

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**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.
NMNM19199

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2

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

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.

CAL MON 35 FEDERAL 174H

2. Name of Operator

OXY USA INC

Contact: SARAH CHAPMAN
E-Mail: SARAH_CHAPMAN@OXY.COM

9. API Well No.

30-015-45523

3a. Address

P.O. BOX 4294
HOUSTON, TX 77210

3b. Phone No. (Include area code)

Ph: 713-350-4997

10. Field and Pool or Exploratory Area

WILDCAT WOLFCAMP

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

Sec 35 T23S R31E Mer NMP NWNE 310FNL 2458FEL
32.267330 N Lat, 103.748001 W Lon

JAN 31 2019

RECEIVED

11. County or Parish, State

EDDY COUNTY, NM

12. CHECK THE 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	☐ Hydraulic Fracturing	☐ 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 must 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 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

OXY USA Inc wishes to make the following changes to the original APD submitted:

1. Cal Mon 35 Federal 174H BHL is moving 690' east of initial permitted location.
2. The new BHL will 1510' FEL.
3. TVD Change
4. Intermediate Casing Change
5. Cementing Program
6. Mud Program
7. Cuttings Volume

* New directional plan, drill plan (with highlighted changes noted), drill plot, C-102 and
- All previous COAs will apply.

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

Electronic Submission #451202 verified by the BLM Well Information System
For OXY USA INC, sent to the Carlsbad
Committed to AFMSS for processing by MUSTAFA HAQUE on 01/22/2019 ()

Name (Printed/Typed) DAVID STEWART

Title SR REGULATORY ADVISOR

Signature (Electronic Submission)

Date 01/21/2019

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By Mustafa HaqueTitle Petroleum EngineerDate 01-24-2019

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.

Carlsbad Field Office
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.

(Instructions on page 2)

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

RUP 2-21-19

Additional data for EC transaction #451202 that would not fit on the form

32. Additional remarks, continued

supplemental information is attached for your use.

District I
1625 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) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Bravo Road, Artesia, NM 87410
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) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
NM OIL CONSERVATION
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

JAN 31 2019

AMENDED REPORT

RECEIVED

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-45523	Pool Code 98236	Pool Name Wildcat Wolfcamp
Property Code 314855	Property Name CAL-MON "35" FEDERAL	Well Number 174H
OGRID No. 16696	Operator Name OXY USA INC.	Elevation 3463.8'

Surface Location

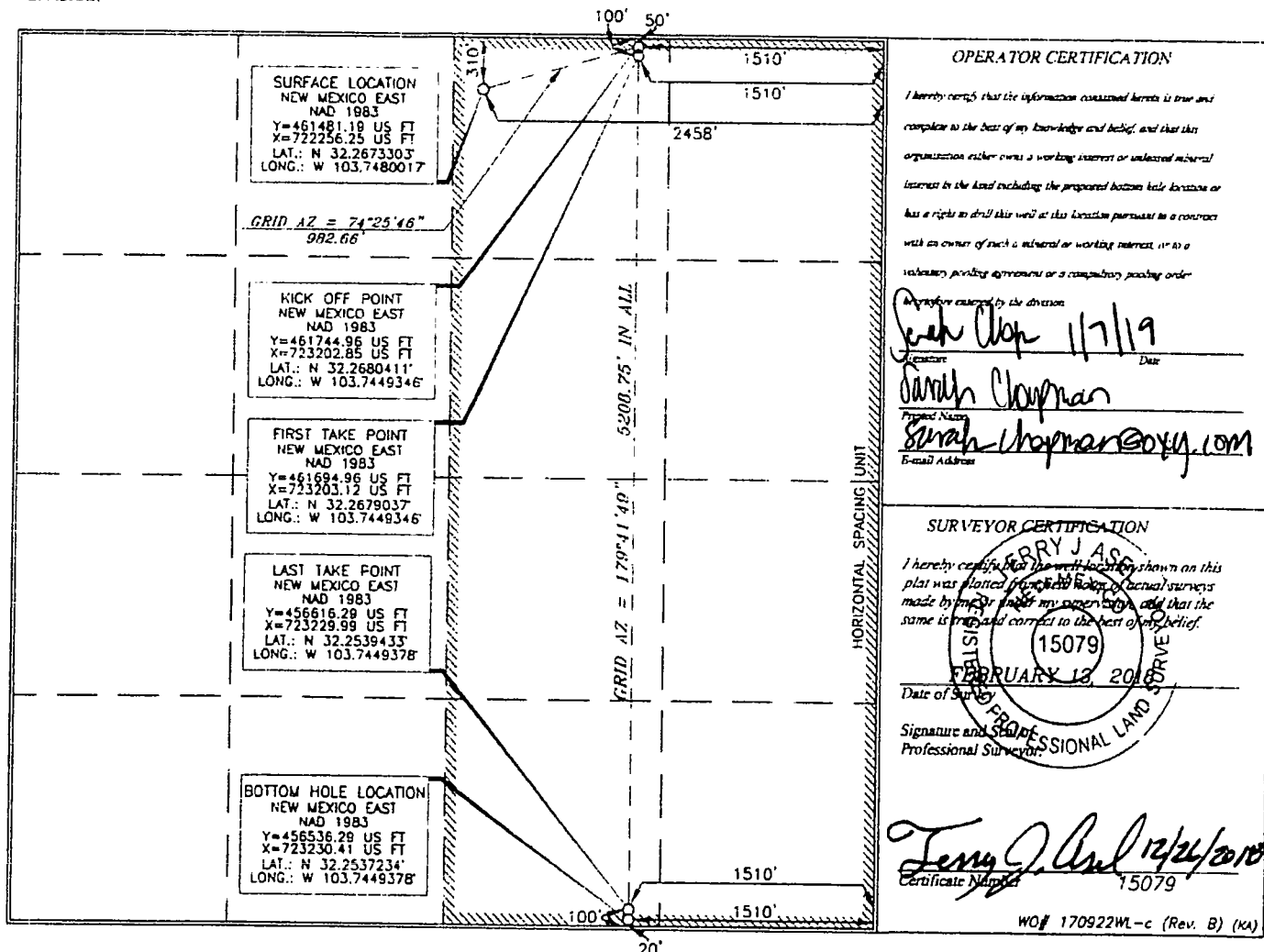
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	35	23 SOUTH	31 EAST, N.M.P.M.		310'	NORTH	2458'	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	35	23 SOUTH	31 EAST, N.M.P.M.		20'	SOUTH	1510'	EAST	EDDY

Dedicated Acres 320	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.



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 completion pooling order.

Signature of Operator
Sarah Chapman
Date
11/7/19
Project Name
Sarah.Chapman@oxy.com
E-mail Address

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from the best of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Signature of Surveyor
Terry J. Anderson
Date of Survey
FEBRUARY 12, 2018
Certificate Number
15079

WO# 170922WL-c (Rev. B) (KA)

RVP 2-21-19

NM OIL CONSERVATION
ARTESIA DISTRICT

Intent ☒ As Drilled ☐

JAN 31 2019

API # 30-015-45523			RECEIVED					
Operator Name: Oxy USA Inc.						Property Name: Cal Mon 35 Federal		

Kick Off Point (KOP)

UL 6	Section 35	Township 23S	Range 31E	Lot	Feet 50	From N/S NORTH	Feet 1510	From E/W EAST	County EDDY
Latitude 32.2680411					Longitude -103.7449346				NAD NAD83

First Take Point (FTP)

UL 6	Section 35	Township 23S	Range 31E	Lot	Feet 100	From N/S NORTH	Feet 1510	From E/W EAST	County EDDY
Latitude 32.2679037					Longitude -103.7449346				NAD NAD83

Last Take Point (LTP)

UL 0	Section 35	Township 23S	Range 31E	Lot	Feet 100	From N/S SOUTH	Feet 1510	From E/W EAST	County EDDY
Latitude 32.2539433					Longitude -103.7449378				NAD NAD83

Is this well the defining well for the Horizontal Spacing Unit? ☒

Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #		
Operator Name:		Property Name:
Well Number		

KZ 06/29/2018

Oxy USA Inc. - Cal-Mon 35 Fed 174H - Sundry

Changes are highlighted in yellow. There were no changes to the BOPE.

1. Geologic Formations

TVD of target	11912'	Pilot Hole Depth	N/A
MD at TD:	16865'	Deepest Expected fresh water:	756'

2. Casing Program

Hole Size (in)	Casing Interval		Csg. Size (in)	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	Buoyant	
	From (ft)	To (ft)							Body SF Tension	Joint SF Tension
14.75	0	806	10.75	40.5	J-55	BTC	1.125	1.2	1.4	1.4
9.875	0	11339	7.625	26.4	L-80 HC	BTC	1.125	1.2	1.4	1.4
6.75	0	11889	5.5	20	P-110	DQX	1.125	1.2	1.4	1.4
6.75	11889	16865	4.5	13.5	P-110	DQX	1.125	1.2	1.4	1.4
SF Values will meet or Exceed										

2. Cementing Program

Casing String	# Sks	Wt. (lb/gal)	Yld (ft3/sack)	H2O (gal/sk)	500# Comp. Strength (hours)	Slurry Description
Surface (Lead)	N/A	N/A	N/A	N/A	N/A	N/A
Surface (Tail)	661	14.8	1.33	6.365	5:26	Class C Cement, Accelerator
Intermediate 1st Stage (Lead)	597	10.2	2.58	11.568	6:59	Pozzolan Cement, Retarder
Intermediate 1st Stage (Tail)	167	13.2	1.61	7.804	7:11	Class H Cement, Retarder, Dispersant, Salt
DV/ECP Tool @ 4470 (We request the option to cancel the second stage if cement is circulated to surface during the first stage of cement)						
Intermediate 2nd Stage (Lead)	N/A	N/A	N/A	N/A	N/A	N/A
Intermediate 2nd Stage (Tail)	1056	13.6	1.67	8.765	7:32	Class C Cement, Accelerator, Retarder
Production (Lead)	N/A	N/A	N/A	N/A	N/A	N/A
Production (Tail)	679	13.2	1.38	6.686	3:39	Class H Cement, Retarder, Dispersant, Salt

Casing String	Top (ft)	Bottom (ft)	% Excess
Surface (Lead)	N/A	N/A	N/A
Surface (Tail)	0	806	100%
Intermediate 1st Stage (Lead)	4370	10339	20%
Intermediate 1st Stage (Tail)	10339	11339	20%
Intermediate 2nd Stage (Lead)	N/A	N/A	N/A
Intermediate 2nd Stage (Tail)	0	4470	100%
Production (Lead)	N/A	N/A	N/A
Production (Tail)	10839	16865	20%

4. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From (ft)	To (ft)				
0	806	Water-Based Mud	8.6-8.8	40-60	N/C
806	11339	Saturated Brine-Based or Oil-Based Mud	8.0-10.0	35-45	N/C
11339	16865	Water-Based or Oil-Based Mud	9.5-12.0	38-50	N/C

Oxy USA Inc. - Cal-Mon 35 Fed 174H - Sundry

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times. The following is a general list of products: Barite, Bentonite, Gypsum, Lime, Soda Ash, Caustic Soda, Nut Plug, Cedar Fiber, Cotton Seed Hulls, Drilling Paper, Salt Water Clay, CACL2. Oxy will use a closed mud system.

5. Drilling Conditions

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

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.

Hydrogen Sulfide (H2S) monitors will be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the operator will comply with the provisions of Onshore Oil and Gas Order #6. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.

N	H2S is present
Y	H2S Plan attached

Total estimated cuttings volume: **14,000 cu ft**.

Attachments

☒ Directional Plan

6. Company Personnel

Name	Title	Office Phone	Mobile Phone
Price Maxwell	Drilling Engineer	713-552-8744	830-370-6326
Diego Tellez	Drilling Engineer Supervisor	713-350-4602	713-303-4932
Simon Benavides	Drilling Superintendent	713-522-8652	281-684-6897
John Willis	Drilling Manager	713-366-5556	713-259-1417



OXY



Borehole:

Well:

Field:

Structure:

Original Borehole

Oxy Cal-mon 35 Fed. #174H XY

NM Eddy County (NAD 83)

Oxy Cal-mon 35 Federal 174H

Gravity & Magnetic Parameters

Model:	HQGM 2018	Dip:	59.89°	Date:	18-Dec-2018
MagDec:	6.135°	FS:	47984.078mT	Gravity FS:	959,448mgn (8.80465 Based)

Surface Location NAD83 New Mexico State Plane, Eastern Zone, US Feet

Lat:	N 32 16 2.39	Northing:	461481.189US	Grid Conv:	0.3125°
Lon:	W 103 44 52.81	Easting:	722266.259US	Scale Fact:	0.99994

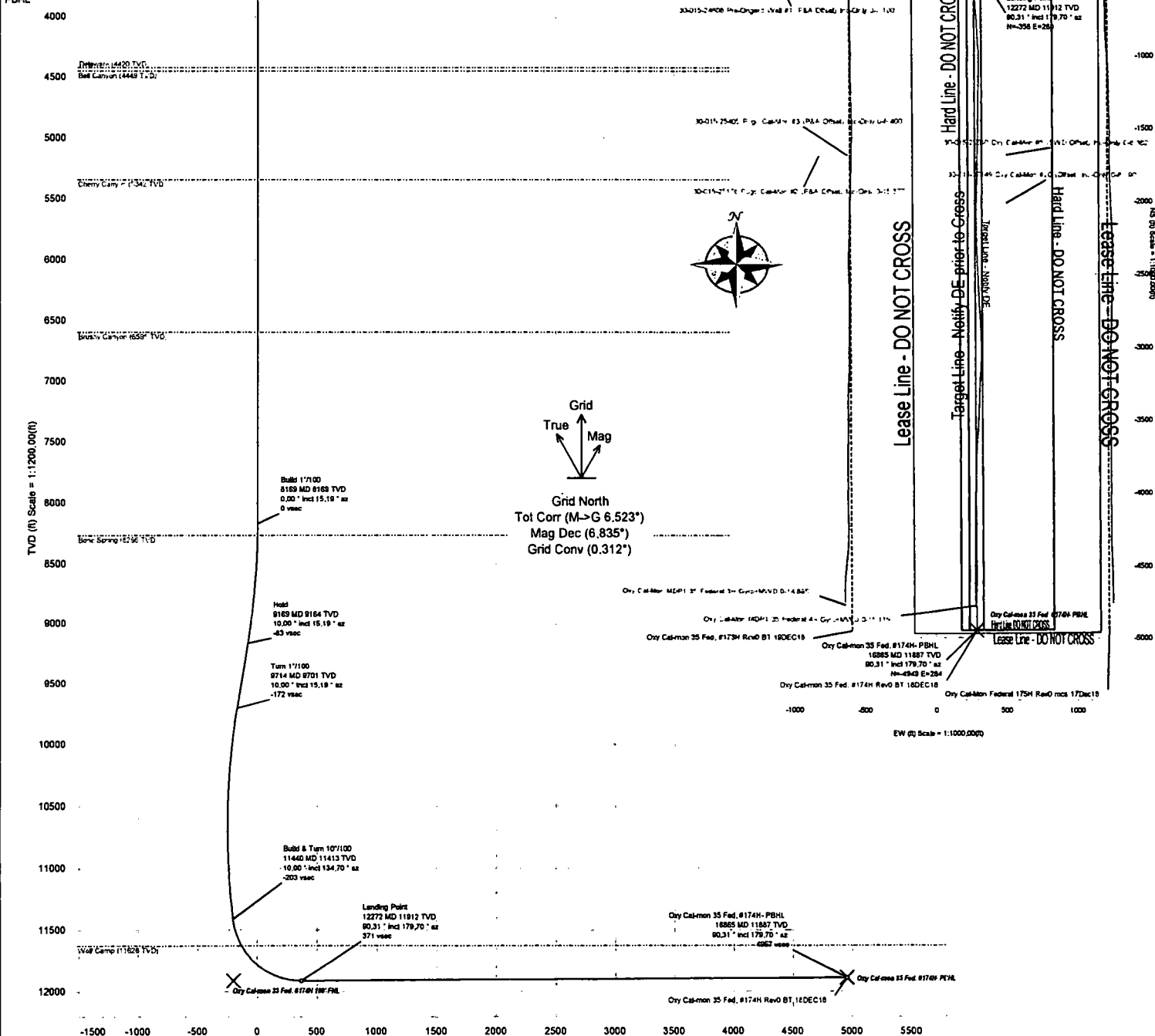
Miscellaneous

SLOT: Oxy Calmon 35
Federal 174H TVD Ref: RUKB(3480.3ft above MSL)
PLAN: Oxy Calmon 35 Fed. #174H Rev0 BT 18DEC18

015-27124 Descr: 1 add 21 ft Federal #14, 2 add 16 ft Offset, Int-Obs 3-2 400'
30-C-15-2" 19 Dec 18 add 20 C Federal #15 +Offset Int.-Obs. 3-2 360'

Critical Points

Critical Point	ND	INCL	AZIN
SHL	0.00	0.00	0.00
Rustler	756.00	0.00	15.19
Sesado	1066.00	0.00	15.19
Castle	2934.00	0.00	15.19
Delaware	4420.00	0.00	15.19
Bell Canyon	4449.00	0.00	15.19
Cherry Canyon	5342.00	0.00	15.19
Brushy Canyon	6595.00	0.00	15.19
Build 1*/100	8168.50	0.00	15.19
Bone Spring	8268.00	0.98	15.19
Hold	9188.59	10.00	15.19
Turn 1*/100	9714.32	10.00	15.19
Build & Turn 10*/100	11439.93	10.00	134.70
Wolf Camp	11687.34	30.58	167.48
Harding Point	12272.49	90.31	179.70
Way Canion 35 Fed. #174H	18885.21	80.31	179.70



Vertical Section (ft) Azim = 176.71° Scale = 1:1200.00(ft) Origin = 0N/-S, 0E/-W



Oxy Cal-mon 35 Fed. #174H Rev0 BT 18DEC18 Proposal Geodetic Report

(Def Plan)

Report Date: December 18, 2018 - 04:43 PM

Client: OXY

Field: NW Eddy County (NAD 83)

Structure / Slot: Oxy Cal-mon 35 Federal 174H / Oxy Cal-mon 35 Federal 174H

Well: Oxy Cal-mon 35 Fed. #174H XY

Borehole: Original Borehole

UWI / API#: Unknown / Unknown

Survey Name: Oxy Cal-mon 35 Fed. #174H Rev0 BT 18DEC18

Survey Date: December 18, 2018

Tort / AHD / DOI / ERD Ratio: 110.513 * / 5562.209 R / 5.940 / 0.467

Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet

Location Lat / Long: N 32° 18' 2.36900" W 103° 44' 52.80617"

Location Grid N/E Y/X: N 481481.190 RUS, E 722256.250 RUS

CRS Grid Convergence Angle: 0.3125 *

Grid Scale Factor: 0.99994558

Version / Patch: 2.10.753.0

Survey / DLS Computation: Minimum Curvature / Lubinski

Vertical Section Azimuth: 178.713 * (Grid North)

Vertical Section Origin: 0.000 ft, 0.000 ft

TVD Reference Datum: RKB

Seabed / Ground Elevation: 3490.300 ft above MSL

Magnetic Declination: 6.835 *

Total Gravity Field Strength: 988.4457mgp (9.80665 Based)

Gravity Model: GARM

Total Magnetic Field Strength: 47984.076 nT

Magnetic Dip Angle: 56.950 *

Declination Date: December 18, 2018

Magnetic Declination Model: HDGM 2018

North Reference: Grid North

Total Corr Mag North-Grid: 0.3125 *

North: 6.5226 *

Local Coord Referenced To: Well Head

North: Local Coord Referenced To: Well Head												
Comments	MD	Incl	Adm Grid	TVD	VSEC	NS	EW	DLS	Northing	Easting	Latitude	Longitude
SHL	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(*100ft)	(RUS)	(RUS)	(N/S °.')	(E/W °.')
	0.00	0.00		0.00	0.00	0.00	0.00	N/A	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	100.00	0.00	15.19	100.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	200.00	0.00	15.19	200.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	300.00	0.00	15.19	300.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	400.00	0.00	15.19	400.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	500.00	0.00	15.19	500.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	600.00	0.00	15.19	600.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	700.00	0.00	15.19	700.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	800.00	0.00	15.19	800.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	900.00	0.00	15.19	900.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	1000.00	0.00	15.19	1000.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	1100.00	0.00	15.19	1100.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	1200.00	0.00	15.19	1200.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	1300.00	0.00	15.19	1300.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	1400.00	0.00	15.19	1400.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	1500.00	0.00	15.19	1500.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	1600.00	0.00	15.19	1600.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	1700.00	0.00	15.19	1700.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	1800.00	0.00	15.19	1800.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	1900.00	0.00	15.19	1900.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	2000.00	0.00	15.19	2000.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	2100.00	0.00	15.19	2100.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	2200.00	0.00	15.19	2200.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	2300.00	0.00	15.19	2300.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	2400.00	0.00	15.19	2400.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	2500.00	0.00	15.19	2500.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	2600.00	0.00	15.19	2600.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	2700.00	0.00	15.19	2700.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	2800.00	0.00	15.19	2800.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	2900.00	0.00	15.19	2900.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	3000.00	0.00	15.19	3000.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	3100.00	0.00	15.19	3100.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	3200.00	0.00	15.19	3200.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	3300.00	0.00	15.19	3300.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	3400.00	0.00	15.19	3400.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	3500.00	0.00	15.19	3500.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	3600.00	0.00	15.19	3600.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	3700.00	0.00	15.19	3700.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	3800.00	0.00	15.19	3800.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	3900.00	0.00	15.19	3900.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	4000.00	0.00	15.19	4000.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	4100.00	0.00	15.19	4100.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	4200.00	0.00	15.19	4200.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	4300.00	0.00	15.19	4300.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	4400.00	0.00	15.19	4400.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	4500.00	0.00	15.19	4500.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	4600.00	0.00	15.19	4600.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	4700.00	0.00	15.19	4700.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	4800.00	0.00	15.19	4800.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	4900.00	0.00	15.19	4900.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	5000.00	0.00	15.19	5000.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	5100.00	0.00	15.19	5100.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	5200.00	0.00	15.19	5200.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	5300.00	0.00	15.19	5300.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	5400.00	0.00	15.19	5400.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	5500.00	0.00	15.19	5500.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	5600.00	0.00	15.19	5600.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	5700.00	0.00	15.19	5700.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	5800.00	0.00	15.19	5800.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	5900.00	0.00	15.19	5900.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	6000.00	0.00	15.19	6000.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	6100.00	0.00	15.19	6100.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	6200.00	0.00	15.19	6200.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	6300.00	0.00	15.19	6300.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	6400.00	0.00	15.19	6400.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	6500.00	0.00	15.19	6500.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	6600.00	0.00	15.19	6600.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	6700.00	0.00	15.19	6700.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	6800.00	0.00	15.19	6800.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	6900.00	0.00	15.19	6900.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	7000.00	0.00	15.19	7000.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	7100.00	0.00	15.19	7100.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	7200.00	0.00	15.19	7200.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	7300.00	0.00	15.19	7300.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	7400.00	0.00	15.19	7400.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	7500.00	0.00	15.18	7500.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	7600.00	0.00	15.18	7600.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	7700.00	0.00	15.18	7700.00	0.00	0.00	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	
	7800.00	0.00	15.18	7800.00	0.00	0.90	0.00	0.00	481481.19	722256.25	N 32 16 2.36 W 103 44 52.81	

Comments	MD	Incl	Azim Ord	TVD	VSEC	NS	EW	DLS	Northing	Easting	Latitude	Longitude
	(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(1/100th)	(ft)(N)	(ft)(E)	(N/S+/-)	(E/W+/-)
	7600.00	0.00	15.18	7600.00	0.00	0.00	0.00	0.00	461481.18	72256.25	N 32 16 2.38	W 103 44 52.81
	8000.00	0.00	15.18	8000.00	0.00	0.00	0.00	0.00	461481.18	72256.25	N 32 16 2.38	W 103 44 52.81
	8100.00	0.00	15.18	8100.00	0.00	0.00	0.00	0.00	461481.18	72256.25	N 32 16 2.38	W 103 44 52.81
	8168.50	0.00	15.18	8168.50	0.00	0.00	0.00	0.00	461481.18	72256.25	N 32 16 2.38	W 103 44 52.81
Build 17100	8200.00	0.32	15.18	8200.00	-0.08	0.08	0.02	1.00	461481.27	72256.27	N 32 16 2.38	W 103 44 52.81
	8200.00	1.32	15.18	8200.00	-1.43	1.48	0.40	1.00	461482.65	72256.65	N 32 16 2.40	W 103 44 52.80
	8400.00	2.32	15.18	8400.00	-4.44	4.51	1.23	1.00	461485.70	72257.76	N 32 16 2.43	W 103 44 52.78
	8500.00	3.32	15.18	8500.00	-8.09	8.25	2.51	1.00	461490.44	72257.48	N 32 16 2.54	W 103 44 52.78
	8600.00	4.32	15.18	8600.00	-15.40	15.45	4.25	1.00	461498.88	72260.50	N 32 16 2.54	W 103 44 52.78
	8700.00	5.32	15.18	8700.00	-23.38	23.77	6.45	1.00	461504.88	72262.00	N 32 16 2.72	W 103 44 52.73
	8800.00	6.32	15.18	8800.00	-32.87	33.55	9.11	1.00	461514.74	72268.36	N 32 16 2.83	W 103 44 52.66
	8900.00	7.32	15.18	8900.00	-44.23	45.00	12.22	1.00	461528.19	72272.03	N 32 16 2.98	W 103 44 52.62
	9000.00	8.32	15.18	8987.08	-57.13	58.13	15.78	1.00	461539.31	72272.03	N 32 16 3.11	W 103 44 52.57
Hold	9168.59	10.00	15.18	9163.52	-82.57	84.02	22.81	1.00	461556.20	72279.06	N 32 16 3.22	W 103 44 52.54
	9200.00	10.00	15.18	9194.45	-87.75	88.28	24.24	1.00	461570.47	72285.04	N 32 16 3.37	W 103 44 52.52
	9300.00	10.00	15.18	9292.83	-104.22	106.04	28.78	0.00	461587.23	72285.04	N 32 16 3.60	W 103 44 52.46
	9400.00	10.00	15.18	9391.41	-120.69	122.80	33.34	0.00	461603.99	72286.59	N 32 16 3.84	W 103 44 52.41
	9450.89	10.00	15.18	9450.89	-137.16	138.56	37.89	0.00	461620.75	72288.13	N 32 16 3.63	W 103 44 52.36
	9600.00	10.00	15.18	9600.00	-153.83	158.32	42.44	0.00	461637.50	72298.68	N 32 16 3.63	W 103 44 52.30
	9700.00	10.00	15.18	9688.37	-170.10	173.08	46.89	0.00	461654.26	72303.23	N 32 16 4.10	W 103 44 52.25
Turn 17100	9714.32	10.00	15.18	9700.96	-172.46	175.48	47.64	0.00	461656.66	72303.88	N 32 16 4.12	W 103 44 52.24
	9800.00	8.27	17.90	9785.43	-185.86	188.23	51.71	1.00	461670.41	72307.98	N 32 16 4.28	W 103 44 52.19
	9900.00	8.46	21.63	9884.23	-200.14	203.73	56.80	1.00	461678.51	72313.14	N 32 16 4.54	W 103 44 51.74
	10000.00	7.88	28.14	9983.24	-223.42	227.73	62.55	1.00	461684.91	72313.14	N 32 16 4.81	W 103 44 51.65
	10100.00	6.96	31.61	10082.43	-232.81	237.21	68.67	1.00	461697.75	72313.14	N 32 16 4.81	W 103 44 51.91
	10200.00	6.32	38.25	10181.76	-239.80	245.02	75.26	1.00	461718.39	72313.14	N 32 16 4.73	W 103 44 51.83
	10300.00	5.38	48.26	10281.20	-245.58	251.14	86.81	1.00	461728.06	72334.62	N 32 16 4.81	W 103 44 51.55
	10400.00	5.38	55.87	10380.73	-249.56	255.58	96.81	1.00	461738.51	72334.62	N 32 16 4.81	W 103 44 51.45
	10500.00	5.13	68.29	10480.31	-251.83	259.41	106.18	1.00	461748.58	72334.62	N 32 16 4.81	W 103 44 51.45
	10600.00	5.08	77.52	10578.92	-252.30	259.41	115.07	1.00	461758.07	72334.62	N 32 16 4.81	W 103 44 51.45
	10700.00	5.22	88.57	10678.08	-254.24	258.79	124.39	1.00	461768.07	72334.62	N 32 16 4.81	W 103 44 51.45
	10800.00	5.54	98.69	10778.08	-258.38	258.79	134.16	1.00	461778.07	72334.62	N 32 16 4.81	W 103 44 51.45
	10900.00	6.01	107.47	10878.07	-263.81	252.51	144.37	1.00	461788.07	72334.62	N 32 16 4.81	W 103 44 51.45
	11000.00	6.60	114.83	10977.97	-268.34	252.51	155.03	1.00	461798.07	72334.62	N 32 16 4.81	W 103 44 51.45
	11100.00	7.28	120.81	11077.24	-273.54	246.84	168.12	1.00	461798.07	72334.62	N 32 16 4.81	W 103 44 51.45
	11200.00	8.03	125.82	11176.35	-279.57	238.45	177.65	1.00	461798.07	72334.62	N 32 16 4.81	W 103 44 51.45
	11300.00	8.82	130.05	11275.27	-285.57	238.45	188.61	1.00	461798.07	72334.62	N 32 16 4.81	W 103 44 51.45
	11400.00	9.66	133.48	11373.97	-293.51	218.74	198.61	1.00	461798.07	72334.62	N 32 16 4.81	W 103 44 51.45
Build & Turn	11439.83	10.00	134.70	11433.31	-293.50	215.00	194.50	1.00	461908.18	72345.04	N 32 16 4.55	W 103 44 50.53
107100	11500.00	14.84	151.61	11471.98	-192.84	204.55	201.87	10.00	461968.73	72345.11	N 32 16 4.40	W 103 44 50.44
	11600.00	24.08	163.47	11566.20	-161.11	173.65	213.78	10.00	461954.83	72345.11	N 32 16 4.40	W 103 44 50.31
	11700.00	33.73	168.81	11653.65	-113.62	128.73	224.87	10.00	461960.91	72345.11	N 32 16 3.63	W 103 44 50.18
	11800.00	43.53	172.12	11731.88	-51.63	65.21	235.06	10.00	461954.40	72345.11	N 32 16 2.98	W 103 44 50.06
	11900.00	53.38	174.35	11797.91	-22.99	-8.03	243.75	10.00	461947.18	72345.11	N 32 16 2.28	W 103 44 49.97
	12000.00	63.29	176.07	11850.33	107.87	-63.75	250.79	10.00	461937.44	72350.72	N 32 16 1.53	W 103 44 49.89
	12100.00	73.20	177.50	11887.36	200.73	-188.37	255.85	10.00	461924.84	72350.72	N 32 16 0.53	W 103 44 49.84
	12200.00	83.12	178.80	11907.65	298.45	-284.06	259.08	10.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	12300.00	93.12	179.70	11912.00	370.70	-356.38	260.03	10.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	12400.00	90.31	179.70	11911.65	368.17	-383.89	260.17	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	12500.00	90.31	179.70	11910.22	597.80	-483.88	261.23	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	12600.00	90.31	179.70	11910.22	697.70	-583.88	261.23	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	12700.00	90.31	179.70	11909.67	797.82	-683.88	262.28	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	12800.00	90.31	179.70	11909.67	897.46	-783.88	262.28	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	12900.00	90.31	179.70	11908.54	997.35	-883.87	263.33	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	13000.00	90.31	179.70	11908.54	1097.21	-983.87	263.33	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	13100.00	90.31	179.70	11907.06	1197.08	-1083.87	264.38	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	13200.00	90.31	179.70	11906.55	1296.84	-1183.86	264.91	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	13300.00	90.31	179.70	11906.55	1396.80	-1283.86	265.43	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	13400.00	90.31	179.70	11906.55	1496.80	-1383.86	265.96	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	13500.00	90.31	179.70	11905.88	1596.83	-1483.85	266.46	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	13600.00	90.31	179.70	11905.88	1696.39	-1583.85	267.01	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	13700.00	90.31	179.70	11904.22	1796.25	-1683.85	267.54	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	13800.00	90.31	179.70	11903.23	1896.39	-1783.85	268.07	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	13900.00	90.31	179.70	11902.14	1996.84	-1883.85	268.58	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	14000.00	90.31	179.70	11901.51	2096.84	-1983.84	269.12	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	14100.00	90.31	179.70	11900.68	2196.57	-2083.84	269.64	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	14200.00	90.31	179.70	11899.88	2296.57	-2183.84	270.17	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	14300.00	90.31	179.70	11898.88	2396.43	-2283.83	270.70	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	14400.00	90.31	179.70	11898.88	2496.29	-2383.83	271.22	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	14500.00	90.31	179.70	11898.88	2596.15	-2483.83	271.75	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	14600.00	90.31	179.70	11898.88	2696.02	-2583.82	272.27	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	14700.00	90.31	179.70	11898.88	2795.88	-2683.82	272.80	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	14800.00	90.31	179.70	11898.88	2895.74	-2783.82	273.33	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	14900.00	90.31	179.70	11898.88	2995.60	-2883.81	273.86	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	15000.00	90.31	179.70	11897.15	3095.47	-2983.81	274.38	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	15100.00	90.31	179.70	11896.01	3195.33	-3083.81	274.91	0.00	461907.14	72351.12	N 32 15 58.56	W 103 44 49.80
	15200.00											

Comments	MD (ft)	Incl (°)	Azimuth (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey			
	1	0.000	28.500	1/100.000	30.000	30.000		NAL_MWD_PLUS_0.5_DEG- Depth Only	Original Borehole / Oxy Cal-mon 35 Fed. #174H Rev0 BT 18DEC18			
	1	28.500	16885.208	1/100.000	30.000	30.000		NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Cal-mon 35 Fed. #174H Rev0 BT			