

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

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.

<u>Name & Title of Surveyor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
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

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)
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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 MDPI 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

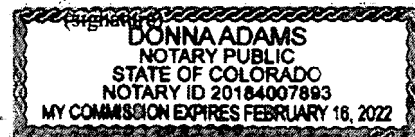
Subscribed and Sworn to before me this 24th day of January (month) 2019 (yr)

My Commission expires:

2-16-2022

Donna Adams
Notary Public

Adams County Colorado
(County State)



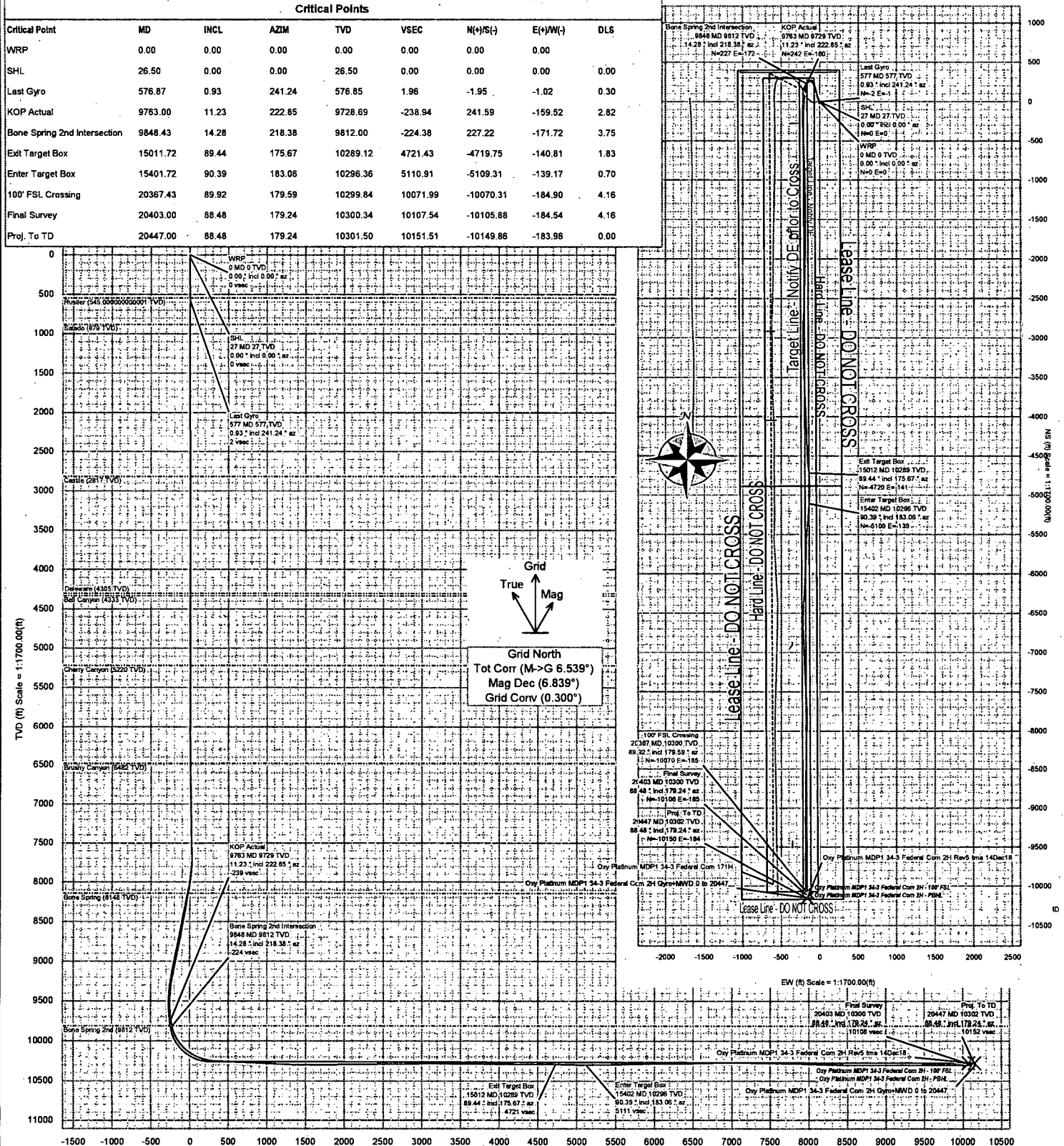
Schlumberger

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				Miscellaneous			
Model: IFR1	Dip: 89.934°	Date: 25-Dec-2018		Lat: N 32 16 1.80	Northing: 481354.13RUS	Grid Conv: 0.3003°		Oxy Platinum	TVD Ref: RKB - 26.5' (3450.7ft above MSL)		
MagDec: 6.839°	FS: 480.20-T	Gravity FS: 998.447mg (9.80665 Based)		Lon: W 103 45 14.78	Eastings: 715216.96RUS	Scale Fact: 0.99954372		Slot: MDP1 34-3			
								Plan: Oxy Platinum MDP1 34-3 Federal Com 2H	Oxy Platinum MDP1 34-3 Federal Com 2H	Oxy Platinum MDP1 34-3 Federal Com 2H	Oxy Platinum MDP1 34-3 Federal Com 2H





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 ° / 10810.605 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 481354.130 RUS, E 715218.950 RUS	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 (RUS)	Easting (RUS)	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	0.58	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	0.05	0.39	461353.29	715219.90	N 32 16	1.50 W 103 46 14.76
	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
	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	715216.56	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	181.96	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	715218.63	N 32 16	1.45 W 103 46 14.78
	6017.00	0.27	158.03	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	158.03	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	165.73	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	0.60	198.76	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
	7288.00	0.62	187.14	7287.87	19.40	-19.38	-1.30	0.25	461334.75	715217.65	N 32 16	1.31 W 103 46 14.79
	7384.00	0.78	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
	7479.00	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	3.78	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

Comments	MD (ft)	Incl (°)	Azin Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ft)	Easting (ft)	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	-194.89	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	-105.94	2.63	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	10.61	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	241.59	-159.52	2.82	461595.44	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	461436.60	715000.87	N 32 16 2.33 W	103 46 17.31
	10255.00	56.14	178.87	10138.65	-5.95	9.55	-219.66	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 16 0.19 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 16 0.02 W	103 46 17.39
	10634.00	87.97	177.56	10252.36	349.85	-346.31	-218.84	6.99	461007.84	714990.13	N 32 16 0.09 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 16 0.07 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 16 0.06 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 16 0.05 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 16 0.04 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 16 0.03 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 16 0.02 W	103 46 17.14
	11280.00	87.27	178.50	10279.83	994.34	-991.28	-195.20	0.64	460362.91	715023.76	N 32 16 0.01 W	103 46 17.11
	11375.00	87.48	178.91	10284.18	1089.17	-1086.15	-193.06	0.48	460268.04	715026.90	N 32 16 0.00 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 16 0.00 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 16 0.00 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 16 0.00 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 16 0.00 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 16 0.00 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 16 0.00 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 16 0.00 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 16 0.00 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 16 0.00 W	103 46 17.12
	12320.00	90.50	181.41	10291.69	2033.70	-2030.82	-192.36	1.17	459323.43	715026.60	N 32 16 0.00 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 16 0.00 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 16 0.00 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 16 0.00 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 16 0.00 W	103 46 17.27
	12793.00	90.61	180.91	10285.90	2506.64	-2503.64	-204.15	1.05	458850.64	715014.81	N 32 16 0.00 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 16 0.00 W	103 46 17.34
	12982.00	89.92	182.47	10285.54	2696.62	-2693.55	-209.60	0.90	458661.74	715009.36	N 32 16 0.00 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 16 0.00 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 16 0.00 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 16 0.00 W	103 46 17.52
	13366.00	90.20	177.69	10278.83	3169.30	-3166.20	-215.32	1.20	458188.12	715003.65	N 32 16 0.00 W	103 46 17.48
	13456.00	88.92	178.35	10279.55	3263.17	-3260.13	-212.07	1.53	458094.19	715006.89	N 32 16 0.00 W	103 46 17.44
	13545.00	88.89	178.66	10281.37	3358.07	-3355.08	-209.59	0.33	457999.24	715009.37	N 32 16 0.00 W	103 46 17.42
	13645.00	89.95	178.07	10282.33	3452.96	-3450.04	-206.88	1.28	457904.29	715012.08	N 32 16 0.00 W	103 46 17.39
	13740.00	89.20	176.82	10283.03	3547.78	-3544.94	-202.64	1.53	457809.40	715016.32	N 32 16 0.00 W	103 46 17.35
	13835.00	89.82	178.03	10283.84	3641.60	-3638.84	-198.42	1.45	457715.50	715020.54	N 32 16 0.00 W	103 46 17.31
	13929.00	89.68	177.72	10284.25	3736.46	-3733.77	-194.90	0.36	457620.57	715024.06	N 32 16 0.00 W	103 46 17.27
	14024.00	89.65	177.19	10284.80	3830.29	-3827.68	-190.73	0.56	457526.67	715028.24	N 32 16 0.00 W	103 46 17.23
	14118.00	89.82	177.86	10285.24	3925.12	-3922.59	-186.62	0.73	457431.77	715032.34	N 32 16 0.00 W	103 46 17.19
	14213.00	89.82	177.54	10285.54	4019.91	-4017.47	-181.98	1.39	457336.89	715036.98	N 32 16 0.00 W	103 46 17.14
	14308.00	89.16	177.71	10286.37	4113.70	-4111.35	-177.27	1.43	457243.02	715041.69	N 32 16 0.00 W	103 46 17.09
	14402.00	89.09	179.07	10287.83	4208.59	-4206.30	-174.60	1.43	457148.08	715044.36	N 32 16 0.00 W	103 46 17.07
	14497.00	89.78	178.07	10288.75	4302.51	-4300.26	-172.25	1.29	457054.12	715046.71	N 32 16 0.00 W	103 46 17.04
	14591.00	89.78	175.88	10289.12	4397.27	-4395.12	-167.24	2.31	456959.26	715051.72	N 32 16 0.00 W	103 46 16.99
	14686.00	89.95	175.95	10289.34	4490.91	-4488.88	-160.54	0.20	456865.51	715058.42	N 32 16 0.00 W	103 46 16.92
	14780.00	90.44	174.68	10289.02	4585.45	-4583.56	-152.79	1.43	456770.83	715066.17	N 32 16 0.00 W	103 46 16.83
	14875.00	89.78	174.96	10288.84	4678.91	-4677.18	-144.30	0.76	456677.22	715074.66	N 32 16 0.00 W	103 46 16.74
Exit Target Box	15011.72	89.44	175.67	10289.12	4771.43	-4771.75	-140.81	1.83	456583.65	715078.15	N 32 16 0.00 W	103 46 16.70
	15064.00	89.03	176.53	10289.82	4863.72	-4863.79	-133.25	1.83	456488.62	715081.71	N 32 16 0.00 W	103 46 16.66
	15158.00	88.10	178.76	10292.18	4957.23	-4957.73	-133.29	2.57	456394.69	715085.67	N 32 16 0.00 W	103 46 16.63
	15252.00	88.06	181.12	10293.33	5050.22	-5050.66	-136.52	2.85	456297.76	715082.43	N 32 16 0.00 W	103 46 16.67
Enter Target Box	15349.00	90.33	182.70	10296.69	5143.91	-5143.91	-139.17	0.70	456203.90	715079.78	N 32 16 0.00 W	103 46 16.71

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 ° ' '')
	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 37.88	W 103 46 17.37
	18846.00	89.55	181.31	10301.46	8550.88	-8549.06	-180.80	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	90.16	179.36	10299.00	9400.75	-9398.97	-185.22	0.29	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	10298.78	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	10298.34	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	10298.59	9967.59	-9965.89	-185.69	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	20367.43	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	-10105.86	-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	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

...Original Borehole/Oxy Platinum MDP1 34-3 Federal Com 2H Gyro+MWD 0 to 20447