

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)

Sc ur 'ger

**NM OIL CONSERVATION
ARTESIA DISTRICT**

November 21, 2018

DEC 10 2018

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

30.015-45076

RECEIVED

Re:

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

CLIENT: OXY USA Inc.
WELL: Iridium MDP1 28-21 Federal Com 171H
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>
Balqees Alabdullah FE	Iridium MDP1 28-21 Federal Com 171H Original Hole	665.00 Ft to 13229.00 Ft	August 18, 2018 to September 7, 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

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:

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

I, Balqees Alabdullah certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of August 18, 2018 through September 07, 2018, conduct or supervise the taking of the TelePacer/SlimPulse & Third Party Corrected surveys from a depth of 665.00 feet to a depth of 13229.00 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 Federal Com 171H Well (Original Hole) 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
Balqees Alabdullah
FE

Balqees

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

My Commission expires:

2-16-2022

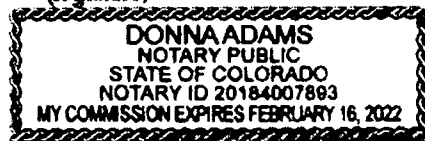
Notary Public

D. Adams

(County State)

Adams County Colorado

(Signature)





Oxy Iridium MDP1 28-21 Federal Com 171H Gyro+MWD IFR 0-13325' MD

Survey Geodetic Report

(Def Survey)

Report Date: September 28, 2018 - 04:07 PM
 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: Pilot Hole
 UWI / API#: Unknown / Unknown
 Survey Name: Oxy Iridium MDP1 28-21 Federal Com 171H Gyro+MWD IFR 0-13325' MD
 Survey Date: August 16, 2018
 Tort / AHD / DDI / ERD Ratio: 68.566 ° / 469.242 ft / 4.496 / 0.035
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 16' 9.70294", W 103° 47' 20.68803"
 Location Grid N/E Y/X: N 462153.450 RUS, E 709554.680 RUS
 CRS Grid Convergence Angle: 0.2806 °
 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: 3369.700 ft above MSL
 Magnetic Declination: 6.901 °
 Total Gravity Field Strength: 998.4510mgn (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 48021.991 nT
 Magnetic Dip Angle: 60.014 °
 Declination Date: August 16, 2018
 Magnetic Declination Model: HDGM 2018
 North Reference: Grid North
 Grid Convergence Used: 0.2806 °
 Total Corr Mag North->Grid: 6.6106 °
 North: Well Head
 Local Coord Referenced To: Well Head

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 ° ' ")
RKB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	462153.45	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	462153.45	709554.68	N 32 16 9.70	W 103 47 20.70
	100.16	0.54	112.47	100.16	-0.14	-0.13	0.31	0.77	462153.32	709554.99	N 32 16 9.70	W 103 47 20.69
	156.08	0.48	122.54	156.08	-0.38	-0.35	0.75	0.19	462153.10	709555.43	N 32 16 9.70	W 103 47 20.68
	241.73	0.39	122.72	241.72	-0.74	-0.70	1.29	0.11	462152.75	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	462152.37	709556.40	N 32 16 9.69	W 103 47 20.68
	429.01	0.33	182.46	429.00	-1.62	-1.56	1.97	0.12	462151.89	709556.85	N 32 16 9.69	W 103 47 20.68
	523.62	0.41	202.70	523.61	-2.19	-2.13	1.93	0.28	462151.32	709556.61	N 32 16 9.68	W 103 47 20.68
	596.57	0.53	205.68	596.56	-2.72	-2.68	1.88	0.17	462150.77	709556.38	N 32 16 9.68	W 103 47 20.68
	665.00	0.15	229.44	664.99	-3.06	-3.02	1.47	0.58	462150.43	709555.95	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	462150.32	709555.99	N 32 16 9.67	W 103 47 20.68
	848.00	0.08	125.28	847.99	-3.22	-3.18	1.27	0.16	462150.27	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	462150.12	709555.10	N 32 16 9.67	W 103 47 20.68
	1211.00	0.07	49.59	1210.98	-3.40	-3.35	1.58	0.06	462150.10	709555.24	N 32 16 9.67	W 103 47 20.68
	1302.00	0.02	120.93	1301.98	-3.37	-3.32	1.82	0.07	462150.13	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	462150.14	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	462150.18	709556.38	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	462150.18	709556.48	N 32 16 9.67	W 103 47 20.68
	1676.00	0.06	84.43	1675.98	-3.31	-3.26	1.88	0.00	462150.19	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	462150.18	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	462150.16	709556.58	N 32 16 9.67	W 103 47 20.68
	1960.00	0.02	245.47	1959.98	-3.36	-3.31	1.83	0.02	462150.14	709556.51	N 32 16 9.67	W 103 47 20.68
	2149.00	0.07	200.03	2148.98	-3.48	-3.43	1.76	0.03	462150.02	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	462149.95	709556.39	N 32 16 9.67	W 103 47 20.68
	2338.00	0.02	268.45	2337.98	-3.58	-3.51	1.67	0.02	462149.94	709556.35	N 32 16 9.67	W 103 47 20.68
	2433.00	0.06	299.52	2432.98	-3.53	-3.49	1.81	0.05	462149.96	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	462150.04	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	462150.11	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	462150.13	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	462150.10	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	462150.07	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	462150.00	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	462150.05	709556.08	N 32 16 9.67	W 103 47 20.68
	3380.00	0.21	148.46	3379.98	-3.51	-3.48	1.24	0.52	462149.97	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	462149.85	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	462149.38	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	462148.92	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	462148.54	709555.61	N 32 16 9.65	W 103 47 20.69
	4148.00	0.12	232.89	4147.98	-5.18	-5.16	0.73	0.04	462148.30	709555.41	N 32 16 9.65	W 103 47 20.69
	4338.00	0.03	87.91	4337.98	-5.29	-5.27	0.83	0.08	462148.18	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	462148.16	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	462148.07	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	462147.93	709555.44	N 32 16 9.65	W 103 47 20.69
	4714.00	0.06	56.08	4713.98	-5.80	-5.57	0.97	0.22	462147.88	709555.85	N 32 16 9.65	W 103 47 20.69
	4809.00	0.08	120.47	4808.98	-5.80	-5.57	1.06	0.07	462147.88	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	462147.88	709555.68	N 32 16 9.65	W 103 47 20.69
	4998.00	0.08	236.25	4997.98	-5.80	-5.58	0.88	0.09	462147.87	709555.54	N 32 16 9.65	W 103 47 20.69
	5093.00	0.03	300.81	5092.98	-5.81	-5.59	0.80	0.06	462147.86	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	462147.91	709555.43	N 32 16 9.65	W 103 47 20.69
	5376.00	0.07	33.52	5375.98	-5.38	-5.38	0.76	0.04	462148.09	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	462148.25	709555.46	N 32 16 9.65	W 103 47 20.69
	5565.00	0.16	277.38	5564.98	-5.08	-5.07	0.83	0.19	462148.38	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	462148.21	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	462148.03	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	462148.09	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	462148.17	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	462148.22	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	462148.18	709555.17	N 32 16 9.65	W 103 47 20.69
	6322.00	0.06	226.22	6321.98	-5.37	-5.36	0.37	0.02	462148.09	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	462148.08	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	462148.10	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	462147.98	709555.02	N 32 16 9.65	W 103 47 20.69
	6701.00	0.16	189.64	6700.98	-5.69	-5.68	0.36	0.09	462147.77	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	462147.40	709554.94	N 32 16 9.64	W 103 47 20.70
	6885.00	0.50	205.06	6884.97	-7.26	-7.27	-0.24	0.11	462146.18	709554.44	N 32 16 9.63	W 103 47 20.70
	7079.00	0.52	193.55	7078.97	-8.04	-8.06	-0.51	0.11	462145.39	709554.17	N 32 16 9.62	W 103 47 20.70
	7269.00	0.85	182.08	7268.95	-10.28	-10.31	-0.78	0.19	462143.15	709553.92	N 32 16 9.60	W 103 47 20.71
	7457.00	1.02	179.45	7456.93	-13.34	-13.37	-0.80	0.09	462140.08	709553.88	N 32 16 9.57	W 103 47 20.71
	7552.00	1.20	190.43	7551.91	-15.16	-15.20	-0.97	0.29	462138.25	709553.71	N 32 16 9.55	W 103 47 20.71
	7646.00	1.17	195.90	7645.89	-17.04	-17.09	-1.41	0.12	462136.36	709553.27	N 32 16 9.53	W 103 47 20.72
	7741.00	1.40	199.22	7740.87	-19.05	-19.12	-2.06	0.25	462134.34	709552.62	N 32 16 9.51	W 103 47 20.72
	7836.00	1.42	211.24	7835.84	-21.12	-21.22	-3.05	0.31	462132.23	709551.63	N 32 16 9.49	W 103 47 20.73
	7930.00	1.80	213.99	7929.80	-23.29	-23.44	-4.48	0.41	462130.01	709550.20	N 32 16 9.47	W 103 47 20.75
	8025.00	1.51	220.57	8024.76	-25.43	-25.63	-6.13	0.38	462127.83	709548.55	N 32 16 9.44	W 103 47 2

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (m)	NS (ft)	EW (ft)	DLS (*/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	8497.00	4.27	285.63	8498.29	-28.65	-29.41	-24.81	0.84	482124.04	709529.87	N 32 18	8.41 W 103 47 20.99
	8591.00	4.03	258.64	8590.05	-29.36	-30.33	-31.54	0.80	482123.12	709523.14	N 32 18	8.40 W 103 47 21.07
	8780.00	3.25	258.21	8778.67	-31.41	-32.73	-43.29	0.41	482120.72	709511.39	N 32 18	8.38 W 103 47 21.20
	8875.00	2.67	261.69	8873.54	-32.13	-33.80	-48.12	0.84	482119.85	709508.58	N 32 18	8.37 W 103 47 21.26
	8969.00	1.37	290.03	8967.48	-31.97	-33.53	-51.34	1.70	482119.92	709503.34	N 32 18	8.37 W 103 47 21.30
	9064.00	1.40	225.84	9062.48	-32.33	-33.95	-53.24	1.55	482119.50	709501.44	N 32 18	8.37 W 103 47 21.32
	9158.00	4.52	208.87	9156.32	-36.29	-38.00	-55.85	3.41	482115.48	709498.83	N 32 18	8.33 W 103 47 21.35
	9253.00	5.74	212.30	9250.94	-43.45	-45.29	-60.20	1.32	482108.18	709494.48	N 32 18	8.28 W 103 47 21.40
	9442.00	8.94	211.41	9438.37	-63.59	-65.82	-72.91	1.89	482087.84	709481.78	N 32 18	8.06 W 103 47 21.55
	9538.00	8.79	209.14	9531.24	-75.87	-78.32	-80.21	0.40	482075.13	709474.47	N 32 18	8.93 W 103 47 21.84
	9631.00	8.47	208.83	9625.17	-88.12	-90.79	-87.12	0.34	482062.68	709467.57	N 32 18	8.81 W 103 47 21.72
	9725.00	9.17	202.87	9718.06	-100.89	-103.76	-93.37	1.22	482049.70	709461.32	N 32 18	8.88 W 103 47 21.79
	9819.00	11.17	200.07	9810.58	-116.16	-119.21	-99.40	2.19	482034.24	709455.28	N 32 18	8.53 W 103 47 21.88
	9914.00	13.77	197.16	9903.33	-135.40	-138.68	-105.90	2.81	482014.79	709448.79	N 32 18	8.34 W 103 47 21.94
	10008.00	12.00	197.94	9994.96	-155.19	-158.65	-112.21	1.89	481994.81	709442.48	N 32 18	8.14 W 103 47 22.01
	10103.00	12.31	193.06	10087.83	-174.28	-177.91	-117.54	1.13	481975.55	709437.15	N 32 18	7.95 W 103 47 22.08
	10197.00	12.98	194.52	10179.55	-194.11	-197.89	-122.45	0.79	481955.57	709432.24	N 32 18	7.75 W 103 47 22.14
	10252.00	12.29	190.04	10233.22	-205.77	-209.64	-125.02	2.18	481943.83	709429.67	N 32 18	7.63 W 103 47 22.17
	10444.00	9.74	194.44	10421.67	-241.38	-245.49	-132.63	1.40	481907.97	709422.05	N 32 18	7.28 W 103 47 22.26
	10538.00	7.47	198.95	10514.61	-254.73	-258.97	-136.80	2.52	481894.49	709418.09	N 32 18	7.15 W 103 47 22.30
	10633.00	6.23	205.41	10608.93	-265.10	-269.47	-140.82	1.53	481883.99	709413.87	N 32 18	7.04 W 103 47 22.35
	10822.00	7.40	212.12	10796.59	-284.33	-289.04	-151.89	0.75	481864.42	709403.00	N 32 18	6.85 W 103 47 22.48
	10917.00	8.36	228.93	10890.71	-293.79	-298.76	-160.15	2.62	481854.70	709394.54	N 32 18	6.75 W 103 47 22.58
	11012.00	8.85	227.49	10984.64	-302.94	-308.24	-170.75	0.56	481845.23	709383.94	N 32 18	6.66 W 103 47 22.70
	11106.00	9.03	218.62	11077.50	-313.29	-318.89	-180.68	1.48	481834.58	709374.01	N 32 18	6.56 W 103 47 22.82
	11200.00	9.17	207.49	11170.33	-325.45	-331.30	-188.74	1.88	481822.17	709365.95	N 32 18	6.43 W 103 47 22.92
	11295.00	8.63	201.88	11264.18	-338.59	-344.63	-194.89	1.08	481808.84	709359.80	N 32 18	6.30 W 103 47 22.99
	11389.00	6.80	193.74	11357.35	-350.28	-356.42	-198.81	2.44	481797.05	709355.89	N 32 18	6.19 W 103 47 23.03
	11484.00	4.56	190.28	11451.90	-359.21	-365.44	-200.78	2.18	481788.03	709353.92	N 32 18	6.10 W 103 47 23.08
	11578.00	2.75	206.93	11545.70	-364.85	-371.13	-202.47	2.21	481782.34	709352.23	N 32 18	6.04 W 103 47 23.08
	11672.00	1.89	255.30	11639.64	-367.14	-373.49	-204.83	2.19	481779.88	709349.87	N 32 18	6.02 W 103 47 23.11
	11767.00	0.10	220.91	11734.83	-367.51	-373.91	-206.24	1.89	481779.58	709348.48	N 32 18	6.01 W 103 47 23.12
	11862.00	0.29	247.22	11829.82	-367.68	-374.07	-206.51	0.22	481779.41	709348.18	N 32 18	6.01 W 103 47 23.13
	11958.00	0.05	72.93	11923.82	-367.74	-374.15	-206.89	0.38	481779.33	709348.00	N 32 18	6.01 W 103 47 23.13
	12051.00	0.03	31.80	12018.62	-367.70	-374.11	-206.84	0.04	481779.38	709348.05	N 32 18	6.01 W 103 47 23.13
	12148.00	0.33	277.84	12113.82	-367.64	-374.05	-206.90	0.38	481779.42	709347.79	N 32 18	6.01 W 103 47 23.13
	12241.00	0.42	279.76	12208.62	-367.52	-373.96	-207.51	0.10	481779.51	709347.18	N 32 18	6.01 W 103 47 23.14
	12335.00	0.49	269.97	12302.62	-367.44	-373.90	-208.25	0.11	481779.57	709346.44	N 32 18	6.01 W 103 47 23.15
	12428.00	0.55	215.52	12363.62	-367.78	-374.28	-208.90	0.53	481778.22	709345.80	N 32 18	6.01 W 103 47 23.15
	12520.00	0.81	215.80	12487.61	-368.66	-375.16	-208.55	0.28	481778.31	709345.15	N 32 18	6.00 W 103 47 23.16
	12615.00	0.92	223.77	12582.60	-369.73	-376.26	-210.47	0.17	481777.22	709344.23	N 32 18	5.99 W 103 47 23.17
	12710.00	0.59	235.15	12677.59	-370.53	-377.09	-211.40	0.38	481776.39	709343.30	N 32 18	5.98 W 103 47 23.18
	12805.00	0.03	228.06	12772.59	-370.82	-377.38	-211.82	0.59	481776.09	709342.88	N 32 18	5.98 W 103 47 23.19
	12899.00	0.03	324.89	12868.59	-370.81	-377.38	-211.85	0.05	481776.09	709342.84	N 32 18	5.98 W 103 47 23.19
	12994.00	0.03	248.31	12961.59	-370.80	-377.37	-211.89	0.04	481776.10	709342.81	N 32 18	5.98 W 103 47 23.19
	13090.00	0.05	258.97	13057.59	-370.82	-377.39	-211.95	0.02	481776.09	709342.74	N 32 18	5.98 W 103 47 23.19
	13185.00	0.07	298.32	13152.59	-370.80	-377.37	-212.04	0.05	481776.10	709342.65	N 32 18	5.98 W 103 47 23.19
Final MWD Survey	13229.00	0.08	285.08	13198.59	-370.77	-377.35	-212.10	0.04	481776.12	709342.60	N 32 18	5.98 W 103 47 23.19
Proj to Bit	13325.00	0.08	285.08	13292.59	-370.74	-377.31	-212.23	0.00	481776.16	709342.47	N 32 18	5.98 W 103 47 23.19

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	30.000	1/98.425	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Pilot Hole / Oxy Iridium MDP1 28-21 Federal Com 171H Gyro+MWD IFR 0-13325' MD
	1	30.000	30.000	Act Sns	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Pilot Hole / Oxy Iridium MDP1 28-21 Federal Com 171H Gyro+MWD IFR 0-13325' MD
	1	30.000	598.570	Act Sns	30.000	30.000	NAL_NSG+MSHOT	Pilot Hole / Oxy Iridium MDP1 28-21 Federal Com 171H
	1	598.570	13325.000	Act Sns	30.000	30.000	NAL_MWD_IFR1+MS	Pilot Hole / Oxy Iridium MDP1 28-21 Federal Com 171H