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

30-015-45226

March 5, 2019

OXY USA INC.

NM OIL CONSERVATION
ARTESIA DISTRICT
MAR 06 2019
RECEIVED

Re:

34, 23S, 31E, Eddy NM
32.26709 103.77088

CLIENT: OXY USA INC.
WELL: Platinum MDP1 34-3 Federal Com 1H
FIELD: Cotton Draw-Bone Spring

RIG: H&P 657
COUNTY: Eddy
API NO: 30-015-45226
JOB NO: 18MLD4265

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.

Name & Title of Surveyor	Drainhole Number	Surveyed Depths		Dates Performed		Type of Survey
Andrea Lee FE	Platinum MDP1 34-3 Federal Com 1H Original Hole	700.00 Ft 20250.00 Ft	to	December 8, 2018 January 6, 2019	to	TelePacer Third Party Corrected

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

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:
34, 23S, 31E, Eddy NM
32.26709 103.77088

I, Andrea Lee certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of December 08, 2018 through January 06, 2019, conduct or supervise the taking of the TelePacer & Third Party Corrected surveys from a depth of 700.00 feet to a depth of 20250.00 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 Platinum MDP1 34-3 Federal Com 1H Well (Original Hole) API No. 30-015-45226 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 **Signed by Jody Bare on behalf of Andrea Lee**
Andrea Lee
FE

Subscribed and Sworn to before me this 5th day of March (month) 2019 (yr)

My Commission expires:

2-16-2022

D. Adams
Notary Public (signature)

Adams County Colorado
(County State)

DONNA ADAMS
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20184007893
MY COMMISSION EXPIRES FEBRUARY 16, 2022

Schlumberger

Oxy Platinum MDP1 34-3 Federal Com 1H Gyro+MWD 0 to 20303ft MD
Survey Geodetic Report
(Def Survey)

Report Date:	January 07, 2019 - 12:23 PM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Oxy	**Vertical Section Azimuth:**	183.049 ° (Grid North)
Field:	NM Eddy County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Oxy Platinum MDP1 34-3 Federal Com 1H / Oxy Platinum MDP1 34-3 Federal Com 1H	**TVD Reference Datum:**	RKB - 26.5'
Well:	Oxy Platinum MDP1 34-3 Federal Com 1H	**TVD Reference Elevation:**	3449.400 ft above MSL
Borehole:	Original Borehole	**Seabed / Ground Elevation:**	3422.900 ft above MSL
UWI / API#:	H&P 657 / 30-015-45226	**Magnetic Declination:**	6.839 °
Survey Name:	Oxy Platinum MDP1 34-3 Federal Com 1H Gyro+MWD 0 to 20303ft MD	**Total Gravity Field Strength:**	998.4473mgn (9.80665 Based)
Survey Date:	October 16, 2018	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	305.179 ° / 11132.702 ft / 6.838 / 1.110	**Total Magnetic Field Strength:**	48019.700 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.994 °
Location Lat / Long:	N 32° 16' 1.50403", W 103° 46' 15.18284"	**Declination Date:**	December 26, 2018
Location Grid N/E Y/X:	N 461353.930 ftUS, E 715183.950 ftUS	**Magnetic Declination Model:**	IFR1
CRS Grid Convergence Angle:	0.3003 °	**North Reference:**	Grid North
Grid Scale Factor:	0.9999437	**Grid Convergence Used:**	0.3003 °
Version / Patch:	2.10.753.0	**Total Corr Mag North->Grid North:**	6.5387 °
		Local Coord Referenced To:	Structure Reference Point

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 ° ' ")
WRP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	461353.93	715183.95	N 32 16 1.50	W 103 46 15.18
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	461353.93	715183.95	N 32 16 1.50	W 103 46 15.18
	92.65	0.77	317.47	92.65	-0.31	0.33	-0.30	1.16	461354.26	715183.65	N 32 16 1.51	W 103 46 15.19
	180.68	0.76	301.21	180.67	-1.00	1.07	-1.20	0.25	461355.00	715182.75	N 32 16 1.51	W 103 46 15.20
	265.33	0.78	304.85	265.31	-1.57	1.69	-2.15	0.06	461355.62	715181.80	N 32 16 1.52	W 103 46 15.21
	359.85	1.23	287.72	359.82	-2.17	2.36	-3.65	0.57	461356.29	715180.30	N 32 16 1.53	W 103 46 15.23
	454.42	1.11	287.99	454.37	-2.66	2.95	-5.49	0.13	461356.88	715178.47	N 32 16 1.53	W 103 46 15.25
Last Gyro	548.50	1.43	277.31	548.43	-2.98	3.39	-7.52	0.42	461357.31	715176.43	N 32 16 1.54	W 103 46 15.27
	700.00	0.35	221.05	699.91	-2.76	3.28	-9.70	0.84	461357.21	715174.26	N 32 16 1.54	W 103 46 15.30
	792.00	0.35	194.64	791.90	-2.26	2.79	-8.95	0.17	461356.72	715174.00	N 32 16 1.53	W 103 46 15.30
	974.00	0.32	169.04	973.90	-1.22	1.76	-9.99	0.08	461355.69	715173.96	N 32 16 1.52	W 103 46 15.30
	1160.00	0.30	177.40	1159.90	-0.23	0.76	-9.87	0.03	461354.69	715174.08	N 32 16 1.51	W 103 46 15.30
	1250.00	0.35	175.03	1249.90	0.27	0.25	-9.84	0.06	461354.18	715174.11	N 32 16 1.51	W 103 46 15.30
	1341.00	0.28	154.98	1340.90	0.74	-0.23	-9.72	0.14	461353.70	715174.23	N 32 16 1.50	W 103 46 15.30
	1432.00	0.24	128.66	1431.90	1.05	-0.55	-9.48	0.14	461353.38	715174.47	N 32 16 1.50	W 103 46 15.29
	1526.00	0.42	186.05	1525.89	1.51	-1.01	-9.36	0.38	461352.92	715174.59	N 32 16 1.49	W 103 46 15.29
	1621.00	0.36	200.45	1620.89	2.14	-1.64	-9.50	0.12	461352.29	715174.45	N 32 16 1.49	W 103 46 15.29
	1813.00	0.43	197.09	1812.89	3.42	-2.89	-9.92	0.04	461351.04	715174.03	N 32 16 1.48	W 103 46 15.30
	1908.00	0.35	169.93	1907.89	4.05	-3.52	-9.98	0.21	461350.41	715173.97	N 32 16 1.47	W 103 46 15.30
	2003.00	0.36	151.84	2002.88	4.58	-4.07	-9.79	0.12	461349.86	715174.16	N 32 16 1.46	W 103 46 15.30
	2097.00	0.36	166.47	2096.88	5.12	-4.62	-9.58	0.10	461349.31	715174.37	N 32 16 1.46	W 103 46 15.29
	2192.00	0.30	140.44	2191.88	5.59	-5.10	-9.35	0.17	461348.83	715174.60	N 32 16 1.45	W 103 46 15.29
	2287.00	0.35	180.14	2286.88	6.06	-5.58	-9.19	0.24	461348.35	715174.76	N 32 16 1.45	W 103 46 15.29
	2382.00	0.42	164.40	2381.88	6.68	-6.21	-9.10	0.13	461347.72	715174.85	N 32 16 1.44	W 103 46 15.29
	2477.00	0.38	151.05	2476.87	7.28	-6.82	-8.85	0.11	461347.11	715175.10	N 32 16 1.44	W 103 46 15.29
	2571.00	0.45	166.96	2570.87	7.90	-7.45	-8.62	0.14	461346.48	715175.33	N 32 16 1.43	W 103 46 15.28
	2761.00	0.43	142.16	2760.87	9.15	-8.74	-8.01	0.10	461345.19	715175.94	N 32 16 1.42	W 103 46 15.28
	2855.00	0.33	174.24	2854.86	9.69	-9.29	-7.77	0.25	461344.64	715176.18	N 32 16 1.41	W 103 46 15.27
	2950.00	0.35	182.16	2949.86	10.25	-9.85	-7.75	0.05	461344.08	715176.20	N 32 16 1.41	W 103 46 15.27
	3045.00	0.52	158.11	3044.86	10.93	-10.54	-7.60	0.26	461343.39	715176.35	N 32 16 1.40	W 103 46 15.27
	3140.00	0.47	149.24	3139.86	11.64	-11.27	-7.24	0.10	461342.66	715176.71	N 32 16 1.39	W 103 46 15.27
	3234.00	0.45	115.54	3233.85	12.10	-11.76	-6.71	0.28	461342.17	715177.24	N 32 16 1.39	W 103 46 15.26
	3329.00	0.54	87.61	3328.85	12.21	-11.91	-5.93	0.27	461342.02	715178.02	N 32 16 1.39	W 103 46 15.25
	3424.00	0.57	58.03	3423.85	11.89	-11.64	-5.08	0.30	461342.29	715178.87	N 32 16 1.39	W 103 46 15.24
	3519.00	0.40	61.73	3518.84	11.45	-11.23	-4.39	0.18	461342.70	715179.56	N 32 16 1.39	W 103 46 15.23
	3613.00	0.36	85.68	3612.84	11.24	-11.05	-3.80	0.17	461342.88	715180.15	N 32 16 1.39	W 103 46 15.23
	3708.00	0.14	94.06	3707.84	11.20	-11.04	-3.39	0.23	461342.89	715180.56	N 32 16 1.39	W 103 46 15.22
	3803.00	0.34	110.45	3802.84	11.29	-11.15	-3.01	0.22	461342.79	715180.94	N 32 16 1.39	W 103 46 15.22
	3898.00	0.38	92.04	3897.84	11.37	-11.25	-2.43	0.13	461342.68	715181.52	N 32 16 1.39	W 103 46 15.21
	3993.00	0.35	111.41	3992.83	11.45	-11.37	-1.85	0.13	461342.56	715182.10	N 32 16 1.39	W 103 46 15.21
	4089.00	0.27	58.36	4088.83	11.42	-11.36	-1.38	0.30	461342.57	715182.57	N 32 16 1.39	W 103 46 15.20
	4184.00	0.34	24.38	4183.83	11.03	-10.99	-1.08	0.20	461342.94	715182.87	N 32 16 1.40	W 103 46 15.20
	4279.00	0.23	351.86	4278.83	10.58	-10.54	-0.99	0.20	461343.39	715182.96	N 32 16 1.40	W 103 46 15.19
	4319.00	0.27	352.11	4318.83	10.41	-10.37	-1.01	0.10	461343.56	715182.94	N 32 16 1.40	W 103 46 15.20
	4516.00	0.17	349.06	4515.83	9.67	-9.62	-1.13	0.05	461344.31	715182.82	N 32 16 1.41	W 103 46 15.20
	4536.00	0.10	12.18	4535.83	9.62	-9.58	-1.13	0.44	461344.36	715182.82	N 32 16 1.41	W 103 46 15.20
	4630.00	0.08	180.81	4629.83	9.61	-9.56	-1.11	0.19	461344.37	715182.84	N 32 16 1.41	W 103 46 15.20
	4820.00	0.10	353.48	4819.83	9.58	-9.53	-1.14	0.09	461344.40	715182.81	N 32 16 1.41	W 103 46 15.20
	4915.00	0.06	300.35	4914.83	9.47	-9.42	-1.19	0.08	461344.51	715182.76	N 32 16 1.41	W 103 46 15.20
	5009.00	0.09	115.41	5008.83	9.48	-9.43	-1.16	0.16	461344.50	715182.79	N 32 16 1.41	W 103 46 15.20
	5104.00	0.12	16.56	5103.83	9.41	-9.36	-1.07	0.17	461344.57	715182.88	N 32 16 1.41	W 103 46 15.20
	5198.00	0.06	187.92	5197.83	9.36	-9.32	-1.05	0.19	461344.61	715182.90	N 32 16 1.41	W 103 46 15.20
	5293.00	0.10	320.46	5292.83	9.35	-9.30	-1.11	0.16	461344.63	715182.84	N 32 16 1.41	W 103 46 15.20
	5388.00	0.10	311.39	5387.83	9.24	-9.19	-1.22	0.02	461344.75	715182.73	N 32 16 1.41	W 103 46 15.20
	5483.00	0.12	259.88	5482.83	9.21	-9.15	-1.38	0.10	461344.78	715182.57	N 32 16 1.41	W 103 46 15.20
	5578.00	0.08	213.71	5577.83	9.29	-9.22	-1.52	0.09	461344.71	715182.43	N 32 16 1.41	W 103 46 15.20
	5672.00	0.08	183.49	5671.83	9.41	-9.34	-1.56	0.04	461344.59	715182.39	N 32 16 1.41	W 103 46 15.20
	5767.00	0.09	42.94	5766.83	9.42	-9.35	-1.51	0.17	461344.58	715182.44	N 32 16 1.41	W 103 46 15.20
	5861.00	1.14	263.33	5860.82	9.52	-9.41	-2.39	1.29	461344.52	715181.56	N 32 16 1.41	W 103 46 15.21
	5956.00	4.27	265.81	5955.70	10.13	-9.78	-6.86	3.30	461344.16	715177.10	N 32 16 1.41	W 103 46 15.26
	6050.00	7.09	265.46	6049.23	11.33	-10.49	-16.13	3.00	461343.44	715167.82	N 32 16 1.40	W 103 46 15.37
	6145.00	9.02	269.44	6143.29	12.58	-11.03	-29.42	2.11	461342.90	715154.53	N 32 16 1.40	W 103 46 15.53
	6239.00	9.45	282.30	6236.08	11.80	-9.45	-44.33	2.24	461344.48	715139.62	N 32 16 1.41	W 103 46 15.70
	6334.00	10.14	291.82	6329.70	7.85	-4.68	-59.72	1.85	461349.25	715124.24	N 32 16 1.46	W 103 46 15.88
	6429.00	10.39	301.03	6423.19	1.14	2.84	-74.82	1.75	461356.77	715109.13	N 32 16 1.54	W 103 46 16.05
	6523.00	10.52	306.60	6515.63	-7.58	12.33	-88.97	1.08	461366.26	715094.98	N 32 16 1.63	W 103 46 16.22
	6618.00	10.55	311.86	6609.03	-17.82	23.30	-102.41	1.01	461377.23	715081.54	N 32 16 1.74	W 103 46 16.37
	6713.00	10.50	316.35	6702.44	-29.21	35.37	-114.87	0.86	461389.30	715069.09	N 32 16 1.86	W 103 46 16.52
	6808.00	10.66	321.95	6795.82	-41.77	48.55	-126.26	1.09	461402.48	715057.70	N 32 16 1.99	W 103 46 16.65
	6903.00	10.04	326.05	6889.28	-55.00	62.34	-136.30	1.01	461416.27	715047.66	N 32 16 2.13	W 103 46 16.77
	6998.00	9.10	329.20	6982.96	-67.85	75.66	-144.77	1.13	461429.59	715039.19	N 32 16 2.26	W 103 46 16.86
	7093.00	10.32	332.70	7076.59	-81.44	89.68	-152.52	1.43	461443.60	715031.44	N 32 16 2.40	W 103 46 16.95
	7189.00	11.18	332.10	7170.91	-96.84	105.54	-160.82	0.90	461459.47	715023.14	N 32 16 2.56	W 103 46 17.05
	7284.00	13.27	330.85	7263.75	-113.97	123.21	-170.44	2.22	461477.13	715013.52	N 32 16 2.73	W 103 46 17.16
	7379.00	15.50	330.88	7355.77	-133.94	143.82	-181.93	2.35	461497.74	715002.03	N 32 16 2.94	W 103 46 17.29
	7474.00	15.91	330.31	7447.22	-155.64	166.22	-194.56	0.46	461520.14	714989.40	N 32 16 3.16	W 103 46 17.44
	7569.00	16.48	328.83	7538.45	-177.73	189.06	-207.98	0.74	461542.98	714975.98	N 32 16 3.39	W 103 46 17.59

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 ° ' ")
	7663.00	15.84	324.82	7628.74	-198.84	210.96	-222.27	1.37	461564.88	714961.69	N 32 16 3.60	W 103 46 17.76
	7758.00	15.13	320.43	7720.29	-218.15	231.11	-237.64	1.44	461585.03	714946.32	N 32 16 3.80	W 103 46 17.94
	7852.00	15.06	315.82	7811.05	-235.47	249.33	-253.97	1.28	461603.24	714930.00	N 32 16 3.98	W 103 46 18.13
	7946.00	14.52	310.54	7901.94	-250.93	265.75	-271.43	1.54	461619.66	714912.53	N 32 16 4.15	W 103 46 18.33
	8041.00	13.68	305.43	7994.08	-264.20	280.00	-289.64	1.58	461633.91	714894.33	N 32 16 4.29	W 103 46 18.54
	8230.00	10.25	295.68	8178.97	-282.64	300.25	-323.02	2.10	461654.16	714860.95	N 32 16 4.49	W 103 46 18.93
	8325.00	7.65	285.82	8272.81	-287.30	305.64	-336.72	3.17	461659.55	714847.25	N 32 16 4.55	W 103 46 19.09
	8420.00	6.22	283.85	8367.11	-289.66	308.59	-347.80	1.53	461662.51	714836.17	N 32 16 4.58	W 103 46 19.21
	8514.00	5.51	272.30	8460.62	-290.55	310.00	-357.26	1.46	461663.91	714826.71	N 32 16 4.59	W 103 46 19.32
	8609.00	5.85	269.95	8555.15	-290.23	310.17	-366.66	0.43	461664.09	714817.31	N 32 16 4.59	W 103 46 19.43
	8704.00	6.18	276.56	8649.63	-290.28	310.75	-376.58	0.81	461664.67	714807.39	N 32 16 4.60	W 103 46 19.55
	8893.00	6.89	271.09	8837.40	-290.52	312.13	-398.02	0.50	461666.04	714785.95	N 32 16 4.61	W 103 46 19.80
	8988.00	6.31	272.42	8931.77	-290.27	312.46	-408.93	0.63	461666.37	714775.04	N 32 16 4.62	W 103 46 19.93
	9083.00	6.66	273.02	9026.17	-290.21	312.97	-419.65	0.38	461666.88	714764.32	N 32 16 4.62	W 103 46 20.05
	9178.00	7.14	268.39	9120.48	-289.72	313.10	-431.05	0.77	461667.01	714752.92	N 32 16 4.62	W 103 46 20.18
	9272.00	7.84	257.04	9213.68	-287.48	311.49	-443.14	1.74	461665.41	714740.83	N 32 16 4.61	W 103 46 20.32
	9367.00	10.07	249.84	9307.52	-282.42	307.18	-457.25	2.62	461661.09	714726.72	N 32 16 4.57	W 103 46 20.49
KOP Actual	9456.00	10.98	245.50	9395.02	-275.43	300.98	-472.27	1.36	461654.89	714711.71	N 32 16 4.51	W 103 46 20.66
100'FNL Crossing 2nd Bone Spring Intersection	*9500.00*	*12.19*	*245.72*	*9438.13*	*-271.36*	*297.33*	*-480.32*	*2.74*	*461651.25*	*714703.66*	*N 32 16 4.47*	*W 103 46 20.76*
	9524.45	*12.86*	*245.83*	*9462.00*	*-268.94*	*295.16*	*-485.15*	*2.74*	*461649.07*	*714698.83*	*N 32 16 4.45*	*W 103 46 20.81*
	9588.00	14.60	246.06	9523.73	-262.07	289.01	-498.93	2.74	461642.93	714685.05	N 32 16 4.39	W 103 46 20.98
	9680.00	19.40	219.39	9611.81	-244.46	272.46	-519.26	9.82	461626.38	714664.72	N 32 16 4.23	W 103 46 21.21
	9775.00	23.29	194.55	9700.46	-213.27	242.02	-534.03	10.27	461595.94	714649.95	N 32 16 3.93	W 103 46 21.39
	9870.00	31.32	188.54	9784.82	-170.21	199.35	-542.43	8.93	461553.26	714641.55	N 32 16 3.50	W 103 46 21.49
	9965.00	39.64	186.01	9862.12	-115.27	144.69	-549.28	8.89	461498.61	714634.70	N 32 16 2.96	W 103 46 21.57
	10059.00	51.23	182.49	9927.98	-48.45	78.02	-554.03	12.61	461431.95	714629.95	N 32 16 2.30	W 103 46 21.63
	10154.00	63.82	176.96	9978.91	31.34	-1.91	-553.37	14.13	461352.02	714630.61	N 32 16 1.51	W 103 46 21.63
	10248.00	78.12	178.03	10009.48	119.56	-90.45	-549.54	15.25	461263.48	714634.45	N 32 16 0.64	W 103 46 21.59
	10343.00	90.96	180.25	10018.50	213.70	-184.81	-548.14	13.71	461169.13	714635.84	N 32 15 59.70	W 103 46 21.58
	10432.00	91.07	179.04	10016.93	302.53	-273.79	-547.59	1.36	461080.15	714636.39	N 32 15 58.82	W 103 46 21.58
	10526.00	90.38	179.59	10015.74	396.32	-367.78	-546.46	0.94	460986.17	714637.52	N 32 15 57.89	W 103 46 21.57
	10619.00	92.10	180.26	10013.73	489.16	-460.75	-546.34	1.98	460893.21	714637.64	N 32 15 56.97	W 103 46 21.57
	10713.00	90.24	179.66	10011.81	583.00	-554.73	-546.28	2.08	460799.24	714637.71	N 32 15 56.04	W 103 46 21.58
	10808.00	87.42	179.07	10013.75	677.77	-649.69	-545.22	3.03	460704.28	714638.76	N 32 15 55.10	W 103 46 21.57
	10903.00	91.34	180.77	10014.77	772.60	-744.66	-545.09	4.50	460609.31	714638.89	N 32 15 54.16	W 103 46 21.58
	10997.00	88.35	180.64	10015.03	866.51	-838.65	-546.25	3.18	460515.33	714637.73	N 32 15 53.23	W 103 46 21.60
	11092.00	87.25	181.50	10018.67	961.38	-933.56	-548.02	1.47	460420.43	714635.96	N 32 15 52.29	W 103 46 21.62
	11187.00	89.04	181.18	10021.75	1056.29	-1028.48	-550.24	1.91	460325.51	714633.74	N 32 15 51.36	W 103 46 21.65
	11281.00	91.27	182.11	10021.50	1150.25	-1122.43	-552.94	2.57	460231.56	714631.04	N 32 15 50.43	W 103 46 21.69
	11376.00	90.52	180.02	10020.01	1245.18	-1217.40	-554.70	2.34	460136.60	714629.28	N 32 15 49.49	W 103 46 21.72
	11471.00	90.48	181.24	10019.18	1340.09	-1312.39	-555.75	1.28	460041.62	714628.23	N 32 15 48.55	W 103 46 21.73
	11566.00	89.97	181.80	10018.81	1435.05	-1407.35	-558.27	0.80	459946.66	714625.71	N 32 15 47.61	W 103 46 21.77
	11660.00	89.76	181.63	10019.03	1529.03	-1501.31	-561.08	0.29	459852.71	714622.90	N 32 15 46.68	W 103 46 21.81
	11754.00	90.96	181.18	10018.44	1622.98	-1595.28	-563.39	1.36	459758.75	714620.60	N 32 15 45.75	W 103 46 21.84
	11849.00	91.34	181.26	10016.53	1717.92	-1690.24	-565.41	0.41	459663.79	714618.57	N 32 15 44.81	W 103 46 21.87
	11944.00	91.34	180.93	10014.31	1812.84	-1785.19	-567.22	0.35	459568.84	714616.76	N 32 15 43.87	W 103 46 21.90
	12038.00	91.34	180.35	10012.11	1906.73	-1879.16	-568.27	0.62	459474.88	714615.71	N 32 15 42.94	W 103 46 21.92
	12133.00	92.93	181.02	10008.57	2001.58	-1974.08	-569.41	1.82	459379.96	714614.58	N 32 15 42.00	W 103 46 21.93
	12227.00	90.72	180.24	10005.58	2095.44	-2068.02	-570.44	2.49	459286.03	714613.54	N 32 15 41.07	W 103 46 21.95
	12322.00	91.03	181.57	10004.13	2190.36	-2163.00	-571.94	1.44	459191.06	714612.04	N 32 15 40.13	W 103 46 21.98
	12416.00	90.79	181.10	10002.64	2284.30	-2256.96	-574.13	0.56	459097.10	714609.85	N 32 15 39.20	W 103 46 22.01
	12511.00	90.62	181.41	10001.47	2379.25	-2351.93	-576.21	0.37	459002.14	714607.77	N 32 15 38.26	W 103 46 22.04
	12606.00	90.55	181.92	10000.50	2474.22	-2446.89	-578.97	0.54	458907.19	714605.01	N 32 15 37.32	W 103 46 22.07
	12700.00	92.27	181.04	9998.19	2568.15	-2540.82	-581.40	2.06	458813.26	714602.59	N 32 15 36.39	W 103 46 22.11
	12795.00	90.62	180.81	9996.79	2663.05	-2635.78	-582.93	1.75	458718.31	714601.05	N 32 15 35.45	W 103 46 22.13
	12889.00	90.76	182.36	9994.66	2757.01	-2729.73	-585.53	1.66	458624.36	714598.45	N 32 15 34.52	W 103 46 22.17
	12984.00	91.31	181.16	9992.94	2851.97	-2824.67	-588.45	1.39	458529.43	714595.54	N 32 15 33.58	W 103 46 22.21
	13078.00	91.41	178.54	9990.71	2945.79	-2918.63	-588.20	2.79	458435.47	714595.78	N 32 15 32.65	W 103 46 22.21
	13173.00	90.55	178.91	9989.09	3040.50	-3013.59	-586.09	0.99	458340.51	714597.89	N 32 15 31.72	W 103 46 22.19
	13268.00	90.52	180.48	9988.20	3135.33	-3108.59	-585.58	1.65	458245.53	714598.40	N 32 15 30.78	W 103 46 22.19
	13362.00	90.35	179.39	9987.48	3229.19	-3202.58	-585.48	1.17	458151.54	714598.51	N 32 15 29.84	W 103 46 22.20
	13457.00	89.28	179.18	9987.79	3323.98	-3297.57	-584.29	1.15	458056.55	714599.69	N 32 15 28.90	W 103 46 22.19
	13584.00	91.00	178.78	9987.48	3450.66	-3424.55	-582.03	1.39	457929.58	714601.95	N 32 15 27.65	W 103 46 22.17
	13647.00	90.24	179.21	9986.80	3513.49	-3487.53	-580.93	1.39	457866.60	714603.06	N 32 15 27.03	W 103 46 22.16
	13741.00	89.90	178.96	9986.68	3607.27	-3581.52	-579.42	0.45	457772.62	714604.56	N 32 15 26.10	W 103 46 22.15
	13836.00	90.69	179.19	9986.20	3702.04	-3676.51	-577.89	0.87	457677.64	714606.09	N 32 15 25.16	W 103 46 22.14
	13931.00	90.48	178.49	9985.23	3796.78	-3771.48	-575.97	0.77	457582.67	714608.02	N 32 15 24.22	W 103 46 22.12
	14025.00	87.80	177.20	9986.64	3890.37	-3865.39	-572.43	3.16	457488.76	714611.55	N 32 15 23.29	W 103 46 22.08
	14138.00	87.77	176.45	9991.00	4002.62	-3978.13	-566.18	0.66	457376.03	714617.80	N 32 15 22.17	W 103 46 22.02
	14215.00	88.35	176.82	9993.61	4079.09	-4054.96	-561.66	0.89	457299.21	714622.32	N 32 15 21.41	W 103 46 21.97
	14309.00	87.11	177.91	9997.33	4172.55	-4148.78	-557.35	1.76	457205.39	714626.64	N 32 15 20.48	W 103 46 21.93
	14404.00	86.80	179.93	10002.38	4267.17	-4243.62	-555.56	2.15	457110.55	714628.43	N 32 15 19.54	W 103 46 21.91
	14498.00	86.70	179.62	10007.71	4360.86	-4337.47	-555.19	0.35	457016.71	714628.79	N 32 15 18.61	W 103 46 21.91
	14592.00	89.35	181.57	10010.95	4454.71	-4431.40	-556.17	3.50	456922.79	714627.82	N 32 15 17.68	W 103 46 21.93
	14687.00	90.28	181.09	10011.26	4549.66	-4526.37	-558.37	1.10	456827.82	714625.61	N 32 15 16.74	W 103 46 21.96
	14782.00	89.28	178.72	10011.62	4644.51	-4621.36	-558.21	2.71	456732.84	714625.77	N 32 15 15.80	W 103 46 21.96
	14876.00	89.73	179.30	10012.43	4738.27	-4715.34	-556.59	0.78	456638.86	714627.39	N 32 15 14.87	W 103 46 21.95
	14971.00	86.73	178.47	10015.37	4832.97	-4810.27	-554.74	3.28	456543.94	714629.24	N 32 15 13.94	W 103 46 21.94
	15065.00	88.25	180.04	10019.48	4926.66	-4904.17	-553.52	2.32	456450.05	714630.46	N 32 15 13.01	W 103 46 21.93
	15159.00	87.87	180.11	10022.67	5020.48	-4998.11	-553.64	0.41	456356.11	714630.34	N 32 15 12.08	W 103 46 21.93
	15254.00	89.42	179.37	10024.91	5115.30	-5093.08	-553.21	1.81	456261.15	714630.77	N 32 15 11.14	W 103 46 21.94
	15348.00	92.10	179.62	10023.67	5209.10	-5187.06	-552.39	2.86	456167.17	714631.60	N 32 15 10.21	W 103 46 21.93
	15537.00	95.83	181.37	10010.60	5397.42	-5375.56	-554.01	2.18	455978.68	714629.98	N 32 15 8.34	W 103 46 21.96
	15632.00	93.40	183.00	10002.95	5492.09	-5470.17	-557.62	3.08	455884.08	714626.36	N 32 15 7.41	W 103 46 22.01
	15761.00	88.35	177.48	10000.98	5620.83	-5599.06	-558.16	5.80	455755.19	714625.83	N 32 15 6.13	W 103 46 22.02
	15821.00	83.59	176.08	10005.20	5680.30	-5658.80	-554.80	8.27	455695.46	714629.19	N 32 15 5.54	W 103 46 21.99
	15915.00	84.36	175.86	10015.07	5773.07	-5752.05	-548.23	0.85	455602.21	714635.76	N 32 15 4.62	W 103 46 21.92
	16009.00	88.42	176.39	10020.98	5866.18	-5845.63	-541.89	4.36	455508.64	714642.09	N 32 15 3.69	W 103 46 21.85
	16198.00	94.58	177.22	10016.04	6053.90	-6034.18	-531.36	3.29	455320.10	714652.62	N 32 15 1.82	W 103 46 21.74
	16293.00	92.52	176.75	10010.16	6148.18	-6128.86	-526.37	2.22	455225.43	714657.61	N 32 15 0.89	W 103 46 21.69
	16387.00	92.14	176.28	10006.33	6241.49	-6222.61	-520.67	0.64	455131.68	714663.31	N 32 14 59.96	W 103 46 21.63
	16482.00	91.86	176.75	10003.02	6335.82	-6317.38	-514.89	0.58	455036.92	714669.09	N 32 14 59.02	W 103 46 21.56
	16576.00	91.31	180.62	10000.42	6429.49	-6411.30	-512.74	4.16	454943.01	714671.24	N 32 14 58.09	W 103 46 21.54
	16671.00	90.59	180.57	9998.84	6524.39	-6506.28	-513.72	0.76	454848.03	714670.25	N 32 14 57.15	W 103 46 21.56
	16766.00	90.76	180.61	9997.72	6619.30	-6601.27	-514.70	0.18	454753.05	714669.28	N 32 14 56.21	W 103 46 21.58
	16861.00	90.18	181.04	9996.94	6714.22	-6696.25	-516.07	0.76	454658.07	714667.91	N 32 14 55.27	W 103 46 21.60
	16955.00	90.28	181.66	9996.57	6808.18	-6790.23	-518.29	0.67	454564.10	714665.69	N 32 14 54.34	W 103 46 21.63
	17050.00	90.28	181.82	9996.10	6903.15	-6885.18	-521.17	0.17	454469.15	714662.81	N 32 14 53.40	W 103 46 21.67
	17144.00	90.11	181.55	9995.78	6997.13	-6979.14	-523.93	0.34	454375.20	714660.05	N 32 14 52.47	W 103 46 21.71
	17334.00	89.76	181.23	9996.00	7187.05	-7169.08	-528.54	0.25	454185.27	714655.44	N 32 14 50.59	W 103 46 21.77
	17429.00	88.66	181.32	9997.31	7281.99	-7264.05	-530.66	1.16	454090.31	714653.32	N 32 14 49.65	W 103 46 21.80
	17523.00	89.56	181.36	9998.77	7375.94	-7358.01	-532.85	0.96	453996.35	714651.13	N 32 14 48.72	W 103 46 21.84
	17618.00	90.04	181.68	9999.10	7470.90	-7452.98	-535.37	0.61	453901.39	714648.61	N 32 14 47.78	W 103 46 21.87
	17712.00	89.76	181.73	9999.26	7564.88	-7546.93	-538.17	0.30	453807.44	714645.81	N 32 14 46.86	W 103 46 21.91
	17807.00	89.83	181.56	9999.60	7659.85	-7641.89	-540.90	0.19	453712.48	714643.08	N 32 14 45.92	W 103 46 21.95
	17901.00	89.73	181.15	9999.97	7753.80	-7735.87	-543.12	0.45	453618.51	714640.86	N 32 14 44.99	W 103 46 21.98

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 ° ' ")
	17995.00	89.80	181.34	10000.35	7847.76	-7829.84	-545.16	0.22	453524.54	714638.82	N 32 14 44.06	W 103 46 22.01
	18090.00	89.97	181.62	10000.54	7942.72	-7924.81	-547.62	0.34	453429.58	714636.36	N 32 14 43.12	W 103 46 22.04
	18185.00	89.49	179.99	10000.99	8037.64	-8019.80	-548.95	1.79	453334.60	714635.03	N 32 14 42.18	W 103 46 22.06
	18279.00	89.70	178.98	10001.65	8131.46	-8113.79	-548.11	1.10	453240.61	714635.87	N 32 14 41.25	W 103 46 22.06
	18374.00	89.52	178.67	10002.30	8226.20	-8208.77	-546.16	0.38	453145.64	714637.82	N 32 14 40.31	W 103 46 22.04
	18469.00	87.67	178.95	10004.63	8320.91	-8303.72	-544.19	1.97	453050.70	714639.80	N 32 14 39.37	W 103 46 22.03
	18658.00	89.42	178.84	10009.43	8509.34	-8492.61	-540.54	0.93	452861.81	714643.44	N 32 14 37.50	W 103 46 21.99
	18752.00	90.18	179.10	10009.76	8603.10	-8586.60	-538.85	0.85	452767.84	714645.13	N 32 14 36.57	W 103 46 21.98
	18941.00	90.62	178.89	10008.44	8791.62	-8775.56	-535.54	0.26	452578.88	714648.44	N 32 14 34.70	W 103 46 21.95
	19130.00	90.11	177.91	10007.23	8979.99	-8964.48	-530.26	0.58	452389.97	714653.72	N 32 14 32.83	W 103 46 21.90
	19319.00	90.25	180.36	10006.64	9168.54	-9153.44	-527.41	1.30	452201.02	714656.57	N 32 14 30.96	W 103 46 21.88
	19416.00	92.76	181.07	10004.09	9265.42	-9250.39	-528.62	2.69	452104.08	714655.36	N 32 14 30.00	W 103 46 21.90
	19510.00	92.86	178.03	9999.48	9359.12	-9344.27	-527.88	3.23	452010.21	714656.10	N 32 14 29.07	W 103 46 21.90
	19605.00	91.28	178.41	9996.05	9453.72	-9439.16	-524.93	1.71	451915.32	714659.05	N 32 14 28.13	W 103 46 21.87
	19700.00	90.49	179.18	9994.58	9548.44	-9534.12	-522.93	1.16	451820.36	714661.05	N 32 14 27.19	W 103 46 21.85
	19794.00	89.90	178.56	9994.26	9642.19	-9628.10	-521.08	0.91	451726.39	714662.90	N 32 14 26.26	W 103 46 21.84
	19889.00	89.25	178.56	9994.97	9736.89	-9723.07	-518.69	0.68	451631.43	714665.29	N 32 14 25.32	W 103 46 21.81
	19983.00	88.77	179.23	9996.59	9830.63	-9817.04	-516.88	0.88	451537.47	714667.10	N 32 14 24.39	W 103 46 21.80
	20078.00	88.83	179.67	9998.58	9925.42	-9912.01	-515.97	0.47	451442.50	714668.01	N 32 14 23.45	W 103 46 21.79
	20172.00	88.80	179.45	10000.53	10019.23	-10005.99	-515.25	0.24	451348.52	714668.73	N 32 14 22.52	W 103 46 21.79
100' FSL Crossing	*20238.69*	*88.86*	*179.81*	*10001.89*	*10085.79*	*-10072.66*	*-514.82*	*0.55*	*451281.85*	*714669.16*	*N 32 14 21.86*	*W 103 46 21.79*
Final MWD	20250.00	88.87	179.87	10002.11	10097.08	-10083.97	-514.78	0.55	451270.55	714669.20	N 32 14 21.75	W 103 46 21.79
Proj to TD	20303.00	88.87	179.87	10003.16	10149.99	-10136.96	-514.66	0.00	451217.56	714669.32	N 32 14 21.23	W 103 46 21.79

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 (in)	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 Platinum MDP1 34-3 Federal Com 1H Gyro+MWD 0 to 20303ft MD
	1	26.500	26.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Platinum MDP1 34-3 Federal Com 1H Gyro+MWD 0 to 20303ft MD
	1	26.500	548.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Platinum MDP1 34-3 Federal Com 1H
	1	548.500	8893.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS	Original Borehole / Oxy Platinum MDP1 34-3 Federal Com 1H
	1	8893.000	9456.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Platinum MDP1 34-3 Federal Com 1H
	1	9456.000	20303.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS	Original Borehole / Oxy Platinum MDP1 34-3 Federal Com 1H

Schlumberger

Oxy

Borehole:	Well:	Field:	Structure:
Original Borehole	Oxy Platinum MDP1 34-3 Federal Com 1H	NM Eddy County (NAD 83)	Oxy Platinum MDP1 34-3 Federal Com 1H

Gravity & Magnetic Parameters

Model: IFR1 Dip: 59.994° Date: 26-Dec-2018
MagDec: 6.839° FS: 48019.7nT Gravity FS: 998.447mgn (9.80665 Based)

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

Lat: N 32 16 1.50 Northing: 461353.93ftUS Grid Conv: 0.3003°
Lon: W 103 46 15.18 Easting: 715183.95ftUS Scale Fact: 0.9999437

Miscellaneous

Slot: Oxy Platinum MDP1 34-3 Federal Com 1H TVD Ref: RKB - 26.5'(3449.4ft above MSL)
Plan: Oxy Platinum MDP1 34-3 Federal Com 1H Gyro+MWD 0 to 20303ft MD

Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
WRP	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	548.50	1.43	277.31	548.43	-2.98	3.39	-7.52	0.42
KOP Actual	9456.00	10.98	245.50	9395.02	-275.43	300.98	-472.27	1.36
100'FNL Crossing	9500.00	12.19	245.72	9438.13	-271.36	297.33	-480.32	2.74
2nd Bone Spring Intersection	9524.45	12.86	245.83	9462.00	-268.94	295.16	-485.15	2.74
100' FSL Crossing	20238.69	88.86	179.81	10001.89	10085.79	-10072.66	-514.82	0.55
Final MWD	20250.00	88.87	179.87	10002.11	10097.08	-10083.97	-514.78	0.55
Proj to TD	20303.00	88.87	179.87	10003.16	10149.99	-10136.96	-514.66	0.00