

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

May 2, 2019

OXY USA Inc.

Re:

17, 24S, 31E, Eddy NM
N 32.22406 W 103.80317

CLIENT: OXY USA Inc.
WELL: Sunrise MDP1 8-5 Federal Com 173H
FIELD: Purple Sage Wolfcamp

RIG: H&P 657
COUNTY: Eddy
API NO: 30-015-44931
JOB NO: 19MLD4350

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 Federal Com 173H Original Hole	737.00 Ft to 21673.00 Ft	March 6, 2019 to April 30, 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

Schlumberger-Private

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)

RECEIVED

Schlumberger

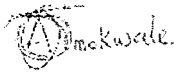
JUN 03 2019

DISTRICT II-ARTESIA O.C.D.

Well Reference:
17, 24S, 31E, Eddy NM
N 32.22406 W 103.80317

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 06, 2019 through April 30, 2019, conduct or supervise the taking of the SlimPulse & Third Party Corrected surveys from a depth of 737.00 feet to a depth of 21673.00 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 Federal Com 173H Well (Original Hole) API No. 30-015-44931 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 2nd day of May (month) 2019 (yr)

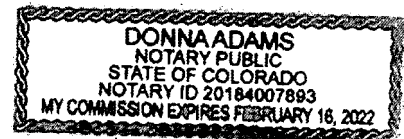
My Commission expires:

2-16-2022

D. Adams
Notary Public

(signature)

Adams County Colorado
(County State)



Schlumberger

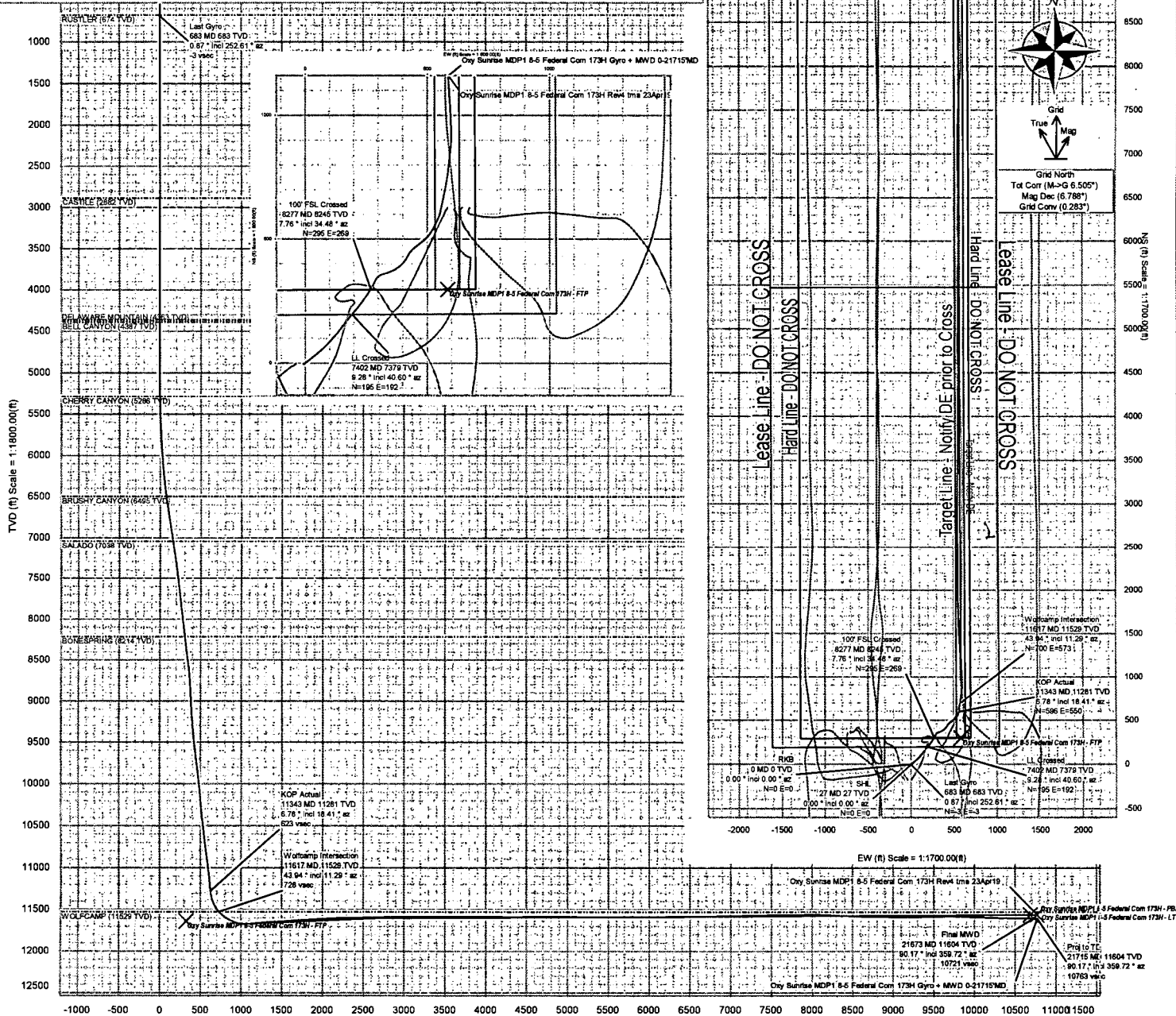
OXY



Borehole:	Well:	Field:	Structure:
Original Borehole	Oxy Sunrise MDP1 8-5 Federal Com 173H	NM Eddy County (NAD 83)	Oxy Sunrise MDP1 8-5 Federal Com 173H

Gravity & Magnetic Parameters				Surface Location				Miscellaneous			
Model:	IPR1	Dip:	58.82°	Date:	17-Apr-2019	Lat:	N 32 13 26.82	Northings:	445451.28RUS	Grid Conv:	0.2827°
MagDec:	6.78°	FS:	47937nT	Gravity FS:	998.42mgm (9.80665 Based)	Lon:	W 103 48 11.42	Eastings:	705281.43RUS	Scale Fact:	0.99993887
								MDP1 8-5 Federal Com 173H Gyro + MWD 0-21715MD			

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	683.30	0.87	252.61	683.28	-3.18	-3.03	-3.03	0.30
LL Crossed	7402.00	9.28	40.60	7379.31	204.60	195.05	192.50	0.32
100' FSL Crossed	8277.00	7.76	34.48	8245.14	308.70	295.38	269.00	0.26
KOP Actual	11343.00	6.78	18.41	11281.29	623.31	596.05	550.33	1.28
Wolfcamp Intersection	11617.22	43.94	11.29	11528.50	728.31	700.01	573.43	16.21
100' FNL Crossed	21633.00	90.25	0.23	11603.85	10680.91	10666.00	564.38	1.29
Final MWD	21673.00	90.17	359.72	11603.70	10720.85	10706.00	564.36	1.29
Proj to TD	21715.00	90.17	359.72	11603.58	10762.79	10748.00	564.15	0.00



Oxy Sunrise MDP1 8-5 Federal Com 173H Gyro + MWD 0-21715MD Survey Geodetic Report (Def Survey)



Report Date: April 30, 2019 - 09:44 PM
Client: OXY
Field: NM Eddy County (NAD 83)
Structure / Slot: Oxy Sunrise MDP1 8-5 Federal Com 173H / Oxy Sunrise MDP1 8-5
Well: Oxy Sunrise MDP1 8-5 Federal Com 173H
Borehole: Original Borehole
UWI / API#: Unknown / 30-015-44931
Survey Name: Oxy Sunrise MDP1 8-5 Federal Com 173H Gyro + MWD 0-21715MD
Survey Date: February 26, 2019
Tort / AHD / DDI / ERD Ratio: 262.362' / 11016.387 ft / 6.730 / 0.944
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 13' 26.61554", W 103° 48' 11.41761"
Location Grid N/E Y/X: N 445651.260 RUS, E 705281.430 RUS
CRS Grid Convergence Angle: 0.2827°
Grid Scale Factor: 0.99993987
Version / Patch: 2.10.753.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 2.920° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB=26.5'
TVD Reference Elevation: 3560.500 ft above MSL
Seabed / Ground Elevation: 3534.000 ft above MSL
Magnetic Declination: 6.788°
Total Gravity Field Strength: 998.4282mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47937.000 nT
Magnetic Dip Angle: 59.920°
Declination Date: April 17, 2019
Magnetic Declination Model: IFR1
North Reference: Grid North
Grid Convergence Used: 0.2827°
Total Corr Mag North->Grid: 6.5053°
North: Well Head
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS ("/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
RKB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	445651.26	705281.43	N 32° 13' 26.62"	W 103° 48' 11.42"
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	445651.26	705281.43	N 32° 13' 26.62"	W 103° 48' 11.42"
	119.70	0.25	192.59	119.70	-0.20	-0.20	-0.04	0.27	445651.06	705281.39	N 32° 13' 26.61"	W 103° 48' 11.42"
	146.90	0.27	192.32	146.90	-0.32	-0.32	-0.07	0.07	445650.94	705281.36	N 32° 13' 26.61"	W 103° 48' 11.42"
	229.70	0.42	207.16	229.70	-0.79	-0.78	-0.25	0.21	445650.48	705281.18	N 32° 13' 26.61"	W 103° 48' 11.42"
	324.40	0.30	210.70	324.40	-1.33	-1.30	-0.54	0.13	445649.96	705280.89	N 32° 13' 26.60"	W 103° 48' 11.42"
	418.50	0.41	208.83	418.49	-1.85	-1.81	-0.82	0.12	445649.45	705280.61	N 32° 13' 26.60"	W 103° 48' 11.43"
	513.70	0.44	233.92	513.69	-2.38	-2.32	-1.28	0.20	445648.94	705280.15	N 32° 13' 26.59"	W 103° 48' 11.43"
	608.50	0.65	250.30	608.49	-2.82	-2.72	-2.08	0.27	445648.54	705279.35	N 32° 13' 26.59"	W 103° 48' 11.44"
	683.30	0.87	252.61	683.28	-3.18	-3.03	-3.03	0.30	445648.23	705278.40	N 32° 13' 26.59"	W 103° 48' 11.45"
	737.00	1.80	230.57	736.97	-3.89	-3.69	-4.07	1.95	445647.57	705277.36	N 32° 13' 26.58"	W 103° 48' 11.47"
	830.00	0.41	208.79	829.95	-5.17	-4.91	-5.35	1.53	445646.35	705276.08	N 32° 13' 26.57"	W 103° 48' 11.48"
	922.00	0.11	91.35	921.95	-5.47	-5.20	-5.42	0.51	445646.06	705276.01	N 32° 13' 26.56"	W 103° 48' 11.48"
	1015.00	0.10	58.82	1014.95	-5.42	-5.16	-5.27	0.06	445646.10	705276.16	N 32° 13' 26.56"	W 103° 48' 11.48"
	1107.00	0.10	290.45	1106.95	-5.35	-5.09	-5.27	0.20	445646.17	705276.16	N 32° 13' 26.57"	W 103° 48' 11.48"
	1199.00	0.06	80.95	1198.95	-5.32	-5.05	-5.30	0.17	445646.21	705276.13	N 32° 13' 26.57"	W 103° 48' 11.48"
	1292.00	0.10	58.18	1291.95	-5.26	-5.00	-5.18	0.05	445646.26	705276.25	N 32° 13' 26.57"	W 103° 48' 11.48"
	1386.00	0.10	66.77	1385.95	-5.18	-4.93	-5.04	0.02	445646.33	705276.39	N 32° 13' 26.57"	W 103° 48' 11.48"
	1481.00	0.06	92.34	1480.95	-5.14	-4.90	-4.91	0.06	445646.36	705276.52	N 32° 13' 26.57"	W 103° 48' 11.48"
	1575.00	0.10	136.10	1574.95	-5.20	-4.96	-4.81	0.07	445646.30	705276.62	N 32° 13' 26.57"	W 103° 48' 11.47"
	1670.00	0.10	125.14	1669.95	-5.30	-5.06	-4.68	0.02	445646.20	705276.75	N 32° 13' 26.57"	W 103° 48' 11.47"
	1859.00	0.06	342.58	1858.94	-5.29	-5.07	-4.58	0.08	445646.20	705276.85	N 32° 13' 26.57"	W 103° 48' 11.47"
	1953.00	0.08	336.51	1952.94	-5.19	-4.96	-4.62	0.02	445646.30	705276.81	N 32° 13' 26.57"	W 103° 48' 11.47"
	2048.00	0.10	47.89	2047.94	-5.07	-4.84	-4.58	0.11	445646.42	705276.85	N 32° 13' 26.57"	W 103° 48' 11.47"
	2143.00	0.10	254.31	2142.94	-5.04	-4.81	-4.60	0.20	445646.45	705276.83	N 32° 13' 26.57"	W 103° 48' 11.47"
	2237.00	0.03	256.91	2236.94	-5.07	-4.84	-4.70	0.07	445646.42	705276.73	N 32° 13' 26.57"	W 103° 48' 11.47"
	2332.00	0.10	291.67	2331.94	-5.05	-4.81	-4.80	0.08	445646.45	705276.63	N 32° 13' 26.57"	W 103° 48' 11.47"
	2426.00	0.13	151.57	2425.94	-5.11	-4.87	-4.83	0.23	445646.39	705276.60	N 32° 13' 26.57"	W 103° 48' 11.47"
	2521.00	0.05	237.34	2520.94	-5.23	-4.99	-4.81	0.14	445646.27	705276.62	N 32° 13' 26.57"	W 103° 48' 11.47"
	2615.00	0.04	54.48	2614.94	-5.23	-4.99	-4.82	0.10	445646.27	705276.61	N 32° 13' 26.57"	W 103° 48' 11.47"
	2710.00	0.06	256.45	2709.94	-5.23	-4.99	-4.84	0.10	445646.27	705276.59	N 32° 13' 26.57"	W 103° 48' 11.47"
	2805.00	0.26	251.16	2804.94	-5.32	-5.07	-5.09	0.21	445646.19	705276.34	N 32° 13' 26.57"	W 103° 48' 11.48"
	2899.00	0.42	235.48	2898.94	-5.61	-5.33	-5.58	0.20	445645.93	705275.85	N 32° 13' 26.56"	W 103° 48' 11.48"
	2994.00	0.96	202.81	2993.94	-6.57	-6.26	-6.18	0.68	445645.00	705275.25	N 32° 13' 26.55"	W 103° 48' 11.49"
	3088.00	0.15	29.59	3087.93	-7.20	-6.88	-6.42	1.18	445644.38	705275.01	N 32° 13' 26.55"	W 103° 48' 11.49"
	3183.00	0.12	353.45	3182.93	-6.99	-6.68	-6.37	0.09	445644.59	705275.06	N 32° 13' 26.55"	W 103° 48' 11.49"
	3372.00	0.37	252.04	3371.93	-7.01	-6.67	-6.97	0.22	445644.59	705274.46	N 32° 13' 26.55"	W 103° 48' 11.50"
	3467.00	0.24	273.54	3466.93	-7.12	-6.75	-7.46	0.18	445644.51	705273.97	N 32° 13' 26.55"	W 103° 48' 11.50"
	3566.00	0.12	124.02	3565.93	-7.22	-6.84	-7.69	0.16	445644.42	705273.74	N 32° 13' 26.55"	W 103° 48' 11.51"
	3750.00	0.14	221.51	3749.93	-7.36	-6.98	-7.69	0.21	445644.28	705273.74	N 32° 13' 26.55"	W 103° 48' 11.51"
	3939.00	0.14	195.69	3938.93	-7.76	-7.37	-7.80	0.03	445643.89	705273.53	N 32° 13' 26.54"	W 103° 48' 11.51"
	4033.00	0.14	227.73	4032.93	-7.96	-7.56	-8.02	0.08	445643.70	705273.41	N 32° 13' 26.54"	W 103° 48' 11.51"
	4127.00	0.09	168.59	4126.93	-8.11	-7.71	-8.09	0.13	445643.55	705273.34	N 32° 13' 26.54"	W 103° 48' 11.51"
	4221.00	0.28	359.78	4220.93	-7.95	-7.55	-8.08	0.39	445643.71	705273.35	N 32° 13' 26.54"	W 103° 48' 11.51"
	4315.00	0.13	84.21	4314.93	-7.71	-7.31	-7.97	0.32	445643.95	705273.46	N 32° 13' 26.54"	W 103° 48' 11.51"
	4410.00	0.06	209.98	4409.93	-7.74	-7.34	-7.89	0.18	445643.92	705273.54	N 32° 13' 26.54"	W 103° 48' 11.51"
	4598.00	0.06	17.92	4597.93	-7.73	-7.34	-7.91	0.06	445643.93	705273.52	N 32° 13' 26.54"	W 103° 48' 11.51"
	4693.00	0.10	179.04	4692.93	-7.76	-7.37	-7.89	0.17	445643.89	705273.54	N 32° 13' 26.54"	W 103° 48' 11.51"
	4787.00	0.05	196.41	4786.93	-7.89	-7.49	-7.90	0.06	445643.77	705273.53	N 32° 13' 26.54"	W 103° 48' 11.51"
	4881.00	0.07	84.92	4880.93	-7.92	-7.53	-7.86	0.11	445643.73	705273.57	N 32° 13' 26.54"	W 103° 48' 11.51"
	5070.00	0.65	281.73	5069.92	-7.74	-7.30	-8.79	0.38	445643.96	705272.64	N 32° 13' 26.54"	W 103° 48' 11.52"
	5164.00	0.65	14.30	5163.92	-7.13	-6.67	-9.18	1.00	445644.59	705272.25	N 32° 13' 26.55"	W 103° 48' 11.52"
	5259.00	1.19	30.41	5258.91	-5.73	-5.30	-8.55	0.62	445645.96	705272.88	N 32° 13' 26.56"	W 103° 48' 11.52"
	5353.00	1.67	50.46	5352.88	-3.94	-3.59	-7.00	0.73	445647.67	705274.43	N 32° 13' 26.58"	W 103° 48' 11.50"
	5447.00	2.37	54.35	5446.82	-1.80	-1.58	-4.36	0.76	445649.68	705277.07	N 32° 13' 26.60"	W 103° 48' 11.47"
	5542.00	3.11	57.65	5541.71	0.91	0.94	-0.59	0.80	445652.20	705280.84	N 32° 13' 26.62"	W 103° 48' 11.42"
	5636.00	3.92	58.19	5635.53	4.21	4.00	4.29	0.86	445655.26	705285.72	N 32° 13' 26.65"	W 103° 48' 11.37"
	5730.00	4.86	54.88	5729.25	8.50	7.98	10.28	1.04	445659.24	705291.71	N 32° 13' 26.69"	W 103° 48' 11.30"
	5824.00	5.36	53.96	5822.88	13.71	12.86	17.09	0.54	445664.12	705298.52	N 32° 13' 26.74"	W 103° 48' 11.22"
	5919.00	5.84	51.50	5917.43	19.70	18.48	24.46	0.56	445669.74	705305.89	N 32° 13' 26.80"	W 103° 48' 11.13"
	6014.00	5.58	49.91	6011.96	26.05	24.46	31.78	0.32	445675.72	705313.20	N 32° 13' 26.86"	W 103° 48' 11.05"
	6108.00	5.89	51.87	6105.49	32.33	30.38	39.07	0.39	445681.64	705320.49	N 32° 13' 26.91"	W 103° 48' 10.96"
	6203.00	7.37	51.90	6199.85	39.53	37.15	47.70	1.56	445688.41	705329.12	N 32° 13' 26.98"	W 103° 48' 10.86"
	6297.00	9.11	49.95	6292.87	48.56	45.66	58.14	1.87	445696.92	705339.56	N 32° 13' 27.06"	W 103° 48' 10.74"
	6392.00	10.16	48.55	6386.53	59.55	56.05	70.17	1.13	445707.30	705351.60	N 32° 13' 27.17"	W 103° 48' 10.60"
	6486.00	10.83	46.93	6478.96	71.70	67.57	82.84	0.78	445718.82	705364.27	N 32° 13' 27.28"	W 103° 48' 10.45"
	6581.00	10.97	44.37	6572.25	84.89	80.12	95.68	0.53	445731.38	705377.11	N 32° 13' 27.40"	W 103° 48' 10.30"
	6676.00	11.62	43.21	6665.41	98.97	93.56	108.55	0.72	445744.81	705389.98	N 32° 13' 27.54"	W 103° 48' 10.15"
	6770.00	11.04	40.97	6757.57	113.27	107.25	120.94	0.77	445758.51	705402.36	N 32° 13' 27.67"	W 103° 48' 10.00"
	6869.00	10.58	37.55	6843.22	141.80	134.67	143.38	0.42	445785.92	705424.80	N 32° 13' 27.94"	W 103° 48' 9.74"
	7054.00	10.62	37.84	7036.60	156.16	148.50	154.06	0.07	445799.75	705435.48	N 32° 13' 28.08"	W 103° 48' 9.62"
	7149.00	10.17	38.86	7130.04	170.12	161.95	164.69	0.51	445813.19	705446.11	N 32° 13' 28.2	

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 ° ' ")
100' FSL Crossed	7810.00	8.30	37.61	7782.70	253.93	242.47	231.12	0.12	445893.72	705512.54	N 32 13 29.00 W 103 48 8.71	
	8000.00	8.01	36.06	7870.78	276.28	264.04	247.29	0.19	445915.28	705528.70	N 32 13 28.22 W 103 48 8.52	
	8094.00	7.87	34.70	8063.87	287.25	274.62	254.80	0.25	445925.87	705536.22	N 32 13 28.32 W 103 48 8.44	
	8189.00	7.98	34.13	8157.97	298.41	285.43	262.21	0.14	445936.67	705543.62	N 32 13 29.43 W 103 48 8.35	
	8277.00	7.76	34.48	8245.14	308.70	295.38	269.00	0.26	445946.62	705550.41	N 32 13 29.53 W 103 48 8.27	
	8281.00	7.75	34.50	8249.10	309.16	295.83	269.30	0.26	445947.07	705550.72	N 32 13 29.53 W 103 48 8.27	
	8375.00	7.94	29.70	8342.22	320.36	306.69	276.11	0.73	445957.93	705557.52	N 32 13 29.64 W 103 48 8.19	
	8470.00	7.86	23.33	8436.32	332.30	318.35	281.93	0.92	445969.59	705563.35	N 32 13 29.75 W 103 48 8.12	
	8564.00	7.92	26.90	8529.43	344.24	330.03	287.41	0.53	445981.27	705568.82	N 32 13 29.87 W 103 48 8.05	
	8659.00	7.84	33.71	8623.54	355.79	341.26	293.97	0.99	445992.50	705575.38	N 32 13 29.98 W 103 48 7.98	
KOP Actual	8753.00	7.63	54.59	8716.70	365.17	350.21	302.61	2.98	446001.45	705584.02	N 32 13 30.07 W 103 48 7.87	
	8848.00	7.62	69.08	8810.87	371.63	356.11	313.64	2.02	446007.35	705595.05	N 32 13 30.12 W 103 48 7.75	
	8942.00	7.80	74.45	8904.02	376.17	360.05	325.60	0.79	446011.29	705607.01	N 32 13 30.16 W 103 48 7.61	
	9036.00	8.11	71.84	8997.12	380.57	363.82	338.05	0.51	446015.06	705619.46	N 32 13 30.20 W 103 48 7.46	
	9131.00	7.81	66.65	9091.20	385.84	368.47	350.34	0.82	446019.71	705631.75	N 32 13 30.24 W 103 48 7.32	
	9225.00	8.78	63.35	9184.22	392.21	374.22	362.62	1.15	446025.46	705644.03	N 32 13 30.30 W 103 48 7.17	
	9319.00	7.87	58.26	9277.23	399.41	380.82	374.50	1.24	446032.06	705655.91	N 32 13 30.37 W 103 48 7.04	
	9508.00	7.84	46.56	9464.47	416.10	396.50	394.87	0.84	446047.73	705676.28	N 32 13 30.52 W 103 48 6.80	
	9603.00	7.99	38.86	9558.57	426.13	406.09	403.72	1.13	446057.33	705685.12	N 32 13 30.61 W 103 48 6.69	
	9697.00	8.23	35.93	9651.63	437.06	416.63	411.76	0.51	446067.86	705693.17	N 32 13 30.72 W 103 48 6.60	
Wolfcamp Intersection	9791.00	8.41	30.16	9744.64	448.82	428.02	419.17	0.91	446079.25	705700.57	N 32 13 30.83 W 103 48 6.51	
	9886.00	8.19	31.29	9838.64	460.95	439.81	426.17	0.29	446091.04	705707.57	N 32 13 30.95 W 103 48 6.43	
	10075.00	8.34	48.88	10025.71	482.32	460.33	443.49	1.34	446111.56	705724.89	N 32 13 31.15 W 103 48 6.23	
	10263.00	8.42	53.83	10211.71	500.48	477.42	464.87	0.39	446128.65	705746.28	N 32 13 31.32 W 103 48 5.98	
	10452.00	8.73	49.67	10398.59	519.03	494.87	486.98	0.37	446146.10	705768.38	N 32 13 31.49 W 103 48 5.72	
	10547.00	8.43	44.41	10492.53	529.19	504.51	497.35	0.88	446155.74	705778.75	N 32 13 31.58 W 103 48 5.60	
	10736.00	8.41	34.18	10679.51	551.38	525.84	514.81	0.79	446177.07	705796.21	N 32 13 31.79 W 103 48 5.39	
	10925.00	8.24	26.76	10866.52	575.59	549.37	528.67	0.58	446200.60	705810.07	N 32 13 32.03 W 103 48 5.23	
	11032.00	8.12	26.32	10972.43	589.54	562.99	535.47	0.13	446214.21	705816.87	N 32 13 32.16 W 103 48 5.15	
	11153.00	6.64	24.57	11092.43	603.88	577.01	542.17	1.24	446228.24	705823.57	N 32 13 32.30 W 103 48 5.07	

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 ° ' ")
	18662.00	93.13	4.58	11560.05	7916.04	7896.99	575.23	3.17	453547.76	705856.63	N 32 14 44.73	W 103 48 4.27
	18957.00	88.82	1.29	11557.61	8010.98	7991.81	580.09	4.91	453642.57	705861.48	N 32 14 45.67	W 103 48 4.20
	19052.00	86.52	358.94	11560.64	8105.80	8086.74	580.28	4.26	453737.49	705861.68	N 32 14 46.61	W 103 48 4.20
	19147.00	87.17	358.67	11565.87	8200.41	8181.57	578.30	0.74	453832.32	705859.70	N 32 14 47.54	W 103 48 4.21
	19241.00	87.41	357.98	11570.31	8294.00	8275.43	575.56	0.78	453926.17	705856.95	N 32 14 48.47	W 103 48 4.24
	19335.00	87.17	357.82	11574.76	8387.54	8369.26	572.12	0.31	454020.00	705853.51	N 32 14 49.40	W 103 48 4.28
	19430.00	87.55	357.21	11579.13	8482.01	8464.07	568.00	0.76	454114.80	705849.40	N 32 14 50.34	W 103 48 4.32
	19525.00	88.07	358.03	11582.76	8576.54	8558.91	564.06	1.02	454209.64	705845.46	N 32 14 51.28	W 103 48 4.36
	19620.00	89.24	358.17	11584.99	8671.17	8653.83	560.91	1.24	454304.56	705842.31	N 32 14 52.22	W 103 48 4.39
	19715.00	89.48	357.61	11586.05	8765.80	8748.76	557.42	0.64	454399.48	705838.81	N 32 14 53.16	W 103 48 4.42
	19810.00	89.68	358.23	11586.75	8860.44	8843.70	553.97	0.69	454494.41	705835.36	N 32 14 54.10	W 103 48 4.46
	19904.00	89.75	358.84	11587.22	8954.16	8937.67	551.56	0.65	454588.37	705832.96	N 32 14 55.03	W 103 48 4.48
	19999.00	89.65	358.54	11587.71	9048.90	9032.64	549.39	0.33	454683.34	705830.79	N 32 14 55.97	W 103 48 4.50
	20094.00	89.62	0.42	11588.32	9143.72	9127.63	548.53	1.98	454778.32	705829.93	N 32 14 56.91	W 103 48 4.51
	20189.00	90.03	0.21	11588.61	9238.62	9222.63	549.05	0.48	454873.31	705830.45	N 32 14 57.85	W 103 48 4.49
	20284.00	91.37	0.08	11587.45	9333.50	9317.62	549.29	1.42	454968.30	705830.69	N 32 14 58.79	W 103 48 4.49
	20379.00	89.72	0.67	11586.55	9428.40	9412.61	549.92	1.84	455063.28	705831.31	N 32 14 59.73	W 103 48 4.47
	20473.00	91.89	1.44	11585.23	9522.33	9506.58	551.65	2.45	455157.25	705833.04	N 32 15 0.66	W 103 48 4.45
	20568.00	92.61	1.25	11581.50	9617.22	9601.48	553.87	0.78	455252.14	705835.27	N 32 15 1.60	W 103 48 4.42
	20663.00	89.03	0.94	11580.14	9712.15	9696.43	555.69	3.78	455347.09	705837.08	N 32 15 2.53	W 103 48 4.39
	20758.00	88.07	0.33	11582.54	9807.04	9791.40	556.74	1.20	455442.05	705838.14	N 32 15 3.47	W 103 48 4.37
	20852.00	88.31	0.88	11585.51	9900.92	9885.34	557.73	0.64	455535.99	705839.13	N 32 15 4.40	W 103 48 4.36
	20947.00	88.07	0.53	11588.51	9995.80	9980.29	558.90	0.45	455630.93	705840.30	N 32 15 5.34	W 103 48 4.34
	21042.00	87.96	0.44	11591.80	10090.66	10075.23	559.71	0.15	455725.86	705841.10	N 32 15 6.28	W 103 48 4.32
	21136.00	87.93	359.17	11595.17	10184.46	10169.16	559.39	1.35	455819.79	705840.78	N 32 15 7.21	W 103 48 4.32
	21230.00	88.03	1.36	11598.49	10278.29	10263.10	559.82	2.33	455913.72	705841.22	N 32 15 8.14	W 103 48 4.31
	21419.00	89.17	0.37	11603.10	10452.02	10437.11	562.67	0.80	456102.63	705844.07	N 32 15 10.01	W 103 48 4.26
	21607.00	90.30	0.56	11603.97	10654.93	10640.00	564.20	0.61	456290.60	705845.59	N 32 15 11.87	W 103 48 4.24
100' FNL	21633.00	90.25	0.23	11603.85	10680.91	10666.00	564.38	1.29	456316.60	705845.77	N 32 15 12.13	W 103 48 4.23
Crossed	21673.00	90.17	359.72	11603.70	10720.85	10706.00	564.36	1.29	456356.60	705845.75	N 32 15 12.52	W 103 48 4.23
Final MWD	21715.00	90.17	359.72	11603.58	10762.79	10748.00	564.15	0.00	456398.59	705845.55	N 32 15 12.94	W 103 48 4.23
Proj to TD												

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 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	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 173H Gyro + MWD 0-21715'MD
	1	26.500	26.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 173H Gyro + MWD 0-21715'MD
	1	26.500	683.300	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 173H
	1	683.300	11032.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 173H
	1	11032.000	11438.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 173H
	1	11438.000	11795.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 173H
	1	11795.000	12009.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 173H
	1	12009.000	21715.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 173H

...Original Borehole\Oxy Sunrise MDP1 8-5 Federal Com 173H Gyro + MWD 0-21715'MD