

APD

Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

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.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well ☒ Oil Well ☐ Gas Well ☐ Other		5. Lease Serial No. NMNM86024
2. Name of Operator OXY USA INC.		6. If Indian, Allottee or Tribe Name
3a. Address P.O. BOX 50250 MIDLAND, TX 79710		7. If Unit or CA/Agreement, Name and/or No.
3b. Phone No. (include area code) Ph: 432-685-5717 Fx: 432-685-5742		8. Well Name and No. CYPRESS 28 FEDERAL 7H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 28 T23S R29E SWSE 330FSL 1400FEL 32.269380 N Lat, 103.985230 W Lon		9. API Well No. 30-015-41303
		10. Field and Pool, or Exploratory HARROUN RANCH DELAWARE NE ✓
		11. County or Parish, and State EDDY COUNTY, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION
☒ Notice of Intent	☐ Acidize ☐ Deepen ☐ Production (Start/Resume) ☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing ☐ Fracture Treat ☐ Reclamation ☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair ☐ New Construction ☐ Recomplete ☒ Other
	☐ Change Plans ☐ Plug and Abandon ☐ Temporarily Abandon ☐ Change to Original A
	☐ Convert to Injection ☐ Plug Back ☐ Water Disposal ☐ PD

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 recomplete 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 shall 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 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

OXY USA Inc. respectfully requests approval for the following changes to the drilling plan:

1. Change the Target formation from the 2nd Bone Spring to the Delaware Brushy Canyon. See attached for amended C-102 and new directional plan.

Projected TD - 10986'M 6599'V

2. Casing design modification, to drill the well with smaller bit sizes:
14-3/4" surface hole w/ 11-3/4" csg, 10-5/8" intermediate hole w/ 8-5/8" csg and 7-7/8" production hole w/ 5-1/2" csg. Details are below.

3. Cement program adjustment to the new bit/casing sizes. Cement program modifications detailed

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

RECEIVED
DEC 02 2013
NMOCD ARTESIA

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #221385 verified by the BLM Well Information System
For OXY USA INC., sent to the Carlsbad
Committed to AFMSS for processing by JOHNNY DICKERSON on 10/21/2013 ()

Name (Printed/Typed) DAVID STEWART Title SR. REGULATORY ADVISOR

Accepted for record
NMOCD 10/23/2013

Signature (Electronic Submission) Date 09/27/2013

APPROVED

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By _____ Title _____

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office _____

NOV 27 2013
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, 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.

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

11/22/13

Additional data for EC transaction #221385 that would not fit on the form

32. Additional remarks, continued

below.

a. Surface Casing-

11-3/4" 47# J-55 BT&C new csg @ 0-350', 14-3/4" hole w/ 8.5# mud

Coll Rating (psi)-1510 Burst Rating (psi)-3070
SF Coll-9.80 SF Burst-1.43 SF Ten-6.50

b. Intermediate Casing-

8-5/8" 32# J-55 LT&C new csg @ 0-3000', 10-5/8" hole w/ 10.2# mud

Coll Rating (psi)-2530 Burst Rating (psi)-3930
SF Coll-2.54 SF Burst-1.30 SF Ten-2.31

c. Production Casing

5-1/2" 17# L-80 BT&C new csg @ 0-10986'M, 7-7/8" hole w/ 9.2# mud

Coll Rating (psi)-6290 Burst Rating (psi)-7740
SF Coll-1.99 SF Burst-1.20 SF Ten-2.02

Collapse and burst loads calculated using Stress Check with anticipated loads, see attached for design assumptions

a. Surface - Circulate cement to surface w/ 180sx PP cmt w/ 4% Bentonite + 1% CaCl₂ + .25#/sx Poly-E-Flake, 13.5ppg 1.73 yield 1006# 24hr CS 165% Excess followed by 90sx PP cmt w/ 2% CaCl₂, 14.8ppg 1.35 yield 1346# 24hr CS 165% Excess.

b. Intermediate - Circulate cement to surface w/ 550sx HES light PP cmt w/ 5% Salt + 3#/sx Kol-Seal + .125#/sx Poly-E-Flake, 12.9ppg 1.87 yield 625# 24hrs CS 105% Excess followed by 170sx PP cmt w/ 1% CaCl₂, 14.8ppg 1.34 yield 2125# 24hr CS 105% Excess.

c. Production - Cement w/ 560sx Tuned Light cmt w/ 14.8#/sx Silicalite 50/50 Blend + 15#/sx Schotchlite HGS-6000 w/ .5#/sx CFR-3 + .15#/sx WG-17 + 1#/sx Cal-Seal 60 + 1.5# salt + 2% CaCl₂, 10.2ppg 2.95 yield 450# 24hr CS (500#-30hr) 100% Excess followed by 770sx Super H cmt w/ 3#/sx salt + .4% CFR-3 + .5% Halad-344 + .2% HR-800, 13.2ppg 1.64 yield 1263# 24hr CS 40% Excess,

Contingency 2nd Stage- DVT @ 3100' If lost circulation is present in the first stage and cement is not brought to surface, the contingency 2nd stage will be pumped as follows:
Circulate cement w/ 240sx HES light PP cmt w/ 3#/sx Salt, 12.4ppg 2.05 yield 450# 24hr (500#-28hr) CS 10% Excess followed by 100sx PP cmt, 14.8ppg 1.33 yield 1849# 24hr CS 50% Excess.

Description of Cement Additives: Calcium Chloride, Cal Seal 60, Salt (Accelerator); Silicalite (Additive Material); CFR-3 (Dispersant); WG-17 (Gelling Agent); Bentonite, Schotchlite HGS-6000 (Light Weight Additive); Kol-Seal, Poly-E-Flake (Lost Circulation Additive); Halad-344 (Low Fluid Loss Control); HR-800 (Retarder)

The above cement volumes could be revised pending the caliper measurement.

OXY USA Inc.
Cypress 28 Federal #7H – API No. 30-015-41303

Casing Design Assumptions:

Burst Loads

CSG Test (Surface)

- Internal: Displacement fluid + 70% CSG Burst rating
- External: Pore Pressure from section TD to surface

CSG Test (Intermediate)

- Internal: Displacement fluid + 70% CSG Burst rating
- External: Pore Pressure from the Intermediate hole TD to Surface CSG shoe and MW of the drilling mud that was in the hole when the CSG was run to surface

CSG Test (Production)

- Internal: Displacement fluid + 80% CSG Burst rating
- External: Pore Pressure from the well TD the Intermediate CSG shoe and MW of the drilling mud that was in the hole when the CSG was run to surface

Gas Kick (Surface/Intermediate)

- Internal: Gas Kick based on Pore Pressure or Fracture Gradient @ CSG shoe with a gas 0.115psi/ft Gas gradient to surface while drilling the next hole section (e.g. Gas Kick while drilling the production hole section is a burst load used to design the intermediate CSG)
- External: Pore Pressure from section TD to previous CSG shoe and MW of the drilling mud that was in the hole when the CSG was run to surface

Stimulation (Production)

- Internal: Displacement fluid + Max Frac treating pressure (not to exceed 80% CSG Burst rating)
- External: Pore Pressure from the well TD to the Intermediate CSG shoe and 8.5 ppg MWE to surface

Collapse Loads

Lost Circulation (Surface/Intermediate)

- Internal: Losses experienced while drilling the next hole section (e.g. losses while drilling the production hole section are used as a collapse load to design the intermediate CSG). After losses there will be a column of mud inside the CSG with an equivalent weight to the Pore Pressure of the lost circulation zone
- External: MW of the drilling mud that was in the hole when the CSG was run

Cementing (Surface/Intermediate/Production)

- Internal: Displacement Fluid
- External: Cement Slurries to TOC, MW to surface

Full Evacuation (Production)

- Internal: Atmospheric Pressure
- External: MW of the drilling mud that was in the hole when the CSG was run

Tension Loads

Running CSG (Surface/Intermediate/Production)

- Axial load of the buoyant weight of the string plus either 100 klb over-pull or string weight in air, whichever is less

Green Cement (Surface/Intermediate/Production)

- Axial load of the buoyant weight of the string plus the cement plug bump pressure (Final displacement pressure + 500 psi)

District I
1023 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 744-1243 Fax: (575) 744-9720
District III
1000 Rio Bravo Road, Artesia, NM 88210
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3463

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☒ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-05-41303	Pool Code 96878	Pool Name Hammann Ranch Delaware, NE ✓
Property Code 37803	Property Name CYPRESS "28" FED.	Well Number 7H
OGRID No. 16696	Operator Name OXY USA INC.	Elevation 2994.0'

Surface Location

UL or lot no.	Section	Township	Range	Lot 1dn	Feet from the	North/South line	Feet from the	East/West line	County
0	28	23 SOUTH	29 EAST, N.M.P.M.		330'	SOUTH	1400'	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot 1dn	Feet from the	North/South line	Feet from the	East/West line	County
B	28	23 SOUTH	29 EAST, N.M.P.M.		330'	NORTH	1689'	EAST	EDDY

Dedicated Acres 160	Joint or Infill	Consolidation Code	Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

BOTTOM HOLE LOCATION NEW MEXICO EAST NAD 1927 Y=468551.4 X=607283.5 LAT.: N 32.2821892° LONG.: W 103.9861852° PENETRATION POINT NEW MEXICO EAST NAD 1927 Y=4682630.9 X=607308.5 LAT.: N 32.2714120° LONG.: W 103.9861422° SURFACE LOCATION NEW MEXICO EAST NAD 1927 Y=461892.4 X=607553.2 LAT.: N 32.2693793° LONG.: W 103.9852320°		OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or undivided mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order hereafter entered by the division. Signature: <i>[Signature]</i> Date: 9/26/13 Printed Name: David Stewart Sr. Reg. Adv. E-mail Address: david.stewart@oxy.com
		SURVEYOR CERTIFICATION I hereby certify that the location shown on this plat was plotted from the NEW MEXICO plat survey made by me or under my supervision and that the same is true and correct to the best of my belief. Date of Survey: 9/25/2012 Signature and Seal of Professional Surveyor: <i>[Signature]</i> Certificate Number: 15079
		WO# 120525WL-b (KA)



Cypress 28 Fed #7H Eddy Co, NM

KB ELEV: 3014.0
GL ELEV: 2994.0

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	5809.19	0.00	0.00	5809.19	0.00	0.00	0.00	0.00	0.00	
3	6246.79	35.00	314.80	6220.08	91.27	-91.91	8.00	314.80	97.16	
4	7072.07	90.03	359.63	6601.00	744.62	-284.30	8.00	50.49	761.82	
5	10986.49	90.03	359.63	6599.00	4658.96	-309.72	0.00	0.00	4669.24	PBHL

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Cypress 28 Fed #7H	0.00	0.00	461892.40	607593.20	32°16'09.766N	103°59'06.835W	N/A

TARGET DETAILS

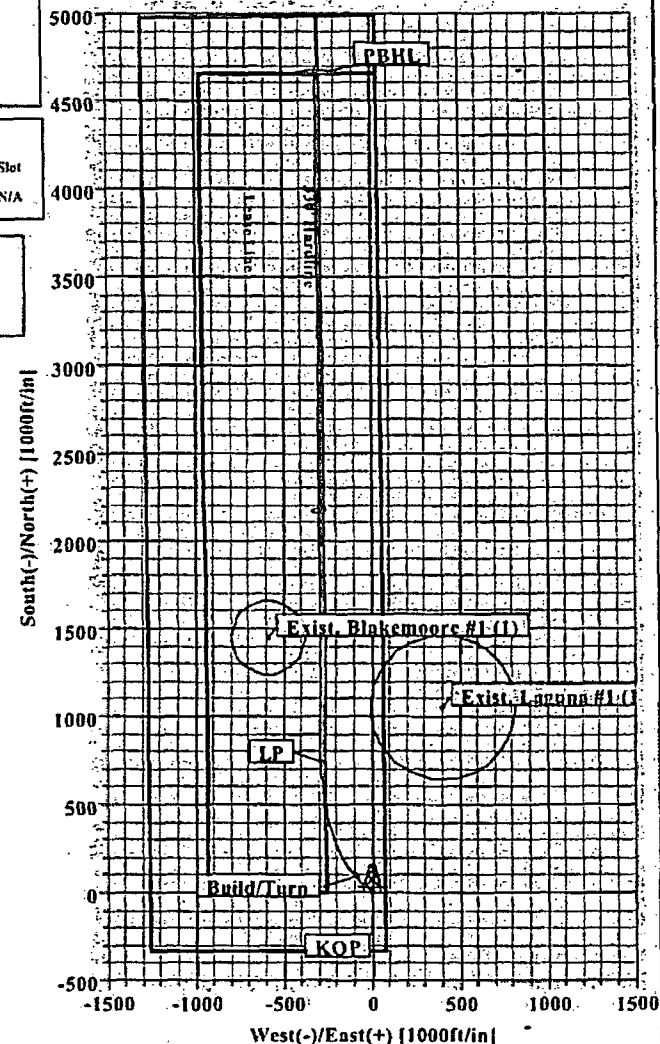
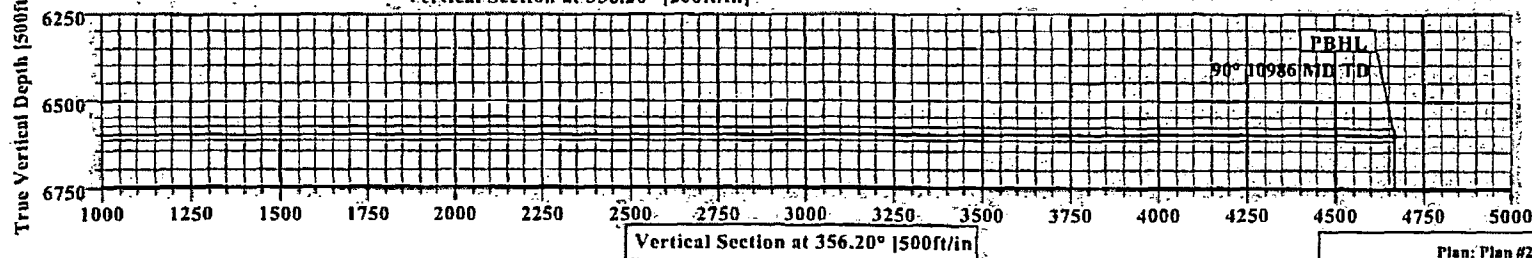
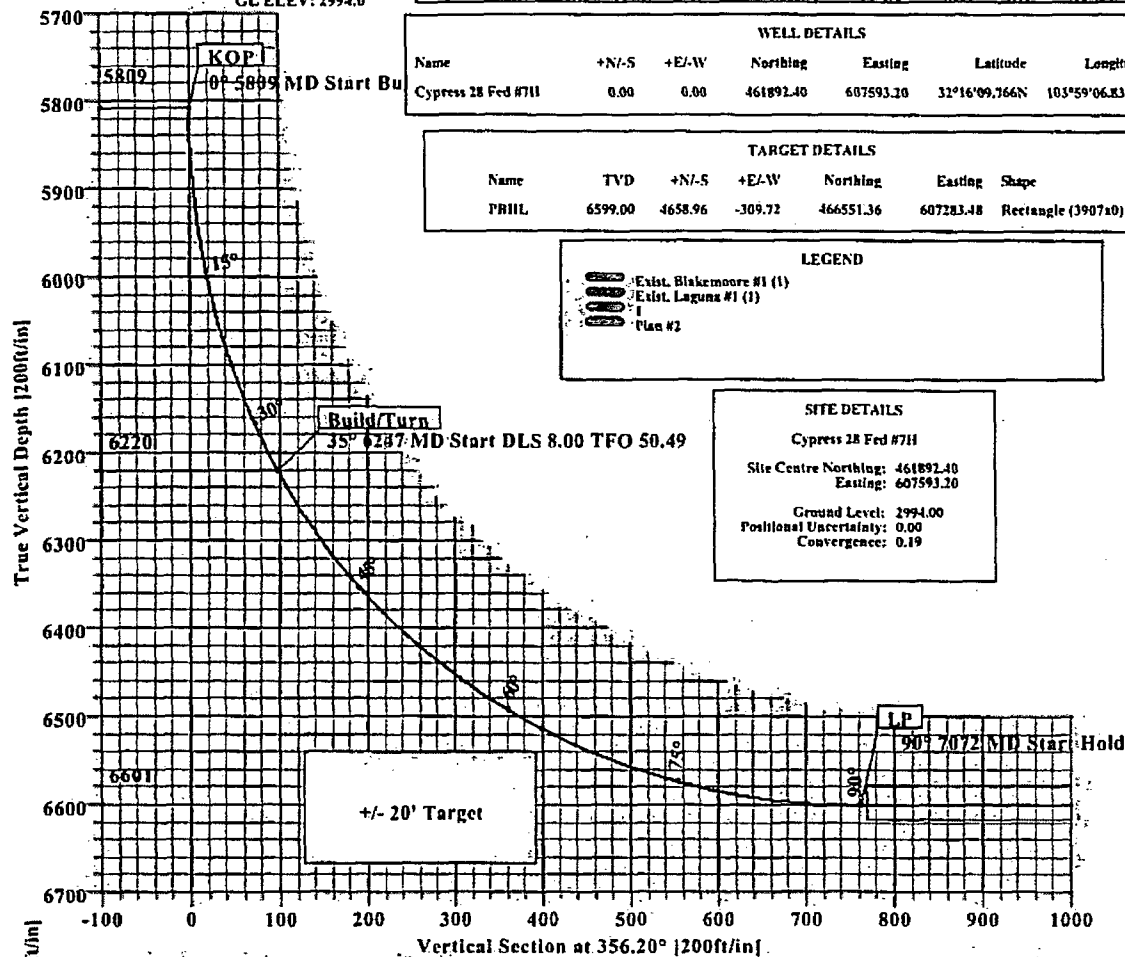
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	6599.00	4658.96	-309.72	466551.36	607283.48	Rectangle (3907x0)

LEGEND

- Exist. Blakemoore #1 (1)
- Exist. Laguna #1 (1)
- Plan #2

SITE DETAILS

Cypress 28 Fed #7H
Site Centre Northing: 461892.40
Easting: 607593.20
Ground Level: 2994.00
Positional Uncertainty: 0.00
Convergence: 0.19



Weatherford

Plan: Plan #2 (Cypress 28 Fed #7H/1)

Created By: Patrick Rudolph

Date: 9/19/2013



Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company: Occidental Permian Ltd.	Date: 9/26/2013	Time: 17:36:37	Page: 1
Field: Eddy Co, NM (Nad 27)	Co-ordinate(NE) Reference:	Well: Cypress 28 Fed #7H, Grid North	
Site: Cypress 28 Fed #7H	Vertical (TVD) Reference:	SITE 3018.0	
Well: Cypress 28 Fed #7H	Section (VS) Reference:	Well (0.00N,0.00E,356.20Azi)	
Wellpath: 1	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Plan: Plan #2	Date Composed: 9/19/2013
Principal: Yes	Version: 1
	Tied-to: From Surface

Site: Cypress 28 Fed #7H

Site Position:	Northings: 461892.40 ft	Latitude: 32 16 9.766 N
From: Map	Easting: 607593.20 ft	Longitude: 103 59 6.835 W
Position Uncertainty: 0.00 ft		North Reference: Grid
Ground Level: 2994.00 ft		Grid Convergence: 0.19 deg

Well: Cypress 28 Fed #7H	Slot Name:
Well Position: +N-S 0.00 ft	Latitude: 32 16 9.766 N
+E-W 0.00 ft	Longitude: 103 59 6.835 W
Position Uncertainty: 0.00 ft	

Wellpath: 1	Drilled From: Surface
Current Datum: SITE	Tie-on Depth: 0.00 ft
Magnetic Data: 1/15/2013	Above System Datum: Mean Sea Level
Field Strength: 48465 nT	Declination: 7.59 deg
Vertical Section: Depth From (TVD)	Mag Dip Angle: 60.12 deg
ft	+N-S ft
	+E-W ft
0.00	0.00
	Direction deg
	356.20

Plan Section Information

MD ft	Incl deg	Azlm deg	TVD ft	+N-S ft	+E-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5809.29	0.00	0.00	5809.29	0.00	0.00	0.00	0.00	0.00	0.00	
6246.79	35.00	314.80	6220.08	91.27	-91.91	8.00	8.00	0.00	314.80	
7072.07	90.03	359.63	6601.00	744.62	-284.30	8.00	6.67	5.43	50.49	
10986.49	90.03	359.63	6599.00	4658.96	-309.72	0.00	0.00	0.00	0.00	PBHL

Survey

MD ft	Incl deg	Azlm deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	461892.40	607593.20	Csg
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
1600.00	0.00	0.00	1600.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
1700.00	0.00	0.00	1700.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
1800.00	0.00	0.00	1800.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
1900.00	0.00	0.00	1900.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
2000.00	0.00	0.00	2000.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
2100.00	0.00	0.00	2100.00	0.00	0.00	0.00	0.00	461892.40	607593.20	



Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company: Occidental Permian Ltd. Date: 9/26/2013 Time: 17:36:37 Page: 2
 Field: Eddy Co, NM (Nad 27) Co-ordinate(NE) Reference: Well: Cypress 28 Fed #7H, Grid North
 Site: Cypress 28 Fed #7H Vertical (TVD) Reference: SITE 3018.0
 Well: Cypress 28 Fed #7H Section (VS) Reference: Well (0.00N,0.00E,356.20Azi)
 Wellpath: 1 Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comment
2200.00	0.00	0.00	2200.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
2300.00	0.00	0.00	2300.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
2400.00	0.00	0.00	2400.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
2500.00	0.00	0.00	2500.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
2600.00	0.00	0.00	2600.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
2700.00	0.00	0.00	2700.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
2800.00	0.00	0.00	2800.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
2900.00	0.00	0.00	2900.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
3000.00	0.00	0.00	3000.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
3100.00	0.00	0.00	3100.00	0.00	0.00	0.00	0.00	461892.40	607593.20	Csg
3200.00	0.00	0.00	3200.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
3300.00	0.00	0.00	3300.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
3400.00	0.00	0.00	3400.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
3500.00	0.00	0.00	3500.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
3600.00	0.00	0.00	3600.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
3700.00	0.00	0.00	3700.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
3800.00	0.00	0.00	3800.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
3900.00	0.00	0.00	3900.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
4000.00	0.00	0.00	4000.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
4100.00	0.00	0.00	4100.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
4200.00	0.00	0.00	4200.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
4300.00	0.00	0.00	4300.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
4400.00	0.00	0.00	4400.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
4500.00	0.00	0.00	4500.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
4600.00	0.00	0.00	4600.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
4700.00	0.00	0.00	4700.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
4800.00	0.00	0.00	4800.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
4900.00	0.00	0.00	4900.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
5000.00	0.00	0.00	5000.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
5100.00	0.00	0.00	5100.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
5200.00	0.00	0.00	5200.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
5300.00	0.00	0.00	5300.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
5400.00	0.00	0.00	5400.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
5500.00	0.00	0.00	5500.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
5600.00	0.00	0.00	5600.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
5700.00	0.00	0.00	5700.00	0.00	0.00	0.00	0.00	461892.40	607593.20	
5809.29	0.00	0.00	5809.29	0.00	0.00	0.00	0.00	461892.40	607593.20	KOP
5850.00	3.26	314.80	5849.98	0.82	-0.82	0.87	8.00	461893.22	607592.38	
5900.00	7.26	314.80	5899.76	4.04	-4.07	4.30	8.00	461896.44	607589.13	
5950.00	11.26	314.80	5949.10	9.71	-9.78	10.34	8.00	461902.11	607583.42	
6000.00	15.26	314.80	5997.75	17.79	-17.91	18.93	8.00	461910.19	607575.29	
6050.00	19.26	314.80	6045.49	28.24	-28.43	30.06	8.00	461920.64	607564.77	
6100.00	23.26	314.80	6092.08	41.01	-41.29	43.65	8.00	461933.41	607551.91	
6150.00	27.26	314.80	6137.29	56.04	-56.43	59.65	8.00	461948.44	607536.77	
6200.00	31.26	314.80	6180.91	73.25	-73.76	77.98	8.00	461965.65	607519.44	
6246.79	35.00	314.80	6220.08	91.27	-91.91	97.16	8.00	461983.67	607501.29	Build/Turn
6250.00	35.16	315.14	6222.71	92.57	-93.21	98.54	8.00	461984.97	607499.99	
6300.00	37.83	320.16	6262.91	114.56	-113.20	121.81	8.00	462006.96	607480.00	
6350.00	40.69	324.59	6301.63	139.63	-132.48	148.10	8.00	462032.03	607460.72	
6400.00	43.70	328.52	6338.67	167.65	-150.95	177.28	8.00	462060.05	607442.25	
6450.00	46.82	332.03	6373.87	198.49	-168.53	209.22	8.00	462090.89	607424.67	
6500.00	50.05	335.19	6407.04	232.00	-185.12	243.76	8.00	462124.40	607408.08	
6550.00	53.35	338.07	6438.03	268.02	-200.66	280.73	8.00	462160.42	607392.54	



Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company: Occidental Permian Ltd.	Date: 9/26/2013	Time: 17:36:37	Page: 3
Field: Eddy Co. NM (Nad 27)	Co-ordinate(NE) Reference:	Well: Cypress 28 Fed #7H, Grid North	
Site: Cypress 28 Fed #7H	Vertical (TVD) Reference:	SITE 3018.0	
Well: Cypress 28 Fed #7H	Section (VS) Reference:	Well (0.00N,0.00E,356.20Azi)	
Wellpath: 1	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey

MD ft	Incl deg	Azlm deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comment
6600.00	56.72	340.71	6466.69	306.37	-215.06	319.95	8.00	462198.77	607378.14	
6650.00	60.13	343.15	6492.87	346.86	-228.25	361.22	8.00	462239.26	607364.95	
6700.00	63.59	345.43	6516.45	389.29	-240.18	404.36	8.00	462281.69	607353.02	
6750.00	67.09	347.57	6537.31	433.47	-250.77	449.14	8.00	462325.87	607342.43	
6800.00	70.61	349.61	6555.35	479.17	-259.98	495.35	8.00	462371.57	607333.22	
6850.00	74.15	351.56	6570.49	526.18	-267.77	542.76	8.00	462418.58	607325.43	
6900.00	77.71	353.44	6582.64	574.25	-274.09	591.15	8.00	462466.65	607319.11	
6950.00	81.28	355.27	6591.76	623.16	-278.92	640.28	8.00	462515.56	607314.28	
7000.00	84.86	357.07	6597.79	672.68	-282.23	689.90	8.00	462565.08	607310.97	
7050.00	88.45	358.85	6600.71	722.55	-284.01	739.79	8.00	462614.95	607309.19	
7072.07	90.03	359.63	6601.00	744.62	-284.30	761.82	8.00	462637.02	607308.90	LP
7100.00	90.03	359.63	6600.99	772.55	-284.48	789.70	0.00	462664.95	607308.72	
7200.00	90.03	359.63	6600.94	872.54	-285.13	889.52	0.00	462764.94	607308.07	
7300.00	90.03	359.63	6600.88	972.54	-285.78	989.34	0.00	462864.94	607307.42	
7400.00	90.03	359.63	6600.83	1072.54	-286.43	1089.16	0.00	462964.94	607306.77	
7500.00	90.03	359.63	6600.78	1172.54	-287.08	1188.99	0.00	463064.94	607306.12	
7600.00	90.03	359.63	6600.73	1272.54	-287.73	1288.81	0.00	463164.94	607305.47	
7700.00	90.03	359.63	6600.68	1372.53	-288.38	1388.63	0.00	463264.93	607304.82	
7800.00	90.03	359.63	6600.63	1472.53	-289.03	1488.45	0.00	463364.93	607304.17	
7900.00	90.03	359.63	6600.58	1572.53	-289.68	1588.27	0.00	463464.93	607303.52	
8000.00	90.03	359.63	6600.53	1672.53	-290.33	1688.09	0.00	463564.93	607302.87	
8100.00	90.03	359.63	6600.48	1772.53	-290.98	1787.91	0.00	463664.93	607302.22	
8200.00	90.03	359.63	6600.42	1872.52	-291.63	1887.73	0.00	463764.92	607301.57	
8300.00	90.03	359.63	6600.37	1972.52	-292.28	1987.55	0.00	463864.92	607300.92	
8400.00	90.03	359.63	6600.32	2072.52	-292.93	2087.38	0.00	463964.92	607300.27	
8500.00	90.03	359.63	6600.27	2172.52	-293.58	2187.20	0.00	464064.92	607299.62	
8600.00	90.03	359.63	6600.22	2272.51	-294.23	2287.02	0.00	464164.91	607298.97	
8700.00	90.03	359.63	6600.17	2372.51	-294.87	2386.84	0.00	464264.91	607298.33	
8800.00	90.03	359.63	6600.12	2472.51	-295.52	2486.66	0.00	464364.91	607297.68	
8900.00	90.03	359.63	6600.07	2572.51	-296.17	2586.48	0.00	464464.91	607297.03	
9000.00	90.03	359.63	6600.02	2672.51	-296.82	2686.30	0.00	464564.91	607296.38	
9100.00	90.03	359.63	6599.96	2772.50	-297.47	2786.12	0.00	464664.90	607295.73	
9200.00	90.03	359.63	6599.91	2872.50	-298.12	2885.94	0.00	464764.90	607295.08	
9300.00	90.03	359.63	6599.86	2972.50	-298.77	2985.77	0.00	464864.90	607294.43	
9400.00	90.03	359.63	6599.81	3072.50	-299.42	3085.59	0.00	464964.90	607293.78	
9500.00	90.03	359.63	6599.76	3172.50	-300.07	3185.41	0.00	465064.90	607293.13	
9600.00	90.03	359.63	6599.71	3272.49	-300.72	3285.23	0.00	465164.89	607292.48	
9700.00	90.03	359.63	6599.66	3372.49	-301.37	3385.05	0.00	465264.89	607291.83	
9800.00	90.03	359.63	6599.61	3472.49	-302.02	3484.87	0.00	465364.89	607291.18	
9900.00	90.03	359.63	6599.56	3572.49	-302.67	3584.69	0.00	465464.89	607290.53	
10000.00	90.03	359.63	6599.50	3672.48	-303.32	3684.51	0.00	465564.88	607289.88	
10100.00	90.03	359.63	6599.45	3772.48	-303.97	3784.33	0.00	465664.88	607289.23	
10200.00	90.03	359.63	6599.40	3872.48	-304.62	3884.15	0.00	465764.88	607288.58	
10300.00	90.03	359.63	6599.35	3972.48	-305.26	3983.98	0.00	465864.88	607287.94	
10400.00	90.03	359.63	6599.30	4072.48	-305.91	4083.80	0.00	465964.88	607287.29	
10500.00	90.03	359.63	6599.25	4172.47	-306.56	4183.62	0.00	466064.87	607286.64	
10600.00	90.03	359.63	6599.20	4272.47	-307.21	4283.44	0.00	466164.87	607285.99	
10700.00	90.03	359.63	6599.15	4372.47	-307.86	4383.26	0.00	466264.87	607285.34	
10800.00	90.03	359.63	6599.10	4472.47	-308.51	4483.08	0.00	466364.87	607284.69	
10900.00	90.03	359.63	6599.04	4572.47	-309.16	4582.90	0.00	466464.87	607284.04	
10986.49	90.03	359.63	6599.00	4658.96	-309.72	4669.24	0.00	466551.36	607283.48	PBHL



Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company: Occidental Permian Ltd.	Date: 9/26/2013	Time: 17:36:37	Page: 4
Field: Eddy Co, NM (Nad 27)	Co-ordinate(NE) Reference:	Well: Cypress 28 Fed #7H, Grid North	
Site: Cypress 28 Fed #7H	Vertical (TVD) Reference:	SITE 3018.0	
Well: Cypress 28 Fed #7H	Section (VS) Reference:	Well (0.00N,0.00E,356.20Azi)	
Wellpath: 1	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Targets

Name	Description	Dip	Dir	TVD ft	+N-S ft	+E-W ft	Map Northing ft	Map Easting ft	Latitude Deg Min Sec	Longitude Deg Min Sec
PBHL	0.03	359.63	6599.00	4658.96	-309.72	466551.36	607283.48	32 16 55.881 N	103 59 10.267 W	
-Rectangle (3907x0)										

Casing Points

MD ft	TVD ft	Diameter in	Hole Size in	Name
400.00	400.00	0.000	0.000	Csg
3100.00	3100.00	0.000	0.000	Csg

Annotation

MD ft	TVD ft	
5809.29	5809.29	KOP
6246.79	6220.08	Build/Turn
7072.07	6601.00	LP
10986.49	6599.00	PBHL

Formations

MD ft	TVD ft	Formations	Lithology	Dip Angle deg	Dip Direction deg
	0.00	T. BSPG2 Limestone		0.00	0.00
	0.00	T. BSPG 2nd Sand		0.00	0.00
	0.00	Upper Limit of 2nd Sand		0.00	0.00

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	OXY USA INC.
LEASE NO.:	NM86024
WELL NAME & NO.:	7H-CYPRESS 28 FEDERAL
SURFACE HOLE FOOTAGE:	330'/S. & 1400'/E.
BOTTOM HOLE FOOTAGE:	330'/N. & 1689'/E.
LOCATION:	Section 28, T. 23 S., R. 29 E., NMPM
COUNTY:	Eddy County, New Mexico
API:	30-015-41303

Original COAs still stand with the following drilling modifications:

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)

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

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. 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.**
3. 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 is located, this does not include the dog house or stairway area.

4. 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 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.).

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.

High cave/karst.

Possible lost circulation in the Rustler, Delaware and Bone Spring.

1. The **11-3/4 inch** surface casing shall be set **at approximately 350 feet (in a competent bed below potential fresh water zones and above the salt)** and cemented to the surface. **If the salt occurs at a shallower depth, the casing is to be set a minimum of 25 feet above the salt.**
 - 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.

Formation below the 11-3/4" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe and the mud weight for the bottom of the hole. Report results to BLM office.

2. The minimum required fill of cement behind the **8-5/8 inch** intermediate casing is: **(Ensure casing is set in the base of the Castile or the Lamar at approximately 3000')**

- ☒ 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 cave/karst and potash concerns.

Formation below the 8-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office

3. The minimum required fill of cement behind the 5-1/2 inch production casing is:

- ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.

Operator has proposed a contingency DV tool at 3100'. If operator circulates cement on the first stage, operator is approved to run the DV tool cancellation plug and cancel the second stage of the proposed cement plan. If cement does not circulate, operator will proceed with the second stage.

a. Second stage above DV tool:

- ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Additional cement may be required – excess calculates to 14%.**

4. 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.
5. 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. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

3. **Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 5000 (5M) psi.**
- a. **Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.**
 - b. **If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.**
 - c. **Manufacturer representative shall install the test plug for the initial BOP test.**
 - d. **Operator shall perform the intermediate casing integrity test to 70 % of the casing burst. This will test the multi-bowl seals.**
 - e. **If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.**

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.****
 - 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.

JAM 102713