

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)

**NM OIL CONSERVATION
ARTESIA DISTRICT**

DEC 10 2018

November 21, 2018

OXY USA Inc.
P.O. BOX 2289
Houston, TX 77252

30-015-45076

RECEIVED

28, 23S, 31E, Eddy NM
N 32.26930 W 103.78900

Re:

CLIENT: OXY USA Inc.
WELL: Iridium MDP1 28-21 Fed Com 171H S T01
FIELD: Wolfcamp

RIG: H&P 556
COUNTY: Eddy
API NO: 30-015-450760000
JOB NO: 18MLD3523

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>
Chris Heimann FE	Iridium MDP1 28-21 Fed Com 171H ST01 Side Track	10718.00 Ft to 21596.00 Ft	September 21, 2018 to September 27, 2018	TelePacer/SlimPulse Third Party Corrected

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

Mike Stephens
Field Service Manager

Schlumberger-Private

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)

Well Reference:
28, 23S, 31E, Eddy NM
N 32.26930 W 103.78900

I, Chris Heimann certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of September 21, 2018 through September 27, 2018, conduct or supervise the taking of the TelePacer/SlimPulse & Third Party Corrected surveys from a depth of 10718.00 feet to a depth of 21596.00 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 Iridium MDPI 28-21 Fed Com 171H ST01 Well (Side Track) API No. 30-015-450760000 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 Chris Heimann
Chris Heimann
FE

Subscribed and Sworn to before me this 21st day of November (month) 2018 (yr)

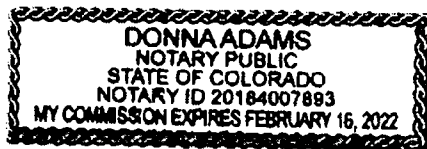
My Commission expires:

2-16-2022

D. Adams
Notary Public

Adams County Colorado
(County State)

(signature)



Schlumberger

Iridium MDP1 28-21 Federal Com 171H ST01 MWD 0-21640' MD Survey Geodetic Report (Def Survey)



Report Date: September 28, 2018 - 11:35 AM
Client: OXY
Field: NM Eddy County (NAD 83)
Structure / Slot: Oxy Iridium MDP1 28-21 Federal Com 171H / Iridium MDP1 28-21 Federal Com 171H
Well: Iridium MDP1 28-21 Federal Com 171H
Borehole: ST01
UWI / API#: Unknown / 18MLD3523
Survey Name: Iridium MDP1 28-21 Federal Com 171H ST01 MWD 0-21640' MD
Survey Date: September 19, 2018
Tort / AHD / DDI / ERD Ratio: 312.474' / 10815.470' / 6.804' / 0.943
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 16' 9.70294", W 103° 47' 20.88803"
Location Grid N/E Y/X: N 482153.450 RUS, E 709554.680 RUS
CRS Grid Convergence Angle: 0.2906°
Grid Scale Factor: 0.9999415
Version / Patch: 2.10.740.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 358.270° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB=30'
TVD Reference Elevation: 3399.700 ft above MSL
Seabed / Ground Elevation: 3389.700 ft above MSL
Magnetic Declination: 6.893°
Total Gravity Field Strength: 998.4510mg (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 48011.136 nT
Magnetic Dip Angle: 80.010°
Declination Date: September 19, 2018
Magnetic Declination Model: HDGM 2018
North Reference: Grid North
Grid Convergence Used: 0.2906°
Total Corr Mag North->Grid: 6.8019°
North:
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azth Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S)	Longitude (E/W)
RKB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	482153.45	709554.68	N 32 16	9.70 W 103 47 20.70
SHL	30.00	0.00	0.00	30.00	0.00	0.00	0.00	0.00	482153.45	709554.68	N 32 16	9.70 W 103 47 20.70
	100.18	0.54	112.47	100.16	-0.14	-0.13	0.31	0.77	482153.32	709554.99	N 32 16	9.70 W 103 47 20.69
	156.06	0.48	122.54	156.06	-0.38	-0.35	0.75	0.19	482153.10	709555.43	N 32 16	9.70 W 103 47 20.69
	241.73	0.39	122.72	241.72	-0.74	-0.70	1.29	0.11	482152.75	709555.97	N 32 16	9.70 W 103 47 20.68
	334.45	0.33	141.95	334.44	-1.14	-1.08	1.72	0.14	482152.37	709556.40	N 32 16	9.69 W 103 47 20.68
	429.01	0.33	162.48	429.00	-1.62	-1.56	1.97	0.12	482151.89	709556.85	N 32 16	9.69 W 103 47 20.68
	523.82	0.41	202.70	523.81	-2.19	-2.13	1.93	0.28	482151.32	709556.81	N 32 16	9.68 W 103 47 20.68
Last Gyro	596.57	0.53	205.68	596.56	-2.72	-2.68	1.68	0.17	482150.77	709556.38	N 32 16	9.68 W 103 47 20.68
	685.00	0.15	229.44	684.99	-3.06	-3.02	1.47	0.58	482150.43	709556.15	N 32 16	9.67 W 103 47 20.68
	757.00	0.10	247.87	756.99	-3.17	-3.13	1.31	0.07	482150.32	709555.99	N 32 16	9.67 W 103 47 20.68
	848.00	0.06	125.28	847.99	-3.22	-3.18	1.27	0.16	482150.27	709555.95	N 32 16	9.67 W 103 47 20.68
	1031.00	0.07	144.99	1030.98	-3.37	-3.33	1.42	0.01	482150.12	709556.10	N 32 16	9.67 W 103 47 20.68
	1211.00	0.07	49.59	1210.98	-3.40	-3.35	1.56	0.06	482150.10	709556.24	N 32 16	9.67 W 103 47 20.68
	1302.00	0.02	120.93	1301.98	-3.37	-3.32	1.62	0.07	482150.13	709556.30	N 32 16	9.67 W 103 47 20.68
	1393.00	0.02	3.08	1392.98	-3.36	-3.32	1.63	0.04	482150.14	709556.31	N 32 16	9.67 W 103 47 20.68
	1487.00	0.06	75.50	1486.98	-3.34	-3.29	1.68	0.06	482150.18	709556.36	N 32 16	9.67 W 103 47 20.68
	1582.00	0.06	83.60	1581.98	-3.32	-3.27	1.78	0.01	482150.18	709556.48	N 32 16	9.67 W 103 47 20.68
	1676.00	0.06	84.43	1675.98	-3.31	-3.26	1.68	0.00	482150.19	709556.56	N 32 16	9.67 W 103 47 20.68
	1771.00	0.02	206.24	1770.98	-3.32	-3.27	1.92	0.08	482150.18	709556.60	N 32 16	9.67 W 103 47 20.68
	1865.00	0.04	256.21	1864.98	-3.35	-3.29	1.88	0.03	482150.16	709556.56	N 32 16	9.67 W 103 47 20.68
	1960.00	0.02	245.47	1959.98	-3.36	-3.31	1.63	0.02	482150.14	709556.51	N 32 16	9.67 W 103 47 20.68
	2149.00	0.07	200.03	2148.98	-3.48	-3.43	1.78	0.03	482150.02	709556.44	N 32 16	9.67 W 103 47 20.68
	2244.00	0.04	244.82	2243.98	-3.55	-3.50	1.71	0.05	482149.95	709556.39	N 32 16	9.67 W 103 47 20.68
	2338.00	0.02	268.45	2337.98	-3.56	-3.51	1.67	0.02	482149.94	709556.35	N 32 16	9.67 W 103 47 20.68
	2433.00	0.06	299.52	2432.98	-3.53	-3.49	1.61	0.05	482149.96	709556.29	N 32 16	9.67 W 103 47 20.68
	2527.00	0.06	358.11	2526.98	-3.46	-3.41	1.56	0.06	482150.04	709556.24	N 32 16	9.67 W 103 47 20.68
	2622.00	0.04	48.53	2621.98	-3.39	-3.34	1.59	0.05	482150.11	709556.27	N 32 16	9.67 W 103 47 20.68
	2717.00	0.02	265.76	2716.98	-3.37	-3.32	1.59	0.06	482150.13	709556.27	N 32 16	9.67 W 103 47 20.68
	2906.00	0.02	150.74	2905.98	-3.40	-3.35	1.58	0.02	482150.10	709556.26	N 32 16	9.67 W 103 47 20.68
	3001.00	0.02	194.40	3000.98	-3.43	-3.38	1.58	0.02	482150.07	709556.26	N 32 16	9.67 W 103 47 20.68
	3191.00	0.04	125.96	3190.98	-3.50	-3.45	1.63	0.02	482150.00	709556.31	N 32 16	9.67 W 103 47 20.68
	3285.00	0.32	285.47	3284.98	-3.44	-3.40	1.40	0.38	482150.05	709556.08	N 32 16	9.67 W 103 47 20.68
	3380.00	0.21	146.46	3379.98	-3.51	-3.48	1.24	0.52	482149.97	709555.92	N 32 16	9.67 W 103 47 20.68
	3475.00	0.26	145.66	3474.98	-3.84	-3.80	1.46	0.05	482149.65	709556.14	N 32 16	9.67 W 103 47 20.68
	3569.00	0.12	196.53	3568.98	-4.12	-4.07	1.55	0.22	482149.38	709556.23	N 32 16	9.66 W 103 47 20.68
	3759.00	0.23	224.87	3758.98	-4.57	-4.53	1.23	0.07	482148.92	709555.91	N 32 16	9.66 W 103 47 20.68
	3948.00	0.07	194.38	3947.98	-4.94	-4.91	0.93	0.09	482148.54	709555.81	N 32 16	9.65 W 103 47 20.69
	4146.00	0.12	232.69	4145.98	-5.18	-5.16	0.73	0.04	482148.30	709555.41	N 32 16	9.65 W 103 47 20.69
	4336.00	0.03	87.91	4335.98	-5.29	-5.27	0.63	0.08	482148.18	709555.31	N 32 16	9.65 W 103 47 20.69
	4431.00	0.08	253.04	4430.98	-5.31	-5.29	0.59	0.12	482148.16	709555.27	N 32 16	9.65 W 103 47 20.69
	4525.00	0.09	157.14	4524.98	-5.39	-5.38	0.55	0.13	482148.07	709555.23	N 32 16	9.65 W 103 47 20.69
	4620.00	0.23	113.05	4619.98	-5.54	-5.52	0.76	0.19	482147.93	709555.44	N 32 16	9.65 W 103 47 20.69
	4714.00	0.06	56.08	4713.98	-5.60	-5.57	0.97	0.22	482147.86	709555.65	N 32 16	9.65 W 103 47 20.69
	4809.00	0.06	120.47	4808.98	-5.60	-5.57	1.08	0.07	482147.86	709555.74	N 32 16	9.65 W 103 47 20.69
	4904.00	0.12	282.00	4903.98	-5.80	-5.57	1.00	0.19	482147.88	709555.68	N 32 16	9.65 W 103 47 20.69
	4998.00	0.06	236.25	4997.98	-5.80	-5.58	0.88	0.09	482147.87	709555.54	N 32 16	9.65 W 103 47 20.69
	5093.00	0.03	300.61	5092.98	-5.61	-5.59	0.80	0.06	482147.86	709555.48	N 32 16	9.65 W 103 47 20.69
	5187.00	0.06	326.11	5186.98	-5.56	-5.54	0.75	0.04	482147.91	709555.43	N 32 16	9.65 W 103 47 20.69
	5376.00	0.07	33.52	5375.98	-5.38	-5.36	0.76	0.04	482148.09	709555.44	N 32 16	9.65 W 103 47 20.69
	5471.00	0.14	351.33	5470.98	-5.22	-5.20	0.78	0.11	482148.25	709555.48	N 32 16	9.65 W 103 47 20.69
	5565.00	0.16	277.36	5564.98	-5.08	-5.07	0.63	0.19	482148.38	709555.31	N 32 16	9.65 W 103 47 20.69
	5659.00	0.23	175.50	5658.98	-5.25	-5.24	0.51	0.33	482148.21	709555.19	N 32 16	9.65 W 103 47 20.69
	5754.00	0.17	87.78	5753.98	-5.44	-5.42	0.67	0.30	482148.03	709555.35	N 32 16	9.65 W 103 47 20.69
	5849.00	0.13	303.62	5848.98	-5.38	-5.36	0.72	0.30	482148.09	709555.40	N 32 16	9.65 W 103 47 20.69
	5943.00	0.03	25.81	5942.98	-5.29	-5.28	0.64	0.14	482148.17	709555.32	N 32 16	9.65 W 103 47 20.69
	6038.00	0.03	330.52	6037.98	-5.25	-5.23	0.64	0.03	482148.22	709555.32	N 32 16	9.65 W 103 47 20.69
	6227.00	0.09	237.18	6226.98	-5.28	-5.27	0.49	0.05	482148.18	709555.17	N 32 16	9.65 W 103 47 20.69
	6322.00	0.09	226.22	6321.98	-5.37	-5.36	0.37	0.02	482148.09	709555.05	N 32 16	9.65 W 103 47 20.69
	6416.00	0.07	327.55	6415.98	-5.37	-5.37	0.29	0.13	482148.08	709554.97	N 32 16	9.65 W 103 47 20.69
	6511.00	0.05	143.36	6510.98	-5.36	-5.35	0.28	0.13	482148.10	709554.96	N 32 16	9.65 W 103 47 20.70
	6606.00	0.11	157.34	6605.98	-5.48	-5.47	0.34	0.07	482147.98	709555.02	N 32 16	9.65 W 103 47 20.69
	6701.00	0.18	189.64	6700.98	-5.69	-5.68	0.38	0.09	482147.77	709555.04	N 32 16	9.65 W 103 47 20.69
	6795.00	0.30	197.20	6794.98	-6.05	-6.05	0.26	0.15	482147.40	709554.94	N 32 16	9.64 W 103 47 20.70
	6985.00	0.50	205.06	6984.97	-7.26	-7.27	-0.24	0.11	482146.18	709554.44	N 32 16	9.63 W 103 47 20.70

...Iridium MDP1 28-21 Federal Com 171HST01Iridium MDP1 28-21 Federal Com 171H ST01 MWD 0-21640' MD

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	15678.00	91.58	1.93	11457.15	4163.18	4157.78	-242.81	3.87	486310.98	709311.89	N 32 16 50.88	W 103 47 23.28
	15772.00	91.97	0.08	11454.25	4257.04	4251.70	-241.16	2.01	486404.89	709313.54	N 32 16 51.79	W 103 47 23.26
	15887.00	92.55	359.12	11450.51	4351.94	4348.82	-241.82	1.18	486499.80	709312.88	N 32 16 52.72	W 103 47 23.26
	15961.00	93.34	359.06	11445.68	4445.80	4440.48	-243.31	0.84	486593.66	709311.38	N 32 16 53.65	W 103 47 23.27
	16056.00	92.38	359.02	11440.94	4540.67	4535.35	-244.90	1.01	486688.52	709309.79	N 32 16 54.59	W 103 47 23.28
	16245.00	92.28	359.14	11433.25	4729.50	4724.17	-247.93	0.08	486877.33	709308.76	N 32 16 56.46	W 103 47 23.31
	16340.00	90.49	358.87	11430.98	4824.48	4819.12	-249.75	1.95	486972.28	709304.95	N 32 16 57.40	W 103 47 23.32
	16435.00	88.85	355.87	11433.18	4919.40	4913.96	-254.27	4.83	487067.11	709300.43	N 32 16 58.34	W 103 47 23.37
	16530.00	88.81	355.31	11438.42	5014.15	5008.53	-261.56	0.59	487181.68	709293.13	N 32 16 59.28	W 103 47 23.45
	16624.00	88.39	356.72	11442.35	5107.99	5102.22	-268.09	2.25	487255.38	709286.61	N 32 17 0.20	W 103 47 23.52
	16719.00	88.46	357.41	11444.98	5202.93	5197.06	-272.95	0.73	487350.19	709281.75	N 32 17 1.14	W 103 47 23.57
	16814.00	89.49	357.17	11446.66	5297.90	5291.93	-277.44	1.11	487445.06	709277.26	N 32 17 2.08	W 103 47 23.62
	16909.00	88.22	356.31	11448.56	5392.84	5386.78	-282.84	1.61	487539.88	709271.86	N 32 17 3.02	W 103 47 23.67
	17003.00	90.42	356.98	11449.68	5486.79	5480.53	-288.34	2.45	487633.70	709266.36	N 32 17 3.95	W 103 47 23.73
	17098.00	90.28	356.83	11449.10	5581.78	5575.44	-293.47	0.22	487728.56	709261.23	N 32 17 4.89	W 103 47 23.79
	17193.00	90.04	356.95	11448.83	5676.74	5670.30	-298.63	0.28	487823.41	709256.07	N 32 17 5.83	W 103 47 23.84
	17287.00	89.42	357.29	11449.28	5770.71	5764.18	-303.35	0.75	487917.29	709251.35	N 32 17 6.75	W 103 47 23.89
	17382.00	90.22	357.90	11449.57	5865.71	5859.10	-307.33	1.06	488012.19	709247.38	N 32 17 7.69	W 103 47 23.93
	17477.00	89.29	358.15	11449.98	5960.70	5954.04	-310.61	1.01	488107.13	709244.09	N 32 17 8.63	W 103 47 23.96
	17572.00	89.77	358.82	11450.78	6055.69	6049.02	-312.29	1.83	488202.10	709242.41	N 32 17 9.57	W 103 47 23.98
	17667.00	87.70	0.82	11452.88	6150.81	6143.99	-311.93	2.34	488297.07	709242.77	N 32 17 10.51	W 103 47 23.97
	17761.00	89.11	1.18	11455.47	6244.47	6237.94	-310.45	1.81	488391.01	709244.25	N 32 17 11.44	W 103 47 23.95
	17856.00	89.53	1.70	11456.60	6339.31	6332.90	-308.06	0.70	488485.97	709246.84	N 32 17 12.38	W 103 47 23.91
	17951.00	89.97	0.59	11457.02	6434.19	6427.88	-306.17	1.28	488580.94	709248.53	N 32 17 13.32	W 103 47 23.88
	18046.00	88.81	0.26	11458.03	6529.12	6522.87	-305.46	1.27	488675.92	709249.24	N 32 17 14.26	W 103 47 23.87
	18140.00	88.70	359.98	11460.07	6623.05	6616.85	-305.26	0.32	488769.90	709249.43	N 32 17 15.19	W 103 47 23.88
	18235.00	89.29	0.06	11461.74	6717.99	6711.83	-305.23	0.63	488864.88	709249.47	N 32 17 16.13	W 103 47 23.88
	18330.00	89.70	0.89	11462.57	6812.92	6806.83	-304.81	0.79	488959.88	709250.09	N 32 17 17.07	W 103 47 23.84
	18425.00	90.01	0.58	11462.81	6907.84	6901.82	-303.56	0.35	489054.85	709251.14	N 32 17 18.01	W 103 47 23.83
	18519.00	92.14	2.12	11461.05	7001.68	6995.77	-301.34	2.80	489148.79	709253.38	N 32 17 18.94	W 103 47 23.79
	18609.00	89.87	2.91	11457.55	7191.11	7185.54	-293.01	1.22	489338.56	709261.69	N 32 17 20.82	W 103 47 23.69
	18696.00	90.01	1.76	11457.58	7379.63	7374.38	-285.31	0.61	489527.38	709269.39	N 32 17 22.69	W 103 47 23.59
	18993.00	90.01	0.73	11457.57	7474.50	7469.36	-283.24	1.08	489622.35	709271.46	N 32 17 23.63	W 103 47 23.56
	19088.00	89.87	359.84	11457.67	7569.45	7564.35	-282.94	1.16	489717.35	709271.76	N 32 17 24.57	W 103 47 23.55
	19278.00	89.05	357.53	11459.48	7759.42	7754.28	-287.63	1.19	489807.26	709267.07	N 32 17 26.45	W 103 47 23.59
	19372.00	89.22	356.88	11460.88	7853.39	7848.14	-282.37	0.92	470001.12	709262.32	N 32 17 27.37	W 103 47 23.64
	19467.00	89.22	355.93	11462.17	7948.33	7942.94	-288.50	0.79	470095.91	709258.20	N 32 17 28.31	W 103 47 23.71
	19562.00	90.83	357.75	11462.29	8043.29	8037.79	-303.73	2.42	470190.75	709250.97	N 32 17 29.25	W 103 47 23.76
	19751.00	89.80	356.89	11461.92	8232.29	8226.69	-309.60	0.74	470379.64	709245.10	N 32 17 31.12	W 103 47 23.82
	19846.00	91.14	358.15	11461.30	8327.28	8321.65	-312.22	1.72	470474.60	709242.48	N 32 17 32.06	W 103 47 23.84
	19941.00	90.08	357.46	11460.29	8422.27	8416.57	-315.86	1.33	470569.51	709238.84	N 32 17 33.00	W 103 47 23.88
	20130.00	91.38	356.31	11457.88	8611.19	8605.27	-326.13	0.92	470758.20	709228.57	N 32 17 34.87	W 103 47 23.99
	20225.00	89.91	355.97	11456.81	8706.12	8700.05	-332.52	1.59	470852.97	709222.18	N 32 17 35.81	W 103 47 24.06
	20320.00	89.29	356.22	11457.48	8801.05	8794.82	-338.99	0.70	470947.74	709215.71	N 32 17 36.74	W 103 47 24.13
	20415.00	88.43	356.61	11459.37	8895.98	8889.82	-344.93	0.99	471042.53	709209.77	N 32 17 37.68	W 103 47 24.19
	20500.00	87.78	357.84	11462.18	8990.92	8984.47	-349.04	1.64	471127.38	709205.66	N 32 17 38.52	W 103 47 24.23
	20510.00	87.70	357.99	11462.57	8990.91	8984.45	-349.40	1.64	471137.36	709205.30	N 32 17 38.62	W 103 47 24.24
	20804.00	88.53	359.60	11465.87	9084.85	9078.38	-351.38	1.93	471231.28	709203.32	N 32 17 39.55	W 103 47 24.25
	20899.00	89.80	0.95	11467.22	9179.77	9173.36	-350.92	1.81	471326.26	709203.78	N 32 17 40.49	W 103 47 24.24
	20730.00	89.53	1.10	11467.45	9210.74	9204.36	-350.37	0.53	471357.25	709204.33	N 32 17 40.80	W 103 47 24.24
	20889.00	89.15	1.85	11469.29	9369.48	9363.29	-346.28	0.53	471518.17	709208.42	N 32 17 42.37	W 103 47 24.18
	21078.00	89.25	4.45	11471.93	9557.76	9551.97	-335.90	1.38	471704.84	709218.80	N 32 17 44.24	W 103 47 24.05
	21268.00	90.52	4.37	11472.31	9746.68	9741.40	-321.29	0.67	471894.26	709233.41	N 32 17 46.11	W 103 47 23.87
	21363.00	92.21	4.55	11470.05	9841.08	9836.09	-313.80	1.79	471988.94	709240.80	N 32 17 47.05	W 103 47 23.77
	21458.00	89.91	2.40	11468.29	9935.68	9930.88	-308.15	3.31	472083.73	709246.55	N 32 17 47.98	W 103 47 23.70
	21553.00	89.18	1.82	11469.04	10030.45	10025.82	-304.82	1.12	472178.66	709249.88	N 32 17 48.92	W 103 47 23.66
	21560.00	89.30	1.82	11469.14	10037.44	10032.82	-304.62	1.77	472185.66	709250.08	N 32 17 48.99	W 103 47 23.65
	21586.00	89.84	1.81	11469.37	10073.38	10068.80	-303.60	1.77	472221.84	709251.09	N 32 17 49.35	W 103 47 23.84
	21640.00	89.94	1.81	11469.42	10117.30	10112.78	-302.37	0.00	472265.82	709252.33	N 32 17 49.78	W 103 47 23.82

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	30.000	1/68.425	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Pilot Hole / Oxy Iridium MDP1 28-21 Federal Com 171H
	1	30.000	30.000	Act Stns	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Gyro+MWD IFR 0-13325 MD
	1	30.000	596.570	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Pilot Hole / Oxy Iridium MDP1 28-21 Federal Com 171H
	1	596.570	10633.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS	Gyro+MWD IFR 0-13325 MD
	1	10633.000	21640.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS	Pilot Hole / Oxy Iridium MDP1 28-21 Federal Com 171H
								ST01 / Iridium MDP1 28-21 Federal Com 171H ST01 MWD 0-

...Iridium MDP1 28-21 Federal Com 171HST01Iridium MDP1 28-21 Federal Com 171H ST01 MWD 0-21640MD

Borehole:	Well:	Field:	Structure:
ST01	Iridium MDP1 28-21 Federal Com 171H	NM Eddy County (NAD 83)	Oxy Iridium MDP1 28-21 Federal Com 171H

Gravity & Magnetic Parameters				Surface Location				Miscellaneous			
Model:	MDGM 2018	Dip:	60.01°	Date:	19-Sep-2018	Lat:	N 22 18 8.70	Northing:	482183.488US	Grid Conv:	0.2908°
MagDec:	6.893°	FS:	48011.136nT	Gravity FS:	998.481mgal (8.80665 Based)	Lon:	W 103 47 20.70	Easting:	708654.828US	Scale Fact:	0.9999416
								Iridium MDP1 28-21 Federal Com 171H ST01 MWD 0-21640' MWD			

Critical Points									
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS	
Tie-In	10633.00	6.23	205.41	10608.93	-265.10	-269.47	-140.82		
KOP Actual	10660.00	6.57	206.31	10635.76	-267.77	-272.18	-142.13	1.31	
Wolfcamp Intersection	11449.00	51.17	350.59	11334.94	-19.79	-26.87	-233.91	5.60	
Exit Target Box 1	12280.00	90.47	6.67	11458.82	777.78	772.15	-198.18	1.40	
Enter Target Box 1	13970.00	89.78	353.29	11436.74	2462.37	2457.22	-207.67	2.15	
Exit Target Box 2	20500.00	87.78	357.84	11462.18	8980.92	8974.47	-349.04	1.64	
Enter Target Box 2	20730.00	89.53	1.10	11467.45	9210.74	9204.36	-350.37	0.53	
100' FNL Cross	21560.00	89.30	1.62	11469.14	10037.44	10032.82	-304.62	1.77	
Final MWD Survey	21596.00	89.94	1.61	11469.37	10073.38	10068.80	-303.60	1.77	
Proj to TD	21640.00	89.94	1.61	11469.42	10117.30	10112.78	-302.37	0.00	

