

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs

FORM APPROVED
OMB No. 1004-0137
Expires: October 31, 2014

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No.
NMNM 27572

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well Oil Well Gas Well Other

7. If Unit of CA/Agreement, Name and/or No.
Laguna Deep Unit NM 70966X

2. Name of Operator
Marshall & Winston, Inc.

8. Well Name and No.
Laguna Deep Unit 35 Federal #2H

3a. Address
P. O. Box 50880, Midland, Texas 79710-0880

3b. Phone No. (include area code)
432-684-6373

9. API Well No.
30-025-40943

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SHL: 1140' FSL & 436' FEL, Sec. 35 (P), T19S, R33E
BHL: 660' FSL & 330' FWL, Sec. 35 (M), T19S, R33E

10. Field and Pool or Exploratory Area
Teas; Bone Spring

11. County or Parish, State
Lea County, New Mexico

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

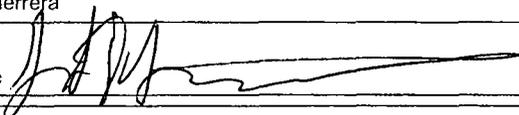
TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Due to change in type of production equipment to be used, a bigger casing program is needed.
Marshall & Winston, Inc. is requesting to change casing program.
Please see attached.

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)
Gabriel D. Herrera

Signature 

Title Engineer

Date 06/07/2013

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by _____

Title _____

Office _____

APPROVED

JUN 27 2013

/s/ Chris Walls

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

Title 18 U.S.C. Section 1001 and Title 49 U.S.C. Section 10122 make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

JUL 08 2013

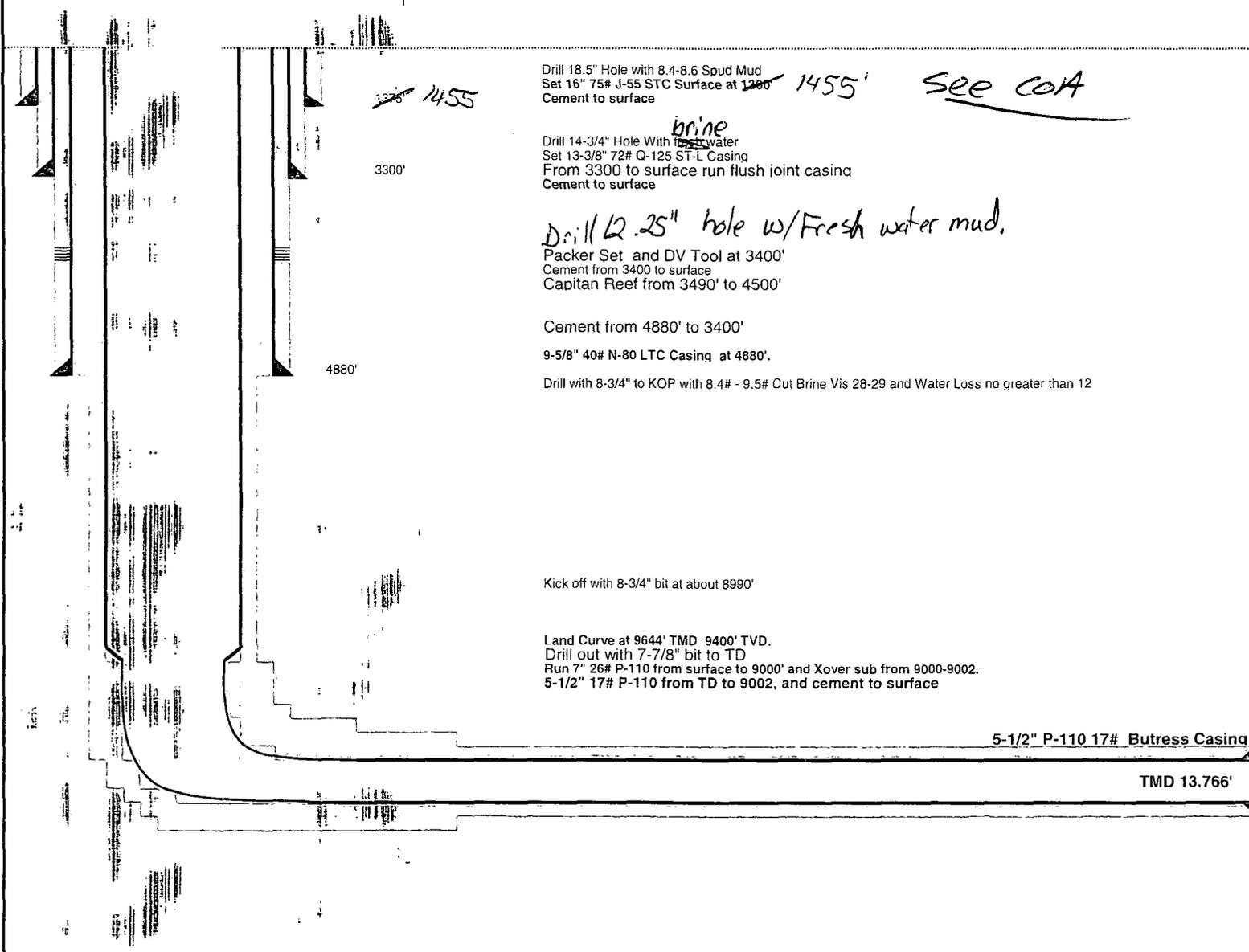
Size	Weight	Grade	Connection	Collapse (PSI)	Burst (PSI)	Tensile (K lbs)
16"	75#	J-55	STC	1,020	2,630	710
13-3/8"	72#	Q-125	ST-L	2,880	8,410	1792
9-5/8"	40#	N-80	LTC	3,090	5,750	737
7"	26#	P-110	LTC	6,210	9,960	693
5-1/2"	17#	P-110	Buttress	7,460	10,640	568

Size	SKS	Volume (cuft)	Lead				Tail						
			Weight(ppg)	Water	Yield	Type	SKS	Volume (cuft)	Weight(ppg)	Water	Yield	Type	
16"	550	957	13.5	9.135	1.74	C	200	266	14.8	6.325	1.33	C	
13-3/8"	870	1671	12.9	9.946	1.92	C	200	266	14.8	6.32	1.33	C	
9-5/8"	350	669	12.9	9.927	1.91	C	200	266	14.8	6.32	1.33	C	Below Packer
9-5/8"	630	1204	12.9	9.927	1.91	C	100	133	14.8	6.32	1.33	C	Above Packer
7"													
5-1/2"	1500	2835	12.9	9.586	1.89	H	930	1172	14.4	5.548	1.26	H	

AFE No.
API # 30-025-40943
Permit No.
Project No.

M:WA
Mud & Water, Inc.
Laguna Deep Federal 35-2H
Lea County, NM
Proposed Wellbore Sketch

AFE Information
Dry Hole: Days:
Proposed TD: 13,766' TMD 9,300' TVD
v



Well Information
Surface Location: Lea County, NM T19S R33E Section 35

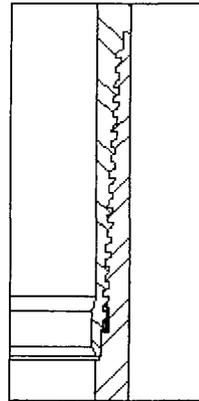
Technical Specifications

Connection Type:	Size(O.D.):	Weight (Wall):	Grade:
ST-L Casing API alternate drift	13-3/8 in	72.00 lb/ft (0.514 in)	Q-125

Material	
Q-125	Grade
125,000	Minimum Yield Strength (psi)
135,000	Minimum Ultimate Strength (psi)
Pipe Dimensions	
13.375	Nominal Pipe Body O.D. (in)
12.347	Nominal Pipe Body I.D.(in)
0.514	Nominal Wall Thickness (in)
72.00	Nominal Weight (lbs/ft)
70.67	Plain End Weight (lbs /ft)
20.768	Nominal Pipe Body Area (sq in)
Pipe Body Performance Properties	
2,596,000	Minimum Pipe Body Yield Strength (lbs)
2,880	Minimum Collapse Pressure (psi)
8,410	Minimum Internal Yield Pressure (psi)
7,700	Hydrostatic Test Pressure (psi)
Connection Dimensions	
13.375	Connection O.D. (in)
12.298	Connection I.D. (in)
12.250	Connection Drift Diameter (in)
6.02	Make-up Loss (in)
14.339	Critical Area (sq in)
69.0	Joint Efficiency (%)
Connection Performance Properties	
1,792,000 (1)	Joint Strength (lbs)
1,936,000 (2)	Reference Minimum Parting Load (lbs)
18,110	Reference String Length (ft) 1.4 Design Factor
1,075,000	Compression Rating (lbs)
2,880	Collapse Pressure Rating (psi)
8,410	Internal Pressure Rating (psi)
17.8	Maximum uniaxial bend rating [degrees/100 ft]
Recommended Torque Values	
10,900 (3)	Minimum Final Torque (ft-lbs)
13,800 (3)	Maximum Final Torque (ft-lbs)



VAM-USA
 4424 W. Sam Houston Pkwy. Suite 150
 Houston, TX 77041
 Phone: 713-479-3200
 Fax: 713-479-3234
 E-mail: VAMUSAsales@na.vallourec.com



(1) Joint strength is the elastic limit or yield strength of the connection.
 (2) Reference minimum parting load is the ultimate strength or parting load of the connection.
 (3) Torque values are recommended and can be affected by field conditions.

Connection specifications within the control of VAM-USA were correct as of the date printed. Specifications are subject to change without notice. Certain connection specifications are dependent on the mechanical properties of the pipe. Mechanical properties of mill proprietary pipe grades were obtained from mill publications and are subject to change. Properties of mill proprietary grades should be confirmed with the mill. Users are advised to obtain current connection specifications and verify pipe mechanical properties for each application.

6/26/2013 12:09:42 PM

CONDITIONS OF APPROVAL

OPERATOR'S NAME:	MARSHAL & WINSTON
LEASE NO.:	NM27572
WELL NAME & NO.:	2H-LAGUNA DEEP UNIT FEDERAL 35
SURFACE HOLE FOOTAGE:	1140'/S. & 0436'/E.
BOTTOM HOLE FOOTAGE:	0660'/S. & 0330'/W.
LOCATION:	Section 35, T. 19 S., R. 33 E., NMPM
COUNTY:	Lea County, New Mexico

I. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

Lea County

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240,
(575) 393-3612

1. **Due to recent H₂S encounters in the salt formation, it is recommended that monitoring equipment be onsite for potential Hydrogen Sulfide prior to drilling out the surface shoe. If Hydrogen Sulfide is encountered, please report measurements and formations to the BLM.**
2. A Hydrogen Sulfide (H₂S) Drilling Plan shall be activated **500 feet** prior to drilling into the **Yates** formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**
3. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
4. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

5. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

If used/refurbished casing will be utilized the operator must submit a sundry and have approval before running casing.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. IF OPERATOR DOES NOT HAVE THE WELL SPECIFIC CEMENT DETAILS ONSITE PRIOR TO PUMPING THE CEMENT FOR EACH CASING STRING, THE WOC WILL BE 30 HOURS. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

R-111-P Potash

Capitan Reef

Possible lost circulation within the Capitan Reef and Bone Spring.

Possible water and brine flows in the Artesia and Salado.

1. **The 16 inch surface casing shall be set at approximately 1455 feet (in a competent bed below the Magenta Dolomite, a Member of the Rustler, and if salt is encountered, set casing at least 25 feet above the salt) and cemented to the surface.**

- a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **13-3/8 inch Flush Joint 1st** intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.**

12-1/4" hole shall be drilled with fresh water.

3. The minimum required fill of cement behind the **9-5/8 inch 2nd** intermediate casing is:
 - Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.**
4. The minimum required fill of cement behind the **7 X 5-1/2 inch** production casing is:
 - Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Capitan Reef.**
5. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
6. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi.
 - a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.
3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** inch intermediate casing shoe shall be **5000 (5M)** psi. **5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**
4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.
 - b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
 - c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock.
 - d. The results of the test shall be reported to the appropriate BLM office.

- e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
- f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

D. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

CRW 062713