

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTNM OIL CONSERVATION
ARTESIA DISTRICTFORM 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.

OCT 31 2016

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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 INCORPORATED Contact: DAVID STEWART E-Mail: david_stewart@oxy.com		6. If Indian, Allottee or Tribe Name
3a. Address 5 GREENWAY PLAZA SUITE 110 HOUSTON, TX 77046-0521	3b. Phone No. (include area code) Ph: 432.685.5717	7. If Unit or CA/Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 3 T24S R29E NWNE 180FNL 1167FEL		8. Well Name and No. CYPRESS 34 FEDERAL 12H
		9. API Well No. 30-015-43849-00-X1
		10. Field and Pool, or Exploratory CEDAR CANYON
		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 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 approved APD:

1. Amend the proposed TD and horizontal completion interval.

New TD - 15071'M 10180'V

This well was originally permitted in the Cedar Canyon Bone Spring and will now be completed in the Wolfcamp.

3. Amend casing/cementing program - Amend production casing size, setting depth and cement. Change from tapered 4-1/2" and 5-1/2" to a 5-1/2" casing string.

Production Casing

5-1/2" 20# P-110 DQX new csg @ 0-15071'M. 8-1/2" hole

SF Coll-2.11 SF Burst-1.27 Body SF Ten-2.23 Joint SF Tension-2.48

14. I hereby certify that the foregoing is true and correct. Electronic Submission #352158 verified by the BLM Well Information System For OXY USA INCORPORATED, sent to the Carlsbad Committed to AFMSS for processing by DEBORAH MCKINNEY on 10/04/2016 (17DLM0005SE)	
Name (Printed/Typed) DAVID STEWART	Title REGULATORY ADVISOR
Signature (Electronic Submission)	Date 09/22/2016

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By <u>CHRISTOPHER WALLS</u>	Title <u>PETROLEUM ENGINEER</u>	Date <u>10/25/2016</u>
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 <u>Carlsbad</u>

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 #352158 that would not fit on the form

32. Additional remarks, continued

Production - Circulate cement w/ 1063sx PPC w/ 0.35% HR-601(Retarder) + 0.5% Halad R-9(Low Fluid Loss Control) + 0.125#/sx Poly-E-Flake(Lost Circulation Additive), 10.2ppg 3.057 yield, 500# CS in 19.09hr, 75% Excess followed by 1872sx Super H cmt w/ 3#/sx salt(Accelerator) + 0.1% HR-800(Retarder) + 0.4% CFR-3(Dispersant) + 0.5% HR-344(Low Fluid Loss Control), 13.2ppg 1.631 yield, 500# CS in 15.15hr, 125% Excess.

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

4. Amend the Mud Program.

Depth	Type	Mud WT	Vis Sec	Fluid Loss
0 - 348'	EnerSeal(MMH)	8.4-8.6	40-60	N/C
348-3213'	Brine	9.8-10.0	35-45	N/C
3213-9558'	EnerSeal(MMH)	8.8-9.6	38-50	N/C
9558-15071'	Oil-Based Mud	8.8-9.6	35-50	N/C

5. Amend the Logging Procedure, start mudlogging from the intermediate casing shoe to TD.

Oxy USA Inc. - Cypress 34 Federal 12H

1. Geologic Formations

TVD of target	10185'	Pilot Hole Depth	N/A
MD at TD:	15071'	Deepest Expected fresh water:	297'

Delaware Basin

Formation	TVD - RKB	Expected Fluids
Rustler	297	
Salado	629	
Lamar/Delaware	3162	Oil/Gas
Bell Canyon*	3203	Water/Oil/Gas
Cherry Canyon*	3911	Oil/Gas
Brushy Canyon*	5313	Oil/Gas
1st Bone Spring	6927	Oil/Gas
2nd Bone Spring	8275	Oil/Gas
3rd Bone Spring	9037	Oil/Gas
Wolfcamp	10168	Oil/Gas

*H2S, water flows, loss of circulation, abnormal pressures, etc.

2. Casing Program

Hole Size (in)	Casing Interval		Csg. Size (in)	Weight (lbs)	Grade	Conn.	Buoyant			
	From (ft)	To (ft)					SF Collapse	SF Burst	Body SF Tension	Joint SF Tension
17.5	0	348	13.375	54.5	H40	BTC	5.44	1.34	2.47	2.64
12.25	0	3213	9.625	36	J55	BTC	3.09	1.28	2.24	2.56
8.5	0	15071	5.5	20	P-110	DQX	2.11	1.27	2.23	2.48

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	Y
Does casing meet API specifications? If no, attach casing specification sheet.	Y
Is premium or uncommon casing planned? If yes attach casing specification sheet.	Y
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	Y
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	Y
Is well located within Capitan Reef?	N
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	

Oxy USA Inc. - Cypress 34 Federal 12H

Is well located in SOPA but not in R-111-P?	N
If yes, are the first 2 strings cemented to surface and 3 rd string cement tied back 500' into previous casing?	N
Is well located in R-111-P and SOPA?	Y
If yes, are the first three strings cemented to surface?	Y
Is 2 nd string set 100' to 600' below the base of salt?	Y
Is well located in high Cave/Karst?	Y
If yes, are there two strings cemented to surface?	Y
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	N/A
Is well located in critical Cave/Karst?	N
If yes, are there three strings cemented to surface?	

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H2O gal/sk	500# Comp. Strength (hours)	Slurry Description
Surface	296	14.8	1.35	6.53	6:50	Premium Plus Cement 2% Calcium Chloride – Flake (Accelerator)
Intermediate Casing	818	12.9	1.74	8.67	15:07	Halliburton Light Premium Plus 6% Bentonite, 0.3% HR-800 (Retarder), 5% Salt
	156	14.8	1.326	6.34	6:31	Premium Plus Cement 94 lbm/sk
Production Casing	1063	10.2	3.057	15.65	19:09	Premium Plus Cement, 0.35 % HR-601 (Retarder), 0.5 % Halad(R)-9 (Low Fluid Loss Control), 0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive)
	1872	13.2	1.631	8.37	15:15	Super H Cement, 0.1 % HR-800 (Retarder), 0.5 % Halad(R)-344 (Low Fluid Loss Control), 0.4 % CFR-3 (Dispersant), 3 lbm Salt (Salt)

Casing String	Top of Lead (ft)	Bottom of Lead (ft)	Top of Tail (ft)	Bottom of Tail (ft)	% Excess Lead	% Excess Tail
Surface	N/A	N/A	0	348	N/A	50%
Intermediate Casing	0	2713	2713	3213	75%	20%
Production Casing	0	9158	9158	15071	75%	125%

Oxy USA Inc. - Cypress 34 Federal 12H

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From (ft)	To (ft)				
0	348	EnerSeal (MMH)	8.4-8.6	40-60	N/C
348	3213	Brine	9.8-10.0	35-45	N/C
3213	9558	EnerSeal (MMH)	8.8-9.6	38-50	N/C
9558	15071	Oil-Based Mud	8.8-9.6	35-50	N/C

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

Oxy proposes to drill out the " surface casing shoe with a saturated brine system from 348' - 3213', which is the base of the salt system. At this point we will swap fluid systems to a high viscosity mixed metal hydroxide system. We will drill with this system to the intermediate TD @ 9558'.

What will be used to monitor the loss or gain of fluid?	PVT/MD Totco/Visual Monitoring
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6. Logging and Testing Procedures

Logging, Coring and Testing	
Yes	Will run GR from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM.
No	Logs are planned based on well control or offset log information.
No	Drill stem test? If yes, explain
No	Coring? If yes, explain

Additional logs planned	Interval
No	Resistivity
No	Density
No	CBL
Yes	Mud log
No	PEX
	Intermediate Shoe - TD

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	4979 psi
Abnormal Temperature	No

Pump high viscosity sweeps as needed for hole cleaning. The mud system will be monitored visually/manually as well as with an electronic PVT. The necessary mud products for additional weight and fluid loss control will be on location at all times. Appropriately weighted mud will be used to isolate potential gas, oil, and water zones until such time as casing can be cemented into place for zonal isolation.

Oxy
Planning Report

OCT 31 2016

Database:	HOPSPP	Local Co-ordinate Reference:	Site Cypress 34
Company:	OXY	TVD Reference:	WELL @ 3121.50ft (Original Well Elev)
Project:	NM DIRECTIONAL PLANS	MD Reference:	WELL @ 3121.50ft (Original Well Elev)
Site:	Cypress 34	North Reference:	Grid
Well:	Cypress 34 Federal 12H	Survey Calculation Method:	Minimum Curvature
Wellbore:	WB00		
Design:	Permitting Plan		

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Project:	NM DIRECTIONAL PLANS		
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:	Cypress 34		
Site Position:	Northings:	456,090.85 usft	Latitude: 32° 15' 12.168318 N
From: Map	Eastings:	613,194.65 usft	Longitude: 103° 58' 1.825071 W
Position Uncertainty:	0 00 ft	Slot Radius: 13 200 in	Grid Convergence: 0.20 °

Well:	Cypress 34 Federal 12H		
Well Position	+N-S	0 00 ft	Northings: 456,090.85 usft
	+E-W	0 00 ft	Eastings: 613,194.65 usft
Position Uncertainty	0 00 ft	Wellhead Elevation:	3,095.00 ft
		Ground Level:	3,095 00 ft

Wellbore:	WB00		
Magnetics	Model Name	Sample Date	Declination
	HDGM	9/21/2016	7.23
			Dip Angle
			60.10
			Field Strength
			48,239

Design:	Permitting Plan		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD)	+N-S	+E-W
	(ft)	(ft)	(ft)
	0 00	0.00	0.00
			Direction
			353.97

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N-S	+E-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
0.00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00	
5,955 00	0 00	0 00	5,955 00	0 00	0 00	0 00	0 00	0 00	0 00	
6,424 70	9 39	289.79	6,422.59	13 01	-36.15	2.00	2 00	0 00	289.79	
9,205 91	9 39	289.79	9,166 51	166.70	-463.29	0 00	0 00	0 00	0 00	
9,757 60	10 00	359.32	9,712 00	230 04	-506 36	2 00	0 11	12 60	121.79	C_34_12H_KOP_N
10,558 30	90 07	359.32	10,185 46	794 95	-513.09	10 00	10 00	0 00	0 00	
15,070 86	90 07	359.48	10,180 00	5,307 26	-560.53	0 00	0 00	0 00	90.44	C_34_12H_BHL_N

Oxy Planning Report

Database: HOPSP
Company: OXY
Project: NM DIRECTIONAL PLANS
Site: Cypress 34
Well: Cypress 34 Federal 12H
Wellbore: WB00
Design: Permitting Plan

Local Co-ordinate Reference: Site Cypress 34
TVD Reference: WELL @ 3121.50ft (Original Well Elev)
MD Reference: WELL @ 3121.50ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
297.00	0.00	0.00	297.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
629.00	0.00	0.00	629.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
3,162.00	0.00	0.00	3,162.00	0.00	0.00	0.00	0.00	0.00	0.00
Lamar/Delaware									
3,203.00	0.00	0.00	3,203.00	0.00	0.00	0.00	0.00	0.00	0.00
Bell Canyon									
3,911.00	0.00	0.00	3,911.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon									
5,313.00	0.00	0.00	5,313.00	0.00	0.00	0.00	0.00	0.00	0.00
Brushy Canyon									
5,955.00	0.00	0.00	5,955.00	0.00	0.00	0.00	0.00	0.00	0.00
Step out DLS 2.00									
6,000.00	0.90	289.79	6,000.00	0.12	-0.33	0.15	2.00	2.00	0.00
6,100.00	2.90	289.79	6,099.94	1.24	-3.45	1.60	2.00	2.00	0.00
6,200.00	4.90	289.79	6,199.70	3.54	-9.85	4.56	2.00	2.00	0.00
6,300.00	6.90	289.79	6,299.17	7.02	-19.52	9.04	2.00	2.00	0.00
6,400.00	8.90	289.79	6,398.21	11.68	-32.46	15.02	2.00	2.00	0.00
6,424.70	9.39	289.79	6,422.59	13.01	-36.15	16.73	2.00	2.00	0.00
Hold 10° tangent									
6,500.00	9.39	289.79	6,496.89	17.17	-47.71	22.09	0.00	0.00	0.00
6,600.00	9.39	289.79	6,595.55	22.70	-63.07	29.19	0.00	0.00	0.00
6,700.00	9.39	289.79	6,694.21	28.22	-78.43	36.30	0.00	0.00	0.00
6,800.00	9.39	289.79	6,792.87	33.75	-93.79	43.41	0.00	0.00	0.00
6,900.00	9.39	289.79	6,891.52	39.27	-109.15	50.52	0.00	0.00	0.00
6,935.96	9.39	289.79	6,927.00	41.26	-114.67	53.08	0.00	0.00	0.00
Bone Spring									
7,000.00	9.39	289.79	6,990.18	44.80	-124.51	57.63	0.00	0.00	0.00
7,100.00	9.39	289.79	7,088.84	50.33	-139.86	64.74	0.00	0.00	0.00
7,200.00	9.39	289.79	7,187.50	55.85	-155.22	71.85	0.00	0.00	0.00
7,300.00	9.39	289.79	7,286.16	61.38	-170.58	78.96	0.00	0.00	0.00
7,400.00	9.39	289.79	7,384.82	66.91	-185.94	86.06	0.00	0.00	0.00
7,500.00	9.39	289.79	7,483.48	72.43	-201.30	93.17	0.00	0.00	0.00
7,600.00	9.39	289.79	7,582.14	77.96	-216.65	100.28	0.00	0.00	0.00
7,700.00	9.39	289.79	7,680.80	83.48	-232.01	107.39	0.00	0.00	0.00
7,800.00	9.39	289.79	7,779.46	89.01	-247.37	114.50	0.00	0.00	0.00
7,900.00	9.39	289.79	7,878.11	94.54	-262.73	121.61	0.00	0.00	0.00
8,000.00	9.39	289.79	7,976.77	100.06	-278.09	128.72	0.00	0.00	0.00
8,100.00	9.39	289.79	8,075.43	105.59	-293.45	135.83	0.00	0.00	0.00
8,200.00	9.39	289.79	8,174.09	111.11	-308.80	142.93	0.00	0.00	0.00
8,300.00	9.39	289.79	8,272.75	116.64	-324.16	150.04	0.00	0.00	0.00
8,400.00	9.39	289.79	8,371.41	122.17	-339.52	157.15	0.00	0.00	0.00
8,500.00	9.39	289.79	8,470.07	127.69	-354.88	164.26	0.00	0.00	0.00
8,600.00	9.39	289.79	8,568.73	133.22	-370.24	171.37	0.00	0.00	0.00
8,700.00	9.39	289.79	8,667.39	138.75	-385.59	178.48	0.00	0.00	0.00
8,800.00	9.39	289.79	8,766.04	144.27	-400.95	185.59	0.00	0.00	0.00
8,900.00	9.39	289.79	8,864.70	149.80	-416.31	192.70	0.00	0.00	0.00
9,000.00	9.39	289.79	8,963.36	155.32	-431.67	199.80	0.00	0.00	0.00
9,100.00	9.39	289.79	9,062.02	160.85	-447.03	206.91	0.00	0.00	0.00
9,200.00	9.39	289.79	9,160.68	166.38	-462.38	214.02	0.00	0.00	0.00
9,205.91	9.39	289.79	9,166.51	166.70	-463.29	214.44	0.00	0.00	0.00

Oxy Planning Report

Database: HOPSPP
Company: OXY
Project: NM DIRECTIONAL PLANS
Site: Cypress 34
Well: Cypress 34 Federal 12H
Wellbore: WB00
Design: Permitting Plan

Local Co-ordinate Reference: Site Cypress 34
TVD Reference: WELL @ 3121.50ft (Original Well Elev)
MD Reference: WELL @ 3121.50ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Turn to 359° Azimuth									
9,300.00	8.55	300.61	9,259.46	172.87	-476.54	221.96	2.00	-0.89	11.50
9,400.00	8.05	314.05	9,358.42	181.52	-487.97	231.77	2.00	-0.50	13.45
9,500.00	8.03	328.39	9,457.44	192.34	-496.66	243.44	2.00	-0.02	14.34
9,600.00	8.48	341.99	9,556.42	205.30	-502.60	256.95	2.00	0.46	13.60
9,700.00	9.35	353.64	9,655.22	220.39	-505.78	272.29	2.00	0.87	11.65
9,757.60	10.00	359.32	9,712.00	230.04	-506.36	281.95	2.00	1.12	9.85
Build curve 10°/100'									
9,800.00	14.24	359.32	9,753.44	238.94	-506.47	290.81	10.00	10.00	0.00
9,900.00	24.24	359.32	9,847.74	271.85	-506.86	323.58	10.00	10.00	0.00
10,000.00	34.24	359.32	9,934.89	320.63	-507.44	372.15	10.00	10.00	0.00
10,100.00	44.24	359.32	10,012.24	383.80	-508.19	435.05	10.00	10.00	0.00
10,200.00	54.24	359.32	10,077.45	459.44	-509.09	510.37	10.00	10.00	0.00
10,300.00	64.24	359.32	10,128.52	545.26	-510.12	595.82	10.00	10.00	0.00
10,400.00	74.24	359.32	10,163.93	638.64	-511.23	688.81	10.00	10.00	0.00
10,415.77	75.82	359.32	10,168.00	653.88	-511.41	703.98	10.00	10.00	0.00
Wolfcamp									
10,500.00	84.24	359.32	10,182.57	736.75	-512.40	786.50	10.00	10.00	0.00
10,558.30	90.07	359.32	10,185.46	794.95	-513.09	844.45	10.00	10.00	0.00
Landing Point									
10,600.00	90.07	359.32	10,185.41	836.65	-513.59	885.96	0.00	0.00	0.00
10,700.00	90.07	359.32	10,185.29	936.64	-514.77	985.53	0.00	0.00	0.00
10,800.00	90.07	359.33	10,185.17	1,036.63	-515.95	1,085.09	0.00	0.00	0.00
10,900.00	90.07	359.33	10,185.05	1,136.63	-517.13	1,184.66	0.00	0.00	0.00
11,000.00	90.07	359.33	10,184.93	1,236.62	-518.29	1,284.22	0.00	0.00	0.00
11,100.00	90.07	359.34	10,184.80	1,336.61	-519.45	1,383.78	0.00	0.00	0.00
11,200.00	90.07	359.34	10,184.68	1,436.61	-520.61	1,483.34	0.00	0.00	0.00
11,300.00	90.07	359.34	10,184.56	1,536.60	-521.76	1,582.90	0.00	0.00	0.00
11,400.00	90.07	359.35	10,184.44	1,636.59	-522.90	1,682.46	0.00	0.00	0.00
11,500.00	90.07	359.35	10,184.32	1,736.59	-524.04	1,782.02	0.00	0.00	0.00
11,600.00	90.07	359.35	10,184.19	1,836.58	-525.17	1,881.58	0.00	0.00	0.00
11,700.00	90.07	359.36	10,184.07	1,936.57	-526.29	1,981.14	0.00	0.00	0.00
11,800.00	90.07	359.36	10,183.95	2,036.57	-527.41	2,080.70	0.00	0.00	0.00
11,900.00	90.07	359.37	10,183.83	2,136.56	-528.52	2,180.26	0.00	0.00	0.00
12,000.00	90.07	359.37	10,183.71	2,236.56	-529.62	2,279.81	0.00	0.00	0.00
12,100.00	90.07	359.37	10,183.59	2,336.55	-530.72	2,379.37	0.00	0.00	0.00
12,200.00	90.07	359.38	10,183.47	2,436.54	-531.81	2,478.92	0.00	0.00	0.00
12,300.00	90.07	359.38	10,183.34	2,536.54	-532.90	2,578.48	0.00	0.00	0.00
12,400.00	90.07	359.38	10,183.22	2,636.53	-533.98	2,678.03	0.00	0.00	0.00
12,500.00	90.07	359.39	10,183.10	2,736.53	-535.05	2,777.59	0.00	0.00	0.00
12,600.00	90.07	359.39	10,182.98	2,836.52	-536.12	2,877.14	0.00	0.00	0.00
12,700.00	90.07	359.39	10,182.86	2,936.51	-537.18	2,976.69	0.00	0.00	0.00
12,800.00	90.07	359.40	10,182.74	3,036.51	-538.24	3,076.25	0.00	0.00	0.00
12,900.00	90.07	359.40	10,182.62	3,136.50	-539.29	3,175.80	0.00	0.00	0.00
13,000.00	90.07	359.40	10,182.50	3,236.50	-540.33	3,275.35	0.00	0.00	0.00
13,100.00	90.07	359.41	10,182.37	3,336.49	-541.37	3,374.90	0.00	0.00	0.00
13,200.00	90.07	359.41	10,182.25	3,436.49	-542.40	3,474.45	0.00	0.00	0.00
13,300.00	90.07	359.41	10,182.13	3,536.48	-543.42	3,574.00	0.00	0.00	0.00
13,400.00	90.07	359.42	10,182.01	3,636.48	-544.44	3,673.55	0.00	0.00	0.00
13,500.00	90.07	359.42	10,181.89	3,736.47	-545.45	3,773.09	0.00	0.00	0.00
13,600.00	90.07	359.43	10,181.77	3,836.47	-546.46	3,872.64	0.00	0.00	0.00
13,700.00	90.07	359.43	10,181.65	3,936.46	-547.46	3,972.19	0.00	0.00	0.00
13,800.00	90.07	359.43	10,181.53	4,036.46	-548.45	4,071.73	0.00	0.00	0.00

Oxy Planning Report

Database: HOPSPP
Company: OXY
Project: NM DIRECTIONAL PLANS
Site: Cypress 34
Well: Cypress 34 Federal 12H
Wellbore: WB00
Design: Permitting Plan

Local Co-ordinate Reference: Site Cypress 34
TVD Reference: WELL @ 3121.50ft (Original Well Elev)
MD Reference: WELL @ 3121.50ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
13,900.00	90.07	359.44	10,181.41	4,136.45	-549.44	4,171.28	0.00	0.00	0.00
14,000.00	90.07	359.44	10,181.29	4,236.45	-550.42	4,270.83	0.00	0.00	0.00
14,100.00	90.07	359.44	10,181.17	4,336.44	-551.39	4,370.37	0.00	0.00	0.00
14,200.00	90.07	359.45	10,181.05	4,436.44	-552.36	4,469.91	0.00	0.00	0.00
14,300.00	90.07	359.45	10,180.93	4,536.43	-553.32	4,569.46	0.00	0.00	0.00
14,400.00	90.07	359.45	10,180.81	4,636.43	-554.28	4,669.00	0.00	0.00	0.00
14,500.00	90.07	359.46	10,180.69	4,736.42	-555.23	4,768.54	0.00	0.00	0.00
14,600.00	90.07	359.46	10,180.57	4,836.42	-556.17	4,868.08	0.00	0.00	0.00
14,700.00	90.07	359.46	10,180.45	4,936.41	-557.11	4,967.62	0.00	0.00	0.00
14,800.00	90.07	359.47	10,180.33	5,036.41	-558.04	5,067.16	0.00	0.00	0.00
14,900.00	90.07	359.47	10,180.21	5,136.40	-558.97	5,166.70	0.00	0.00	0.00
15,000.00	90.07	359.48	10,180.09	5,236.40	-559.88	5,266.24	0.00	0.00	0.00
15,070.86	90.07	359.48	10,180.00	5,307.26	-560.53	5,336.78	0.00	0.00	0.00

TD at 15070.86 MD

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
297.00	297.00	Rustler			
629.00	629.00	Salado			
3,162.00	3,162.00	Lamar/Delaware			
3,203.00	3,203.00	Bell Canyon			
3,911.00	3,911.00	Cherry Canyon			
5,313.00	5,313.00	Brushy Canyon			
6,935.96	6,927.00	Bone Sprng			
10,415.77	10,168.00	Wolfcamp			

Plan Annotations

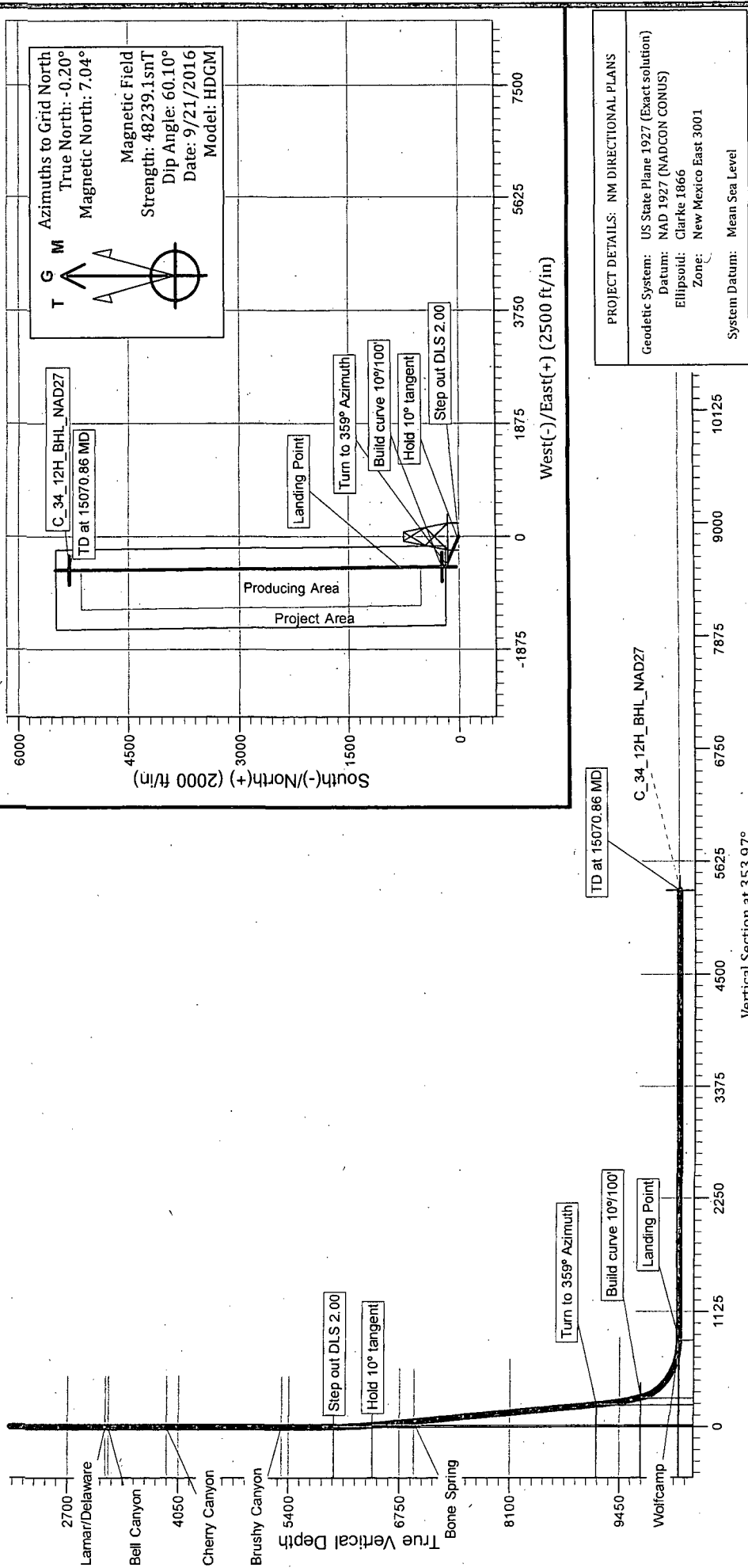
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates: +N-S (ft)	+E-W (ft)	Comment
5,955.00	5,955.00	0.00	0.00	Step out DLS 2.00
6,424.70	6,422.59	13.01	-36.15	Hold 10° tangent
9,205.91	9,166.51	166.70	-463.29	Turn to 359° Azimuth
9,757.60	9,712.00	230.04	-506.36	Build curve 10°/100'
10,558.30	10,185.46	794.95	-513.09	Landing Point
15,070.86	10,180.00	5,307.26	-560.53	TD at 15070.86 MD



Project: NM DIRECTIONAL PLANS
 Site: Cypress 34
 Well: Cypress 34 Federal 12H
 Wellbore: WB00
 Design: Permitting Plan

WELL DETAILS: Cypress 34 Federal 12H

Ground Level: 3095.00
 +N/-S 0.00
 +E/-W 0.00
 Northing 456090.85
 Easting 613194.65
 WELL @ 3121.50ft (Original Well Elev)
 Latitude 32° 15' 12.168318 N
 Longitude 103° 58' 1.825071 W



PROJECT DETAILS: NM DIRECTIONAL PLANS
 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

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation
5955.00	5955.00	0.00	0.00	0.00	0.00	0.00	0.00	Step out DLS 2.00
6422.59	6424.70	9.39	289.79	13.01	-36.15	16.73	38.42	Hold 10° tangent
9166.51	9205.91	9.39	289.79	166.70	-463.29	214.44	492.37	Turn to 359° Azimuth
9712.00	9757.60	10.00	359.32	230.04	-506.36	281.95	585.30	Build curve 10°/100'
10185.46	10558.30	90.07	359.32	794.95	-513.09	844.45	1150.25	Landing Point
10180.00	15070.86	90.07	359.48	5307.26	-560.53	5336.78	5662.81	TD at 15070.86 MD