

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources

NM OIL CONSERVATION
ARTESIA DISTRICT

Form C-104
Revised August 1, 2011

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

OCT 09 2019

Submit one copy to appropriate District Office

RECEIVED

☐ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address OXY USA INC. P.O. BOX 4294 HOUSTON, TX 77210		² OGRID Number 16696	
⁴ API Number 30-015-44977		⁵ Pool Name PURPLE SAGE WOLFCAMP	
⁷ Property Code: 318492		⁸ Property Name: SUNRISE MDP1 8-5 FEDERAL COM	
		⁶ Pool Code 98220	
		⁹ Well Number: 172H	

II. ¹⁰ Surface Location

UI or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West line	County
C	17	24S	31E		194	NORTH	1579	WEST	EDDY

¹¹ Bottom Hole Location

FTP - 198' FSL 1220' FWL LTP - 269' FNL 1245' FWL

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
4	5	24S	31E		22	NORTH	1247	WEST	EDDY

¹² Lse Code F	¹³ Producing Method Code : F	¹⁴ Gas Connection Date: 06/07/2019	¹⁵ C-129 Permit Number	¹⁶ C-129 Effective Date	¹⁷ C-129 Expiration Date
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III. Oil and Gas Transporters

¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
237722	CENTURION PIPELINE L.P.	O
151618	ENTERPRISE FIELD SERVICES LLC	G

IV. Well Completion Data

²¹ Spud Date 02/04/2019	²² Ready Date 06/01/2019	²³ TD 11751'V/22395'M	²⁴ PBTDD 11751'V/22357'M	²⁵ Perforations 12044'-22159' ✓	²⁶ DHC, MC
²⁷ Hole Size	²⁸ Casing & Tubing Size	²⁹ Depth Set	³⁰ Sacks Cement		
14-3/4"	10-3/4" 45.5 J65	681'	745		
9-7/8"	7/5/8" 26.4 L80	11148'	2199		
6-3/4"	5-1/2" 20.0 P110	22395'	826		

V. Well Test Data

³¹ Date New Oil 06/08/2019	³² Gas Delivery Date 06/08/2019	³³ Test Date 06/20/2019	³⁴ Test Length 24-hour	³⁵ Tbg. Pressure	³⁶ Csg. Pressure 848
³⁷ Choke Size 72/164	³⁸ Oil 3205	³⁹ Water 5892	⁴⁰ Gas 7857		⁴¹ Test Method FLOWING

⁴² I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature: Sarah Chapman

Printed name:
SARAH CHAPMAN

Title:
REGULATORY SPECIALIST

E-mail Address:
sarah_chapman@oxy.com

Date: 10/07/2019 Phone: 713-350-4997

OIL CONSERVATION DIVISION

Approved by:

Raymond M. Rodary

Title: Geologist

Approval Date: 10/16/19

Pending BLM approvals will subsequently be reviewed and scanned.

10

NM OIL CONSERVATION
ARTESIA DISTRICT

OCT 09 2019

Form C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

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

RECEIVED

AMENDED REPORT

As-Drilled

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-44977	Pool Code 90220	Pool Name Purple Sage Wolfcamp
Property Code 318942	Property Name SUNRISE MDP1 "8-5" FEDERAL COM	Well Number 172H
OGRID No. 16696	Operator Name OXY USA INC.	Elevation 3534.4'

Surface Location

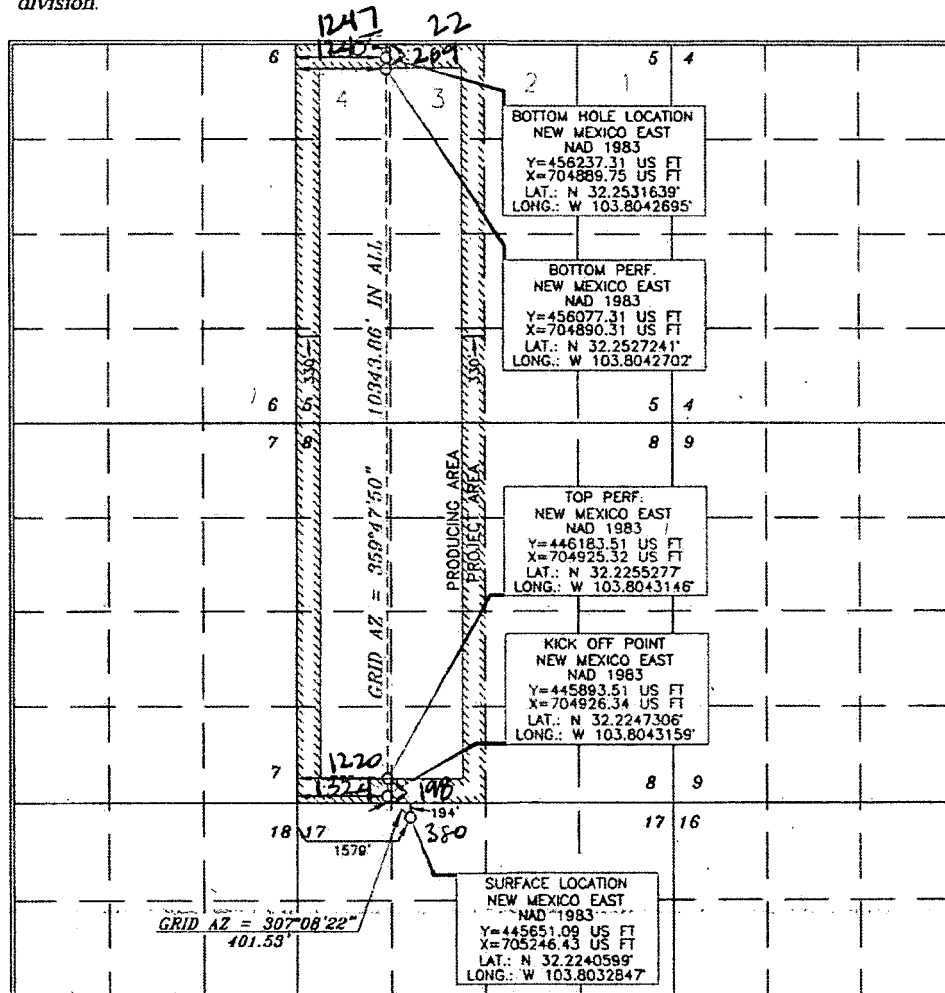
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	17	24 SOUTH	31 EAST, N.M.P.M.		194'	NORTH	1579'	WEST	EDDY

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
4	5	24 SOUTH	31 EAST, N.M.P.M.		22	NORTH	1247	WEST	EDDY

Dedicated Acres 640	Joint or Infill	Consolidation Code	Order No. NSL order: 7F12
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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 compulsory pooling order heretofore entered by the division.

Sarah Chapman 5/28/19
Signature Date

Sarah Chapman
Printed Name

sarah_chapman@oxy.com
E-mail Address

SURVEYOR CERTIFICATION

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

15079
Date of Survey

11/22/2017
Signature and Title of Professional Surveyor

15079
Certificate Number

WO# 171106WL-b (KA)

NM OIL CONSERVATION

ARTESIA DISTRICT

OCT 09 2019

Intent ☐ As Drilled ☒

API # 30-015-44977		Operator Name: Oxy USA Inc.		Property Name: Sunrise MBPI 8-5 Federal - Com		Well Number 172H	
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RECEIVED

Kick Off Point (KOP)

UL C	Section 17	Township 24S	Range 31E	Lot	Feet 380	From N/S North	Feet 1324	From E/W West	County EDDY
Latitude 32.22355					Longitude -103.80411				NAD NAD83

First Take Point (FTP)

UL H	Section 8	Township 24S	Range 31E	Lot	Feet 198	From N/S South	Feet 1220	From E/W West	County EDDY
Latitude 32.22514					Longitude -103.80444				NAD NAD83

Last Take Point (LTP)

UL	Section 5	Township 24S	Range 31E	Lot 4	Feet 269	From N/S North	Feet 1245	From E/W West	County EDDY
Latitude 32.25292					Longitude -103.80420				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

NM OIL CONSERVATION

ARTESIA DISTRICT

OCT 09 2019

Form 3160-4
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.
NMNM89172

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.

8. Lease Name and Well No.
SUNRISE MDP1 8-5 FEDERAL COM 172H

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other

b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.
Other

2. Name of Operator
OXY USA INC.

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

3. Address P.O. BOX 4294
HOUSTON, TX 77210

3a. Phone No. (include area code)
Ph: 713-350-4997

4. Location of Well (Report location clearly and in accordance with Federal requirements)*
Sec 17 T24S R31E Mer NMP
At surface NENW 194FNL 1579FWL 32.224059 N Lat, 103.803284 W Lon
Sec 8 T24S R31E Mer NMP
At top prod interval reported below SWSW 198FSL 1220FWL 32.225140 N Lat, 103.804440 W Lon
Sec 5 T24S R31E Mer NMP
At total depth NWNW Lot 4 22FNL 1247FWL 32.253600 N Lat, 103.804190 W Lon

10. Field and Pool, or Exploratory
PURPLE SAGE WOLFCAMP

11. Sec., T., R., M., or Block and Survey
or Area Sec 17 T24S R31E Mer NMP

12. County or Parish
EDDY

13. State
NM

14. Date Spudded
02/04/2019

15. Date T.D. Reached
04/20/2019

16. Date Completed
☐ D & A ☒ Ready to Prod.
05/28/2019

17. Elevations (DF, KB, RT, GL)*
3534 GL

18. Total Depth: MD 22395
TVD 11751

19. Plug Back T.D.: MD 22357
TVD 11751

20. Depth Bridge Plug Set: MD
TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
GAMMA RAY, MUD LOG

22. Was well cored? ☒ No ☐ Yes (Submit analysis)
Was DST run? ☒ No ☐ Yes (Submit analysis)
Directional Survey? ☐ No ☒ Yes (Submit analysis)

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
14.750	10.750 J-55	45.5	0	681		745	180	0	
9.875	7.625 L-80	26.4	0	11148		2199	686	0	
6.750	5.500 SF TORQ	20.0	0	22395		826	212	10645	
	P110								

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) WOLFCAMP	12044	22159	12044 TO 22159	0.420	975	ACTIVE
B)						
C)						
D)						

26. Perforation Record

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
12044 TO 22159	10743810G SLICKWATER AND 1000G 7.5% HCL ACID W/ 16362005# SAND

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
06/08/2019	06/20/2019	24	→	3205.0	7857.0	5892.0			FLOWS FROM WELL
Choke Size	Tbg. Press. Flwg. SI	Csg. Press. SI	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
72/168		848.0	→	3205	7857	5892		POW	

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity
			→				
Choke Size	Tbg. Press. Flwg. SI	Csg. Press. SI	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	
			→				

Pending BLM approvals will subsequently be reviewed and scanned.

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #486753 VERIFIED BY THE BLM WELL

** OPERATOR-SUBMITTED ** OPERA

OPERATOR-SUBMITTED **

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

29. Disposition of Gas(Sold, used for fuel, vented, etc.)
SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
BELL CANYON	4380	5277	OIL, GAS, WATER	RUSTLER	654
CHERRY CANYON	5278	6484	OIL, GAS, WATER	SALADO	1017
BRUSHY CANYON	6485	8192	OIL, GAS, WATER	CASTILE	2844
BONE SPRING	8193	8996	OIL, GAS, WATER	DELAWARE	4339
1ST BONE SPRING	8997	9478	OIL, GAS, WATER	BELL CANYON	4380
2ND BONE SPRING	9479	11358	OIL, GAS, WATER	CHERRY CANYON	5278
3RD BONE SPRING	10359	11643	OIL, GAS, WATER	BRUSHY CANYON	6485
WOLFCAMP	11644	11850	OIL, GAS, WATER	BONE SPRING	8193

32. Additional remarks (include plugging procedure):

LOG HEADER, DIRECTIONAL SURVEY, AS DRILLED C-102, SUPPLEMENTAL AND WBD ATTACHED.

33. Circle enclosed attachments:

- | | | | |
|---|--------------------|---------------|-----------------------|
| 1. Electrical/Mechanical Logs (1 full set req'd.) | 2. Geologic Report | 3. DST Report | 4. Directional Survey |
| 5. Sundry Notice for plugging and cement verification | 6. Core Analysis | 7. Other: | |

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Electronic Submission #486753 Verified by the BLM Well Information System.
For OXY USA INC., sent to the Carlsbad

Name (please print) SARAH CHAPMAN

Title REGULATORY SPECIALIST

Signature (Electronic Submission)

Date 10/07/2019

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.

**** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ****



Sunrise MDP1 8-5 Federal Com 172H Wellbore Diagram

Elevation: GL 3534'

API: 30-015-44977

14-3/4" hole – 10-3/4" 45.5# J-55 csg
Set @ 681'

9-7/8" hole – 7-5/8" 26.4# L-80 BTC csg
Set @ 11148'

6-3/4" hole – 5-1/2" 20# P-110 SF
TORQ/DQX csg
Set @ 22395'

Frac'd 12044'-22159'
39 stages

*Note: Diagram not to scale

PBTD – 22357' MD
TD – 22395' MD/11751' TVD

Oilfield Services, Central U.S. Land
Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20
Midland, Texas 79706
Phone : (432) 742-5400 (Main)
Fax : (432) 742-5606 (Shared)

Schlumberger

April 19, 2019

OXY USA Inc.
P.O. Box 2289
Houston, TX 77252

NM OIL CONSERVATION
ARTESIA DISTRICT
OCT 09 2019

RECEIVED

Re:

17, 24S, 31E, Eddy NM
N 32.22406 W 103.80328

CLIENT: OXY USA Inc.
WELL: Sunrise MDP1 8-5 Fed com 172H
FIELD: Purple Sage Wolfcamp

RIG: H&P 657
COUNTY: Eddy
API NO: 30-015-44977
JOB NO: 19MLD3843

Enclosed, please find the original copy of the survey performed on the referenced well by Drilling & Measurements, a division of Schlumberger Technology Corporation (P-5 No. 754900).
Other information required by your office is as follows.

<u>Name & Title of Surveyor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Jude Omokwale FS	Sunrise MDP1 8-5 Fed com 172H Original Hole	860.00 Ft to 22363.00 Ft	March 14, 2019 to April 16, 2019	SlimPulse Third Party Corrected

If any other information is required, please contact the undersigned at the above letterhead and phone number.
Sincerely,

Andrew Salomon
Field Service Manager

Oilfield Services, Central U.S. Land
Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20
Midland, Texas 79706
Phone : (432) 742-5400 (Main)
Fax : (432) 742-5606 (Shared)

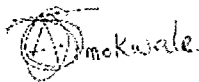
Schlumberger

Well Reference:

17, 24S, 31E, Eddy NM
N 32.22406 W 103.80328

I, Jude Omokwale certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of March 14, 2019 through April 16, 2019, conduct or supervise the taking of the SlimPulse & Third Party Corrected surveys from a depth of 860.00 feet to a depth of 22363.00 feet referenced to driller's depth; that the data is true, correct, complete and within the limitations of the tool as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I am authorized and qualified to make this report; that this survey was conducted at the request of OXY USA Inc. for the Sunrise MDP1 8-5 Fed com 172H Well (Original Hole) API No. 30-015-44977 in New Mexico; and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation.

By
Jude Omokwale
FS



Subscribed and Sworn to before me this 19th day of April (month) 2019 (yr)

My Commission expires:

2-16-2022

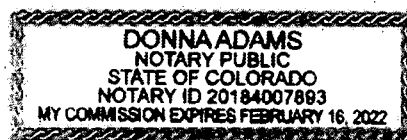
Notary Public

Donna Adams

(signature)

(County State)

Adams County Colorado



Schlumberger

OXY

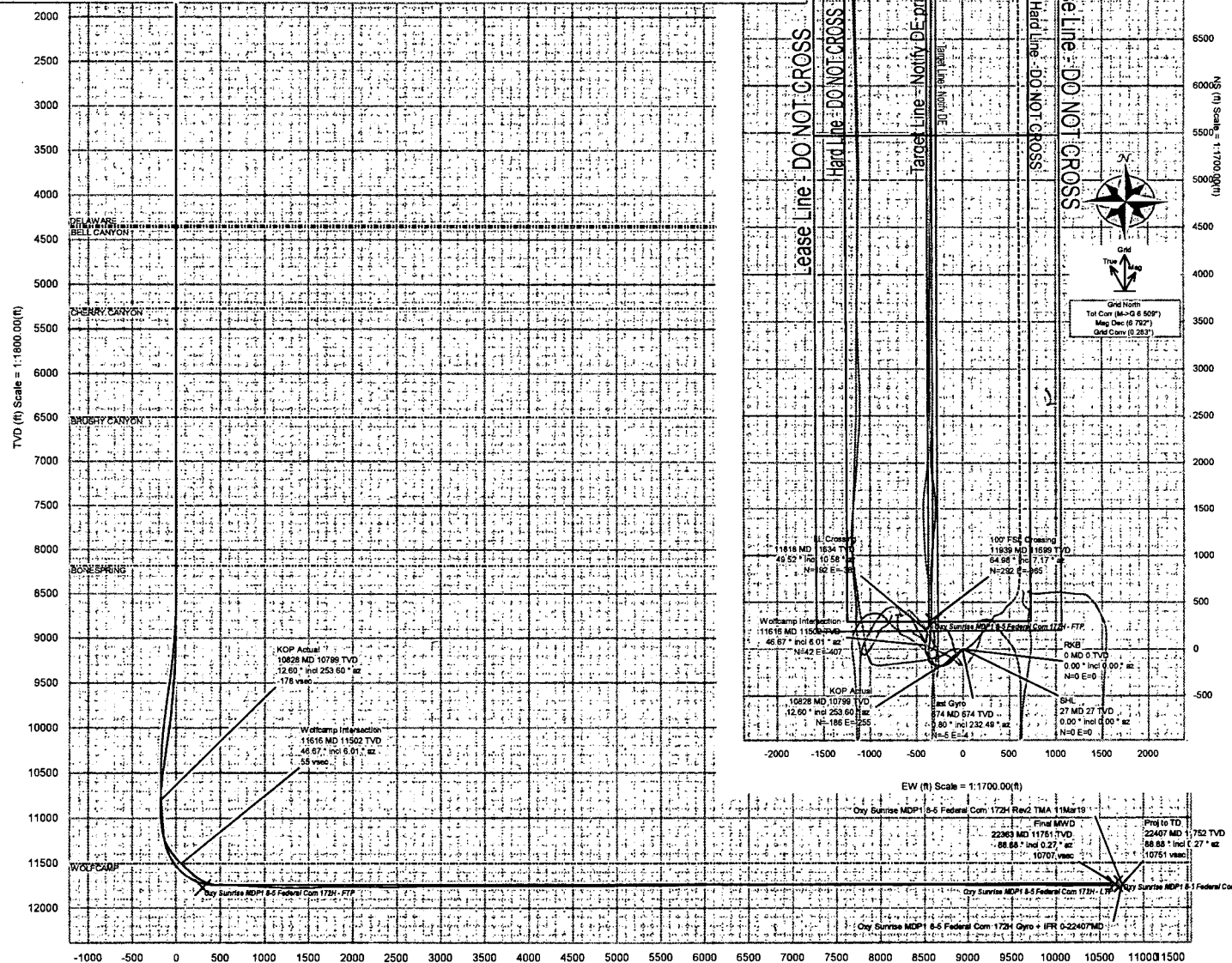


Borehole:	Well:	Field:	Structure:
Original Borehole	Oxy Sunrise MDP1 8-5 Federal Com 172H	NM Eddy County (NAD 83)	Oxy Sunrise MDP1 8-5 Federal Com 172H

Gravity & Magnetic Parameters					Surface Location				Miscellaneous						
Model:	IFR1	Dip:	59.921"	Date:	04-Apr-2019	Lat:	N 32 13 26.62	Northing:	445651.09RUS	Grid Conv:	0.2826"	Slot:	MDP1 8-5 Federal Com	TVD Ref:	RKB=26.5' (3560.9ft above MSL)
MagDec:	6.792"	FS:	47940.8nT	Gravity FB:	998.428mg (8.89665 Based)	Lon:	W 103 48 11.83	Eastng:	705244.43RUS	Scale Fact:	0.99993866	Plan:	Oxy Sunrise MDP1 8-5 Federal Com 172H Gyro + IFR 0-22407MD		

Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(°)S(-)	E(°)W(-)	DLS
RKB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00
Last Gyro	674.30	0.80	232.49	674.26	-4.76	-4.90	-4.31	0.14
KOP Actual	10828.00	12.60	253.60	10799.39	-177.54	-186.21	-255.07	0.94
Wolfcamp Intersection	11616.33	46.67	6.01	11502.00	55.17	41.69	-407.19	14.65
LL Crossing	11818.00	49.52	10.58	11633.73	204.69	192.14	-381.41	12.86
100' FSL Crossing	11939.00	64.98	7.17	11698.95	304.12	292.19	-364.52	14.63
100' FNL Crossing	22328.00	89.74	0.73	11750.86	10671.82	10666.67	-332.28	2.79
Final MWD	22363.00	88.88	0.27	11751.28	10706.79	10701.67	-331.97	2.79
Proj to TD	22407.00	88.88	0.27	11752.14	10750.75	10745.66	-331.76	0.00



Vertical Section (ft) Azim = 358.10° Scale = 1:1800.00(ft) Origin = 0N-S, 0E-W



Oxy Sunrise MDP1 8-5 Federal Com 172H Gyro + IFR 0-22407 MD Survey

Geodetic Report

(Def Survey)

Report Date: April 17, 2019 - 10:18 AM Client: OXY Field: NM Eddy County (NAD 83) Structure / Slot: Oxy Sunrise MDP1 8-5 Federal Com 172H / Oxy Sunrise MDP1 8-5 Federal Com 172H Well: Oxy Sunrise MDP1 8-5 Federal Com 172H Borehole: Original Borehole UWI / API#: Unknown / 30-015-44977 Survey Name: Oxy Sunrise MDP1 8-5 Federal Com 172H Gyro + IFR 0-22407 MD Survey Date: February 26, 2019 Tort / AHD / DDI / ERD Ratio: 293.152' / 11339.863 ft / 6.801 / 0.963 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet Location Lat / Long: N 32° 13' 26.61556", W 103° 48' 11.82506" Location Grid N/E Y/X: N 445651.090 ftUS, E 705246.430 ftUS CRS Grid Convergence Angle: 0.2826 ° Grid Scale Factor: 0.99993986 Version / Patch: 2.10.753.0	Survey / DLS Computation: Minimum Curvature / Lubinski Vertical Section Azimuth: 358.099 ° (Grid North) Vertical Section Origin: 0.000 ft, 0.000 ft TVD Reference Datum: RKB=26.5' TVD Reference Elevation: 3560.900 ft above MSL Seabed / Ground Elevation: 3534.400 ft above MSL Magnetic Declination: 6.782 ° Total Gravity Field Strength: 998.4281mgn (9.80665 Based) Gravity Model: GARM Total Magnetic Field Strength: 47940.800 nT Magnetic Dip Angle: 59.921 ° Declination Date: April 04, 2019 Magnetic Declination Model: IFR1 North Reference: Grid North Grid Convergence Used: 0.2826 ° Total Corr Mag North->Grid North: 6.5094 ° Local Coord Referenced To: Well Head	
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Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
RKB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	445651.09	705246.43	N 32 13 26.62	W 103 48 11.83
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	445651.09	705246.43	N 32 13 26.62	W 103 48 11.83
	120.80	0.43	225.92	120.80	-0.24	-0.25	-0.25	0.46	445650.84	705246.18	N 32 13 26.61	W 103 48 11.83
	205.30	0.56	226.90	205.30	-0.72	-0.75	-0.78	0.15	445650.34	705245.65	N 32 13 26.61	W 103 48 11.83
	296.30	0.45	219.21	296.29	-1.28	-1.33	-1.33	0.14	445649.76	705245.10	N 32 13 26.60	W 103 48 11.84
	391.10	0.63	209.71	391.09	-2.01	-2.07	-1.83	0.21	445649.02	705244.60	N 32 13 26.60	W 103 48 11.85
	486.00	0.75	217.59	485.98	-2.93	-3.02	-2.47	0.16	445648.07	705243.96	N 32 13 26.59	W 103 48 11.85
	580.80	0.84	223.63	580.77	-3.90	-4.01	-3.32	0.13	445647.08	705243.11	N 32 13 26.58	W 103 48 11.86
Last Gyro	674.30	0.80	232.49	674.26	-4.76	-4.90	-4.31	0.14	445646.19	705242.12	N 32 13 26.57	W 103 48 11.88
	860.00	0.04	195.01	859.96	-5.58	-5.76	-5.36	0.41	445645.33	705241.07	N 32 13 26.56	W 103 48 11.89
	916.00	0.06	127.85	915.96	-5.61	-5.79	-5.34	0.10	445645.30	705241.09	N 32 13 26.56	W 103 48 11.89
	1100.00	0.04	259.71	1099.96	-5.68	-5.86	-5.33	0.05	445645.23	705241.10	N 32 13 26.56	W 103 48 11.89
	1194.00	0.06	302.97	1193.96	-5.66	-5.84	-5.40	0.04	445645.25	705241.03	N 32 13 26.56	W 103 48 11.89
	1381.00	0.02	275.55	1380.96	-5.60	-5.79	-5.52	0.02	445645.30	705240.91	N 32 13 26.56	W 103 48 11.89
	1475.00	0.02	46.48	1474.96	-5.59	-5.77	-5.52	0.04	445645.32	705240.91	N 32 13 26.56	W 103 48 11.89
	1665.00	0.02	134.16	1664.96	-5.59	-5.77	-5.47	0.01	445645.32	705240.96	N 32 13 26.56	W 103 48 11.89
	1759.00	0.04	325.66	1758.96	-5.57	-5.76	-5.48	0.06	445645.33	705240.95	N 32 13 26.56	W 103 48 11.89
	1854.00	0.04	18.96	1853.96	-5.51	-5.70	-5.49	0.04	445645.39	705240.94	N 32 13 26.56	W 103 48 11.89
	1948.00	0.04	160.38	1947.96	-5.51	-5.70	-5.47	0.08	445645.39	705240.96	N 32 13 26.56	W 103 48 11.89
	2043.00	0.05	8.80	2042.96	-5.51	-5.69	-5.45	0.09	445645.40	705240.98	N 32 13 26.56	W 103 48 11.89
	2232.00	0.03	97.42	2231.96	-5.43	-5.61	-5.39	0.03	445645.48	705241.04	N 32 13 26.56	W 103 48 11.89
	2326.00	0.05	273.76	2325.96	-5.43	-5.61	-5.40	0.09	445645.48	705241.03	N 32 13 26.56	W 103 48 11.89
	2421.00	0.02	9.62	2420.96	-5.41	-5.60	-5.44	0.06	445645.49	705240.99	N 32 13 26.56	W 103 48 11.89
	2516.00	0.06	128.18	2515.96	-5.43	-5.61	-5.40	0.08	445645.48	705241.03	N 32 13 26.56	W 103 48 11.89
	2610.00	0.02	256.64	2609.96	-5.46	-5.64	-5.38	0.08	445645.45	705241.05	N 32 13 26.56	W 103 48 11.89
	2705.00	0.02	110.22	2704.96	-5.47	-5.65	-5.38	0.04	445645.44	705241.05	N 32 13 26.56	W 103 48 11.89
	2799.00	0.02	155.82	2798.96	-5.49	-5.67	-5.36	0.02	445645.42	705241.07	N 32 13 26.56	W 103 48 11.89
	2894.00	0.02	243.01	2893.96	-5.52	-5.70	-5.36	0.03	445645.39	705241.07	N 32 13 26.56	W 103 48 11.89
	3083.00	0.02	16.33	3082.96	-5.50	-5.68	-5.38	0.02	445645.41	705241.05	N 32 13 26.56	W 103 48 11.89
	3178.00	0.02	332.97	3177.96	-5.47	-5.65	-5.39	0.02	445645.44	705241.04	N 32 13 26.56	W 103 48 11.89
	3272.00	0.05	328.08	3271.96	-5.42	-5.60	-5.42	0.03	445645.49	705241.01	N 32 13 26.56	W 103 48 11.89
	3367.00	0.03	275.31	3366.96	-5.38	-5.56	-5.46	0.04	445645.53	705240.97	N 32 13 26.56	W 103 48 11.89
	3461.00	0.06	334.25	3460.96	-5.33	-5.52	-5.51	0.05	445645.57	705240.92	N 32 13 26.56	W 103 48 11.89
	3556.00	0.04	100.42	3555.96	-5.29	-5.48	-5.50	0.09	445645.61	705240.93	N 32 13 26.56	W 103 48 11.89
	3745.00	0.02	106.22	3744.96	-5.32	-5.50	-5.40	0.01	445645.59	705241.03	N 32 13 26.56	W 103 48 11.89
	3839.00	0.09	52.96	3838.96	-5.28	-5.46	-5.33	0.08	445645.63	705241.10	N 32 13 26.56	W 103 48 11.89
	3933.00	0.07	197.67	3932.96	-5.29	-5.47	-5.28	0.16	445645.62	705241.15	N 32 13 26.56	W 103 48 11.89
	4027.00	0.04	221.49	4026.96	-5.37	-5.55	-5.32	0.04	445645.54	705241.11	N 32 13 26.56	W 103 48 11.89
	4122.00	0.02	275.08	4121.96	-5.39	-5.57	-5.36	0.03	445645.52	705241.07	N 32 13 26.56	W 103 48 11.89
	4216.00	0.14	280.01	4215.96	-5.37	-5.55	-5.49	0.13	445645.54	705240.94	N 32 13 26.56	W 103 48 11.89
	4404.00	0.07	245.40	4403.96	-5.36	-5.56	-5.82	0.05	445645.53	705240.61	N 32 13 26.56	W 103 48 11.89
	4499.00	0.03	257.77	4498.96	-5.39	-5.59	-5.90	0.04	445645.50	705240.53	N 32 13 26.56	W 103 48 11.89
	4593.00	0.02	247.11	4592.96	-5.40	-5.60	-5.94	0.01	445645.49	705240.49	N 32 13 26.56	W 103 48 11.89
	4688.00	0.05	41.52	4687.96	-5.37	-5.57	-5.93	0.07	445645.52	705240.50	N 32 13 26.56	W 103 48 11.89
	4782.00	0.02	252.79	4781.96	-5.35	-5.55	-5.91	0.07	445645.54	705240.52	N 32 13 26.56	W 103 48 11.89
	4876.00	0.06	248.07	4875.96	-5.37	-5.57	-5.98	0.04	445645.52	705240.45	N 32 13 26.56	W 103 48 11.89
	4970.00	0.02	213.10	4969.96	-5.40	-5.60	-6.03	0.05	445645.49	705240.40	N 32 13 26.56	W 103 48 11.90
	5064.00	0.04	35.43	5063.96	-5.39	-5.59	-6.02	0.06	445645.50	705240.41	N 32 13 26.56	W 103 48 11.90
	5159.00	0.03	252.79	5158.96	-5.37	-5.57	-6.03	0.07	445645.52	705240.41	N 32 13 26.56	W 103 48 11.90
	5348.00	0.02	330.12	5347.96	-5.35	-5.56	-6.09	0.02	445645.53	705240.34	N 32 13 26.56	W 103 48 11.90
	5442.00	0.06	211.52	5441.96	-5.38	-5.59	-6.12	0.08	445645.51	705240.31	N 32 13 26.56	W 103 48 11.90
	5536.00	0.06	337.45	5535.96	-5.37	-5.58	-6.17	0.11	445645.51	705240.26	N 32 13 26.56	W 103 48 11.90
	5631.00	0.04	247.55	5630.96	-5.34	-5.55	-6.22	0.08	445645.54	705240.21	N 32 13 26.56	W 103 48 11.90
	5819.00	0.02	235.55	5818.96	-5.38	-5.59	-6.30	0.01	445645.50	705240.13	N 32 13 26.56	W 103 48 11.90
	5914.00	0.05	349.62	5913.96	-5.35	-5.56	-6.33	0.06	445645.53	705240.10	N 32 13 26.56	W 103 48 11.90
	6008.00	0.05	194.53	6007.96	-5.35	-5.56	-6.34	0.10	445645.53	705240.09	N 32 13 26.56	W 103 48 11.90
	6197.00	0.02	211.83	6196.96	-5.45	-5.67	-6.38	0.02	445645.42	705240.05	N 32 13 26.56	W 103 48 11.90
	6292.00	0.06	153.98	6291.96	-5.51	-5.73	-6.37	0.05	445645.36	705240.06	N 32 13 26.56	W 103 48 11.90
	6481.00	0.05	233.20	6480.96	-5.65	-5.86	-6.39	0.04	445645.23	705240.04	N 32 13 26.56	W 103 48 11.90
	6670.00	0.05	273.30	6669.96	-5.69	-5.91	-6.54	0.02	445645.18	705239.89	N 32 13 26.56	W 103 48 11.90
	6765.00	0.02	193.73	6764.95	-5.70	-5.92	-6.58	0.05	445645.17	705239.85	N 32 13 26.56	W 103 48 11.90
	6859.00	0.02	41.61	6858.95	-5.71	-5.93	-6.58	0.04	445645.16	705239.85	N 32 13 26.56	W 103 48 11.90
	7049.00	0.02	30.22	7048.95	-5.65	-5.87	-6.54	0.00	445645.22	705239.89	N 32 13 26.56	W 103 48 11.90
	7238.00	0.02	32.42	7237.95	-5.60	-5.82	-6.50	0.00	445645.27	705239.93	N 32 13 26.56	W 103 48 11.90
	7427.00	0.06	247.74	7426.95	-5.61	-5.83	-6.58	0.04	445645.26	705239.85	N 32 13 26.56	W 103 48 11.90
	7616.00	0.04	253.20	7615.95	-5.66	-5.88	-6.73	0.01	445645.21	705239.70	N 32 13 26.56	W 103 48 11.90
	7805.00	0.10	230.71	7804.95	-5.77	-6.01	-6.92	0.03	445645.08	705239.51	N 32 13 26.56	W 103 48 11.91
	7900.00	0.10	224.72	7899.95	-5.88	-6.12	-7.05	0.01	445644.97	705239.38	N 32 13 26.56	W 103 48 11.91
	8089.00	0.07	182.91	8088.95	-6.11	-6.35	-7.17	0.04	445644.74	705239.26	N 32 13 26.55	W 103 48 11.91
	8183.00	0.18	92.03	8182.95	-6.18	-6.41	-7.02	0.21	445644.68	705239.41	N 32 13 26.55	W 103 48 11.91
	8372.00	0.16	301.42	8371.95	-6.05	-6.29	-6.95	0.17	445644.80	705239.48	N 32 13 26.55	W 103 48 11.91
	8467.00	1.15	260.25	8466.95	-6.11	-6.38	-8.01	1.09	445644.71	705238.43	N 32 13 26.55	W 103 48 11.92
	8561.00	1.77	220.34	8560.92	-7.31	-7.64	-9.87	1.23	445643.45	70523		
	8566.00	1.92	222.75	8555.87	-9.53	-9.93	-11.90	0.18	445641.16	705234.53	N 32 13 26.52	W 103 48 11.96
	8844.00	0.94	285.12	8843.82	-11.32	-11.84	-15.53	0.91	445639.25	705230.90	N 32 13 26.50	W 103 48 12.01
	8939.00	1.56	270.76	8938.79	-11.03	-11.62	-17.58	0.73	445639.47	705228.85	N 32 13 26.50	W 103 48 12.03
	9033.											

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ft)	Easting (ft)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	9128.00	2.92	225.60	9127.62	-14.37	-15.19	-24.50	0.99	445635.90	705221.93	N 32 13 26.47 W 103 48 12.11	
	9222.00	3.79	228.50	9221.46	-17.97	-18.93	-28.54	0.94	445632.16	705217.89	N 32 13 26.43 W 103 48 12.16	
	9316.00	4.20	232.99	9315.23	-21.93	-23.06	-33.62	0.55	445628.03	705212.82	N 32 13 26.39 W 103 48 12.22	
	9505.00	5.51	230.52	9503.55	-31.45	-32.99	-46.15	0.70	445618.10	705200.29	N 32 13 26.29 W 103 48 12.36	
	9600.00	7.74	233.77	9597.91	-37.84	-39.68	-54.83	2.38	445611.42	705191.60	N 32 13 26.23 W 103 48 12.47	
	9695.00	8.25	228.98	9691.99	-45.74	-47.93	-65.13	0.88	445603.16	705181.30	N 32 13 26.14 W 103 48 12.59	
	9789.00	8.85	227.65	9784.94	-54.69	-57.23	-75.56	0.67	445593.86	705170.87	N 32 13 26.05 W 103 48 12.71	
	9884.00	10.07	231.27	9878.65	-64.41	-67.35	-87.44	1.43	445583.75	705158.99	N 32 13 25.95 W 103 48 12.85	
	9978.00	12.61	231.40	9970.81	-75.47	-78.89	-101.88	2.70	445572.20	705144.56	N 32 13 25.84 W 103 48 13.02	
	10072.00	14.99	232.07	10062.09	-88.75	-92.77	-119.49	2.54	445558.33	705126.95	N 32 13 25.70 W 103 48 13.22	
	10261.00	11.85	225.90	10245.91	-116.17	-121.31	-152.71	1.82	445529.79	705093.73	N 32 13 25.42 W 103 48 13.61	
	10356.00	12.70	225.80	10338.74	-129.75	-135.38	-167.20	0.90	445515.72	705079.24	N 32 13 25.28 W 103 48 13.78	
	10450.00	13.45	229.71	10430.30	-143.50	-149.65	-182.95	1.23	445501.45	705063.49	N 32 13 25.14 W 103 48 13.96	
	10544.00	12.93	237.33	10521.83	-155.67	-162.40	-200.14	1.93	445488.70	705046.30	N 32 13 25.02 W 103 48 14.16	
	10639.00	12.00	243.53	10614.59	-165.21	-172.54	-217.93	1.71	445478.56	705028.51	N 32 13 24.92 W 103 48 14.37	
	10733.00	11.92	250.90	10706.56	-172.15	-180.07	-235.85	1.63	445471.03	705010.59	N 32 13 24.78 W 103 48 14.58	
	10828.00	12.60	253.60	10799.39	-177.64	-186.21	-255.07	0.94	445464.90	704991.38	N 32 13 24.79 W 103 48 14.80	
	10923.00	11.23	270.35	10892.37	-179.87	-189.08	-274.26	3.90	445462.03	704972.18	N 32 13 24.76 W 103 48 15.03	
	11019.00	9.47	294.89	10986.85	-175.94	-185.69	-290.78	4.90	445465.41	704955.66	N 32 13 24.79 W 103 48 15.22	
	11115.00	7.60	318.59	11081.81	-167.48	-177.60	-302.15	4.11	445473.50	704944.30	N 32 13 24.87 W 103 48 15.35	
	11248.00	16.94	326.40	11211.06	-142.25	-152.85	-319.97	8.61	445498.15	704926.48	N 32 13 25.12 W 103 48 15.56	
	11343.00	34.59	318.97	11295.64	-107.99	-119.55	-346.38	16.82	445531.55	704900.07	N 32 13 25.45 W 103 48 15.86	
	11438.00	41.06	325.32	11370.67	-60.77	-73.48	-381.88	7.94	445577.61	704854.57	N 32 13 25.91 W 103 48 16.25	
	11533.00	42.04	349.81	11442.24	-2.68	-16.13	-405.42	17.06	445634.96	704841.03	N 32 13 26.48 W 103 48 16.55	
Wolfcamp Intersection	11616.33	46.67	6.01	11502.00	55.17	41.69	-407.19	14.65	445692.78	704839.27	N 32 13 27.05 W 103 48 16.56	
	11628.00	47.49	8.06	11509.95	63.61	50.17	-406.14	14.65	445701.25	704840.31	N 32 13 27.13 W 103 48 16.55	
	11722.00	50.24	10.39	11571.78	133.06	120.03	-394.77	3.47	445771.11	704851.69	N 32 13 27.82 W 103 48 16.41	
	11817.00	49.39	10.59	11633.08	203.94	191.39	-381.55	0.91	445842.47	704864.90	N 32 13 28.53 W 103 48 16.26	
LL Crossing	11818.00	49.52	10.58	11633.73	204.69	192.14	-381.41	12.86	445843.22	704865.04	N 32 13 28.54 W 103 48 16.25	
	11911.00	61.45	9.50	11686.33	279.53	267.47	-368.13	12.86	445918.54	704878.32	N 32 13 29.28 W 103 48 16.09	
100' FSL Crossing	11939.00	64.98	7.17	11698.95	304.12	292.19	-364.52	14.63	445943.26	704881.94	N 32 13 29.52 W 103 48 16.05	
	12006.00	73.56	2.09	11722.66	366.30	354.57	-359.54	14.63	446005.64	704886.91	N 32 13 30.14 W 103 48 15.99	
	12101.00	89.31	359.83	11736.76	459.83	448.20	-358.01	16.74	446099.26	704888.44	N 32 13 31.07 W 103 48 15.97	
	12140.00	89.48	359.47	11737.17	498.81	487.20	-358.25	1.02	446138.26	704888.20	N 32 13 31.45 W 103 48 15.97	
	12230.00	86.41	0.60	11738.83	588.74	577.18	-358.19	1.73	446228.23	704888.26	N 32 13 32.34 W 103 48 15.96	
	12324.00	86.10	3.44	11743.33	682.40	671.00	-354.89	3.89	446322.04	704891.56	N 32 13 33.27 W 103 48 15.92	
	12419.00	86.93	3.35	11749.11	776.82	765.65	-349.27	0.88	446416.70	704897.18	N 32 13 34.21 W 103 48 15.85	
	12514.00	86.82	3.30	11754.29	871.28	860.35	-343.77	0.13	446511.39	704902.68	N 32 13 35.15 W 103 48 15.78	
	12608.00	87.17	4.72	11759.22	964.65	953.99	-337.21	1.55	446605.02	704909.25	N 32 13 36.07 W 103 48 15.70	
	12703.00	86.69	3.74	11764.30	1058.97	1048.59	-330.21	1.15	446698.62	704916.24	N 32 13 37.01 W 103 48 15.61	
	12797.00	87.20	4.39	11769.31	1152.33	1142.22	-323.55	0.88	446793.24	704922.90	N 32 13 37.93 W 103 48 15.53	
	12897.00	90.20	7.16	11773.62	1340.54	1331.17	-304.44	2.15	446982.18	704942.01	N 32 13 38.80 W 103 48 15.29	
	13082.00	90.16	4.42	11773.33	1434.67	1425.68	-294.86	2.88	447076.68	704951.59	N 32 13 40.74 W 103 48 15.18	
	13177.00	93.43	359.35	11770.35	1529.37	1520.53	-291.73	6.35	447171.53	704954.71	N 32 13 41.68 W 103 48 15.13	
	13272.00	94.40	353.57	11763.86	1624.07	1615.09	-297.58	6.16	447266.08	704948.87	N 32 13 42.61 W 103 48 15.20	
	13366.00	90.85	350.34	11759.55	1717.41	1708.04	-310.72	5.10	447359.02	704935.73	N 32 13 43.53 W 103 48 15.34	
	13462.00	89.82	351.71	11758.91	1812.67	1802.86	-325.70	1.72	447453.84	704920.75	N 32 13 44.47 W 103 48 15.51	
	13556.00	90.06	355.50	11758.92	1906.36	1896.26	-336.17	4.03	447547.23	704910.29	N 32 13 45.40 W 103 48 15.63	
	13651.00	90.03	357.46	11758.85	2001.32	1991.07	-342.00	2.06	447642.04	704904.45	N 32 13 46.33 W 103 48 15.69	
	13746.00	89.61	358.63	11759.15	2096.32	2086.02	-345.24	1.31	447736.98	704901.21	N 32 13 47.27 W 103 48 15.72	
	13841.00	89.16	358.29	11760.17	2191.31	2180.98	-347.79	0.59	447831.93	704898.66	N 32 13 48.21 W 103 48 15.75	
	13933.00	89.10	358.88	11761.11	2253.30	2242.95	-349.32	0.96	447893.90	704897.13	N 32 13 48.83 W 103 48 15.76	
	14092.00	89.96	358.18	11762.66	2442.29	2431.88	-354.17	0.59	448082.82	704892.28	N 32 13 50.70 W 103 48 15.81	
	14187.00	90.99	358.45	11761.87	2537.28	2526.83	-356.96	1.12	448177.76	704889.49	N 32 13 51.64 W 103 48 15.84	
	14282.00	90.92	357.94	11760.29	2632.27	2621.77	-359.96	0.54	448272.70	704886.50	N 32 13 52.58 W 103 48 15.86	
	14377.00	91.20	358.85	11758.53	2727.25	2716.72	-362.62	1.00	448367.64	704883.84	N 32 13 53.52 W 103 48 15.89	
	14471.00	91.27	359.79	11756.50	2821.21	2810.69	-363.73	1.00	448461.60	704882.72	N 32 13 54.45 W 103 48 15.90	
	14566.00	91.20	0.52	11754.46	2916.12	2905.66	-363.48	0.77	448556.57	704882.98	N 32 13 55.38 W 103 48 15.89	
	14661.00	91.20	0.14	11752.47	3011.03	3000.64	-362.93	0.40	448651.54	704883.52	N 32 13 56.32 W 103 48 15.88	
	14756.00	90.61	0.61	11750.97	3105.94	3095.63	-362.31	0.79	448746.52	704884.15	N 32 13 57.26 W 103 48 15.87	
	14850.00	89.96	0.63	11750.50	3199.85	3189.62	-361.29	0.69	448840.51	704885.16	N 32 13 58.19 W 103 48 15.85	
	14945.00	89.65	359.30	11750.82	3294.80	3284.62	-361.35	1.44	448935.50	704885.11	N 32 13 59.13 W 103 48 15.84	
	15040.00	89.99	359.58	11751.12	3389.77	3379.61	-362.28	0.46	449030.49	704884.18	N 32 14 0.07 W 103 48 15.85	
	15134.00	90.03	359.71	11751.10	3483.73	3473.61	-362.86	0.14	449124.48	704883.59	N 32 14 1.00 W 103 48 15.85	
	15229.00	89.69	359.46	11751.34	3578.70	3568.61	-363.55	0.44	449219.47	704882.91	N 32 14 1.94 W 103 48 15.85	
	15324.00	90.13	1.08	11751.48	3673.63	3663.60	-363.10	1.77	449314.46	704883.35	N 32 14 2.88 W 103 48 15.84	
	15418.00	90.06	0.73	11751.33	3767.52	3757.59	-361.61	0.38	449408.45	704884.84	N 32 14 3.81 W 103 48 15.82	
	15513.00	90.48	1.05	11750.88	3862.40	3852.58	-360.14	0.56	449503.43	704886.31	N 32 14 4.75 W 103 48 15.80	
	15608.00	89.75	0.36	11750.69	3957.30	3947.57	-358.97	1.06	449598.41	704887.48	N 32 14 5.69 W 103 48 15.78	
	15703.00	90.27	359.82	11750.67	4052.25	4042.57	-358.82	0.79	449693.41	704887.63	N 32 14 6.63 W 103 48 15.77	
	15797.00	89.89	0.21	11750.54	4146.19	4136.57	-358.80	0.58	449787.40	704887.66	N 32 14 7.56 W 103 48 15.76	
	15892.00	90.06	0.73	11750.58	4241.11	4231.56	-358.02	0.58	449882.39	704888.44	N 32 14 8.50 W 103 48 15.75	
	15986.00	89.96	359.97	11750.57	4335.04	4325.56	-357.44	0.82	449976.38	704889.01	N 32 14 9.43 W 103 48 15.74	
	16081.00	89.82	0.76	11750.75	4429.96	4420.56	-356.84	0.84	450071.37	704889.62	N 32 14 10.37 W 103 48 15.73	
	16176.00	89.99	0.27	11750.91	4524.88	4515.55	-355.98	0.55	450166.36	704890.47	N 32 14 11.31 W 103 48 15.71	
	16270.00	90.13	0.25	11750.81	4618.81	4609.55	-355.56	0.15	450260.36	704890.90	N 32 14 12.24 W 103 48 15.70	

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS ("/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	19390.00	90.39	0.75	11738.09	7736.30	7729.26	-340.54	1.43	453379.87	704905.91	N 32 14 43.11	W 103 48 15.35
	19485.00	89.77	0.42	11737.96	7831.21	7824.25	-339.57	0.74	453474.86	704906.88	N 32 14 44.05	W 103 48 15.33
	19580.00	89.46	359.92	11738.60	7926.15	7919.25	-339.29	0.62	453569.85	704907.16	N 32 14 44.99	W 103 48 15.32
	19675.00	89.67	0.09	11739.32	8021.09	8014.25	-339.28	0.28	453664.84	704907.17	N 32 14 45.93	W 103 48 15.31
	19770.00	88.78	358.57	11740.60	8116.06	8109.23	-340.39	1.85	453759.82	704906.06	N 32 14 46.87	W 103 48 15.32
	19864.00	90.56	1.15	11741.14	8210.00	8203.22	-340.62	3.33	453853.80	704905.83	N 32 14 47.80	W 103 48 15.32
	19959.00	89.67	1.53	11740.95	8304.85	8298.19	-338.40	1.02	453948.76	704908.05	N 32 14 48.74	W 103 48 15.29
	20054.00	90.70	0.53	11740.65	8399.72	8393.17	-336.69	1.51	454043.74	704909.76	N 32 14 49.68	W 103 48 15.26
	20149.00	89.84	0.65	11740.20	8494.63	8488.16	-335.71	0.91	454138.73	704910.74	N 32 14 50.62	W 103 48 15.25
	20244.00	89.67	0.33	11740.60	8589.54	8583.16	-334.90	0.38	454233.72	704911.55	N 32 14 51.56	W 103 48 15.23
	20338.00	89.09	359.41	11741.62	8683.49	8677.15	-335.11	1.16	454327.70	704911.34	N 32 14 52.49	W 103 48 15.23
	20433.00	90.05	359.10	11742.33	8778.47	8772.14	-336.35	1.06	454422.68	704910.10	N 32 14 53.43	W 103 48 15.24
	20528.00	89.29	359.79	11742.88	8873.44	8867.13	-337.27	1.08	454517.67	704909.18	N 32 14 54.37	W 103 48 15.24
	20623.00	89.33	0.62	11744.03	8968.37	8962.12	-336.93	0.87	454612.66	704909.52	N 32 14 55.31	W 103 48 15.23
	20718.00	89.05	0.31	11745.37	9063.28	9057.11	-336.16	0.44	454707.64	704910.29	N 32 14 56.25	W 103 48 15.22
	20812.00	89.80	0.85	11746.48	9157.18	9151.10	-335.21	0.82	454801.62	704911.25	N 32 14 57.18	W 103 48 15.20
	20907.00	88.12	359.20	11748.37	9252.10	9246.07	-335.16	2.33	454896.59	704911.29	N 32 14 58.12	W 103 48 15.20
	21002.00	92.18	1.88	11748.12	9346.99	9341.04	-334.27	5.12	454991.55	704912.18	N 32 14 59.06	W 103 48 15.18
	21095.00	89.81	0.36	11746.42	9439.84	9434.00	-332.45	2.94	455084.50	704914.00	N 32 14 59.98	W 103 48 15.15
	21190.00	91.67	0.23	11745.11	9534.75	9528.88	-331.96	1.86	455179.48	704914.49	N 32 15 0.92	W 103 48 15.14
	21285.00	89.91	359.79	11743.80	9628.69	9623.87	-331.95	1.91	455274.46	704914.50	N 32 15 1.86	W 103 48 15.14
	21379.00	91.98	0.52	11742.25	9723.61	9717.85	-331.69	2.34	455368.44	704914.76	N 32 15 2.79	W 103 48 15.12
	21473.00	88.50	359.76	11741.86	9817.53	9811.84	-331.46	3.79	455462.42	704914.99	N 32 15 3.72	W 103 48 15.12
	21567.00	86.16	358.48	11746.24	9911.41	9905.82	-332.90	2.84	455556.29	704913.55	N 32 15 4.65	W 103 48 15.13
	21661.00	89.70	359.54	11749.83	10005.32	9999.72	-334.53	3.93	455650.19	704911.93	N 32 15 5.58	W 103 48 15.15
	21756.00	89.02	360.00	11750.69	10100.27	10094.72	-334.91	0.66	455745.18	704911.54	N 32 15 6.52	W 103 48 15.14
	21851.00	91.29	0.06	11750.44	10195.21	10189.71	-334.86	2.39	455840.17	704911.59	N 32 15 7.46	W 103 48 15.14
	22040.00	89.91	0.18	11748.46	10384.08	10378.69	-334.46	0.73	456029.14	704911.98	N 32 15 8.33	W 103 48 15.12
	22229.00	89.15	0.48	11750.01	10572.93	10567.68	-333.37	0.43	456218.12	704913.08	N 32 15 9.20	W 103 48 15.10
	22324.00	89.84	0.78	11750.84	10667.83	10662.67	-332.33	0.79	456313.10	704914.12	N 32 15 10.14	W 103 48 15.08
100' FNL Crossing	22328.00	89.74	0.73	11750.86	10671.82	10666.67	-332.28	2.79	456317.10	704914.18	N 32 15 10.18	W 103 48 15.08
Final MWD	22363.00	88.88	0.27	11751.28	10706.79	10701.67	-331.97	2.79	456352.09	704914.48	N 32 15 12.52	W 103 48 15.08
Proj to TD	22407.00	88.88	0.27	11752.14	10750.75	10745.66	-331.76	0.00	456396.08	704914.69	N 32 15 12.96	W 103 48 15.07

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7855 sigma
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	26.500	1/98.425	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 172H Gyro + IFR 0-22407MD
	1	26.500	26.500	Act Stns	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 172H Gyro + IFR 0-22407MD
	1	26.500	674.300	Act Stns	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 172H
	1	674.300	22407.000	Act Stns	30.000	NAL_MWD_IFR1+MS	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 172H

...Original Borehole/Oxy Sunrise MDP1 8-5 Federal Com 172H Gyro + IFR 0-22407MD