

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs

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.*5. Lease Serial No.
NMNM107395

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator
OXY USA INCORPORATEDContact: DAVID STEWART
E-Mail: david_stewart@oxy.com

3a. Address

HOUSTON, TX 77210-4294

3b. Phone No. (include area code)
Ph: 432.685.5717
Fx: 432.685.5742

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 29 T23S R33E NWNW 340FNL 980FWL
32.281923 N Lat, 103.599239 W Lon8. Well Name and No.
FOXGLOVE 29 FEDERAL 4H9. API Well No.
30-025-41827-00-X110. Field and Pool, or Exploratory
TRIPLE X11. County or Parish, and State
LEA 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 APD
	☐ Convert to Injection	☐ Plug Back	☐ 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 recompleat 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 and additions to the drilling plan:

1. Extend the BHL approximately 160' past the south hardline to allow for our shoe track and perforating guns, see attached for amended C-102 plat and amended directional drilling plan

Proposed TD - 15662'M 11146'V

2. Run 42 broadband sleeves spaced throughout the lateral section on the 5-1/2" casing. See attached for details, and as showed in the tool specifications the body max. OD is 7.0". The production casing string will be in compliance with current COA in the approved APD.

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

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

Electronic Submission #284155 verified by the BLM Well Information System**For OXY USA INCORPORATED, sent to the Hobbs****Committed to AFMSS for processing by CHRISTOPHER WALLS on 12/05/2014 (15CRW0030SE)**

Name (Printed/Typed) DAVID STEWART

Title SR. REGULATORY ADVISOR

Signature (Electronic Submission)

Date 12/04/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE**APPROVED**

Approved By

Title

DEC 5 2014

Date

/s/ Chris Walls

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

BUREAU OF LAND MANAGEMENT

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.

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

DEC 19 2014

Additional data for EC transaction #284155 that would not fit on the form

32. Additional remarks, continued

3. Contingency Plan if losses are encountered while circulating prior to running casing. Add DV tool and ACP 50' below intermediate casing shoe for contingency second stage cement job.

4. If the DVT and ACP are ran and full returns are present during first stage cement job we will inflate the ACP and then drop the cancelation cone for the DV tool. If there is lost circulation during the first stage cement job, see below for the second stage contingency cement plan.

Production Casing **LTC**
5-1/2" 20# P110 Tenaris Blue new csg @ 0-15662', 7-7/8" hole w/ 9.3# mud

Coll Rating (psi)-11100 Burst Rating (psi)-12630
SF Coll-2.11 SF Burst-1.35 SF Ten-1.74

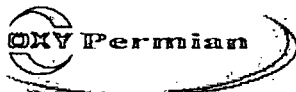
Production - Cement w/ 870sx Tuned Light (TM) system cmt w/ 1#/sx Kol-Seal + .1#/sx Poly-E-Flake + .35% HR-601, 10.2ppg 3.055 yield 788# 24hr CS 150% Excess followed by 760sx PP H cmt w/ 3#/sx salt + .3% CFR-3 + .5% Halad-344 + .1% HR-800, 13.2ppg 1.65 yield 1462# 24hr CS 40% Excess. Calculated TOC 4200'

DV tool @ +/-5250'. If returns are not lost during first stage cement job we will drop the cancelation cone for the DV tool.

Contingency 2nd Stage - Cement w/ 70sx Econocement + 3#/sx salt, 12.4ppg 2.05 yield 500# 29hr CS 10% Excess followed by 90sx PP cmt, 14.8ppg 1.33 yield 1849# 24hr CS 150# excess. Calculated TOC 4000'

Description of Cement Additives: Calcium Chloride, Salt (Accelerator); CFR-3 (Dispersant); SA-1015 (Light Weight Additive); Kol-Seal, Poly-E-Flake (Lost Circulation Additive); Halad-344 (Low Fluid Loss Control); HR-100 (Retarder)

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



Planning Report



Database:	Midland District	Local Co-ordinate Reference:	Well F29F 4H
Company:	OXY	TVD Reference:	KB @ 3716.1usft
Project:	Lea County, New Mexico	MD Reference:	KB @ 3716.1usft
Site:	Foxglove 29 Federal 4H	North Reference:	Grid
Well:	F29F 4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Plan #4		

Project:	Lea County, New Mexico		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site:	Foxglove 29 Federal 4H		
Site Position:	Northings:	467,057.10 usft	Latitude: 32° 16' 54.922 N
From:	Map	Easting: 726,869.00 usft	Longitude: 103° 35' 57.260 W
Position Uncertainty:	0.0 usft	Slot Radius: 13-3/16 "	Grid Convergence: 0.39 °

Well:	F29F 4H		
Well Position	+N/-S	0.0 usft	Northings: 467,057.10 usft
	+E/-W	0.0 usft	Easting: 726,869.00 usft
Position Uncertainty	0.0 usft	Wellhead Elevation:	0.0 usft
		Ground Level:	3,692.1 usft

Wellbore:	Original Wellbore		
Magnetics:	Model Name	Sample Date	Declination
			(°)
	IGRF2010	10/11/2013	7.32
			Dip Angle (°)
			60.18
			Field Strength (mT)
			48.414

Design:	Plan #4		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction (°)
			180.07

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
10,573.0	0.00	0.00	10,573.0	0.0	0.0	0.00	0.00	0.00	0.00	
11,473.0	90.00	183.08	11,146.0	-572.1	-30.8	10.00	10.00	0.00	183.08	
11,647.8	90.00	179.58	11,146.0	-746.8	-34.8	2.00	0.00	-2.00	-90.01	
15,661.5	90.00	179.58	11,146.0	-4,760.4	-5.7	0.00	0.00	0.00	0.00	FG 29Fed 4H PBHL



Planning Report

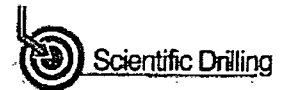


Database:	Midland District	Local Co-ordinate Reference:	Well F29F 4H
Company:	OXY	TVD Reference:	KB @ 3716 1ush
Project:	Lea County, New Mexico	MD Reference:	KB @ 3716 1ush
Site:	Foxplove 29 Federal 4H	North Reference:	Grd
Well:	F29F 4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Plan #4		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	N-S (usft)	E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00



Planning Report



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Site:	Foxglove 29 Federal 4H	North Reference:	Grid
Well:	F29F 4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Plan #4		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,100.0	0.0	0.0	0.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,200.0	0.0	0.0	0.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,300.0	0.0	0.0	0.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,400.0	0.0	0.0	0.0	0.00	0.00	0.00
6,500.0	0.00	0.00	6,500.0	0.0	0.0	0.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,600.0	0.0	0.0	0.0	0.00	0.00	0.00
6,700.0	0.00	0.00	6,700.0	0.0	0.0	0.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,800.0	0.0	0.0	0.0	0.00	0.00	0.00
6,900.0	0.00	0.00	6,900.0	0.0	0.0	0.0	0.00	0.00	0.00
7,000.0	0.00	0.00	7,000.0	0.0	0.0	0.0	0.00	0.00	0.00
7,100.0	0.00	0.00	7,100.0	0.0	0.0	0.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,200.0	0.0	0.0	0.0	0.00	0.00	0.00
7,300.0	0.00	0.00	7,300.0	0.0	0.0	0.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,400.0	0.0	0.0	0.0	0.00	0.00	0.00
7,500.0	0.00	0.00	7,500.0	0.0	0.0	0.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,600.0	0.0	0.0	0.0	0.00	0.00	0.00
7,700.0	0.00	0.00	7,700.0	0.0	0.0	0.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,800.0	0.0	0.0	0.0	0.00	0.00	0.00
7,900.0	0.00	0.00	7,900.0	0.0	0.0	0.0	0.00	0.00	0.00
8,000.0	0.00	0.00	8,000.0	0.0	0.0	0.0	0.00	0.00	0.00
8,100.0	0.00	0.00	8,100.0	0.0	0.0	0.0	0.00	0.00	0.00
8,200.0	0.00	0.00	8,200.0	0.0	0.0	0.0	0.00	0.00	0.00
8,300.0	0.00	0.00	8,300.0	0.0	0.0	0.0	0.00	0.00	0.00
8,400.0	0.00	0.00	8,400.0	0.0	0.0	0.0	0.00	0.00	0.00
8,500.0	0.00	0.00	8,500.0	0.0	0.0	0.0	0.00	0.00	0.00
8,600.0	0.00	0.00	8,600.0	0.0	0.0	0.0	0.00	0.00	0.00
8,700.0	0.00	0.00	8,700.0	0.0	0.0	0.0	0.00	0.00	0.00
8,800.0	0.00	0.00	8,800.0	0.0	0.0	0.0	0.00	0.00	0.00
8,900.0	0.00	0.00	8,900.0	0.0	0.0	0.0	0.00	0.00	0.00
9,000.0	0.00	0.00	9,000.0	0.0	0.0	0.0	0.00	0.00	0.00
9,100.0	0.00	0.00	9,100.0	0.0	0.0	0.0	0.00	0.00	0.00
9,200.0	0.00	0.00	9,200.0	0.0	0.0	0.0	0.00	0.00	0.00
9,300.0	0.00	0.00	9,300.0	0.0	0.0	0.0	0.00	0.00	0.00
9,400.0	0.00	0.00	9,400.0	0.0	0.0	0.0	0.00	0.00	0.00
9,500.0	0.00	0.00	9,500.0	0.0	0.0	0.0	0.00	0.00	0.00
9,600.0	0.00	0.00	9,600.0	0.0	0.0	0.0	0.00	0.00	0.00
9,700.0	0.00	0.00	9,700.0	0.0	0.0	0.0	0.00	0.00	0.00
9,800.0	0.00	0.00	9,800.0	0.0	0.0	0.0	0.00	0.00	0.00
9,900.0	0.00	0.00	9,900.0	0.0	0.0	0.0	0.00	0.00	0.00
10,000.0	0.00	0.00	10,000.0	0.0	0.0	0.0	0.00	0.00	0.00
10,100.0	0.00	0.00	10,100.0	0.0	0.0	0.0	0.00	0.00	0.00
10,200.0	0.00	0.00	10,200.0	0.0	0.0	0.0	0.00	0.00	0.00
10,300.0	0.00	0.00	10,300.0	0.0	0.0	0.0	0.00	0.00	0.00
10,400.0	0.00	0.00	10,400.0	0.0	0.0	0.0	0.00	0.00	0.00
10,500.0	0.00	0.00	10,500.0	0.0	0.0	0.0	0.00	0.00	0.00
10,573.0	0.00	0.00	10,573.0	0.0	0.0	0.0	0.00	0.00	0.00
10,600.0	2.70	183.08	10,600.0	-0.6	0.0	0.6	10.00	10.00	0.00

Database:	Midland District	Local Co-ordinate Reference:	Well F29F 4H
Company:	OXY	TVD Reference:	KB @ 3716.1usft
Project:	Lea County, New Mexico	MD Reference:	KB @ 3716.1usft
Site:	Foxglove 29 Federal 4H	North Reference:	Grid
Well:	F29F 4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Plan #4		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	N-S (usft)	E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,650.0	7.70	183.08	10,649.8	-5.2	-0.3	5.2	10.00	10.00	0.00
10,700.0	12.70	183.08	10,699.0	-14.0	-0.8	14.0	10.00	10.00	0.00
10,750.0	17.70	183.08	10,747.2	-27.1	-1.5	27.1	10.00	10.00	0.00
10,800.0	22.70	183.08	10,794.1	-44.3	-2.4	44.3	10.00	10.00	0.00
10,850.0	27.70	183.08	10,839.3	-65.6	-3.5	65.6	10.00	10.00	0.00
10,900.0	32.70	183.08	10,882.5	-90.7	-4.9	90.7	10.00	10.00	0.00
10,950.0	37.70	183.08	10,923.4	-119.4	-6.4	119.5	10.00	10.00	0.00
11,000.0	42.70	183.08	10,961.6	-151.7	-8.2	151.7	10.00	10.00	0.00
11,050.0	47.70	183.08	10,996.8	-187.1	-10.1	187.1	10.00	10.00	0.00
11,100.0	52.70	183.08	11,028.8	-225.4	-12.1	225.4	10.00	10.00	0.00
11,150.0	57.70	183.08	11,057.3	-266.4	-14.3	266.4	10.00	10.00	0.00
11,200.0	62.70	183.08	11,082.1	-309.7	-16.7	309.7	10.00	10.00	0.00
11,250.0	67.70	183.08	11,103.1	-355.0	-19.1	355.1	10.00	10.00	0.00
11,300.0	72.70	183.08	11,120.0	-402.0	-21.6	402.0	10.00	10.00	0.00
11,350.0	77.70	183.08	11,132.8	-450.2	-24.2	450.3	10.00	10.00	0.00
11,400.0	82.70	183.08	11,141.3	-499.4	-26.9	499.5	10.00	10.00	0.00
11,450.0	87.70	183.08	11,145.5	-549.2	-29.5	549.2	10.00	10.00	0.00
11,473.0	90.00	183.08	11,146.0	-572.1	-30.8	572.2	10.00	10.00	0.00
11,500.0	90.00	182.54	11,146.0	-599.1	-32.1	599.1	2.00	0.00	-2.00
11,600.0	90.00	180.54	11,146.0	-699.1	-34.8	699.1	2.00	0.00	-2.00
11,647.8	90.00	179.58	11,146.0	-746.8	-34.8	746.9	2.00	0.00	-2.00
11,700.0	90.00	179.58	11,146.0	-799.1	-34.5	799.1	0.00	0.00	0.00
11,800.0	90.00	179.58	11,146.0	-899.1	-33.7	899.1	0.00	0.00	0.00
11,900.0	90.00	179.58	11,146.0	-999.0	-33.0	999.1	0.00	0.00	0.00
12,000.0	90.00	179.58	11,146.0	-1,099.0	-32.3	1,099.1	0.00	0.00	0.00
12,100.0	90.00	179.58	11,146.0	-1,199.0	-31.6	1,199.1	0.00	0.00	0.00
12,200.0	90.00	179.58	11,146.0	-1,299.0	-30.8	1,299.1	0.00	0.00	0.00
12,300.0	90.00	179.58	11,146.0	-1,399.0	-30.1	1,399.1	0.00	0.00	0.00
12,400.0	90.00	179.58	11,146.0	-1,499.0	-29.4	1,499.1	0.00	0.00	0.00
12,500.0	90.00	179.58	11,146.0	-1,599.0	-28.7	1,599.1	0.00	0.00	0.00
12,600.0	90.00	179.58	11,146.0	-1,699.0	-27.9	1,699.1	0.00	0.00	0.00
12,700.0	90.00	179.58	11,146.0	-1,799.0	-27.2	1,799.1	0.00	0.00	0.00
12,800.0	90.00	179.58	11,146.0	-1,899.0	-26.5	1,899.1	0.00	0.00	0.00
12,900.0	90.00	179.58	11,146.0	-1,999.0	-25.8	1,999.1	0.00	0.00	0.00
13,000.0	90.00	179.58	11,146.0	-2,099.0	-25.0	2,099.0	0.00	0.00	0.00
13,100.0	90.00	179.58	11,146.0	-2,199.0	-24.3	2,199.0	0.00	0.00	0.00
13,200.0	90.00	179.58	11,146.0	-2,299.0	-23.6	2,299.0	0.00	0.00	0.00
13,300.0	90.00	179.58	11,146.0	-2,399.0	-22.9	2,399.0	0.00	0.00	0.00
13,400.0	90.00	179.58	11,146.0	-2,499.0	-22.1	2,499.0	0.00	0.00	0.00
13,500.0	90.00	179.58	11,146.0	-2,599.0	-21.4	2,599.0	0.00	0.00	0.00
13,600.0	90.00	179.58	11,146.0	-2,699.0	-20.7	2,699.0	0.00	0.00	0.00
13,700.0	90.00	179.58	11,146.0	-2,799.0	-20.0	2,799.0	0.00	0.00	0.00
13,800.0	90.00	179.58	11,146.0	-2,899.0	-19.2	2,899.0	0.00	0.00	0.00
13,900.0	90.00	179.58	11,146.0	-2,999.0	-18.5	2,999.0	0.00	0.00	0.00
14,000.0	90.00	179.58	11,146.0	-3,099.0	-17.8	3,099.0	0.00	0.00	0.00
14,100.0	90.00	179.58	11,146.0	-3,199.0	-17.1	3,199.0	0.00	0.00	0.00
14,200.0	90.00	179.58	11,146.0	-3,299.0	-16.3	3,299.0	0.00	0.00	0.00
14,300.0	90.00	179.58	11,146.0	-3,399.0	-15.6	3,399.0	0.00	0.00	0.00
14,400.0	90.00	179.58	11,146.0	-3,499.0	-14.9	3,499.0	0.00	0.00	0.00
14,500.0	90.00	179.58	11,146.0	-3,599.0	-14.2	3,599.0	0.00	0.00	0.00
14,600.0	90.00	179.58	11,146.0	-3,699.0	-13.4	3,699.0	0.00	0.00	0.00
14,700.0	90.00	179.58	11,146.0	-3,799.0	-12.7	3,799.0	0.00	0.00	0.00
14,800.0	90.00	179.58	11,146.0	-3,899.0	-12.0	3,899.0	0.00	0.00	0.00
14,900.0	90.00	179.58	11,146.0	-3,999.0	-11.3	3,999.0	0.00	0.00	0.00

Database:	Midland District	Local Co-ordinate Reference:	Well F29F 4H
Company:	OXY	TVD Reference:	KB @ 3716.1usft
Project:	Lea County, New Mexico	MD Reference:	KB @ 3716.1usft
Site:	Foxglove 29 Federal 4H	North Reference:	Grid
Well:	F29F 4H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Plan #4		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N-S (usft)	+E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,000.0	90.00	179.58	11,146.0	-4,099.0	-10.5	4,099.0	0.00	0.00	0.00
15,100.0	90.00	179.58	11,146.0	-4,199.0	-9.8	4,199.0	0.00	0.00	0.00
15,200.0	90.00	179.58	11,146.0	-4,299.0	-9.1	4,299.0	0.00	0.00	0.00
15,300.0	90.00	179.58	11,146.0	-4,399.0	-8.4	4,399.0	0.00	0.00	0.00
15,400.0	90.00	179.58	11,146.0	-4,499.0	-7.6	4,499.0	0.00	0.00	0.00
15,500.0	90.00	179.58	11,146.0	-4,599.0	-6.9	4,599.0	0.00	0.00	0.00
15,600.0	90.00	179.58	11,146.0	-4,699.0	-6.2	4,699.0	0.00	0.00	0.00
15,661.5	90.00	179.58	11,146.0	-4,760.4	-5.7	4,760.4	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N-S (usft)	+E-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
hit/miss target									
Shape									
FG 29Fed 4H PBHL	0.00	0.01	11,146.0	-4,760.4	-5.7	462,296.65	726,863.27	32° 16' 7.815 N	103° 35' 57.706 W
- plan hits target center									
- Point									

F29F 4H
Lea County, New Mexico
Northing: 467057.10
Easting: 726869.00
Plan #4

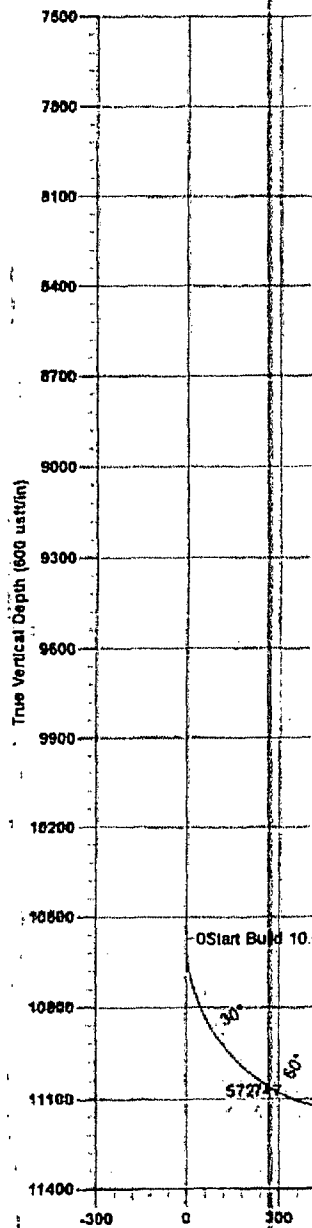


To convert Magnetic North to Grid, Add 6.92°
To convert True North to Grid, Subtract 0.39°

Magnetic Field
Strength: 48413.7 nT
Dip Angle: 60.18°
Date: 10/11/2013
Model: IGRF2010



KB 3716.1usft
Gr 3892.1



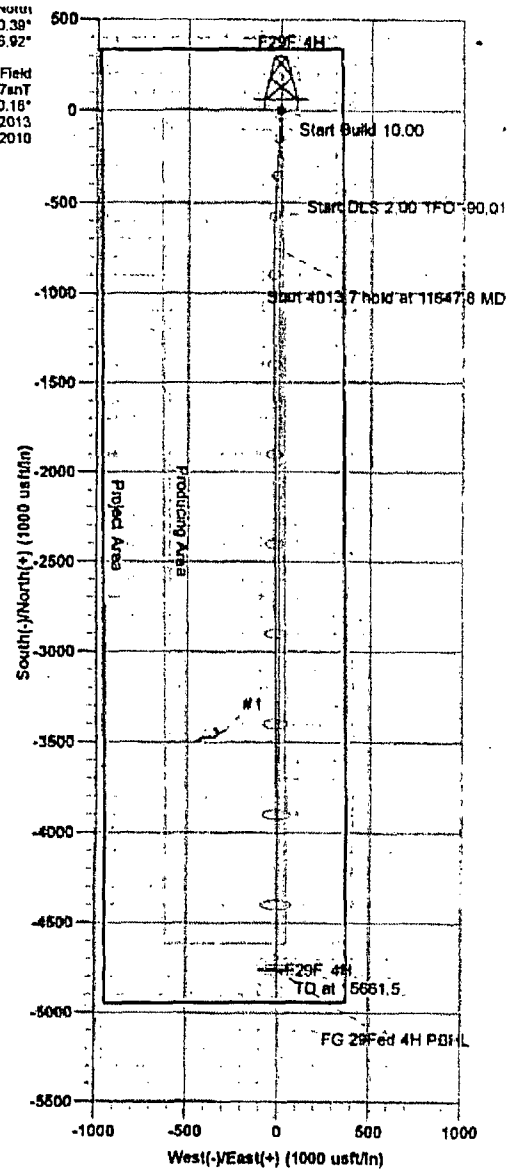
WELL DETAILS F29F 4H						
Ground Level: 3892.1						
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.0	0.0	467057.10	726869.00	32° 16' 54.922 183° 35' 57.260 W		

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSed	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
10573.0	0.00	0.00	10573.0	0.0	0.0	0.00	0.00	0.0	
11473.0	90.00	183.08	11146.0	-572.1	-30.8	10.00	183.08	572.2	
11847.8	90.00	179.58	11146.0	-746.6	-34.8	2.00	-90.01	746.9	
15661.5	90.00	179.58	11146.0	-4760.4	-5.7	0.00	0.00	4760.4	FG 29Fed 4H PBHL

DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Northing	Easting
FG 29Fed 4H PBHL	11146.0	-4760.4	-5.7	462296.65	726863.27

SITE DETAILS:
Forgrave 29 Federal 4H
Site Centre Northing: 467057.10
Easting: 726869.00
Positional Uncertainty: 0.0
Convergence: 0.39
Local North: Grid

PROJECT DETAILS:
Lea County, New Mexico
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level



Lateral TGT Line
20'up/20'down

TD at 15661.5
FG 29Fed 4H PBHL James Dunn
11:07, September 22 2014

Scientific Drilling
325 Faudree Rd.
Odessa, TX 79765

Conditions of Approval

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

a. First stage to DV tool:

- ☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage.

Operator has proposed a contingency DV tool at 5250'. If operator circulates cement on the first stage, operator is approved to inflate the ACP and run the DV tool cancellation plug and cancel the second stage of the proposed cement plan. If cement does not circulate, operator will inflate ACP and proceed with the second stage.

Second stage above DV tool:

- ☒ Cement as proposed by operator (TOC 4000'). Operator shall provide method of verification.

Precision

Reclosable cemented frac sleeve

APPLICATIONS

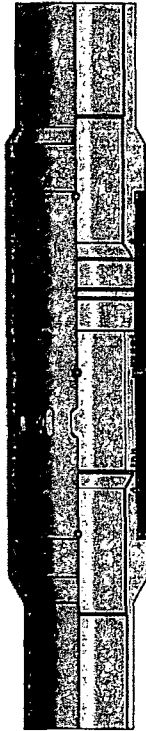
- Cemented multistage stimulation with pinpoint frac placement
- Openhole multistage stimulation, deployed with openhole packers

BENEFITS

- Simplifies rig operations
- Enables reliable zonal shutoff

FEATURES

- Requires only the tension from the CT to open sleeves
- Premium coatings and scraping mechanisms proven in the harshest thermal environments
- Proprietary manufacturing and engineering for robust cemented hole fracturing system
- Large flow port area with 360° port coverage ensures access to frac the plane
- Fullbore has no effect on cementing or reentry for subsequent stimulation
- Reliable Harrier CT multistage stimulation shifting tool technology provides positive sleeve actuation
- Short length of tool reduces drag and increases opening and closing of sleeves



Precision sleeve.

The Precision reclosable cemented frac sleeve is part of a robust cemented hole fracturing system designed to allow operators to perform selective single-point multistage fracs.

The Precision sleeve is a two-position, fullbore, reclosable frac sleeve designed for most common high-pressure and high-rate fracs. The inner sleeve is run in a pinned configuration and sheared when desired, providing positive indication that the specified port has opened before fracturing.

After fracturing, the Precision sleeve can be open, closed, or reopened, allowing operators to tailor production over the life of the well. This has been accomplished through premium manufactured sealing technology, incorporating coatings and associated inner bore scraping mechanisms that have been proven in the harshest thermal environments. In addition, the sleeve utilizes an adjustable detent locking system that locks the sheared sleeve to prevent accidental manipulation and provides operators with reliable weight indicators to mark when the sleeve has shifted.

Precision

4.5-in. Precision Sleeve

Precision Sleeve Specifications

Max. OD	5.5 in [139.7 mm]
Min. ID	Drift
Sleeve weight	85 lbm [28.6 kg]
Total length	34.6 in [878.8 mm]
Up position/lower position	Stimulation/closed
Frac port area	10.70 in ² [69.03 cm ²]

Casing Specifications

Size	4.5 in [114.3 mm]
Weight	11.6–15.1 lbm/ft [17.3–22.5 kg/m]

Precision Sleeve Operating Data

Max. pressure	18,000 psi [124 MPa]
Temperature rating	350 degF [177 degC]
Up shifting weight	5,000 lbf [22,241 N]
Down shifting weight	2,100 lbf [9,341 N]
Torque	6,700 ft.lbf [9,083 N.m]

5.5-in. Precision Sleeve

Precision Sleeve Specifications

Max. OD	7.00 in [177.8 mm]
Min. ID	Drift
Sleeve weight	155 lbm [70.3 kg]
Total length	36.2 in [919.48 mm]
Up position/lower position	Stimulation/closed
Frac port area	11.94 in ² [77.03 cm ²]

Casing Specifications

Size	5.5 in [139.7 mm]
Weight	17.0–23.0 lbm/ft [25.3–34.2 kg/m]

Precision Sleeve Operating Data

Max. pressure	17,500 psi [121 MPa]
Temperature rating	350 degF [177 degC]
Up shifting weight	6,000 lbf [26,689 N]
Down shifting weight	3,000 lbf [13,344 N]
Torque	18,000 ft.lbf [24,404 N.m]

slb.com/BroadBand

Schlumberger

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