has placed with the permit.



The screenshot shows the MMS End of Operation Report interface. At the top is a navigation bar with links: Home, What's New, Help, Suggestions, Logout, and the U.S. Department of the Interior logo. Below the navigation bar is a header with the MMS logo and the title "End of Operation Report". A sub-header contains links: Status, View, Main Menu. The main content area is titled "Summary of Notes". Below the title, it displays lease and API information: "Lease: G14878 Area/Block: H138 Well: 002 ST: 00 BP: 01" and "API: 427104017001 Report Due Date: 05/05/2008 Operator: W & T Offshore, Inc."

12. **"EOR Attachments"** allow you to pull up the wellbore schematic and other items that have been submitted by the operator for you to review pertaining to the permit.



The screenshot shows the MMS End of Operation Report interface for attachments. It features the same navigation bar and header as the previous page. The main content area is titled "Attachments". Below the title, it displays the same lease and API information: "Lease: G14878 Area/Block: H138 Well: 002 ST: 00 BP: 01" and "API: 427104017001 Report Due Date: 05/06/2008 Operator: W & T Offshore, Inc."

Below the information, there are two sections: "REQUIRED ATTACHMENTS (see Allowed File Types list below)" and "OPTIONAL/SUPPLEMENTAL ATTACHMENTS (see Allowed File Types list below)". Each section contains a table with columns: Allowed File Type(s), File Description, Status, and Command.

Allowed File Type(s)	File Description	Status	Command
PDF	As-built Wellbore Schematic	PDF file attached	View

Allowed File Type(s)	File Description	Status	Command
PDF	End of Operations Report	PDF file attached	View

Below the tables is a section titled "Allowed File Types legend" with a table:

File Extension	Description
PDF	Adobe Portable Document Format

13. **"Hydrocarbon bearing interval"** data field is where the operators identify all producible hydrocarbon zones. These hydrocarbon bearing zone(s) are identified regardless whether the zone(s) will be produced or not. Any hydrocarbon bearing interval with ten feet or greater of pay must be identified on the End of Operation Report. The perforated zone must be within the hydrocarbon bearing interval on the schematic and completions page.

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End of Operation Report

Status View Main Menu

Hydrocarbon Bearing Intervals

Lease: G14878 Area/Block: H138 Well: 002 ST: 00 BP: 01

API: 427104017001 Report Due Date: 05/06/2008 Operator: W & T Offshore, Inc.

Hydrocarbon Bearing Intervals			
Interval Name	Top (MD)	Bottom (MD)	Type of Hydrocarbon

14. **"Completion"** shows all the zones that have produced along with the status of whether they are producing or not.

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End of Operation Report

Status View Main Menu

Hydrocarbon Bearing Intervals

Lease: G28025 Area/Block: MC761 Well: 001 ST: 00 BP: 00

API: 608174114000 Report Due Date: 04/16/2008 Operator: LLOG Exploration Offshore, Inc.

Hydrocarbon Bearing Intervals			
Interval Name	Top (MD)	Bottom (MD)	Type of Hydrocarbon
20450' sand	20458	20464	Gas

15. **"Abandonment History"** focuses on what casings have been cut and the depth they were cut. You do not have to view that tab for drilling, mainly will be used for workover applications.

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End of Operation Report

Status View Main Menu

Abandonment History

Lease: G14878 Area/Block: H138 Well: 002 ST: 00 BP: 01

API: 427104017001 Report Due Date: 05/06/2008 Operator: W & T Offshore, Inc.

Obstruction Data			
Type of Obstruction	Protection	Buoy Installed	Obstruction Height (AML)

Required for Permanent Abandonment

Casings Cut				
Casing Size	Casing Cut Date	Casing Cut Method	Casing Cut Depth	Mudline Indicator

13. **"Hydrocarbon bearing interval"** data field is where the operators identify all producible hydrocarbon zones. These hydrocarbon bearing zone(s) are identified regardless whether the zone(s) will be produced or not. Any hydrocarbon bearing interval with ten feet or greater of pay must be identified on the End of Operation Report. The perforated zone must be within the hydrocarbon bearing interval on the schematic and completions page.

The screenshot shows the MMS End of Operation Report interface. The header includes navigation links: Home, What's New, Help, Suggestions, Logout, and the U.S. Department of the Interior logo. Below the header, the title "End of Operation Report" is displayed. The main section is titled "Hydrocarbon Bearing Intervals". It shows lease information: Lease: G14878 Area/Block: H138 Well: 002 ST: 00 BP: 01. Below this, it shows API: 427104017001 Report Due Date: 05/06/2008 Operator: W & T Offshore, Inc. A table titled "Hydrocarbon Bearing Intervals" is displayed with the following columns: Interval Name, Top (MD), Bottom (MD), and Type of Hydrocarbon.

Interval Name	Top (MD)	Bottom (MD)	Type of Hydrocarbon
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14. **"Completion"** shows all the zones that have produced along with the status of whether they are producing or not.

The screenshot shows the MMS End of Operation Report interface. The header includes navigation links: Home, What's New, Help, Suggestions, Logout, and the U.S. Department of the Interior logo. Below the header, the title "End of Operation Report" is displayed. The main section is titled "Hydrocarbon Bearing Intervals". It shows lease information: Lease: G28025 Area/Block: MC751 Well: 001 ST: 00 BP: 00. Below this, it shows API: 608174114000 Report Due Date: 04/16/2008 Operator: LLOG Exploration Offshore, Inc. A table titled "Hydrocarbon Bearing Intervals" is displayed with the following columns: Interval Name, Top (MD), Bottom (MD), and Type of Hydrocarbon.

Interval Name	Top (MD)	Bottom (MD)	Type of Hydrocarbon
20450' sand	20458	20454	Gas

15. **"Abandonment History"** focuses on what casings have been cut and the depth they were cut. You do not have to view that tab for drilling, mainly will be used for workover applications.

The screenshot shows the MMS End of Operation Report interface. The header includes navigation links: Home, What's New, Help, Suggestions, Logout, and the U.S. Department of the Interior logo. Below the header, the title "End of Operation Report" is displayed. The main section is titled "Abandonment History". It shows lease information: Lease: G14878 Area/Block: H138 Well: 002 ST: 00 BP: 01. Below this, it shows API: 427104017001 Report Due Date: 05/06/2008 Operator: W & T Offshore, Inc. A table titled "Obstruction Data" is displayed with the following columns: Type of Obstruction, Protection, Buoy Installed, and Obstruction Height (AML). Below this, a section titled "Required for Permanent Abandonment" is shown, containing a table titled "Casings Cut" with the following columns: Casing Size, Casing Cut Date, Casing Cut Method, Casing Cut Depth, and Mudline Indicator.

Type of Obstruction	Protection	Buoy Installed	Obstruction Height (AML)
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Casings Cut				
Casing Size	Casing Cut Date	Casing Cut Method	Casing Cut Depth	Mudline Indicator

18. You may add comments in the Accepted Status box for the operator to view. After you have/ have not added comments, click the "Submit" button to approve the EOR.

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End of Operation Report

Status View Main Menu

Status

Lease: G12010 Area/Block: S3359 Well: A011 ST: 00 BP: 01
 APE: 177124051901 Report Due Date: 05/01/2008 Operator: W & T Offshore, Inc.

Status: Accepted

Comments to Operator:

Submit Cancel

Status History

Status	Date	Updated by	Comments to Operator
Pending	02/29/2008 04:11 PM	Gwendolyn Anderson	
Submitted	05/01/2008 02:21 PM	Jeannie Groves	
In-review	05/08/2008 08:17 AM	Bonnie Daigle	

19. Once the permit is accepted, your screen will show who accepted it and what comments were made to the operator.

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End of Operation Report

Status View Main Menu

Status History

Lease: G14878 Area/Block: H138 Well: 002 ST: 00 BP: 01
 APE: 427164017001 Report Due Date: 05/06/2008 Operator: W & T Offshore, Inc.

Status	Date	Updated by	Comments to Operator
Pending	02/14/2008 05:54 PM	Gwendolyn Anderson	
Submitted	05/06/2008 04:20 PM	Jeannie Groves	
In-review	05/07/2008 09:09 AM	Eva Santos	
Accepted	05/09/2008 02:47 PM	Ronald Fowler	O.K. as is.

"MMS, GOM, Field Operations, Standard Operating Procedure (SOP) Notice: This electronic document and attached documents are intended to represent the EOR process at the time dated on this document. The SOP document covers general system operating procedures and may contain information that is privileged and confidential."

