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

NM OIL CONSERVATION
ARTESIA DISTRICT
MAR 06 2019
RECEIVED

30-015-45227

January 24, 2019

Oxy USA INC.

Re:

34, 23S, 31E , Eddy NM
N 32.26709 W 103.77077

CLIENT: Oxy USA INC.
WELL: Platinum MDP1 34-3 Federal Com 2H
FIELD: Cotton Draw Bone Spring

RIG: H&P 657
COUNTY: Eddy
API NO: 30-015-45227
JOB NO: 18MLD4267

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
Maria Zapata FE	Platinum MDP1 34-3 Federal Com 2H Original Hole	703.00 Ft to 20403.00 Ft	December 5, 2018 to January 16, 2019	TelePacer/SlimPulse 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
N 32.26709 W 103.77077

I, Maria Zapata certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of December 05, 2018 through January 16, 2019, conduct or supervise the taking of the TelePacer/SlimPulse & Third Party Corrected surveys from a depth of 703.00 feet to a depth of 20403.00 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 2H Well (Original Hole) API No. 30-015-45227 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
Maria Zapata
FE

Subscribed and Sworn to before me this 24th day of January (month) 2019 (yr)

My Commission expires:

2-16-2022

D. Adams
Notary Public

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 2H Gyro+MWD 0 to 20447 Survey Geodetic Report

(Def Survey)

Report Date:	January 17, 2019 - 11:16 AM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Oxy	**Vertical Section Azimuth:**	180.938 ° (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 2H / Oxy Platinum MDP1 34-3 Federal Com 2H	**TVD Reference Datum:**	RKB - 26.5'
Well:	Oxy Platinum MDP1 34-3 Federal Com 2H	**TVD Reference Elevation:**	3450.700 ft above MSL
Borehole:	Original Borehole	**Seabed / Ground Elevation:**	3424.200 ft above MSL
UWI / API#:	H&P 657 / 30-015-45227	**Magnetic Declination:**	6.839 °
Survey Name:	Oxy Platinum MDP1 34-3 Federal Com 2H Gyro+MWD 0 to 20447	**Total Gravity Field Strength:**	998.4472mgn (9.80665 Based)
Survey Date:	November 28, 2018	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	270.695 ° / 10610.605 ft / 6.764 / 1.049	**Total Magnetic Field Strength:**	48020.000 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.994 °
Location Lat / Long:	N 32° 16' 1.50420", W 103° 46' 14.77519"	**Declination Date:**	December 25, 2018
Location Grid N/E Y/X:	N 461354.130 ftUS, E 715218.950 ftUS	**Magnetic Declination Model:**	IFR1
CRS Grid Convergence Angle:	0.3003 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99994372	**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	461354.13	715218.95	N 32 16 1.50	W 103 46 14.78
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	461354.13	715218.95	N 32 16 1.50	W 103 46 14.78
	32.08	0.74	70.65	32.08	-0.01	0.01	0.03	13.26	461354.14	715218.98	N 32 16 1.50	W 103 46 14.77
	124.61	0.68	98.57	124.60	-0.16	0.14	1.06	0.38	461354.27	715220.01	N 32 16 1.51	W 103 46 14.76
	206.96	0.20	180.34	206.95	0.04	-0.07	1.47	0.71	461354.06	715220.42	N 32 16 1.50	W 103 46 14.76
	296.85	0.24	203.58	296.84	0.37	-0.40	1.40	0.11	461353.73	715220.35	N 32 16 1.50	W 103 46 14.76
	391.34	0.55	234.44	391.33	0.82	-0.84	0.95	0.39	461353.29	715219.90	N 32 16 1.50	W 103 46 14.78
	485.94	0.66	242.89	485.92	1.35	-1.35	0.09	0.15	461352.78	715219.04	N 32 16 1.49	W 103 46 14.77
Last Gyro	576.87	0.93	241.24	576.85	1.96	-1.95	-1.02	0.30	461352.18	715217.93	N 32 16 1.48	W 103 46 14.79
	703.00	0.10	254.78	702.97	2.50	-2.47	-2.02	0.66	461351.66	715216.93	N 32 16 1.48	W 103 46 14.80
	887.00	0.14	199.80	886.97	2.76	-2.72	-2.25	0.06	461351.41	715216.70	N 32 16 1.48	W 103 46 14.80
	1070.00	0.10	218.10	1069.97	3.10	-3.06	-2.43	0.03	461351.07	715216.52	N 32 16 1.47	W 103 46 14.80
	1162.00	0.14	48.50	1161.97	3.08	-3.05	-2.39	0.26	461351.08	715216.58	N 32 16 1.47	W 103 46 14.80
	1344.00	0.03	210.53	1343.97	2.98	-2.94	-2.25	0.09	461351.19	715216.70	N 32 16 1.48	W 103 46 14.80
	1435.00	0.10	228.58	1434.97	3.05	-3.01	-2.32	0.08	461351.12	715216.63	N 32 16 1.47	W 103 46 14.80
	1529.00	0.14	289.65	1528.97	3.07	-3.03	-2.49	0.13	461351.10	715216.46	N 32 16 1.47	W 103 46 14.80
	1624.00	0.06	67.03	1623.97	3.01	-2.97	-2.56	0.20	461351.16	715216.39	N 32 16 1.47	W 103 46 14.81
	1718.00	0.11	282.07	1717.97	2.97	-2.93	-2.60	0.17	461351.20	715216.35	N 32 16 1.48	W 103 46 14.81
	1813.00	0.07	181.95	1812.97	3.01	-2.97	-2.69	0.15	461351.16	715216.26	N 32 16 1.47	W 103 46 14.81
	1908.00	0.07	194.27	1907.97	3.13	-3.09	-2.71	0.02	461351.05	715216.24	N 32 16 1.47	W 103 46 14.81
	2002.00	0.14	1.05	2001.97	3.07	-3.03	-2.72	0.22	461351.10	715216.23	N 32 16 1.47	W 103 46 14.81
	2097.00	0.22	187.95	2096.97	3.14	-3.09	-2.74	0.38	461351.04	715216.21	N 32 16 1.47	W 103 46 14.81
	2192.00	0.22	166.82	2191.97	3.49	-3.45	-2.73	0.08	461350.68	715216.22	N 32 16 1.47	W 103 46 14.81
	2287.00	0.12	170.68	2286.97	3.77	-3.72	-2.67	0.11	461350.41	715216.28	N 32 16 1.47	W 103 46 14.81
	2382.00	0.10	172.68	2381.97	3.95	-3.90	-2.64	0.02	461350.23	715216.31	N 32 16 1.47	W 103 46 14.81
	2476.00	0.12	181.01	2475.97	4.13	-4.08	-2.63	0.03	461350.05	715216.32	N 32 16 1.46	W 103 46 14.81
	2571.00	0.18	186.31	2570.97	4.38	-4.33	-2.65	0.06	461349.80	715216.30	N 32 16 1.46	W 103 46 14.81
	2760.00	0.27	88.69	2759.96	4.65	-4.62	-2.24	0.18	461349.51	715216.71	N 32 16 1.46	W 103 46 14.80
	2855.00	0.11	342.48	2854.96	4.56	-4.53	-2.04	0.34	461349.60	715216.91	N 32 16 1.46	W 103 46 14.80
	2950.00	0.11	153.92	2949.96	4.55	-4.52	-2.03	0.23	461349.61	715216.92	N 32 16 1.46	W 103 46 14.80
	3045.00	0.11	53.21	3044.96	4.58	-4.55	-1.92	0.18	461349.58	715217.03	N 32 16 1.46	W 103 46 14.80
	3139.00	0.06	147.17	3138.96	4.56	-4.53	-1.82	0.14	461349.60	715217.13	N 32 16 1.46	W 103 46 14.80
	3234.00	0.13	10.70	3233.96	4.50	-4.47	-1.77	0.19	461349.66	715217.18	N 32 16 1.46	W 103 46 14.80
	3329.00	0.07	302.13	3328.96	4.36	-4.33	-1.80	0.13	461349.80	715217.15	N 32 16 1.46	W 103 46 14.80
	3424.00	0.06	195.27	3423.96	4.38	-4.35	-1.86	0.11	461349.78	715217.09	N 32 16 1.46	W 103 46 14.80
	3518.00	0.14	109.05	3517.96	4.46	-4.44	-1.77	0.16	461349.69	715217.18	N 32 16 1.46	W 103 46 14.80
	3613.00	0.18	95.92	3612.96	4.51	-4.49	-1.51	0.06	461349.64	715217.44	N 32 16 1.46	W 103 46 14.79
	3708.00	0.13	300.71	3707.96	4.47	-4.45	-1.45	0.32	461349.68	715217.50	N 32 16 1.46	W 103 46 14.79
	3803.00	0.37	136.47	3802.96	4.64	-4.62	-1.33	0.52	461349.51	715217.62	N 32 16 1.46	W 103 46 14.79
	3898.00	0.20	129.08	3897.96	4.96	-4.94	-0.99	0.18	461349.19	715217.96	N 32 16 1.46	W 103 46 14.79
	3993.00	0.26	113.64	3992.96	5.15	-5.13	-0.67	0.09	461349.00	715218.28	N 32 16 1.45	W 103 46 14.78
	4089.00	0.08	91.13	4088.96	5.23	-5.22	-0.40	0.20	461348.91	715218.55	N 32 16 1.45	W 103 46 14.78
	4184.00	0.06	244.77	4183.96	5.25	-5.25	-0.38	0.14	461348.88	715218.57	N 32 16 1.45	W 103 46 14.78
	4314.00	0.06	25.59	4313.96	5.22	-5.21	-0.41	0.09	461348.92	715218.54	N 32 16 1.45	W 103 46 14.78
	4512.00	0.10	248.58	4511.96	5.19	-5.18	-0.53	0.08	461348.95	715218.42	N 32 16 1.45	W 103 46 14.78
	4597.00	0.08	204.97	4596.96	5.27	-5.26	-0.62	0.08	461348.87	715218.33	N 32 16 1.45	W 103 46 14.78
	4691.00	0.04	164.32	4690.96	5.37	-5.36	-0.64	0.06	461348.77	715218.31	N 32 16 1.45	W 103 46 14.78
	4803.00	0.08	328.72	4802.96	5.34	-5.33	-0.67	0.11	461348.80	715218.28	N 32 16 1.45	W 103 46 14.78
	4916.00	0.09	18.71	4915.96	5.19	-5.17	-0.68	0.06	461348.96	715218.27	N 32 16 1.45	W 103 46 14.78
	5070.00	0.04	319.66	5069.96	5.03	-5.02	-0.68	0.05	461349.11	715218.27	N 32 16 1.45	W 103 46 14.78
	5164.00	0.01	128.61	5163.96	5.01	-5.00	-0.69	0.05	461349.13	715218.26	N 32 16 1.45	W 103 46 14.78
	5259.00	0.04	122.61	5258.96	5.03	-5.02	-0.66	0.03	461349.11	715218.29	N 32 16 1.45	W 103 46 14.78
	5449.00	0.05	48.16	5448.96	5.01	-5.00	-0.54	0.03	461349.13	715218.41	N 32 16 1.45	W 103 46 14.78
	5638.00	0.03	355.50	5637.96	4.91	-4.90	-0.48	0.02	461349.23	715218.47	N 32 16 1.46	W 103 46 14.78
	5733.00	0.03	293.50	5732.96	4.87	-4.86	-0.51	0.03	461349.27	715218.44	N 32 16 1.46	W 103 46 14.78
	5922.00	0.33	127.44	5921.96	5.18	-5.17	-0.12	0.19	461348.96	715218.83	N 32 16 1.45	W 103 46 14.78
	6017.00	0.27	158.68	6016.96	5.55	-5.55	0.18	0.18	461348.58	715219.13	N 32 16 1.45	W 103 46 14.77
	6111.00	0.46	156.03	6110.96	6.10	-6.11	0.40	0.20	461348.02	715219.35	N 32 16 1.44	W 103 46 14.77
	6300.00	0.53	159.35	6299.95	7.61	-7.63	0.99	0.04	461346.50	715219.94	N 32 16 1.43	W 103 46 14.76
	6489.00	0.22	185.73	6488.94	8.77	-8.80	1.39	0.17	461345.33	715220.34	N 32 16 1.42	W 103 46 14.76
	6584.00	0.80	196.76	6583.94	9.42	-9.44	1.27	0.46	461344.69	715220.22	N 32 16 1.41	W 103 46 14.76
	6774.00	1.09	194.18	6773.92	12.13	-12.14	0.51	0.26	461341.99	715219.46	N 32 16 1.38	W 103 46 14.77
	6963.00	0.80	197.83	6962.89	15.14	-15.14	-0.33	0.16	461338.99	715218.62	N 32 16 1.35	W 103 46 14.78
	7098.00	0.73	193.72	7097.88	16.88	-16.87	-0.83	0.07	461337.26	715218.12	N 32 16 1.34	W 103 46 14.79
	7193.00	0.86	190.81	7192.87	18.17	-18.16	-1.10	0.14	461335.97	715217.85	N 32 16 1.32	W 103 46 14.79
	7289.00	0.62	187.14	7288.87	19.40	-19.38	-1.30	0.25	461334.75	715217.65	N 32 16 1.31	W 103 46 14.79
	7384.00	0.76	178.29	7383.86	20.56	-20.54	-1.35	0.20	461333.59	715217.60	N 32 16 1.30	W 103 46 14.79
	7478.00	0.73	176.20	7477.85	21.79	-21.78	-1.29	0.06	461332.36	715217.66	N 32 16 1.29	W 103 46 14.79
	7666.00	2.21	201.14	7665.78	26.39	-26.35	-2.52	0.84	461327.78	715216.43	N 32 16 1.24	W 103 46 14.81
	7760.00	1.48	349.70	7759.76	26.90	-26.85	-3.39	3.76	461327.28	715215.56	N 32 16 1.24	W 103 46 14.82
	7855.00	4.92	339.29	7854.60	21.91	-21.83	-5.05	3.66	461332.30	715213.90	N 32 16 1.29	W 103 46 14.84
	7949.00	7.71	343.60	7948.02	12.14	-12.01	-8.26	3.01	461342.12	715210.70	N 32 16 1.39	W 103 46 14.87
	8044.00	8.95	349.88	8042.02	-1.20	1.38	-11.35	1.62	461355.51	715207.60	N 32 16 1.52	W 103 46 14.91
	8138.00	11.51	346.54	8134.52	-17.46	17.70	-14.82	2.79	461371.83	715204.13	N 32 16 1.68	W 103 46 14.95
	8233.00	9.27	339.18	8227.96	-33.75	34.08	-19.75	2.74	461388.20	715199.20	N 32 16 1.84	W 103 46 15.00
	8328.00	9.90	337.40	8321.63	-48.34	48.77	-25.61	0.73	461402.89	715193.35	N 32 16 1.99	W 103 46 15.07
	8423.00	11.93	345.19	8414.92	-65.28	65.80	-31.26	2.64	461419.93	715187.70	N 32 16 2.16	W 103 46 15.14
	8517.00	12.07	344.34	8506.86	-84.05	84.66	-36.39	0.24	461438.78	715182.56	N 32 16 2.34	W 103 46 15.19

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 ° ' ")
	8612.00	9.91	346.33	8600.11	-101.48	102.17	-41.01	2.31	461456.29	715177.95	N 32 16 2.52	W 103 46 15.25
	8706.00	10.84	349.10	8692.58	-117.96	118.71	-44.59	1.12	461472.83	715174.36	N 32 16 2.68	W 103 46 15.29
	8751.00	11.90	349.60	8736.69	-126.65	127.43	-46.23	2.37	461481.55	715172.73	N 32 16 2.77	W 103 46 15.31
	8801.00	12.62	348.79	8785.55	-137.05	137.86	-48.22	1.48	461491.98	715170.73	N 32 16 2.87	W 103 46 15.33
	8896.00	11.53	342.78	8878.45	-156.22	157.11	-53.05	1.75	461511.23	715165.91	N 32 16 3.06	W 103 46 15.38
	8991.00	12.82	340.15	8971.31	-175.09	176.09	-59.44	1.48	461530.21	715159.52	N 32 16 3.25	W 103 46 15.46
	9085.00	13.48	334.98	9062.85	-194.69	195.83	-67.61	1.43	461549.95	715151.34	N 32 16 3.45	W 103 46 15.55
	9180.00	12.60	336.21	9155.40	-214.06	215.34	-76.48	0.97	461569.46	715142.48	N 32 16 3.64	W 103 46 15.65
	9275.00	11.98	324.57	9248.24	-231.41	232.86	-86.37	2.68	461586.98	715132.58	N 32 16 3.81	W 103 46 15.77
	9370.00	8.98	307.37	9341.67	-243.76	245.40	-97.99	4.53	461599.52	715120.97	N 32 16 3.94	W 103 46 15.90
	9403.00	8.68	303.54	9374.27	-246.63	248.34	-102.11	2.00	461602.45	715116.85	N 32 16 3.97	W 103 46 15.95
	9461.00	9.09	294.03	9431.58	-250.79	252.62	-109.94	2.83	461606.74	715109.02	N 32 16 4.01	W 103 46 16.04
	9556.00	10.60	270.77	9525.22	-253.71	255.80	-125.54	4.44	461609.91	715093.42	N 32 16 4.04	W 103 46 16.22
	9651.00	10.81	251.44	9618.62	-250.76	253.13	-142.57	3.73	461607.25	715076.39	N 32 16 4.02	W 103 46 16.42
	9746.00	10.96	224.91	9712.00	-241.34	243.95	-157.25	5.19	461598.06	715061.71	N 32 16 3.93	W 103 46 16.59
KOP Actual	9763.00	11.23	222.85	9728.69	-238.94	241.58	-159.52	2.82	461595.70	715059.44	N 32 16 3.90	W 103 46 16.62
Bone Spring 2nd Intersection	*9848.43*	*14.28*	*218.38*	*9812.00*	*-224.38*	*227.22*	*-171.72*	*3.75*	*461581.34*	*715047.24*	*N 32 16 3.76*	*W 103 46 16.76*
	9876.00	15.28	217.32	9838.66	-218.76	221.67	-176.03	3.75	461575.79	715042.93	N 32 16 3.71	W 103 46 16.81
	9971.00	28.50	206.03	9926.65	-188.01	191.20	-193.65	14.54	461545.32	715025.31	N 32 16 3.41	W 103 46 17.02
	10065.00	36.63	192.29	10005.91	-140.06	143.50	-209.51	11.65	461497.63	715009.45	N 32 16 2.94	W 103 46 17.21
	10160.00	44.50	184.19	10078.07	-78.89	82.47	-218.00	9.95	461438.60	715000.97	N 32 16 2.33	W 103 46 17.31
	10255.00	56.14	178.87	10138.65	-5.95	9.55	-219.68	12.98	461363.68	714999.30	N 32 16 1.61	W 103 46 17.33
	10349.00	63.70	182.02	10185.74	75.31	-71.72	-220.38	8.55	461282.42	714998.59	N 32 16 0.81	W 103 46 17.35
	10444.00	71.95	181.85	10221.57	163.20	-159.56	-223.34	8.69	461194.58	714995.62	N 32 15 59.94	W 103 46 17.39
	10539.00	81.33	177.60	10243.50	255.48	-251.86	-222.83	10.79	461102.28	714996.13	N 32 15 59.02	W 103 46 17.39
	10634.00	87.97	177.56	10252.36	349.85	-346.31	-218.84	6.99	461007.84	715000.13	N 32 15 58.09	W 103 46 17.34
	10714.00	87.55	177.39	10255.48	429.64	-426.17	-215.32	0.57	460927.98	715003.65	N 32 15 57.30	W 103 46 17.31
	10807.00	87.79	177.99	10259.26	522.41	-519.02	-211.57	0.69	460835.14	715007.39	N 32 15 56.38	W 103 46 17.27
	10901.00	88.06	178.04	10262.67	616.23	-612.90	-208.32	0.29	460741.26	715010.65	N 32 15 55.45	W 103 46 17.24
	10996.00	87.72	177.74	10266.16	711.03	-707.77	-204.82	0.48	460646.40	715014.14	N 32 15 54.51	W 103 46 17.20
	11091.00	87.37	178.00	10270.23	805.81	-802.62	-201.29	0.46	460551.56	715017.67	N 32 15 53.57	W 103 46 17.17
	11185.00	86.86	178.05	10274.97	899.57	-896.45	-198.06	0.55	460457.74	715020.90	N 32 15 52.64	W 103 46 17.14
	11280.00	87.27	178.50	10279.83	994.34	-991.28	-195.20	0.64	460362.91	715023.78	N 32 15 51.71	W 103 46 17.11
	11375.00	87.48	178.91	10284.18	1089.17	-1086.15	-193.06	0.48	460268.04	715025.90	N 32 15 50.77	W 103 46 17.09
	11469.00	87.17	179.02	10288.57	1183.01	-1180.04	-191.36	0.35	460174.16	715027.60	N 32 15 49.84	W 103 46 17.08
	11564.00	88.20	179.61	10292.40	1277.89	-1274.95	-190.23	1.25	460079.26	715028.73	N 32 15 48.90	W 103 46 17.07
	11659.00	89.85	179.98	10294.02	1372.86	-1369.93	-189.89	1.78	459984.28	715029.07	N 32 15 47.96	W 103 46 17.07
	11753.00	89.30	179.89	10294.72	1466.84	-1463.93	-189.78	0.59	459890.29	715029.18	N 32 15 47.03	W 103 46 17.07
	11848.00	89.03	179.99	10296.10	1561.81	-1558.92	-189.68	0.30	459795.30	715029.28	N 32 15 46.09	W 103 46 17.08
	11942.00	89.13	180.52	10297.61	1655.80	-1652.90	-190.10	0.57	459701.32	715028.86	N 32 15 45.16	W 103 46 17.09
	12037.00	91.81	179.90	10296.83	1750.78	-1747.89	-190.45	2.90	459606.34	715028.51	N 32 15 44.22	W 103 46 17.10
	12131.00	91.36	180.19	10294.23	1844.73	-1841.86	-190.52	0.57	459512.38	715028.44	N 32 15 43.29	W 103 46 17.11
	12226.00	90.61	180.32	10292.60	1939.71	-1936.84	-190.94	0.80	459417.40	715028.02	N 32 15 42.35	W 103 46 17.12
	12320.90	90.50	181.41	10291.69	2033.70	-2030.82	-192.36	1.17	459323.43	715026.60	N 32 15 41.42	W 103 46 17.14
	12415.00	90.37	181.63	10290.97	2128.69	-2125.79	-194.88	0.27	459228.47	715024.08	N 32 15 40.48	W 103 46 17.17
	12509.00	90.71	181.28	10290.08	2222.68	-2219.75	-197.27	0.52	459134.51	715021.69	N 32 15 39.55	W 103 46 17.21
	12604.00	90.78	181.30	10288.85	2317.67	-2314.72	-199.41	0.08	459039.54	715019.55	N 32 15 38.61	W 103 46 17.24
	12699.00	91.09	181.77	10287.30	2412.66	-2409.67	-201.95	0.59	458944.60	715017.01	N 32 15 37.67	W 103 46 17.27
	12793.00	90.81	180.91	10285.90	2506.64	-2503.64	-204.15	1.05	458850.64	715014.81	N 32 15 36.74	W 103 46 17.31
	12888.00	89.95	181.62	10285.44	2601.64	-2598.61	-206.25	1.02	458755.67	715012.71	N 32 15 35.80	W 103 46 17.34
	12982.00	89.92	182.47	10285.54	2695.62	-2692.55	-209.60	0.90	458661.74	715009.36	N 32 15 34.87	W 103 46 17.38
	13077.00	90.99	183.44	10284.79	2790.56	-2787.42	-214.50	1.52	458566.87	715004.46	N 32 15 33.93	W 103 46 17.44
	13171.00	90.81	181.68	10283.31	2884.50	-2881.31	-218.70	1.88	458472.99	715000.27	N 32 15 33.01	W 103 46 17.50
	13266.00	91.40	179.62	10281.48	2979.48	-2976.28	-219.77	2.26	458378.02	714999.19	N 32 15 32.07	W 103 46 17.52
	13456.00	90.20	177.69	10278.83	3169.30	-3166.20	-215.32	1.20	458188.12	715003.85	N 32 15 30.19	W 103 46 17.48
	13550.00	88.92	178.35	10279.55	3263.17	-3260.13	-212.07	1.53	458094.19	715006.89	N 32 15 29.26	W 103 46 17.44
	13645.00	88.89	178.66	10281.37	3358.07	-3355.08	-209.59	0.33	457999.24	715009.37	N 32 15 28.32	W 103 46 17.42
	13740.00	89.95	178.07	10282.33	3452.96	-3450.04	-206.88	1.26	457904.29	715012.08	N 32 15 27.38	W 103 46 17.39
	13835.00	89.20	176.82	10283.03	3547.78	-3544.94	-202.64	1.53	457809.40	715016.32	N 32 15 26.44	W 103 46 17.35
	13929.00	89.82	178.03	10283.84	3641.60	-3638.84	-198.42	1.45	457715.50	715020.54	N 32 15 25.51	W 103 46 17.31
	14024.00	89.68	177.72	10284.25	3736.46	-3733.77	-194.90	0.36	457620.57	715024.06	N 32 15 24.57	W 103 46 17.27
	14118.00	89.65	177.19	10284.80	3830.29	-3827.68	-190.73	0.56	457526.67	715028.24	N 32 15 23.64	W 103 46 17.23
	14213.00	89.82	177.86	10285.24	3925.12	-3922.59	-186.62	0.73	457431.77	715032.34	N 32 15 22.70	W 103 46 17.19
	14308.00	89.82	176.54	10285.54	4019.91	-4017.47	-181.98	1.39	457336.89	715036.98	N 32 15 21.76	W 103 46 17.14
	14402.00	89.16	177.71	10286.37	4113.70	-4111.35	-177.27	1.43	457243.02	715041.69	N 32 15 20.83	W 103 46 17.09
	14497.00	89.09	179.07	10287.83	4208.59	-4206.30	-174.60	1.43	457148.06	715044.36	N 32 15 19.89	W 103 46 17.07
	14591.00	89.78	178.07	10288.75	4302.51	-4300.26	-172.25	1.29	457054.12	715046.71	N 32 15 18.96	W 103 46 17.04
	14686.00	89.78	175.88	10289.12	4397.27	-4395.12	-167.24	2.31	456959.26	715051.72	N 32 15 18.02	W 103 46 16.99
	14780.00	89.95	175.95	10289.34	4490.91	-4488.88	-160.54	0.20	456865.51	715058.42	N 32 15 17.10	W 103 46 16.92
	14875.00	90.44	174.68	10289.02	4585.45	-4583.56	-152.79	1.43	456770.83	715066.17	N 32 15 16.16	W 103 46 16.83
	14969.00	89.78	174.98	10288.84	4678.91	-4677.18	-144.30	0.76	456677.22	715074.66	N 32 15 15.23	W 103 46 16.74
Exit Target Box	*15011.72*	*89.44*	*175.67*	*10289.12*	*4721.43*	*-4719.75*	*-140.81*	*1.83*	*456634.65*	*715078.15*	*N 32 15 14.81*	*W 103 46 16.70*
	15084.00	89.03	176.53	10289.82	4773.52	-4771.91	-137.25	1.83	456582.50	715081.71	N 32 15 14.29	W 103 46 16.66
	15158.00	88.10	178.76	10292.18	4847.32	-4845.79	-133.39	2.57	456488.62	715085.57	N 32 15 13.36	W 103 46 16.63
	15252.00	88.06	181.12	10295.33	4961.25	-4959.73	-133.29	2.51	456394.69	715085.67	N 32 15 12.43	W 103 46 16.63
	15349.00	90.33	182.70	10296.69	5058.22	-5056.66	-136.52	2.85	456297.76	715082.43	N 32 15 11.48	W 103 46 16.67
Enter Target Box	*15401.72*	*90.39*	*183.06*	*10296.36*	*5110.91*	*-5109.31*	*-139.17*	*0.70*	*456245.12*	*715079.78*	*N 32 15 10.96*	*W 103 46 16.71*
	15443.00	90.44	183.35	10296.06	5152.15	-5150.53	-141.48	0.70	456203.90	715077.47	N 32 15 10.55	W 103 46 16.74
	15536.00	90.47	184.55	10295.32	5245.02	-5243.30	-147.89	1.29	456111.13	715071.07	N 32 15 9.63	W 103 46 16.82
	15630.00	90.61	185.29	10294.43	5338.79	-5336.95	-155.95	0.80	456017.49	715063.01	N 32 15 8.70	W 103 46 16.92
	15725.00	91.06	185.47	10293.05	5433.49	-5431.52	-164.86	0.51	455922.93	715054.10	N 32 15 7.77	W 103 46 17.03
	15820.00	91.23	183.57	10291.15	5528.28	-5526.20	-172.34	2.01	455828.25	715046.62	N 32 15 6.83	W 103 46 17.12
	16008.00	90.95	181.30	10287.57	5716.17	-5713.99	-180.33	1.22	455640.48	715038.63	N 32 15 4.97	W 103 46 17.22
	16102.00	91.47	181.84	10285.59	5810.14	-5807.93	-182.90	0.80	455546.54	715036.06	N 32 15 4.04	W 103 46 17.26
	16197.00	91.61	180.95	10283.03	5905.11	-5902.87	-185.21	0.95	455451.61	715033.75	N 32 15 3.11	W 103 46 17.29
	16386.00	89.78	182.85	10280.74	6094.05	-6091.73	-191.48	1.40	455262.75	715027.48	N 32 15 1.24	W 103 46 17.38
	16480.00	89.13	184.11	10281.64	6187.95	-6185.55	-197.19	1.51	455168.94	715021.78	N 32 15 0.31	W 103 46 17.45
	16575.00	90.71	184.70	10281.77	6282.77	-6280.27	-204.48	1.78	455074.23	715014.48	N 32 14 59.37	W 103 46 17.54
	16670.00	90.33	183.35	10280.91	6377.63	-6375.03	-211.15	1.48	454979.48	715007.81	N 32 14 58.43	W 103 46 17.62
	16764.00	91.09	182.16	10278.74	6471.57	-6468.91	-215.67	1.50	454885.60	715003.30	N 32 14 57.51	W 103 46 17.68
	16859.00	91.23	181.07	10277.82	6566.54	-6563.85	-218.34	1.16	454790.66	715000.62	N 32 14 56.57	W 103 46 17.72
	16925.00	91.16	179.63	10276.44	6632.52	-6629.83	-218.75	2.18	454724.68	715000.22	N 32 14 55.91	W 103 46 17.73
	16954.00	91.12	178.91	10275.86	6661.51	-6658.82	-218.38	2.49	454695.69	715000.58	N 32 14 55.63	W 103 46 17.72
	17048.00	92.05	177.60	10273.26	6755.36	-6752.74	-215.52	1.71	454601.78	715003.45	N 32 14 54.70	W 103 46 17.70
	17143.00	90.06	177.21	10271.52	6850.16	-6847.62	-211.22	2.13	454506.91	715007.75	N 32 14 53.76	W 103 46 17.65
	17238.00	89.27	177.56	10272.07	6944.98	-6942.52	-206.88	0.91	454412.01	715012.08	N 32 14 52.82	W 103 46 17.61
	17332.00	90.02	178.04	10272.65	7038.83	-7036.45	-203.27	0.95	454318.09	715015.69	N 32 14 51.89	W 103 46 17.57
	17427.00	90.06	178.61	10272.59	7133.73	-7131.41	-200.50	0.60	454223.14	715018.46	N 32 14 50.95	W 103 46 17.54
	17522.00	89.40	176.57	10273.03	7228.57	-7226.32	-198.50	2.26	454128.23	715022.46	N 32 14 50.01	W 103 46 17.50
	17616.00	88.96	176.04	10274.38	7322.25	-7320.11	-199.45	0.73	454034.44	715028.52	N 32 14 49.08	W 103 46 17.44
	17711.00	88.99	177.08	10276.08	7416.95	-7414.92	-184.75	1.10	453939.64	715034.21	N 32 14 48.14	W 103 46 17.38
	17805.00	88.72	177.05	10277.96	7510.72	-7508.78	-179.93	0.29	453845.79	715039.03	N 32 14 47.21	W 103 46 17.33
	17900.00	90.26	176.87	10278.80	7605.49	-7603.64	-174.90	1.63	453750.93	715044.06	N 32 14 46.28	W 103 46 17.28
	17994.00	89.34	178.58	10279.13	7699.33	-7697.56	-171.17	2.07	453657.02	715047.79	N 32 14 45.35	W 103 46 17.24
	18088.00	88.03	179.50	10281.29	7793.25	-7791.52	-169.59	1.70	453563.06	715049.37	N 32 14 44.42	W 103 46 17.23
	18183.00	88.27	180.48	10284.36	7888.19	-7886.47	-169.57	1.06	453468.12	715049.39	N 32 14 43.48	W 103 46 17.23

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 ° ' ")
	18278.00	88.10	181.61	10287.36	7983.14	-7981.41	-171.31	1.20	453373.19	715047.65	N 32 14 42.54	W 103 46 17.26
	18373.00	88.61	182.60	10290.09	8078.08	-8076.30	-174.79	1.17	453278.30	715044.17	N 32 14 41.60	W 103 46 17.30
	18562.00	89.20	179.56	10293.70	8267.02	-8265.21	-178.35	1.64	453089.40	715040.61	N 32 14 39.73	W 103 46 17.36
	18656.00	87.82	179.90	10296.15	8360.97	-8359.17	-177.91	1.51	452995.44	715041.05	N 32 14 38.80	W 103 46 17.36
	18751.00	88.06	181.14	10299.56	8455.90	-8454.11	-178.77	1.33	452900.52	715040.19	N 32 14 37.86	W 103 46 17.37
	18846.00	89.65	181.31	10301.46	8550.88	-8549.06	-180.60	1.68	452805.56	715038.16	N 32 14 36.92	W 103 46 17.40
	19034.00	89.92	181.01	10302.17	8738.87	-8737.02	-184.61	0.21	452617.62	715034.35	N 32 14 35.06	W 103 46 17.46
	19129.00	90.50	180.36	10301.82	8833.87	-8832.02	-185.75	0.92	452522.63	715033.22	N 32 14 34.12	W 103 46 17.48
	19223.00	90.40	179.18	10301.08	8927.85	-8926.01	-185.37	1.26	452428.64	715033.59	N 32 14 33.19	W 103 46 17.48
	19412.00	89.82	181.21	10300.72	9116.82	-9115.00	-186.01	1.12	452239.66	715032.95	N 32 14 31.32	W 103 46 17.50
	19507.00	90.68	180.05	10300.30	9211.82	-9209.99	-187.06	1.52	452144.68	715031.91	N 32 14 30.38	W 103 46 17.51
	19602.00	90.37	179.18	10299.43	9306.79	-9304.98	-186.42	0.97	452049.69	715032.54	N 32 14 29.44	W 103 46 17.51
	19696.00	90.18	179.36	10299.00	9400.75	-9398.97	-185.22	0.28	451955.71	715033.74	N 32 14 28.51	W 103 46 17.51
	19790.00	90.40	180.45	10298.54	9494.73	-9492.97	-185.06	1.19	451861.71	715033.90	N 32 14 27.58	W 103 46 17.51
	19885.00	91.50	180.62	10298.96	9589.71	-9587.95	-185.95	1.17	451766.74	715033.01	N 32 14 26.64	W 103 46 17.53
	19980.00	87.44	179.32	10297.84	9684.67	-9682.93	-185.90	4.49	451671.77	715033.06	N 32 14 25.70	W 103 46 17.53
	20074.00	90.20	180.71	10299.78	9778.63	-9776.89	-185.93	3.29	451577.81	715033.03	N 32 14 24.77	W 103 46 17.54
	20169.00	90.33	179.78	10299.34	9873.62	-9871.89	-186.33	0.99	451482.81	715032.63	N 32 14 23.83	W 103 46 17.55
	20263.00	89.37	179.44	10299.59	9967.59	-9965.89	-185.89	1.08	451388.82	715033.27	N 32 14 22.90	W 103 46 17.55
	20358.00	90.30	179.68	10299.86	10062.56	-10060.88	-184.96	1.01	451293.83	715034.00	N 32 14 21.96	W 103 46 17.54
100' FSL Crossing	*20387.43*	*89.92*	*179.59*	*10299.84*	*10071.99*	*-10070.31*	*-184.90*	*4.16*	*451284.40*	*715034.06*	*N 32 14 21.87*	*W 103 46 17.54*
Final Survey	20403.00	88.48	179.24	10300.34	10107.54	-10105.88	-184.54	4.16	451248.84	715034.42	N 32 14 21.52	W 103 46 17.54
Proj. To TD	20447.00	88.48	179.24	10301.50	10151.51	-10149.86	-183.96	0.00	451204.86	715035.00	N 32 14 21.08	W 103 46 17.54

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 2H Gyro+MWD 0 to 20447
	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 2H Gyro+MWD 0 to 20447
	1	26.500	576.870	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Platinum MDP1 34-3 Federal Com 2H
	1	576.870	6774.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS	Original Borehole / Oxy Platinum MDP1 34-3 Federal Com 2H
	1	6774.000	6963.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Platinum MDP1 34-3 Federal Com 2H
	1	6963.000	9370.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS	Original Borehole / Oxy Platinum MDP1 34-3 Federal Com 2H
	1	9370.000	9763.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Platinum MDP1 34-3 Federal Com 2H
	1	9763.000	20447.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS	Original Borehole / Oxy Platinum MDP1 34-3 Federal Com 2H

Schlumberger

Oxy

Borehole:	Well:	Field:	Structure:
Original Borehole	Oxy Platinum MDP1 34-3 Federal Com 2H	NM Eddy County (NAD 83)	Oxy Platinum MDP1 34-3 Federal Com 2H

Gravity & Magnetic Parameters						Surface Location	NAD83 New Mexico State Plane, Eastern Zone, US Feet					Miscellaneous			
Model:	IFR1	Dip:	59.894°	Date:	25-Dec-2018	Lat:	N 32 16 1.58	Northing:	461354.13fUS	Grid Conv:	0.3003°	Slot:	Oxy Platinum MDP1 34-3 Federal Com 2H	TVD Ref:	RKB - 26.5'(3458.7ft above MSL)
MagDec:	6.839°	FS:	48028nT	Gravity FS:	998.447mgn (9.80665 Based)	Lon:	W 103 46 14.79	Easting:	715318.565fUS	Scale Fact:	0.99994372	Plan:	Oxy Platinum MDP1 34-3 Federal Com 2H Gyro+MWD 0 to 20447		

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	576.87	0.93	241.24	576.85	1.96	-1.95	-1.02	0.30
KOP Actual	9763.00	11.23	222.85	9728.69	-238.94	241.59	-159.52	2.82
Bone Spring 2nd Intersection	9848.43	14.28	218.38	9812.00	-224.38	227.22	-171.72	3.75
Exit Target Box	15011.72	89.44	175.67	10289.12	4721.43	-4719.75	-140.81	1.83
Enter Target Box	15401.72	90.39	183.06	10296.36	5110.91	-5109.31	-139.17	0.70
100' FSL Crossing	20367.43	89.92	179.59	10299.84	10071.99	-10070.31	-184.90	4.16
Final Survey	20403.00	88.48	179.24	10300.34	10107.54	-10105.88	-184.54	4.16
Proj. To TD	20447.00	88.48	179.24	10301.50	10151.51	-10149.86	-183.96	0.00