

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NM OIL CONSERVATION

ARTESIA DISTRICT

AUG 28 2014

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.

RECEIVED

5. Lease Serial No.
NMNM62590

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.
FEDERAL 26 12H9. API Well No.
30-015-41573-00-X110. Field and Pool, or Exploratory
LIVINGSTON RIDGE11. County or Parish, and State
EDDY COUNTY, NM**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.com3a. Address
5 GREENWAY PLAZA STE 110
HOUSTON, TX 77046-05213b. 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 23 T22S R31E SESE 1043FSL 528FEL

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 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 recompleat 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. Move the surface location. A gas pipeline was under the approved surface location. BLM was contacted and Indra Dahal-BLM approved the new surface location and that we could file a sundry notice for the change. See attached for amended wellsite plans.

Surface Location-1043 FSL 528 FEL SESE(P) Sec 23
Top Perf - 340 FNL 949 FEL NENE(A) Sec 26
Bottom Perf - 350 FSL 659 FEL SESE(P) Sec 26 ✓
Bottom-hole - 180 FSL 649 FEL SESE(P) Sec 26

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

2. Extend the BHL 170' past the south hardline to allow for our shoe track and perforating guns.

Engr reviewed/cont attached 8/6/14 Surface: Previously approved Coac still applies. Indra 8/2

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

Electronic Submission #255469 verified by the BLM Well Information System

For OXY USA INCORPORATED, sent to the Carlsbad

Committed to AFMSS for processing by WESLEY INGRAM on 08/06/2014 (14WWI0312SE)

Name (Printed/Typed) DAVID STEWART

Title REGULATORY ADVISOR

Signature (Electronic Submission)

Date 08/01/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By

Stephen J Coffey

Title

Date

8/21/14

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

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 ****

Additional data for EC transaction #255469 that would not fit on the form

32. Additional remarks, continued

see attached for amended C-102 plat and amended directional drilling plan.

Proposed TD - 13551'M 8305'V

3. Request 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.

a. Surface Casing

11-3/4" 47# J-55 BT&C new csg @ 0-875', 14-3/4" hole w/ 8.5# mud

Coll Rating (psi)-1510 Burst Rating (psi)-3070

SF Coll-4.36 SF Burst-3.80 SF Ten-5.46

b. Intermediate Casing

8-5/8" 32# J-55 LT&C new csg @ 0-4469', 10-5/8" hole w/ 10.2# mud

Coll Rating (psi)-2530 Burst Rating (psi)-3930

SF Coll-1.66 SF Burst-1.38 SF Ten-1.89

c. Production Casing

5-1/2" 17# L-80 BT&C new csg @ 0-13220'M, 7-7/8" hole w/ 9.2# mud

Coll Rating (psi)-6290 Burst Rating (psi)-7740

SF Coll-1.55 SF Burst-1.25 SF Ten-1.80

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

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

a. Surface - Circulate cement to surface w/ 430sx PP cmt w/ 1% CaCl₂ + .25#/sx Poly-E-Flake, 13.5ppg 1.73 yield 1013# 24hr CS 150% Excess followed by 190sx PP cmt w/ 2% CaCl₂, 14.8ppg 1.35 yield 1415# 24hr CS 150% Excess.

b. Intermediate - Circulate cement to surface w/ 910sx HES light PP cmt w/ 5% Salt + .5% HR-800, 12.9ppg 1.84 yield 824# 24hs CS 125% Excess followed by 190sx PP cmt, 14.8ppg 1.33 yield 1784# 24hr CS 125% Excess.

c. Production - Circulate cement to surface w/ 560sx Tuned Light cmt w/ .125#/sx Poly-E-Flake + .8% HR-601 + 3#/sx Kol-Seal, 9.76ppg 3.48 yield 788# 24hr CS 100% Excess followed by 890sx Super H cmt w/ 3#/sx salt + .3% CFR-3 + .5% Halad-344 + 2#/sx Kol-Seal, 13.2ppg 1.65 yield 1462# 24hr CS 40% Excess.

Description of Cement Additives: Calcium Chloride, Salt (Accelerator); CFR-3 (Dispersant); Kol-Seal, Poly-E-Flake (Lost Circulation Additive); Halad-344 (Low Fluid Loss Control); HR-601, HR-800 (Retarder)

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

**Federal 26 12H
30-015-41573
OXY USA Inc.
August 6, 2014
Conditions of Approval**

- 1. Original Conditions of Approval still apply, but with new casing sizes/grades/weights for the surface and intermediate. Note – hole sizes have changed also.**
- 2. Operator shall keep intermediate casing liquid filled while running in hole to meet BLM minimum collapse safety factor.**
- 3. The minimum required fill of cement behind the 5 1/2 inch production casing (also a different grade/hole size) is:**

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

WWI 080614

OXY USA Inc
Federal 26 #12H

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

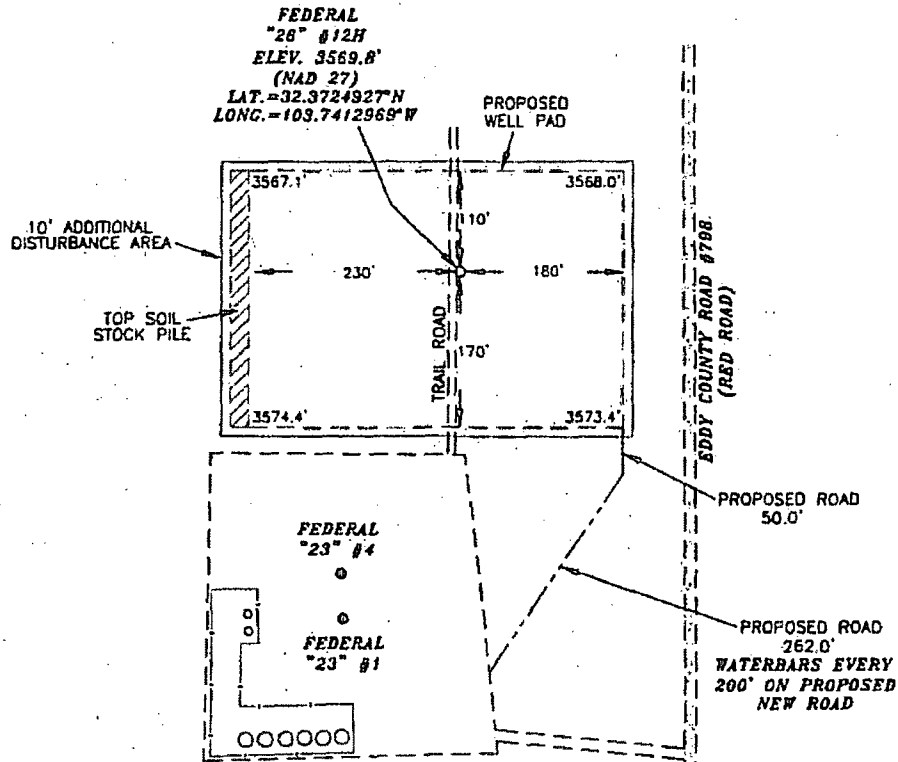
Green Cement (Surface/Intermediate/Production)

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

Burst, Collapse and Tensile SF are calculated using Landmark's Stress Check (Casing Design) software.

WOF 120904WL-a (Rev. H) (CW)

OXY USA INC. FEDERAL "26" #12H SITE PLAN



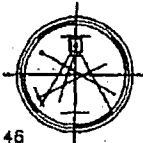
SURVEYORS CERTIFICATE

I, TERRY J. ASEL, NEW MEXICO PROFESSIONAL SURVEYOR NO. 15079, DO HEREBY CERTIFY THAT I CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND MEETS THE "MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO" AS ADOPTED BY THE NEW MEXICO STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND SURVEYORS.

Terry J. Asel 7/22/2014
Terry J. Asel, N.M. R.P.L.S. No. 15079

Asel Surveying

P.O. BOX 393 - 310 W. TAYLOR
HOBBS, NEW MEXICO - 575-393-9146



LEGEND

- ▨ - DENOTES STOCK PILE AREA
- - DENOTES PROPOSED WELL PAD
- - DENOTES PROPOSED ROAD

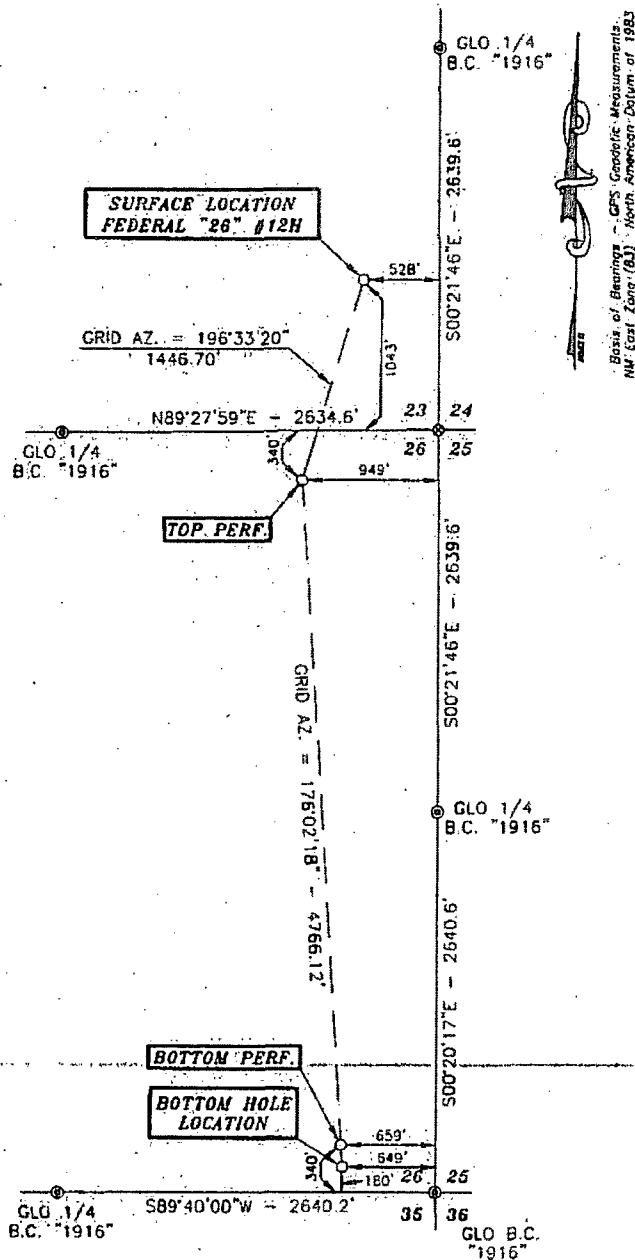
200' 0 200' 400' FEET
SCALE: 1"=200'

OXY USA INC.

FEDERAL "26" #12H WELL PAD LOCATED AT
1043' FSL & 528' FEL IN SECTION 23,
TOWNSHIP 22 SOUTH, RANGE 31 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO

Survey Date: 07/17/14	Sheet 1 of 1 Sheets
W.O. Number: 120904WL-a (Rev. H)	Drawn By: KA Rev: H
Date: 07/21/14	120904WL-a Scale: 1"=200'

SECTIONS 23 & 26, TOWNSHIP 22 SOUTH, RANGE 31 EAST, N.M.P.M.,
EDDY COUNTY
NEW MEXICO



DRIVING DIRECTIONS:
BEGINNING AT THE INTERSECTION OF N.M.
STATE HWY. #128 AND COUNTY ROAD
#798 (RED ROAD), GO NORTH ON
COUNTY ROAD #798 FOR 8.2 MILES,
TURN LEFT AND GO WEST FOR 211.4
FEET, TURN RIGHT AND GO NORTH FOR
70.9 FEET, TURN RIGHT ON PROPOSED
ROAD AND GO NORTHEAST FOR 262.0
FEET, TURN LEFT AND GO NORTH FOR
50.0 FEET TO LOCATION.



SURVEYORS CERTIFICATE

I, TERRY J. ASEL, NEW MEXICO PROFESSIONAL SURVEYOR
NO. 15079, DO HEREBY CERTIFY THAT I CONDUCTED AND AM
RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS
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BELIEF, AND MEETS THE MINIMUM STANDARDS FOR
SURVEYING IN NEW MEXICO AS ADOPTED BY THE NEW
MEXICO STATE BOARD OF REGISTRATION FOR
PROFESSIONAL ENGINEERS AND SURVEYORS.

Terry J. Asel 7/22/2014
Terry J. Asel, N.M. R.P.L.S. No. 15079

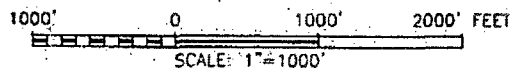
Asel Surveying



P.O. BOX 393 - 310 W. TAYLOR
MOBBS, NEW MEXICO - 575-393-9146

LEGEND

- ⊙ - DENOTES FOUND MONUMENT AS NOTED
- ⊙ - DENOTES CALCULATED CORNER

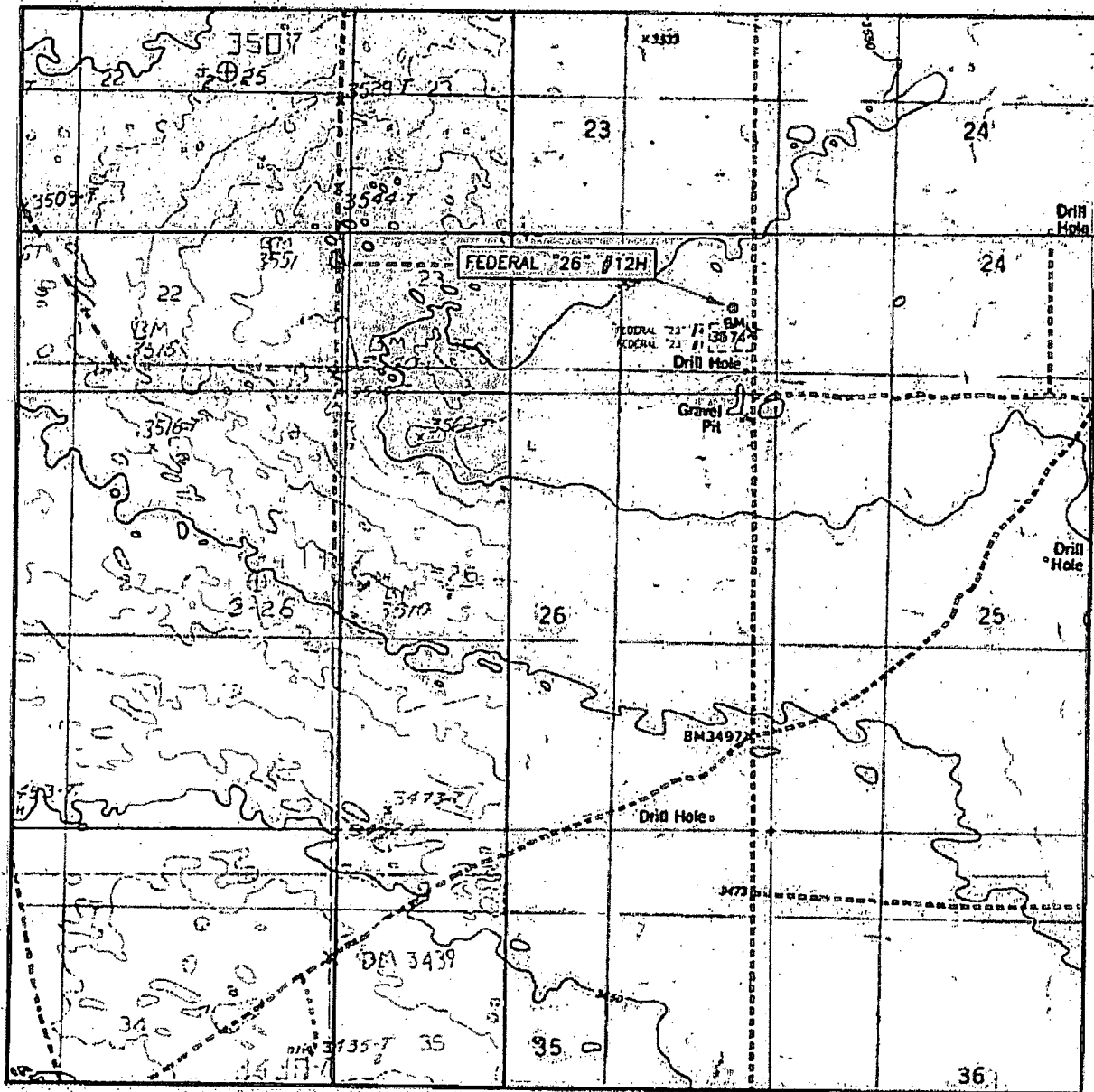


OXY USA INC.

FEDERAL "26" #12H LOCATED AT
1043' FSL & 528' FEL IN SECTION 23,
TOWNSHIP 22 SOUTH, RANGE 31 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO

Survey Date: 07/17/14	Sheet 1 of 1 Sheets
W.O. Number: 120904WL-a (Rev. H)	Drawn By: KA Rev: H
Date: 07/21/14	120904WL-a Scale: 1"=1000'

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL: 10'

SEC. 23 TWP. 22-S RGE. 31-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 1043' FSL & 528' FEL

ELEVATION 3569.8'

OPERATOR OXY USA INC.

LEASE FEDERAL "26" #12H

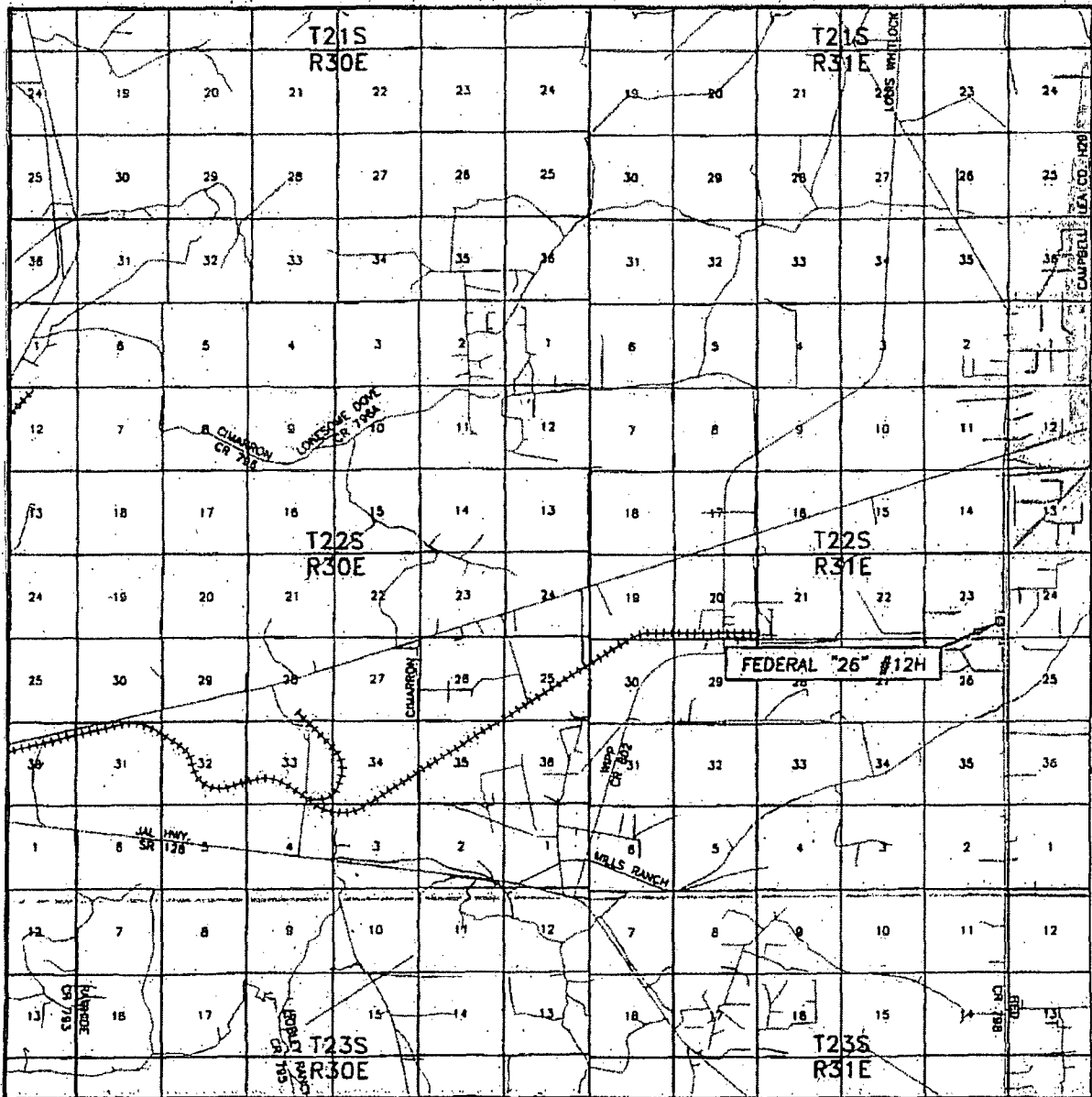
U.S.G.S. TOPOGRAPHIC MAP
BOOTLEG RIDGE, N.M.

Asel Surveying

P.O. BOX 393 - 310 W. TAYLOR
HOBBS, NEW MEXICO - 575-393-9146



VICINITY MAP

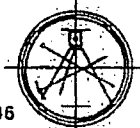


SEC. 23 TWP. 22-S. RGE. 31-E
 SURVEY N.M.P.M.
 COUNTY EDDY
 DESCRIPTION 1043' FSL & 528' FEL
 ELEVATION 3569.8'
 OPERATOR OXY USA INC.

SCALE: 1" = 2 MILES

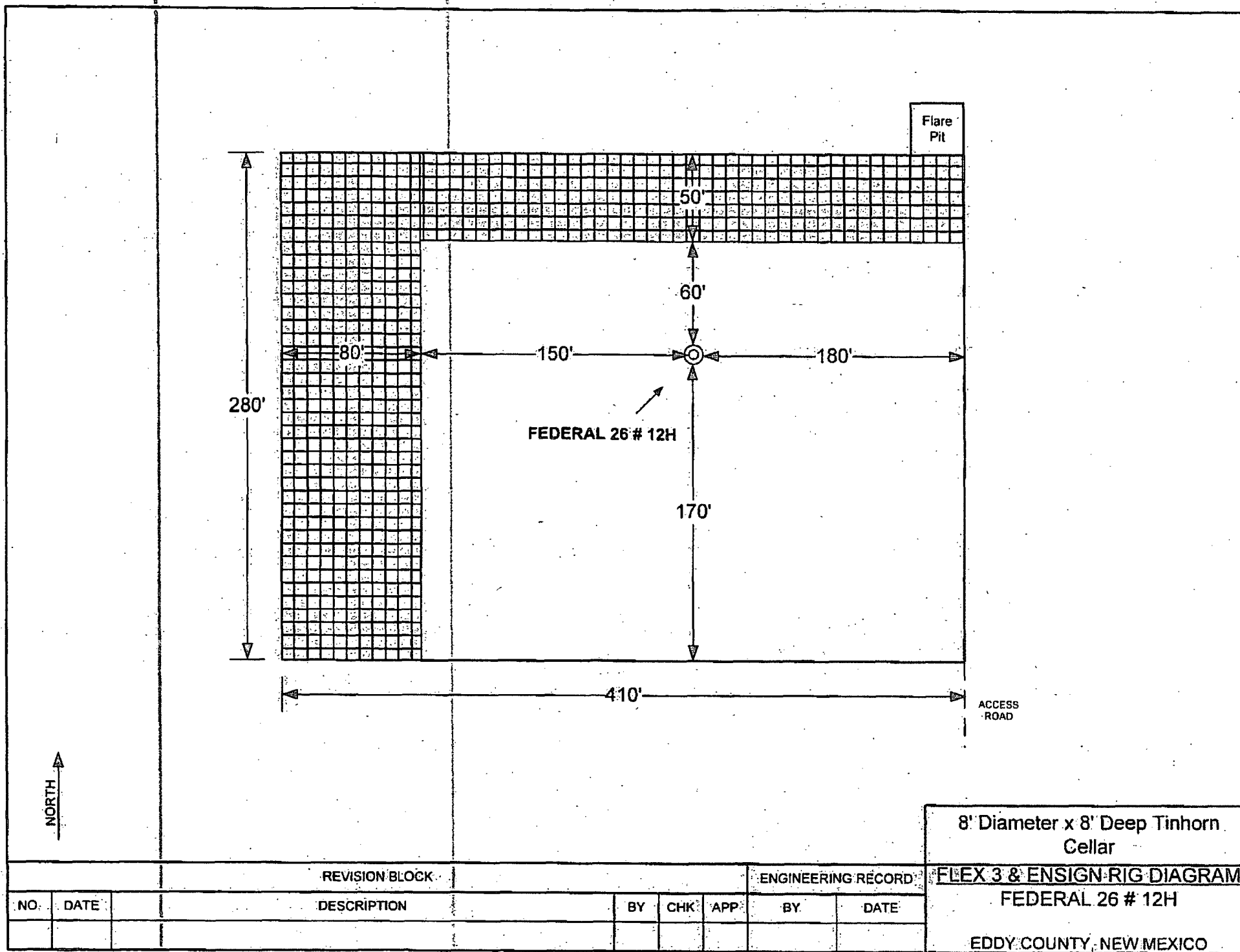
Asel Surveying

P.O. BOX 393 - 310 W. TAYLOR
 HOBBS, NEW MEXICO - 575-393-9146



LEASE FEDERAL #26 #12H

DIRECTIONS BEGINNING AT THE INTERSECTION OF N.M. STATE HWY. #128 AND COUNTY ROAD #798 (RED ROAD), GO NORTH ON COUNTY ROAD #798 FOR 8.2 MILES, TURN LEFT AND GO WEST FOR 211.4 FEET, TURN RIGHT AND GO NORTH FOR 70.9 FEET, TURN RIGHT ON PROPOSED ROAD AND GO NORTHEAST FOR 262.0 FEET, TURN LEFT AND GO NORTH FOR 50.0 FEET TO LOCATION.



8' Diameter x 8' Deep Tinhorn
Cellar

FLEX 3 & ENSIGN RIG DIAGRAM

FEDERAL 26 # 12H

EDDY COUNTY, NEW MEXICO

REVISION BLOCK

ENGINEERING RECORD

NO.	DATE	DESCRIPTION	BY	CHK	APP	BY	DATE



Federal 26 Fed #12H
Eddy Co, New Mexico

KB ELEV: 3594.8
GL ELEV: 3569.8

SECTION DETAILS

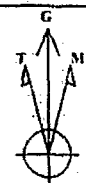
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	0.00	0.00	
3	1719.00	6.38	200.00	1718.34	-16.67	-6.07	2.00	200.00	17.08	
4	3919.20	6.38	200.00	3904.91	-246.42	-89.69	0.00	0.00	252.47	
5	4083.49	6.39	229.88	4068.13	-260.89	-99.81	2.00	104.68	267.66	
6	7545.84	6.39	229.88	7509.07	-509.20	-394.48	0.00	0.00	537.43	
7	8604.84	88.50	176.24	8175.20	-1207.48	-407.26	8.00	-53.94	1234.69	
8	13551.01	88.50	176.24	8304.88	-6141.30	-83.10	0.00	0.00	6130.15	PBHL

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Federal 26 #12H	0.00	0.00	499733.60	682783.70	32°22'20.974N	103°44'28.669W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	8304.88	-6141.30	-83.10	493592.30	682700.60	Point



Azimuths to Grid North

Mag Dec 7.58

Grid Conv. J2

Total Correction 7.26

BGGN12012

Total Correction to Grid North: 7.26°

SITE DETAILS

Federal 26 #12H

Site Centre Northing: 499733.60

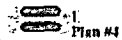
Easting: 682783.70

Ground Level: 3569.80

Positional Uncertainty: 0.00

Convergence: 0.32

LEGEND

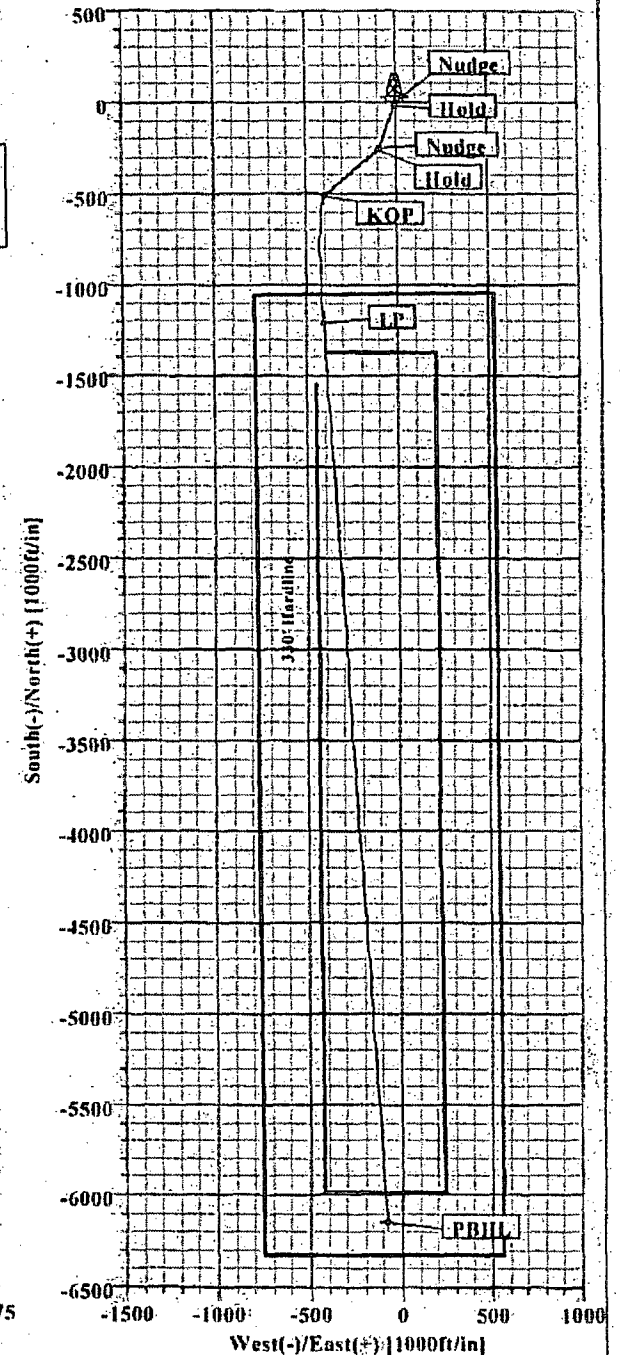
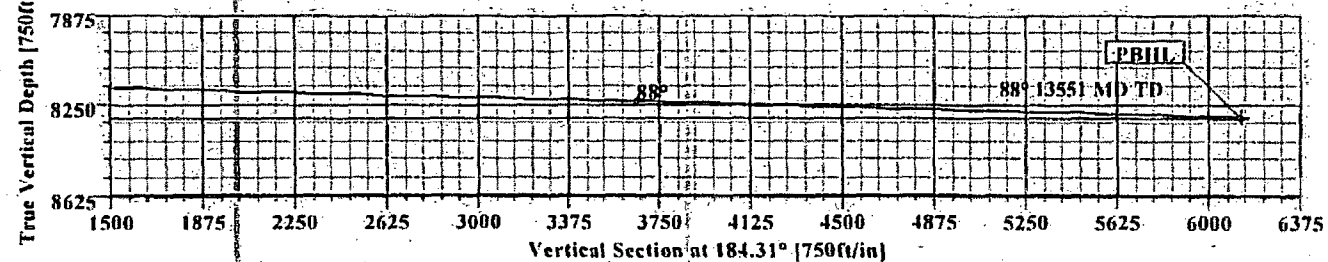
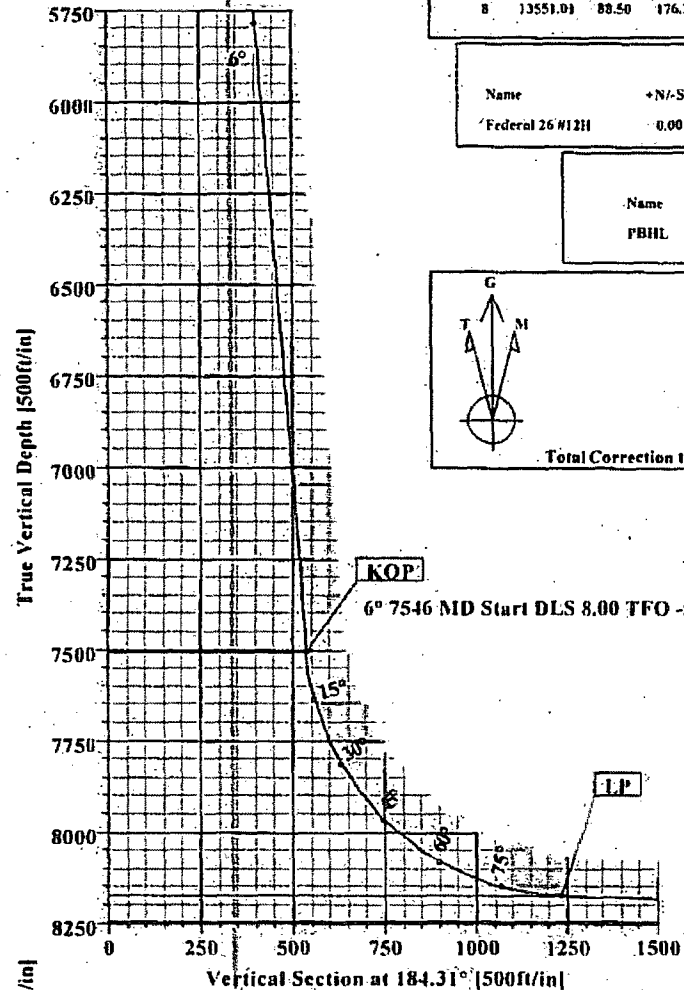


Weatherford

Plan: Plan #4 (Federal 26 #12H/1)

Created By: Michael Dill

Date: 7/28/2014





Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company:	Occidental Permian, Ltd.	Date:	7/28/2014	Time:	15:57:07	Page:	1
Field:	Eddy Co, NM (Nad 27)	Co-ordinate(NE) Reference:	Well: Federal 26 #12H; Grid North				
Site:	Federal 26 #12H	Vertical (TVD) Reference:	SITE 3594.8				
Well:	Federal 26 #12H	Section (VS) Reference:	Well (0.00N, 0.00E, 184.31Azi)				
Wellpath:	1	Survey Calculation Method:	Minimum Curvature			Db:	Sybase

Plan:	Date Composed:
Principal:	Version:
	Tied-to:

Site:		Federal 26 #12H			
Site Position:		Northing:	499733.60 ft	Latitude:	32 22 20.974 N
From:	Map	Easting:	682783.70 ft	Longitude:	103 44 28.669 W
Position Uncertainty:	0.00 ft			North Reference:	Grid
Ground Level:	3569.80 ft			Grid Convergence:	0.32 deg

Well:	Federal 26 #12H				Slot Name:				
Well Position:	+N-S	0.00 ft	Northing:	499733.60 ft	Latitude:	32	22	20.974 N	
	+E-W	0.00 ft	Easting:	682783.70 ft	Longitude:	103	44	28.669 W	
Position Uncertainty:		0.00 ft							

Wellpath:	1	Drilled From:	Surface
Current Datum:	SITE	Tie-on Depth:	0.00 ft
Magnetic Data:	2/1/2013	Above System Datum:	Mean Sea Level
Field Strength:	48549 nT	Declination:	7.48 deg
Vertical Section:	Depth From (TVD)	Mag Dip Angle:	60.25 deg
	ft	+N-S	ft
	ft	+E-W	ft
	ft	Direction	deg
	0.00	0.00	0.00
			184.31

Plan Section Information

MD	Incl	Azim	TVD	+N-S	+E-W	DLS	Build	Turn	TFO	Target
ft	deg	deg	ft	ft	ft	deg/100ft	deg/100ft	deg/100ft	deg	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1719.00	6.38	200.00	1718.34	-16.67	-6.07	2.00	2.00	0.00	200.00	
3919.20	6.38	200.00	3904.91	-246.42	-89.69	0.00	0.00	0.00	0.00	
4083.49	6.39	229.88	4068.23	-260.89	-99.81	2.00	0.01	18.19	104.68	
7545.84	6.39	229.88	7509.07	-509.20	-394.48	0.00	0.00	0.00	0.00	
8604.84	88.50	176.24	8175.20	-1207.48	-407.26	8.00	7.75	-5.07	-53.94	
13551.01	88.50	176.24	8304.88	-6141.30	-83.10	0.00	0.00	0.00	0.00	PBHL

Survey

MD	Incl	Azim	TVD	N/S	E/W	VS	DLS	MapN	MapE	Comment
ft	deg	deg	ft	ft	ft	ft	deg/100ft	ft	ft	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	499733.60	682783.70	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	499733.60	682783.70	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	499733.60	682783.70	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	499733.60	682783.70	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	499733.60	682783.70	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	499733.60	682783.70	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	499733.60	682783.70	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	499733.60	682783.70	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	499733.60	682783.70	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	499733.60	682783.70	
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	499733.60	682783.70	
1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	499733.60	682783.70	
1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00	499733.60	682783.70	
1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00	499733.60	682783.70	
1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	0.00	499733.60	682783.70	Nudge
1500.00	2.00	200.00	1499.98	-1.64	-0.60	1.68	2.00	499731.98	682783.10	
1600.00	4.00	200.00	1599.84	-6.56	-2.39	6.72	2.00	499727.04	682781.31	
1700.00	6.00	200.00	1699.45	-14.75	-5.37	15.11	2.00	499718.85	682778.33	
1719.00	6.38	200.00	1718.34	-16.67	-6.07	17.08	2.00	499716.93	682777.63	Hold
1800.00	6.38	200.00	1798.84	-25.13	-9.15	25.75	0.00	499708.47	682774.55	



Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company: Occidental Permian Ltd. Date: 7/28/2014 Time: 15:57:07 Page: 2
 Field: Eddy Co NM (Nad 27) Co-ordinate(NE) Reference: Well: Federal 26 #12H Grid North
 Site: Federal 26 #12H Vertical (TVD) Reference: SITE 3594.8
 Well: Federal 26 #12H Section (VS) Reference: Well (0.00N,0.00E,184.31Azi)
 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
1900.00	6.38	200.00	1898.22	-35.57	-12.95	36.45	0.00	499698.03	682770.75	
2000.00	6.38	200.00	1997.60	-46.01	-16.75	47.14	0.00	499687.59	682766.95	
2100.00	6.38	200.00	2096.98	-56.46	-20.55	57.84	0.00	499677.14	682763.15	
2200.00	6.38	200.00	2196.36	-66.90	-24.35	68.54	0.00	499666.70	682759.35	
2300.00	6.38	200.00	2295.74	-77.34	-28.15	79.24	0.00	499656.26	682755.55	
2400.00	6.38	200.00	2395.12	-87.78	-31.95	89.94	0.00	499645.82	682751.75	
2500.00	6.38	200.00	2494.50	-98.22	-35.75	100.64	0.00	499635.38	682747.95	
2600.00	6.38	200.00	2593.88	-108.67	-39.55	111.33	0.00	499624.93	682744.15	
2700.00	6.38	200.00	2693.27	-119.11	-43.35	122.03	0.00	499614.49	682740.35	
2800.00	6.38	200.00	2792.65	-129.55	-47.15	132.73	0.00	499604.05	682736.55	
2900.00	6.38	200.00	2892.03	-139.99	-50.95	143.43	0.00	499593.61	682732.75	
3000.00	6.38	200.00	2991.41	-150.44	-54.75	154.13	0.00	499583.16	682728.95	
3100.00	6.38	200.00	3090.79	-160.88	-58.55	164.83	0.00	499572.72	682725.15	
3200.00	6.38	200.00	3190.17	-171.32	-62.36	175.52	0.00	499562.28	682721.34	
3300.00	6.38	200.00	3289.55	-181.76	-66.16	186.22	0.00	499551.84	682717.54	
3400.00	6.38	200.00	3388.93	-192.20	-69.96	196.92	0.00	499541.40	682713.74	
3500.00	6.38	200.00	3488.31	-202.65	-73.76	207.62	0.00	499530.95	682709.94	
3600.00	6.38	200.00	3587.69	-213.09	-77.56	218.32	0.00	499520.51	682706.14	
3700.00	6.38	200.00	3687.07	-223.53	-81.36	229.02	0.00	499510.07	682702.34	
3800.00	6.38	200.00	3786.45	-233.97	-85.16	239.71	0.00	499499.63	682698.54	
3900.00	6.38	200.00	3885.83	-244.41	-88.96	250.41	0.00	499489.19	682694.74	
3919.20	6.38	200.00	3904.91	-246.42	-89.69	252.47	0.00	499487.18	682694.01	Nudge
4000.00	6.17	214.70	3985.24	-254.21	-93.70	260.54	2.00	499479.39	682690.00	
4083.49	6.39	229.88	4068.23	-260.89	-99.81	267.66	2.00	499472.71	682683.89	Hold
4100.00	6.39	229.88	4084.64	-262.08	-101.21	268.95	0.00	499471.52	682682.49	
4200.00	6.39	229.88	4184.02	-269.25	-109.72	276.74	0.00	499464.35	682673.98	
4300.00	6.39	229.88	4283.40	-276.42	-118.23	284.53	0.00	499457.18	682665.47	
4400.00	6.39	229.88	4382.77	-283.59	-126.74	292.32	0.00	499450.01	682656.96	
4500.00	6.39	229.88	4482.15	-290.76	-135.25	300.11	0.00	499442.84	682648.45	
4600.00	6.39	229.88	4581.53	-297.93	-143.76	307.90	0.00	499435.67	682639.94	
4700.00	6.39	229.88	4680.91	-305.11	-152.27	315.70	0.00	499428.49	682631.43	
4800.00	6.39	229.88	4780.29	-312.28	-160.79	323.49	0.00	499421.32	682622.91	
4900.00	6.39	229.88	4879.67	-319.45	-169.30	331.28	0.00	499414.15	682614.40	
5000.00	6.39	229.88	4979.05	-326.62	-177.81	339.07	0.00	499406.98	682605.89	
5100.00	6.39	229.88	5078.43	-333.79	-186.32	346.86	0.00	499399.81	682597.38	
5200.00	6.39	229.88	5177.80	-340.96	-194.83	354.65	0.00	499392.64	682588.87	
5300.00	6.39	229.88	5277.18	-348.14	-203.34	362.45	0.00	499385.46	682580.36	
5400.00	6.39	229.88	5376.56	-355.31	-211.85	370.24	0.00	499378.29	682571.85	
5500.00	6.39	229.88	5475.94	-362.48	-220.36	378.03	0.00	499371.12	682563.34	
5600.00	6.39	229.88	5575.32	-369.65	-228.87	385.82	0.00	499363.95	682554.83	
5700.00	6.39	229.88	5674.70	-376.82	-237.38	393.61	0.00	499356.78	682546.32	
5800.00	6.39	229.88	5774.08	-384.00	-245.89	401.40	0.00	499349.60	682537.81	
5900.00	6.39	229.88	5873.46	-391.17	-254.40	409.20	0.00	499342.43	682529.30	
6000.00	6.39	229.88	5972.83	-398.34	-262.91	416.99	0.00	499335.26	682520.79	
6100.00	6.39	229.88	6072.21	-405.51	-271.42	424.78	0.00	499328.09	682512.28	
6200.00	6.39	229.88	6171.59	-412.68	-279.94	432.57	0.00	499320.92	682503.76	
6300.00	6.39	229.88	6270.97	-419.85	-288.45	440.36	0.00	499313.75	682495.25	
6400.00	6.39	229.88	6370.35	-427.03	-296.96	448.15	0.00	499306.57	682486.74	
6500.00	6.39	229.88	6469.73	-434.20	-305.47	455.95	0.00	499299.40	682478.23	
6600.00	6.39	229.88	6569.11	-441.37	-313.98	463.74	0.00	499292.23	682469.72	
6700.00	6.39	229.88	6668.49	-448.54	-322.49	471.53	0.00	499285.06	682461.21	
6800.00	6.39	229.88	6767.86	-455.71	-331.00	479.32	0.00	499277.89	682452.70	



Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company: Occidental Permian Ltd	Date: 7/28/2014	Time: 15:57:07	Page: 3
Field: Eddy Co. NM (Nad 27)	Co-ordinate(NE) Reference: Well: Federal 26 #12H Grid North		
Site: Federal 26 #12H	Vertical (TVD) Reference: SITE 3594.8		
Well: Federal 26 #12H	Section (VS) Reference: Well (0.00N, 0.00E, 184.31Azi)		
Wellpath: 1	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey

MD ft	Incl deg	Azin deg	TVD ft	N/S ft	E/W ft	VS ft	DLS deg/100ft	MapN ft	MapE ft	Comment
6900.00	6.39	229.88	6867.24	-462.89	-339.51	487.11	0.00	499270.71	682444.19	
7000.00	6.39	229.88	6966.62	-470.06	-348.02	494.90	0.00	499263.54	682435.68	
7100.00	6.39	229.88	7066.00	-477.23	-356.53	502.70	0.00	499256.37	682427.17	
7200.00	6.39	229.88	7165.38	-484.40	-365.04	510.49	0.00	499249.20	682418.66	
7300.00	6.39	229.88	7264.76	-491.57	-373.55	518.28	0.00	499242.03	682410.15	
7400.00	6.39	229.88	7364.14	-498.74	-382.06	526.07	0.00	499234.86	682401.64	
7500.00	6.39	229.88	7463.51	-505.92	-390.57	533.86	0.00	499227.68	682393.13	
7545.84	6.39	229.88	7509.07	-509.20	-394.48	537.43	0.00	499224.40	682389.22	KOP
7550.00	6.59	227.54	7513.20	-509.51	-394.83	537.77	8.00	499224.09	682388.87	
7600.00	9.60	208.39	7582.71	-515.12	-398.93	543.67	8.00	499218.48	682384.77	
7650.00	13.14	198.87	7611.72	-524.17	-402.75	552.98	8.00	499209.43	682380.95	
7700.00	16.89	193.41	7660.01	-536.62	-406.28	565.66	8.00	499196.98	682377.42	
7750.00	20.73	189.92	7707.33	-552.41	-409.49	581.65	8.00	499181.19	682374.21	
7800.00	24.62	187.48	7753.46	-571.46	-412.37	600.86	8.00	499162.14	682371.33	
7850.00	28.54	185.67	7798.17	-593.68	-414.90	623.21	8.00	499139.92	682368.80	
7900.00	32.47	184.27	7841.24	-618.96	-417.08	648.58	8.00	499114.64	682366.62	
7950.00	36.42	183.14	7882.46	-647.18	-418.89	676.85	8.00	499086.42	682364.81	
8000.00	40.38	182.20	7921.64	-678.19	-420.33	707.89	8.00	499055.41	682363.37	
8050.00	44.34	181.41	7958.58	-711.86	-421.38	741.54	8.00	499021.74	682362.32	
8100.00	48.31	180.72	7993.10	-748.01	-422.05	777.64	8.00	498985.59	682361.65	
8150.00	52.28	180.11	8025.03	-786.47	-422.32	816.01	8.00	498947.13	682361.38	
8200.00	56.26	179.56	8054.22	-827.05	-422.20	856.47	8.00	498906.55	682361.50	
8250.00	60.24	179.07	8080.53	-869.56	-421.69	898.81	8.00	498864.04	682362.01	
8300.00	64.22	178.61	8103.83	-913.78	-420.79	942.84	8.00	498819.82	682362.91	
8350.00	68.20	178.18	8123.99	-959.50	-419.50	988.34	8.00	498774.10	682364.20	
8400.00	72.18	177.77	8140.94	-1006.50	-417.84	1035.08	8.00	498727.10	682365.86	
8450.00	76.16	177.38	8154.57	-1054.55	-415.80	1082.84	8.00	498679.05	682367.90	
8500.00	80.14	177.00	8164.84	-1103.42	-413.40	1131.39	8.00	498630.18	682370.30	
8550.00	84.13	176.64	8171.67	-1152.86	-410.66	1180.49	8.00	498580.74	682373.04	
8604.84	88.50	176.24	8175.20	-1207.48	-407.26	1234.69	8.00	498526.12	682376.44	LP
8700.00	88.50	176.24	8177.70	-1302.39	-401.02	1328.87	0.00	498431.21	682382.68	
8800.00	88.50	176.24	8180.32	-1402.15	-394.47	1427.85	0.00	498331.45	682389.23	
8900.00	88.50	176.24	8182.94	-1501.90	-387.91	1526.82	0.00	498231.70	682395.79	
9000.00	88.50	176.24	8185.56	-1601.65	-381.36	1625.80	0.00	498131.95	682402.34	
9100.00	88.50	176.24	8188.18	-1701.40	-374.81	1724.77	0.00	498032.20	682408.89	
9200.00	88.50	176.24	8190.80	-1801.15	-368.25	1823.74	0.00	497932.45	682415.45	
9300.00	88.50	176.24	8193.43	-1900.90	-361.70	1922.72	0.00	497832.70	682422.00	
9400.00	88.50	176.24	8196.05	-2000.65	-355.14	2021.69	0.00	497732.95	682428.56	
9500.00	88.50	176.24	8198.67	-2100.40	-348.59	2120.67	0.00	497633.20	682435.11	
9600.00	88.50	176.24	8201.29	-2200.15	-342.04	2219.64	0.00	497533.45	682441.66	
9700.00	88.50	176.24	8203.91	-2299.90	-335.48	2318.62	0.00	497433.70	682448.22	
9800.00	88.50	176.24	8206.54	-2399.65	-328.93	2417.59	0.00	497333.95	682454.77	
9900.00	88.50	176.24	8209.16	-2499.40	-322.38	2516.57	0.00	497234.20	682461.32	
10000.00	88.50	176.24	8211.78	-2599.15	-315.82	2615.54	0.00	497134.45	682467.88	
10100.00	88.50	176.24	8214.40	-2698.90	-309.27	2714.52	0.00	497034.70	682474.43	
10200.00	88.50	176.24	8217.02	-2798.65	-302.71	2813.49	0.00	496934.95	682480.99	
10300.00	88.50	176.24	8219.64	-2898.40	-296.16	2912.47	0.00	496835.20	682487.54	
10400.00	88.50	176.24	8222.27	-2998.15	-289.61	3011.44	0.00	496735.45	682494.09	
10500.00	88.50	176.24	8224.89	-3097.90	-283.05	3110.42	0.00	496635.70	682500.65	
10600.00	88.50	176.24	8227.51	-3197.66	-276.50	3209.39	0.00	496535.94	682507.20	
10700.00	88.50	176.24	8230.13	-3297.41	-269.95	3308.37	0.00	496436.19	682513.75	
10800.00	88.50	176.24	8232.75	-3397.16	-263.39	3407.34	0.00	496336.44	682520.31	
10900.00	88.50	176.24	8235.38	-3496.91	-256.84	3506.32	0.00	496236.69	682526.86	



Weatherford International Ltd.

WFT Plan Report - X & Y's



Weatherford

Company: Occidental Permian Ltd. Date: 7/28/2014 Time: 15:57:07 Page: 4
Field: Eddy Co, NM (Nad 27) Co-ordinate(NE) Reference: Well: Federal 26 #12H Grid North
Site: Federal 26 #12H Vertical (TVD) Reference: SITE 3594.8
Well: Federal 26 #12H Section (VS) Reference: Well (0.00N,0.00E,184.31Azi)
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
11000.00	88.50	176.24	8238.00	-3596.66	-250.29	3605.29	0.00	496136.94	682533.41	
11100.00	88.50	176.24	8240.62	-3696.41	-243.73	3704.27	0.00	496037.19	682539.97	
11200.00	88.50	176.24	8243.24	-3796.16	-237.18	3803.24	0.00	495937.44	682546.52	
11300.00	88.50	176.24	8245.86	-3895.91	-230.62	3902.22	0.00	495837.69	682553.08	
11400.00	88.50	176.24	8248.48	-3995.66	-224.07	4001.19	0.00	495737.94	682559.63	
11500.00	88.50	176.24	8251.11	-4095.41	-217.52	4100.17	0.00	495638.19	682566.18	
11600.00	88.50	176.24	8253.73	-4195.16	-210.96	4199.14	0.00	495538.44	682572.74	
11700.00	88.50	176.24	8256.35	-4294.91	-204.41	4298.12	0.00	495438.69	682579.29	
11800.00	88.50	176.24	8258.97	-4394.66	-197.86	4397.09	0.00	495338.94	682585.84	
11900.00	88.50	176.24	8261.59	-4494.41	-191.30	4496.07	0.00	495239.19	682592.40	
12000.00	88.50	176.24	8264.22	-4594.16	-184.75	4595.04	0.00	495139.44	682598.95	
12100.00	88.50	176.24	8266.84	-4693.91	-178.19	4694.02	0.00	495039.69	682605.51	
12200.00	88.50	176.24	8269.46	-4793.66	-171.64	4792.99	0.00	494939.94	682612.06	
12300.00	88.50	176.24	8272.08	-4893.41	-165.09	4891.97	0.00	494840.19	682618.61	
12400.00	88.50	176.24	8274.70	-4993.17	-158.53	4990.94	0.00	494740.43	682625.17	
12500.00	88.50	176.24	8277.32	-5092.92	-151.98	5089.92	0.00	494640.68	682631.72	
12600.00	88.50	176.24	8279.95	-5192.67	-145.43	5188.89	0.00	494540.93	682638.27	
12700.00	88.50	176.24	8282.57	-5292.42	-138.87	5287.87	0.00	494441.18	682644.83	
12800.00	88.50	176.24	8285.19	-5392.17	-132.32	5386.84	0.00	494341.43	682651.38	
12900.00	88.50	176.24	8287.81	-5491.92	-125.76	5485.82	0.00	494241.68	682657.94	
13000.00	88.50	176.24	8290.43	-5591.67	-119.21	5584.79	0.00	494141.93	682664.49	
13100.00	88.50	176.24	8293.06	-5691.42	-112.66	5683.77	0.00	494042.18	682671.04	
13200.00	88.50	176.24	8295.68	-5791.17	-106.10	5782.74	0.00	493942.43	682677.60	
13300.00	88.50	176.24	8298.30	-5890.92	-99.55	5881.72	0.00	493842.68	682684.15	
13400.00	88.50	176.24	8300.92	-5990.67	-93.00	5980.69	0.00	493742.93	682690.70	
13500.00	88.50	176.24	8303.54	-6090.42	-86.44	6079.67	0.00	493643.18	682697.26	
13551.01	88.50	176.24	8304.88	-6141.30	-83.10	6130.15	0.00	493592.30	682700.60	PBHL

Targets

Name	Description	TVD	+N/S	+E/W	Map Northing	Map Easting	Latitude Deg Min Sec	Longitude Deg Min Sec
PBHL		8304.88	-6141.30	-83.10	493592.30	682700.60	32 21 20.205 N	103 44 30.034 W

Casing Points

MD	TVD	Diameter	Hole Size	Name

Annotation

MD ft	TVD ft	
1400.00	1400.00	Nudge
1719.00	1718.34	Hold
3919.20	3904.91	Nudge
4083.49	4068.23	Hold
7545.84	7509.07	KOP
8604.84	8175.20	LP
13551.00	8304.88	PBHL