

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

RECEIVED

AUG 24 2018

30-015-44395

January 8, 2018

DISTRICT II-ARTESIA O.C.D.

OXY USA INC.

Re:

B, 24 South, 31 East, Eddy NM
-32.22506 -103.80556

CLIENT: OXY USA INC.
WELL: Sunrise MDP1 "8-5" Federal Com 2H
FIELD: Cotton Draw; Bone Spring

RIG: H&P 617
COUNTY: Eddy
API NO: 30-015-44395
JOB NO: 17MLD3265

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>
Tyler Matthews FET	Sunrise MDP1 "8-5" Federal Com 2H	10320.00 Ft to 20296.00 Ft	December 26, 2017 to January 5, 2018	SlimPulse

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

Field Service Manager

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:

B, 24 South, 31 East, Eddy NM
-32.22506 -103.80556

I, Tyler Matthews certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of December 26, 2017 through January 05, 2018, conduct or supervise the taking of the SlimPulse surveys from a depth of 10320.00 feet to a depth of 20296.00 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 2H Well 2IIAPI No. 30-015-44395 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
Tyler Matthews
FET

Tyler Matthews

Subscribed and Sworn to before me this 22nd day of January (month) 2018 (yr)

My Commission expires:

12-20-2020

J. Allemand

Notary Public

Adams County Colorado
(County State)

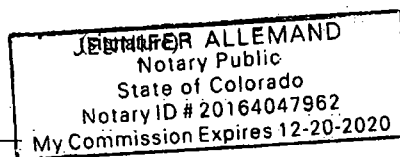
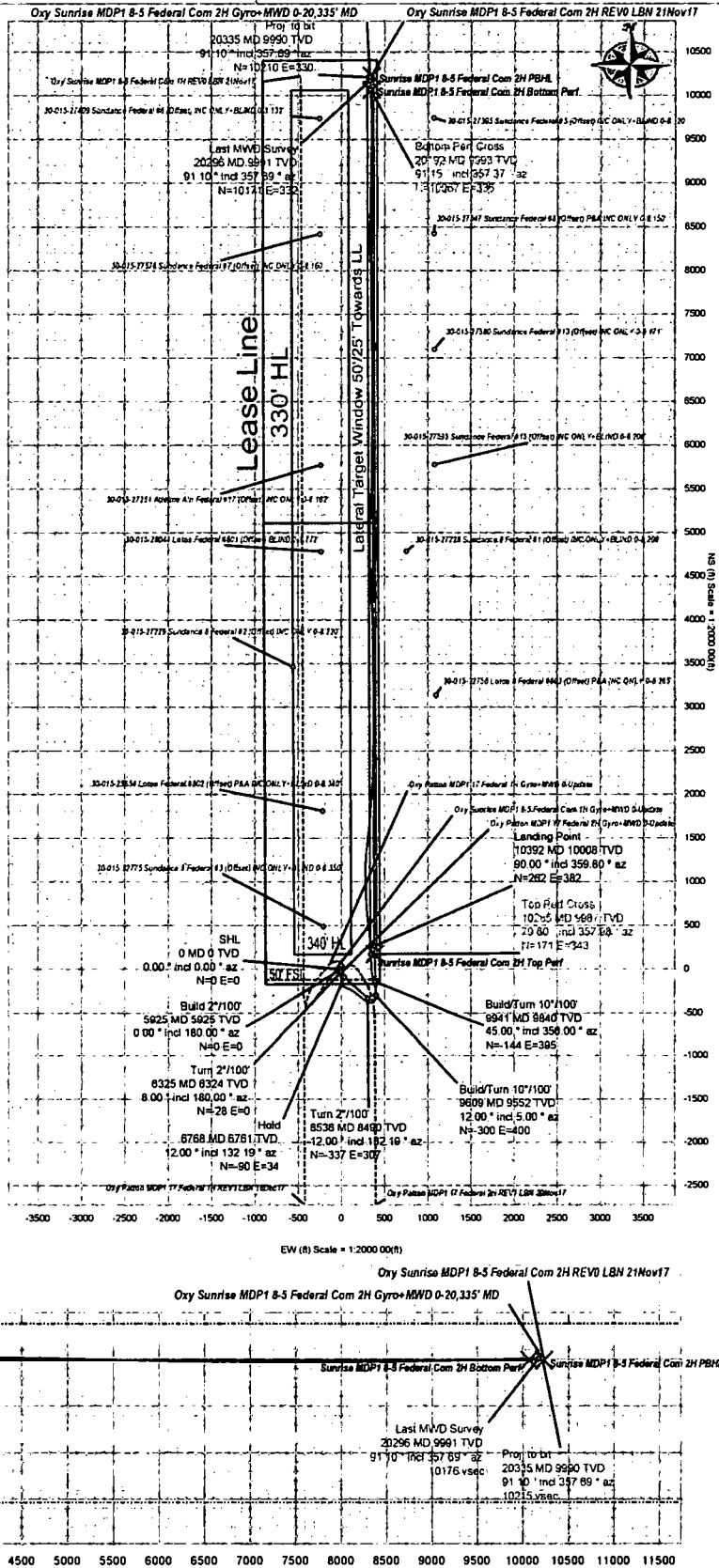
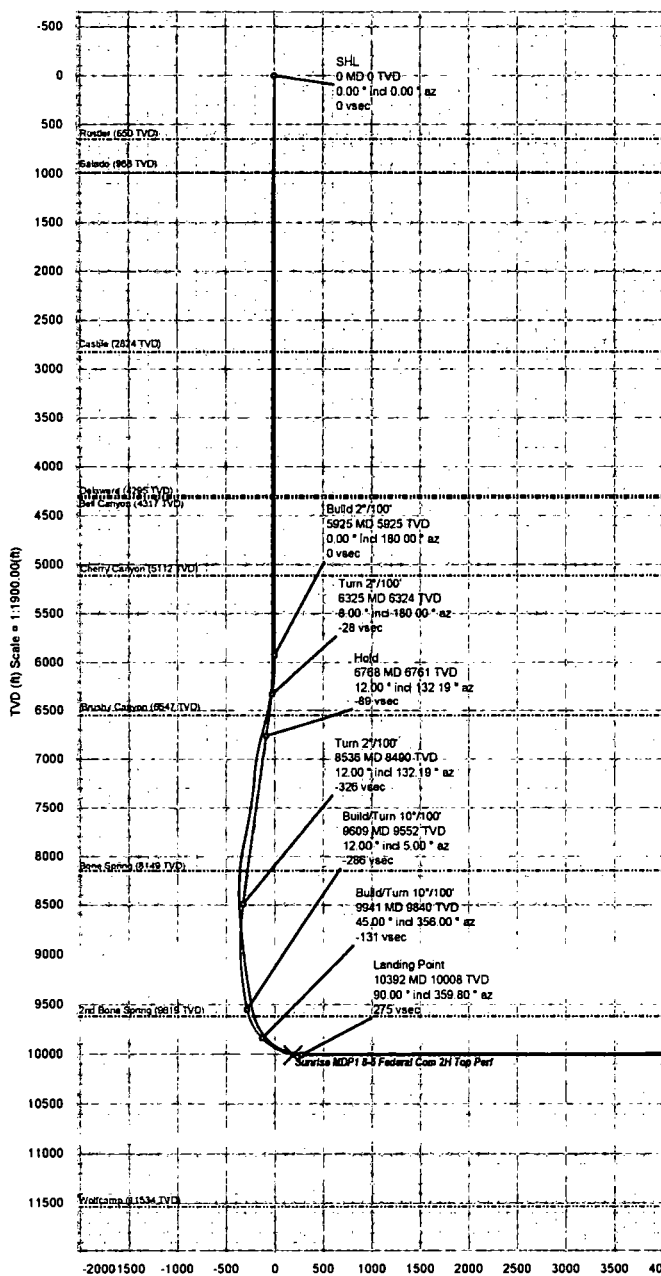




Diagram illustrating the relationship between True, Grid, and Magnetic headings:

- True (Reference)
- Grid (10° clockwise from True)
- Magnetic (5° clockwise from True)

Grid North
Tot Corr (M->G 6.659°)
Mag Dec (6.940°)
Grid Conv (0.281°)



Vertical Section (ft) Azim = 1.95° Scale = 1:1900.00(ft) Origin = 0N/-S, 0E/-W

Oxy Sunrise MDP1 8-5 Federal Com 2H Gyro+MWD 0-20,335' MD Survey Geodetic Report (Def Survey)



Report Date: January 04, 2018 - 04:38 PM
Client: OXY
Field: NM Eddy County (NAD 83)
Structure / Slot: Oxy Sunrise MDP1 8-5 Federal Com 2H / Oxy Sunrise MDP1 8-5 Federal Com 2H
Well: Oxy Sunrise MDP1 8-5 Federal Com 2H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Oxy Sunrise MDP1 8-5 Federal Com 2H Gyro+MWD 0-20,335' MD
Survey Date: December 11, 2017
Tort / AHD / DDI / ERD Ratio: 249.744' / 11217.497 ft / 6.754' / 1.119
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 13' 30.21746", W 103° 48' 20.0652"
Location Grid N/E Y/X: N 446011.610 ftUS, E 704541.860 ftUS
CRS Grid Convergence Angle: 0.2814 °
Grid Scale Factor: 0.9999396
Version / Patch: 2.10.565.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 1.949 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB=26.5'
TVD Reference Elevation: 3555.900 ft above MSL
Seabed / Ground Elevation: 3529.400 ft above MSL
Magnetic Declination: 6.940 °
Total Gravity Field Strength: 998.4287mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 48066.134 nT
Magnetic Dip Angle: 59.985 °
Declination Date: December 11, 2017
Magnetic Declination Model: HDGM 2017
North Reference: Grid North
Grid Convergence Used: 0.2814 °
Total Corr Mag North->Grid North: 6.6587 °
Local Coord Referenced To: Well Head

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 ° ' ")
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	446011.61	704541.86	N 32 13 30.22	W 103 48 20.01
	41.20	0.28	167.68	41.20	-0.10	-0.10	0.02	0.68	446011.51	704541.88	N 32 13 30.22	W 103 48 20.01
	133.10	0.35	196.39	133.10	-0.59	-0.59	-0.01	0.19	446011.02	704541.85	N 32 13 30.21	W 103 48 20.01
	223.90	0.58	189.81	223.90	-1.31	-1.31	-0.17	0.26	446010.30	704541.69	N 32 13 30.20	W 103 48 20.01
	316.20	0.79	175.69	316.19	-2.41	-2.40	-0.20	0.29	446009.21	704541.66	N 32 13 30.19	W 103 48 20.01
	407.90	0.78	175.04	407.88	-3.65	-3.65	-0.10	0.01	446007.96	704541.76	N 32 13 30.18	W 103 48 20.01
	499.30	0.52	180.99	499.27	-4.69	-4.69	-0.05	0.29	446006.92	704541.81	N 32 13 30.17	W 103 48 20.01
	591.60	0.56	176.75	591.57	-5.55	-5.56	-0.03	0.06	446006.05	704541.83	N 32 13 30.16	W 103 48 20.01
	683.50	0.59	154.43	683.47	-6.42	-6.43	0.20	0.24	446005.18	704542.06	N 32 13 30.15	W 103 48 20.00
	774.80	0.80	157.31	774.76	-7.42	-7.44	0.65	0.23	446004.17	704542.51	N 32 13 30.14	W 103 48 20.00
	866.70	1.22	161.20	866.64	-8.92	-8.96	1.21	0.46	446002.65	704543.07	N 32 13 30.13	W 103 48 19.99
	958.20	1.50	164.41	958.12	-10.97	-11.04	1.85	0.32	446000.57	704543.71	N 32 13 30.11	W 103 48 19.99
	1052.90	1.53	165.03	1052.79	-13.36	-13.45	2.50	0.04	445998.16	704544.36	N 32 13 30.08	W 103 48 19.98
	1147.60	1.57	171.79	1147.45	-15.85	-15.96	3.02	0.20	445995.65	704544.88	N 32 13 30.06	W 103 48 19.97
	1242.00	0.91	167.89	1241.83	-17.85	-17.97	3.36	0.70	445993.64	704545.22	N 32 13 30.04	W 103 48 19.97
	1336.60	0.08	200.30	1336.42	-18.64	-18.77	3.49	0.89	445992.84	704545.35	N 32 13 30.03	W 103 48 19.97
	1431.10	0.09	204.33	1430.92	-18.77	-18.90	3.44	0.01	445992.71	704545.30	N 32 13 30.03	W 103 48 19.97
	1525.70	0.10	218.29	1525.52	-18.90	-19.03	3.36	0.03	445992.58	704545.22	N 32 13 30.03	W 103 48 19.97
	1620.60	0.10	196.82	1620.42	-19.05	-19.17	3.28	0.04	445992.44	704545.14	N 32 13 30.03	W 103 48 19.97
	1715.00	0.12	208.69	1714.82	-19.22	-19.34	3.21	0.03	445992.27	704545.07	N 32 13 30.03	W 103 48 19.97
	1809.70	0.13	214.22	1809.52	-19.40	-19.52	3.10	0.02	445992.10	704544.96	N 32 13 30.02	W 103 48 19.97
	1904.40	0.10	207.54	1904.22	-19.56	-19.68	3.00	0.03	445991.93	704544.86	N 32 13 30.02	W 103 48 19.97
	1999.10	0.07	199.33	1998.92	-19.69	-19.81	2.95	0.03	445991.81	704544.81	N 32 13 30.02	W 103 48 19.97
	2093.70	0.11	216.25	2093.52	-19.82	-19.93	2.87	0.05	445991.68	704544.73	N 32 13 30.02	W 103 48 19.97
	2188.20	0.11	225.06	2188.02	-19.96	-20.07	2.76	0.02	445991.54	704544.62	N 32 13 30.02	W 103 48 19.98
	2282.60	0.11	231.76	2282.42	-20.09	-20.19	2.62	0.01	445991.42	704544.48	N 32 13 30.02	W 103 48 19.98
	2377.30	0.11	251.32	2377.12	-20.18	-20.28	2.46	0.04	445991.34	704544.32	N 32 13 30.02	W 103 48 19.98
	2472.20	0.11	249.73	2472.02	-20.25	-20.34	2.29	0.00	445991.27	704544.15	N 32 13 30.02	W 103 48 19.98
	2566.70	0.10	239.14	2566.52	-20.33	-20.41	2.14	0.02	445991.20	704544.00	N 32 13 30.02	W 103 48 19.98
	2661.80	0.10	250.97	2661.42	-20.40	-20.48	1.99	0.02	445991.13	704543.85	N 32 13 30.01	W 103 48 19.98
	2756.20	0.12	249.24	2756.02	-20.47	-20.54	1.82	0.02	445991.07	704543.68	N 32 13 30.01	W 103 48 19.99
	2850.80	0.10	209.15	2850.62	-20.58	-20.65	1.68	0.08	445990.96	704543.54	N 32 13 30.01	W 103 48 19.99
	2945.30	0.09	227.55	2945.12	-20.70	-20.77	1.59	0.03	445990.84	704543.45	N 32 13 30.01	W 103 48 19.99
	3039.70	0.06	223.91	3039.52	-20.79	-20.86	1.50	0.03	445990.75	704543.36	N 32 13 30.01	W 103 48 19.99
	3134.30	0.07	156.35	3134.12	-20.88	-20.95	1.49	0.08	445990.67	704543.35	N 32 13 30.01	W 103 48 19.99
	3228.70	0.10	120.61	3228.52	-20.97	-21.04	1.58	0.06	445990.57	704543.44	N 32 13 30.01	W 103 48 19.99
	3323.30	0.11	248.48	3323.12	-21.05	-21.12	1.57	0.20	445990.50	704543.43	N 32 13 30.01	W 103 48 19.99
	3417.80	0.23	207.08	3417.62	-21.26	-21.32	1.40	0.17	445990.29	704543.26	N 32 13 30.01	W 103 48 19.99
	3512.30	0.21	168.04	3512.12	-21.60	-21.66	1.35	0.16	445989.96	704543.21	N 32 13 30.00	W 103 48 19.99
	3606.80	0.09	125.53	3606.62	-21.81	-21.87	1.44	0.17	445989.74	704543.30	N 32 13 30.00	W 103 48 19.99
	3701.50	0.06	221.43	3701.32	-21.89	-21.95	1.47	0.12	445989.66	704543.33	N 32 13 30.00	W 103 48 19.99
	3796.30	0.13	235.08	3796.12	-21.99	-22.05	1.35	0.08	445989.56	704543.21	N 32 13 30.00	W 103 48 19.99
	3891.20	0.09	227.19	3891.02	-22.11	-22.16	1.21	0.04	445989.45	704543.07	N 32 13 30.00	W 103 48 19.99
	3985.90	0.10	205.54	3985.72	-22.23	-22.28	1.12	0.04	445989.33	704542.98	N 32 13 30.00	W 103 48 19.99
	4080.50	0.11	170.23	4080.32	-22.40	-22.45	1.10	0.07	445989.16	704542.96	N 32 13 30.00	W 103 48 20.00
	4175.00	0.17	347.77	4174.82	-22.35	-22.40	1.08	0.30	445989.21	704542.94	N 32 13 30.00	W 103 48 20.00
	4269.40	0.25	267.35	4269.22	-22.23	-22.27	0.85	0.29	445989.34	704542.71	N 32 13 30.00	W 103 48 20.00
	4364.10	0.21	234.38	4363.92	-22.35	-22.38	0.50	0.14	445989.23	704542.36	N 32 13 30.00	W 103 48 20.00
	4458.80	0.13	275.08	4458.62	-22.45	-22.48	0.25	0.15	445989.14	704542.11	N 32 13 30.00	W 103 48 20.00
	4553.40	0.10	36.00	4553.22	-22.38	-22.40	0.19	0.21	445989.21	704542.05	N 32 13 30.00	W 103 48 20.01
	4647.80	0.10	57.32	4647.62	-22.27	-22.29	0.31	0.04	445989.32	704542.17	N 32 13 30.00	W 103 48 20.00
	4742.40	0.12	37.70	4742.22	-22.14	-22.17	0.44	0.04	445989.45	704542.30	N 32 13 30.00	W 103 48 20.00
	4837.00	0.10	53.52	4836.82	-22.01	-22.04	0.57	0.04	445989.57	704542.43	N 32 13 30.00	W 103 48 20.00
	4931.60	0.09	73.05	4931.42	-21.93	-21.97	0.71	0.04	445989.64	704542.57	N 32 13 30.00	W 103 48 20.00
	5026.00	0.13	56.78	5025.82	-21.85	-21.89	0.87	0.05	445989.72	704542.73	N 32 13 30.00	W 103 48 20.00
	5120.40	0.10	58.59	5120.22	-21.74	-21.79	1.03	0.03	445989.83	704542.89	N 32 13 30.00	W 103 48 20.00
	5214.90	0.11	57.47	5214.72	-21.64	-21.69	1.17	0.01	445989.92	704543.03	N 32 13 30.00	W 103 48 19.99
	5309.40	0.15	49.40	5309.22	-21.51	-21.56	1.34	0.05	445990.05	704543.20	N 32 13 30.00	W 103 48 19.99
	5404.00	0.10	53.24	5403.82	-21.37	-21.43	1.50	0.05	445990.18	704543.36	N 32 13 30.01	W 103 48 19.99
	5498.50	0.10	63.03	5498.32	-21.28	-21.35	1.64	0.02	445990.26	704543.50	N 32 13 30.01	W 103 48 19.99
	5593.00	0.11	48.72	5592.82	-21.18	-21.25	1.79	0.03	445990.36	704543.65	N 32 13 30.01	W 103 48 19.99
	5687.50	0.12	85.12	5687.32	-21.10	-21.18	1.95	0.08	445990.43	704543.81	N 32 13 30.01	W 103 48 19.99
	5782.10	0.17	50.78	5781.91	-21.00	-21.09	2.16	0.10	445990.53	704544.02	N 32 13 30.01	W 103 48 19.98
	5876.80	0.10	46.43	5876.61	-20.85	-20.94	2.33	0.07	445990.67	704544.19	N 32 13 30.01	W 103 48 19.98
	5971.40	0.09	87.32	5971.21	-20.78	-20.88	2.46	0.07	445990.73	704544.32	N 32 13 30.01	W 103 48 19.98
	6065.90	0.28	194.58	6065.71	-21.00	-21.10	2.48	0.34	445990.51	704544.34	N 32 13 30.01	W 103 48 19.98
	6160.40	2.85	198.24	6160.17	-23.48	-23.55	1.68	2.72	445988.06	704543.54	N 32 13 29.98	W 103 48 19.99
	6254.80	5.57	198.20	6254.31	-30.14	-30.14	-0.48	2.88	445981.48	704541.38	N 32 13 29.92	W 103 48 20.01
	6349.30	8.55	193.42	6348.08	-41.43	-41.33	-3.54	3.21	445970.28	704538.32	N 32 13 29.81	W 103 48 20.05
	6443.90	10.91	185.69	6441.32	-57.25	-57.08	-6.06	2.85	445954.53	704535.80	N 32 13 29.65	W 103 48 20.08

Comments	MD (ft)	Incl (°)	Azlm Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ft)	Easting (ft)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	6538.50	12.67	179.20	6533.92	-76.55	-76.36	-6.81	2.33	445935.25	704535.05	N 32 13 29.46	W 103 48 20.09
	6633.10	15.02	174.64	6625.77	-99.08	-98.95	-5.52	2.74	445912.67	704536.34	N 32 13 29.24	W 103 48 20.08
	6727.80	16.21	170.28	6716.98	-124.19	-124.19	-2.14	1.76	445887.42	704539.72	N 32 13 28.99	W 103 48 20.04
	6822.70	15.35	164.76	6808.30	-149.17	-149.37	3.40	1.82	445862.25	704545.26	N 32 13 28.74	W 103 48 19.98
	6917.30	13.37	159.27	6899.95	-171.23	-171.68	10.56	2.54	445839.94	704552.42	N 32 13 28.52	W 103 48 19.89
	7011.90	11.58	143.07	6992.34	-188.72	-189.51	20.14	4.14	445822.11	704562.00	N 32 13 28.34	W 103 48 19.78
	7106.60	11.86	124.96	7085.10	-201.42	-202.69	33.83	3.88	445808.93	704575.69	N 32 13 28.21	W 103 48 19.62
	7201.30	13.05	109.18	7177.59	-209.89	-211.78	51.91	3.79	445799.84	704593.77	N 32 13 28.12	W 103 48 19.41
	7296.00	14.52	110.94	7269.56	-216.92	-219.54	73.10	1.61	445792.09	704614.96	N 32 13 28.04	W 103 48 19.17
	7390.70	16.23	117.02	7360.88	-226.40	-229.79	95.98	2.48	445781.83	704637.83	N 32 13 27.94	W 103 48 18.90
	7485.40	16.94	121.08	7451.64	-238.72	-242.93	119.59	1.43	445768.70	704661.44	N 32 13 27.81	W 103 48 18.63
	7580.10	17.66	124.64	7542.06	-253.20	-258.22	143.22	1.35	445753.41	704685.07	N 32 13 27.66	W 103 48 18.35
	7674.60	18.53	126.98	7631.88	-269.56	-275.40	167.01	1.20	445736.23	704708.86	N 32 13 27.48	W 103 48 18.08
	7769.20	18.83	128.47	7721.50	-287.27	-293.94	190.97	0.60	445717.69	704732.82	N 32 13 27.30	W 103 48 17.80
	7863.80	18.93	128.41	7811.01	-305.48	-312.97	214.95	0.11	445698.66	704756.80	N 32 13 27.11	W 103 48 17.52
	7958.30	18.42	128.46	7900.54	-323.47	-331.78	238.65	0.54	445679.85	704780.50	N 32 13 26.92	W 103 48 17.25
	8052.70	17.21	125.19	7990.41	-340.00	-349.10	261.74	1.66	445662.53	704803.59	N 32 13 26.75	W 103 48 16.98
	8147.20	15.31	118.61	8081.13	-353.26	-363.14	284.13	2.80	445648.50	704825.97	N 32 13 26.61	W 103 48 16.72
	8241.50	13.10	111.67	8172.55	-362.46	-373.04	304.99	2.95	445638.59	704846.83	N 32 13 26.51	W 103 48 16.48
	8336.20	10.78	104.59	8265.20	-368.02	-379.24	323.54	2.89	445632.39	704865.38	N 32 13 26.45	W 103 48 16.26
	8430.80	8.43	94.20	8358.48	-370.23	-381.98	339.02	3.08	445629.66	704880.86	N 32 13 26.42	W 103 48 16.08
	8525.40	7.27	79.26	8452.20	-369.19	-381.37	351.82	2.47	445630.26	704893.66	N 32 13 26.43	W 103 48 15.93
	8620.20	7.27	63.06	8546.25	-364.97	-377.53	363.06	2.16	445634.10	704904.90	N 32 13 26.46	W 103 48 15.80
	8714.70	6.76	47.60	8640.05	-358.19	-371.07	372.50	2.06	445640.56	704914.33	N 32 13 26.53	W 103 48 15.69
	8809.30	6.03	36.44	8734.06	-350.21	-363.32	379.56	1.52	445648.31	704921.40	N 32 13 26.60	W 103 48 15.61
	8903.80	6.39	28.58	8828.01	-341.41	-354.71	385.03	0.98	445656.92	704926.86	N 32 13 26.69	W 103 48 15.54
	8998.50	6.72	23.89	8922.09	-331.56	-345.02	389.79	0.66	445666.62	704931.63	N 32 13 26.78	W 103 48 15.49
	9093.10	7.10	16.78	9016.00	-320.78	-334.36	393.72	0.99	445677.27	704935.56	N 32 13 26.89	W 103 48 15.44
	9187.80	7.91	8.08	9109.89	-308.64	-322.30	396.33	1.47	445689.33	704938.16	N 32 13 27.01	W 103 48 15.41
	9282.40	8.69	2.36	9203.50	-295.02	-308.72	397.53	1.20	445702.91	704939.37	N 32 13 27.14	W 103 48 15.40
	9376.80	9.84	0.85	9296.67	-279.83	-293.53	397.95	1.25	445718.10	704939.78	N 32 13 27.29	W 103 48 15.39
	9471.20	9.75	359.94	9389.70	-263.77	-277.47	398.06	0.19	445734.16	704939.89	N 32 13 27.45	W 103 48 15.39
	9565.80	8.75	354.23	9483.07	-248.64	-262.30	397.33	1.43	445749.33	704939.16	N 32 13 27.60	W 103 48 15.40
	9660.50	13.94	359.56	9575.89	-230.09	-243.71	396.52	5.59	445767.91	704938.35	N 32 13 27.79	W 103 48 15.40
	9755.10	22.75	353.98	9665.60	-200.53	-214.07	394.51	9.49	445797.56	704936.34	N 32 13 28.08	W 103 48 15.43
	9849.80	31.15	344.13	9749.98	-158.98	-172.20	385.87	10.02	445839.42	704927.70	N 32 13 28.49	W 103 48 15.52
	9944.50	41.29	344.00	9826.28	-105.80	-118.47	370.52	10.71	445893.15	704912.35	N 32 13 29.03	W 103 48 15.70
	10039.10	50.46	350.24	9892.10	-40.21	-52.34	355.69	10.78	445959.27	704897.53	N 32 13 29.68	W 103 48 15.87
	10133.60	65.10	357.70	9940.48	38.71	26.91	347.74	16.85	446038.51	704889.51	N 32 13 30.47	W 103 48 15.96
	10228.00	74.92	358.74	9974.64	127.13	115.47	345.02	10.45	446127.07	704886.85	N 32 13 31.34	W 103 48 15.98
	10320.00	82.48	357.53	9992.65	217.08	205.57	342.07	8.32	446217.16	704883.91	N 32 13 32.23	W 103 48 16.01
	10415.00	89.76	355.93	9999.07	311.40	300.13	336.66	7.84	446311.72	704878.50	N 32 13 33.17	W 103 48 16.07
	10449.00	89.97	355.24	9999.15	345.19	334.03	334.04	2.12	446345.62	704875.88	N 32 13 33.51	W 103 48 16.10
	10531.00	90.31	352.35	9998.95	426.35	415.54	325.18	3.55	446427.12	704867.02	N 32 13 34.31	W 103 48 16.20
	10626.00	90.17	351.74	9998.56	519.94	509.62	312.03	0.66	446521.20	704853.87	N 32 13 35.25	W 103 48 16.35
	10720.00	90.00	354.90	9998.42	612.86	602.97	301.10	3.37	446614.54	704842.94	N 32 13 36.17	W 103 48 16.47
	10815.00	90.03	356.73	9998.39	707.31	697.72	294.17	1.93	446709.28	704836.01	N 32 13 37.11	W 103 48 16.54
	10910.00	90.10	356.63	9998.28	801.91	792.56	288.67	0.13	446804.12	704830.51	N 32 13 38.05	W 103 48 16.60
	11004.00	90.24	358.44	9998.01	895.63	886.46	284.62	1.93	446898.02	704826.47	N 32 13 38.98	W 103 48 16.64
	11099.00	90.24	357.97	9997.61	990.43	981.42	281.65	0.49	446992.97	704823.49	N 32 13 39.91	W 103 48 16.67
	11193.00	90.17	358.48	9997.27	1084.23	1075.37	278.74	0.55	447086.91	704820.58	N 32 13 40.84	W 103 48 16.70
	11288.00	90.21	0.42	9996.96	1179.13	1170.36	277.83	2.04	447181.90	704819.67	N 32 13 41.78	W 103 48 16.71
	11383.00	90.31	4.96	9996.52	1274.10	1265.23	282.28	4.78	447276.76	704824.12	N 32 13 42.72	W 103 48 16.65
	11477.00	90.38	8.26	9995.96	1367.77	1358.59	293.10	3.51	447370.12	704834.94	N 32 13 43.65	W 103 48 16.52
	11572.00	90.41	6.97	9995.30	1462.30	1452.75	305.69	1.36	447464.27	704847.53	N 32 13 44.58	W 103 48 16.38
	11667.00	90.38	5.19	9994.65	1557.05	1547.21	315.75	1.87	447558.72	704857.59	N 32 13 45.51	W 103 48 16.24
	11761.00	90.45	5.41	9993.97	1650.89	1640.80	324.43	0.25	447652.31	704866.27	N 32 13 46.44	W 103 48 16.14
	11856.00	89.79	4.85	9993.77	1745.74	1735.42	332.93	0.91	447746.92	704874.77	N 32 13 47.37	W 103 48 16.03
	11951.00	89.79	4.83	9994.12	1840.62	1830.08	340.94	0.02	447841.58	704882.78	N 32 13 48.31	W 103 48 15.93
	12045.00	89.79	3.54	9994.46	1934.54	1923.83	347.80	1.37	447935.32	704889.64	N 32 13 49.24	W 103 48 15.85
	12140.00	89.86	3.15	9994.75	2029.51	2018.67	353.35	0.42	448030.15	704895.18	N 32 13 50.18	W 103 48 15.78
	12329.00	89.79	2.40	9995.33	2218.49	2207.44	362.50	0.40	448218.92	704904.33	N 32 13 52.04	W 103 48 15.66
	12424.00	90.03	1.16	9995.48	2313.49	2302.40	365.45	1.33	448313.86	704907.28	N 32 13 52.98	W 103 48 15.62
	12613.00	89.93	0.86	9995.54	2502.46	2491.37	368.78	0.17	448502.82	704910.62	N 32 13 54.85	W 103 48 15.57
	12707.00	89.03	0.52	9995.58	2596.44	2585.36	369.91	0.38	448596.81	704911.75	N 32 13 55.78	W 103 48 15.55
	12897.00	90.03	0.71	9995.64	2786.39	2775.35	371.95	0.11	448786.78	704913.19	N 32 13 57.66	W 103 48 15.52
	13086.00	90.00	1.65	9995.76	2975.37	2964.31	375.84	0.50	448975.73	704917.68	N 32 13 59.53	W 103 48 15.46
	13180.00	90.00	359.60	9995.76	3069.34	3058.30	376.87	2.18	449069.71	704918.70	N 32 14 0.46	W 103 48 15.44
	13369.00	89.62	358.63	9996.39	3258.11	3247.27	373.95	0.55	449258.68	704915.79	N 32 14 2.33	W 103 48 15.47
	13558.00	89.52	358.47	9997.80	3446.77	3436.20	369.17	0.10	449447.60	704911.00	N 32 14 4.20	W 103 48 15.51
	13652.00	89.93	358.76	9998.26	3540.61	3530.17	366.89	0.53	449541.56	704908.73	N 32 14 5.13	W 103 48 15.53
	13752.00	90.79	359.40	9997.63	3640.48	3630.16	365.29	1.07	449641.54	704907.13	N 32 14 6.12	W 103 48 15.55
	13847.00	91.55	359.62	9995.69	3735.37	3725.13	364.48	0.83	449736.51	704906.31	N 32 14 7.06	W 103 48 15.55
	13941.00	92.96	0.36	9991.99	3829.24	3819.06	364.46	1.69	449830.43	704906.30	N 32 14 7.99	W 103 48 15.55
	14035.00	92.06	359.14	9987.87	3923.08	3912.96	364.05	1.61	449924.33	704905.89	N 32 14 8.92	W 103 48 15.54
	14224.00	90.03	355.28	9984.42	4111.36	4101.66	354.85	2.31	450113.02	704896.69	N 32 14 10.79	W 103 48 15.64
	14318.00	90.00	357.38	9								

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 ° ' ")
	17905.00	90.07	358.97	10028.25	7788.11	7780.90	344.36	0.32	453792.03	704886.20	N 32 14 47.19	W 103 48 15.55
	18000.00	90.41	358.93	10027.85	7882.98	7875.89	342.62	0.36	453887.01	704884.46	N 32 14 48.13	W 103 48 15.57
	18189.00	89.72	358.56	10027.64	8071.69	8064.84	338.48	0.41	454075.95	704880.32	N 32 14 50.00	W 103 48 15.60
	18378.00	90.45	358.86	10027.36	8260.38	8253.79	334.23	0.42	454264.89	704876.06	N 32 14 51.87	W 103 48 15.64
	18473.00	90.41	359.30	10026.64	8355.26	8348.78	332.70	0.47	454359.87	704874.54	N 32 14 52.81	W 103 48 15.66
	18662.00	91.17	0.53	10024.04	8544.12	8537.75	332.42	0.76	454548.83	704874.26	N 32 14 54.68	W 103 48 15.65
	18757.00	91.20	0.95	10022.07	8639.08	8632.72	333.65	0.44	454643.80	704875.49	N 32 14 55.62	W 103 48 15.63
	18851.00	90.89	0.90	10020.36	8733.05	8726.70	335.16	0.33	454737.76	704877.00	N 32 14 56.55	W 103 48 15.60
	18946.00	91.13	0.74	10018.68	8828.01	8821.67	336.52	0.30	454832.73	704878.36	N 32 14 57.49	W 103 48 15.58
	19040.00	91.03	0.95	10016.91	8921.98	8915.65	337.91	0.25	454926.70	704879.75	N 32 14 58.42	W 103 48 15.56
	19135.00	90.65	0.21	10015.52	9016.94	9010.63	338.87	0.88	455021.68	704880.71	N 32 14 59.36	W 103 48 15.55
	19229.00	91.00	0.69	10014.16	9110.90	9104.62	339.61	0.63	455115.66	704881.45	N 32 15 0.29	W 103 48 15.53
	19324.00	90.82	0.48	10012.66	9205.86	9199.60	340.58	0.29	455210.63	704882.42	N 32 15 1.23	W 103 48 15.51
	19417.00	91.31	1.44	10010.93	9298.83	9292.57	342.14	1.16	455303.60	704883.97	N 32 15 2.15	W 103 48 15.49
	19512.00	91.82	2.80	10008.33	9393.79	9387.47	345.65	1.53	455398.49	704887.49	N 32 15 3.09	W 103 48 15.44
	19606.00	91.24	1.61	10005.82	9487.75	9481.36	349.26	1.41	455492.38	704891.10	N 32 15 4.02	W 103 48 15.40
	19700.00	92.10	2.02	10003.08	9581.71	9575.27	352.24	1.01	455586.28	704894.08	N 32 15 4.95	W 103 48 15.36
	19795.00	90.96	359.64	10000.55	9676.65	9670.22	353.61	2.78	455681.23	704895.45	N 32 15 5.89	W 103 48 15.34
	19889.00	91.20	357.19	9998.77	9770.45	9764.16	351.02	2.62	455775.16	704892.85	N 32 15 6.82	W 103 48 15.36
	20078.00	91.13	357.06	9994.93	9958.74	9952.88	341.54	0.08	455963.87	704883.38	N 32 15 8.68	W 103 48 15.46
	20172.00	91.17	357.30	9993.05	10052.40	10046.75	336.91	0.26	456057.73	704878.75	N 32 15 9.61	W 103 48 15.51
	20266.00	91.07	357.65	9991.21	10146.09	10140.64	332.77	0.39	456151.62	704874.61	N 32 15 10.54	W 103 48 15.55
Last MWD Survey	20296.00	91.10	357.69	9990.64	10176.00	10170.61	331.55	0.17	456181.59	704873.39	N 32 15 10.84	W 103 48 15.56
Proj. to bit	20335.00	91.10	357.69	9989.89	10214.89	10209.57	329.98	0.00	456220.54	704871.82	N 32 15 11.23	W 103 48 15.58

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 2H Gyro+MWD 0-20.335' 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 2H Gyro+MWD 0-20.335' MD
	1	26.500	10228.000	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 2H
	1	10228.000	20335.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Sunrise MDP1 8-5 Federal Com 2H