

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:

I, 25 S, 29 E, Eddy NM
N 32.16501 W -103.94177

I, Diyar Kaky certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of December 07, 2018 through January 10, 2019, conduct or supervise the taking of the TelePacer/SlimPulse & Third Party Corrected surveys from a depth of 622.00 feet to a depth of 20576.00 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 Corral Canyon 36-25 Federal Com 31H Well (Original Hole) API No. 30-015-44640 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
Diyar Kaky
FS



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

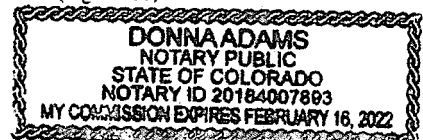
My Commission expires:

2-16-2022

D. Adams
Notary Public

Adams County Colorado
(County State)

(signature)



RECEIVED

Final PvA - Rev0

H&P 635 (RKB=26.5')

MAY 24 2019

Schlumberger

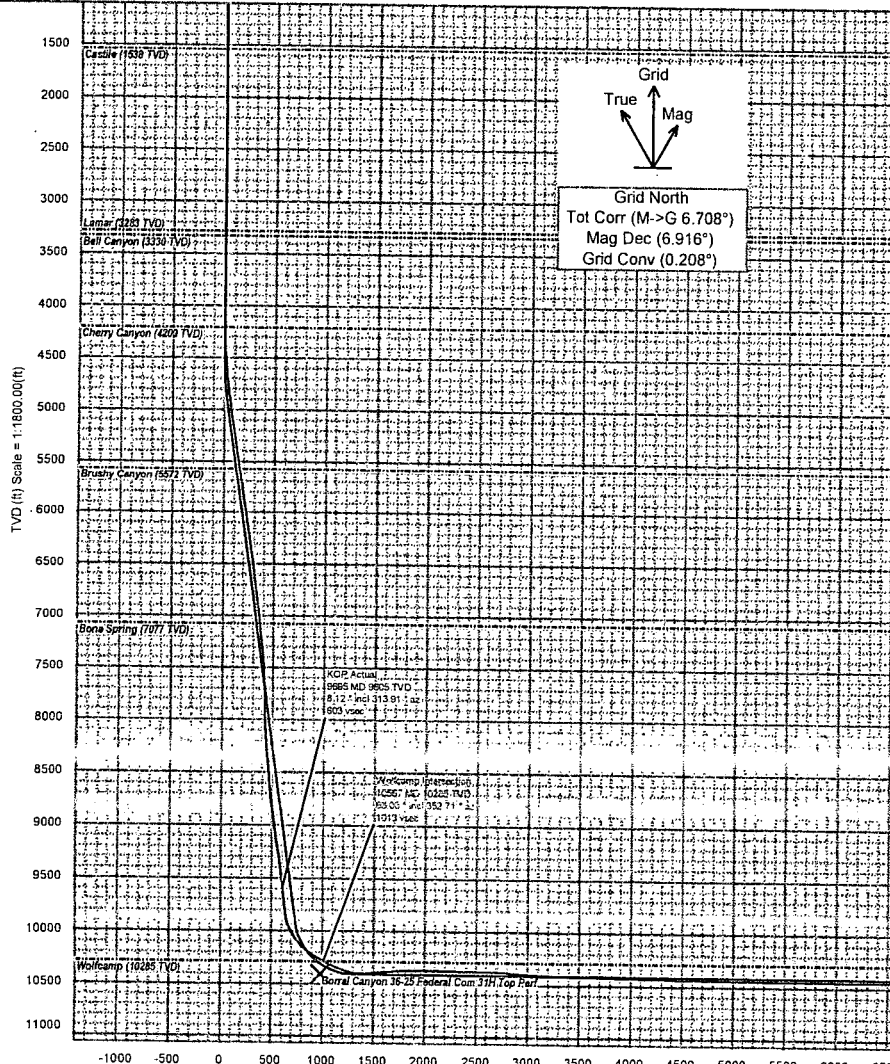
OXY
DISTRICT II-ARTESIA O.C.D.



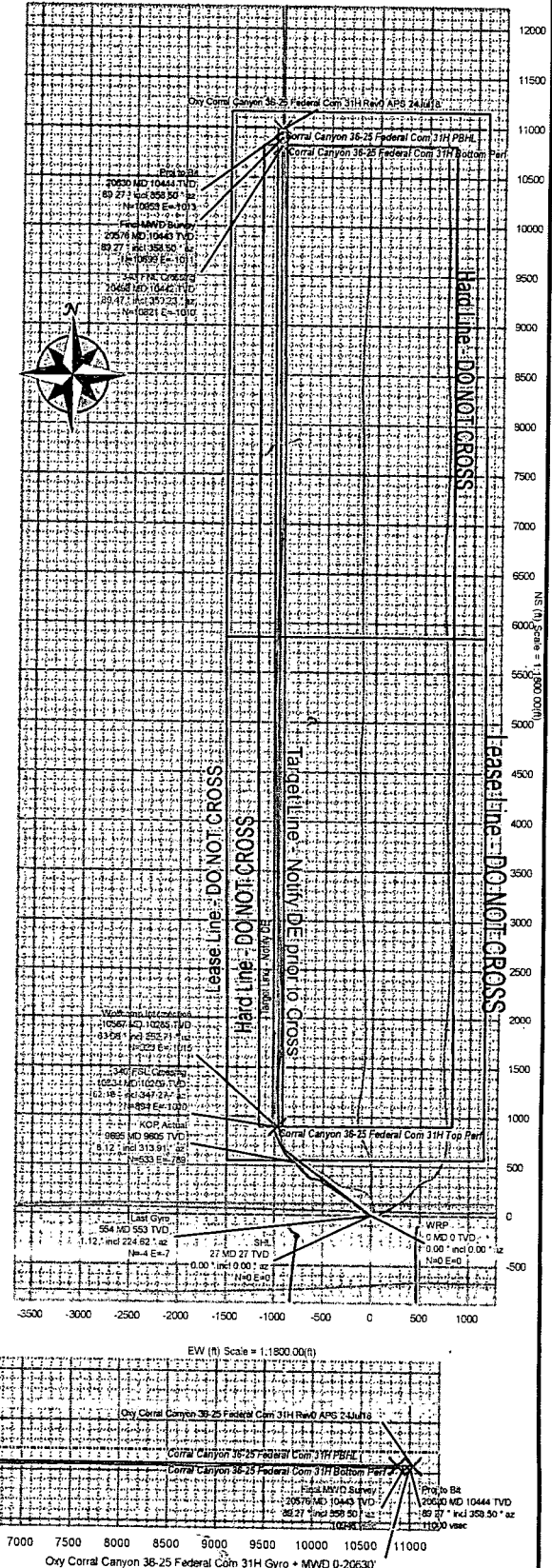
Borehole:		Well:	Field:	Structure:
Original Borehole		Corral Canyon 36-25 Federal Com 31H	NM Eddy County (NAD 83)	Oxy Corral Canyon 36-25 Federal Com 31H
Gravity & Magnetic Parameters				
Model:	HOGM 2018	Dip: 59.895°	Date: 14-Jan-2019	Surface Location
MagDec:	6.916°	PS: 47910.686nT	Gravity PS: 998.45mgal (9.80665 Based)	NAD83 New Mexico State Plane, Eastern Zone, US Feet
				Lat: N 32 9 54.02
				Northing: 423984.47NUS
				Grid Conv: 0.2085°
				Lon: W 103 56 30.38
				Easting: 662498.21NUS
				Scale Fact: 0.9995259
				Miscellaneous
				Oxy Corral Canyon
				36-25 Federal Com 31H Ref: RKB=26.5'(3132ft above MSL)
				31H
				Plan: Oxy Corral Canyon 36-25 Federal Com 31H Gyro • MWD 0-20630'

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	553.50	1.12	224.62	553.42	-3.93	-3.93	-7.49	0.11
KOP Actual	9695.00	8.12	313.91	9604.67	532.97	532.97	-789.03	0.70
340' FSL Crossing	10533.66	62.18	347.27	10269.49	893.80	893.80	-1009.58	14.59
Wolfcamp	10567.37	63.08	352.71	10285.00	923.26	923.26	-1014.77	14.59
340' FNL Crossing	20498.43	89.47	359.23	10442.38	10821.37	10821.37	-1009.84	0.97
Final MWD Survey	20576.00	89.27	358.50	10443.23	10898.92	10898.92	-1011.38	0.97
Proj to Bit	20630.00	89.27	358.50	10443.92	10952.90	10952.90	-1012.80	0.00



Vertical Section (R) Azim = 354.71° Scale = 1:1800.00(ft) Origin = 0N/-S, 0E/-W



Oxy Corral Canyon 36-25 Federal Com 31H Gyro + MWD 0-20630' Survey

Geodetic Report

(Def Survey)



Report Date: January 14, 2019 - 03:09 PM Client: OXY Field: NM Eddy County (NAD 83) Structure / Slot: Oxy Corral Canyon 36-25 Federal Com 31H / Oxy Corral Canyon 36-25 Federal Com 31H Well: Corral Canyon 36-25 Federal Com 31H Borehole: Original Borehole UWI / API#: H&P 635 / 30-015-44640 Survey Name: Oxy Corral Canyon 36-25 Federal Com 31H Gyro + MWD 0-20630' Survey Date: January 14, 2019 Tort / AHD / DDI / ERD Ratio: 292.747' / 11480.016 ft / 6.822' / 1.099 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet Location Lat / Long: N 32° 9' 54.02003", W 103° 56' 30.39274" Location Grid N/E Y/X: N 423984 470 ftUS, E 662498.210 RUS CRS Grid Convergence Angle: 0.2085° Grid Scale Factor: 0.9999259 Version / Patch: 2.10.753.0	Survey / DLS Computation: Minimum Curvature / Lubinski Vertical Section Azimuth: 354.713° (Grid North) Vertical Section Origin: 0.000 ft, 0.000 ft TVD Reference Datum: RKB=26.5' TVD Reference Elevation: 3138.000 ft above MSL Seabed / Ground Elevation: 3111.500 ft above MSL Magnetic Declination: 6.884° Total Gravity Field Strength: 998.4504mgn (9.80665 Based) Gravity Model: GARM Total Magnetic Field Strength: 47936.400 nT Magnetic Dip Angle: 59.889° Declination Date: December 20, 2018 Magnetic Declination Model: IFR North Reference: Grid North Grid Convergence Used: 0.2085° Total Corr Mag North->Grid North: 6.6755° Local Coord Referenced To: Well Head	
--	--	--

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	423984.47	662498.21	N 32° 9' 54.02"	W 103° 56' 30.39"
Marker MudLine	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	423984.47	662498.21	N 32° 9' 54.02"	W 103° 56' 30.39"
SHL	70.50	0.45	247.37	70.50	-0.05	-0.07	-0.16	1.02	423984.40	662498.05	N 32° 9' 54.02"	W 103° 56' 30.39"
	170.50	0.95	279.54	170.49	0.04	-0.08	-1.34	0.62	423984.39	662496.87	N 32° 9' 54.02"	W 103° 56' 30.41"
	270.50	1.17	249.63	270.48	-0.01	-0.30	-3.11	0.59	423984.17	662495.10	N 32° 9' 54.02"	W 103° 56' 30.43"
	370.50	1.27	231.42	370.45	-0.88	-1.34	-4.94	0.40	423983.13	662493.27	N 32° 9' 54.01"	W 103° 56' 30.45"
	470.50	1.08	220.29	470.43	-2.15	-2.75	-6.41	0.30	423981.72	662491.80	N 32° 9' 53.99"	W 103° 56' 30.47"
	553.50	1.12	224.62	553.42	-3.22	-3.93	-7.49	0.11	423980.54	662490.72	N 32° 9' 53.98"	W 103° 56' 30.48"
	622.00	1.08	229.21	621.90	-4.03	-4.83	-8.45	0.14	423979.64	662489.76	N 32° 9' 53.97"	W 103° 56' 30.49"
	715.00	0.15	75.22	714.90	-4.52	-5.37	-8.99	1.31	423979.10	662489.22	N 32° 9' 53.97"	W 103° 56' 30.50"
	807.00	0.14	230.75	806.90	-4.56	-5.41	-8.96	0.31	423979.06	662489.25	N 32° 9' 53.97"	W 103° 56' 30.50"
	899.00	0.09	276.07	898.90	-4.61	-5.47	-9.12	0.11	423979.00	662489.09	N 32° 9' 53.97"	W 103° 56' 30.50"
	992.00	0.23	205.64	991.90	-4.75	-5.63	-9.28	0.23	423978.84	662488.93	N 32° 9' 53.96"	W 103° 56' 30.50"
	1084.00	0.43	229.00	1083.90	-5.11	-6.03	-9.62	0.26	423978.44	662488.59	N 32° 9' 53.96"	W 103° 56' 30.50"
	1177.00	0.35	293.71	1176.90	-5.18	-6.14	-10.14	0.45	423978.33	662488.07	N 32° 9' 53.96"	W 103° 56' 30.51"
	1269.00	0.74	309.67	1268.89	-4.62	-5.65	-10.86	0.45	423978.82	662487.36	N 32° 9' 53.96"	W 103° 56' 30.52"
	1361.00	0.49	347.03	1360.89	-3.81	-4.89	-11.40	0.50	423979.58	662486.81	N 32° 9' 53.97"	W 103° 56' 30.53"
	1545.00	0.12	157.37	1544.88	-3.22	-4.30	-11.50	0.33	423980.17	662486.71	N 32° 9' 53.98"	W 103° 56' 30.53"
	1734.00	0.09	297.51	1733.88	-3.33	-4.41	-11.56	0.10	423980.06	662486.65	N 32° 9' 53.98"	W 103° 56' 30.53"
	1829.00	0.19	34.58	1828.88	-3.17	-4.25	-11.54	0.23	423980.22	662486.68	N 32° 9' 53.98"	W 103° 56' 30.53"
	1923.00	0.15	47.03	1922.88	-2.97	-4.03	-11.36	0.06	423980.44	662486.85	N 32° 9' 53.98"	W 103° 56' 30.53"
	2017.00	0.11	16.73	2016.88	-2.81	-3.86	-11.24	0.08	423980.61	662486.97	N 32° 9' 53.98"	W 103° 56' 30.52"
	2111.00	0.09	309.55	2110.88	-2.68	-3.73	-11.27	0.12	423980.74	662486.94	N 32° 9' 53.98"	W 103° 56' 30.52"
	2205.00	0.09	5.70	2204.88	-2.55	-3.61	-11.32	0.09	423980.86	662486.89	N 32° 9' 53.98"	W 103° 56' 30.52"
	2300.00	0.06	129.18	2299.88	-2.51	-3.57	-11.28	0.14	423980.90	662486.94	N 32° 9' 53.99"	W 103° 56' 30.52"
	2394.00	0.07	225.10	2393.88	-2.58	-3.64	-11.28	0.10	423980.83	662486.93	N 32° 9' 53.98"	W 103° 56' 30.52"
	2582.00	0.12	96.76	2581.88	-2.70	-3.74	-11.16	0.09	423980.73	662487.05	N 32° 9' 53.98"	W 103° 56' 30.52"
	2677.00	0.06	227.44	2676.88	-2.75	-3.79	-11.10	0.17	423980.68	662487.11	N 32° 9' 53.98"	W 103° 56' 30.52"
	2771.00	0.09	193.59	2770.88	-2.85	-3.89	-11.16	0.06	423980.58	662487.06	N 32° 9' 53.98"	W 103° 56' 30.52"
	2866.00	0.01	262.04	2865.88	-2.92	-3.97	-11.18	0.09	423980.50	662487.03	N 32° 9' 53.98"	W 103° 56' 30.52"
	2960.00	0.18	193.63	2959.88	-3.06	-4.11	-11.22	0.19	423980.36	662486.99	N 32° 9' 53.98"	W 103° 56' 30.52"
	3055.00	0.17	206.50	3054.88	-3.32	-4.38	-11.32	0.04	423980.09	662486.89	N 32° 9' 53.98"	W 103° 56' 30.52"
	3149.00	0.09	309.12	3148.88	-3.39	-4.46	-11.44	0.22	423980.01	662486.77	N 32° 9' 53.98"	W 103° 56' 30.53"
	3338.00	0.07	147.46	3337.88	-3.39	-4.47	-11.49	0.08	423980.01	662486.72	N 32° 9' 53.98"	W 103° 56' 30.53"
	3526.00	0.11	342.28	3525.88	-3.31	-4.39	-11.49	0.09	423980.08	662486.72	N 32° 9' 53.98"	W 103° 56' 30.53"
	3621.00	0.11	145.19	3620.88	-3.30	-4.38	-11.46	0.23	423980.09	662486.75	N 32° 9' 53.98"	W 103° 56' 30.53"
	3810.00	0.11	75.95	3809.88	-3.43	-4.48	-11.18	0.07	423979.99	662487.03	N 32° 9' 53.98"	W 103° 56' 30.52"
	3998.00	0.11	292.69	3997.88	-3.32	-4.37	-11.18	0.11	423980.10	662487.04	N 32° 9' 53.98"	W 103° 56' 30.52"
	4093.00	0.11	323.86	4092.88	-3.20	-4.26	-11.31	0.06	423980.21	662486.90	N 32° 9' 53.98"	W 103° 56' 30.52"
	4281.00	1.50	307.71	4280.86	-1.37	-2.61	-13.37	0.74	423981.86	662484.84	N 32° 9' 53.99"	W 103° 56' 30.55"
	4376.00	3.55	311.31	4375.76	1.62	0.09	-16.56	2.16	423984.56	662481.65	N 32° 9' 54.02"	W 103° 56' 30.59"
	4470.00	5.40	308.50	4469.47	6.79	4.77	-22.21	1.98	423989.24	662476.00	N 32° 9' 54.07"	W 103° 56' 30.65"
	4565.00	7.24	307.59	4563.89	13.96	11.20	-30.45	1.94	423995.67	662467.76	N 32° 9' 54.13"	W 103° 56' 30.75"
	4659.00	8.65	306.04	4656.98	22.66	19.97	-40.86	1.52	424003.44	662457.35	N 32° 9' 54.21"	W 103° 56' 30.87"
	4753.00	9.39	305.16	4749.82	32.30	27.55	-52.85	0.80	424012.02	662445.37	N 32° 9' 54.29"	W 103° 56' 31.01"
	4848.00	10.41	305.93	4843.41	42.99	37.05	-66.13	1.08	424021.52	662432.08	N 32° 9' 54.39"	W 103° 56' 31.16"
	5037.00	11.92	305.13	5028.82	66.89	58.30	-95.92	0.80	424042.77	662402.29	N 32° 9' 54.60"	W 103° 56' 31.51"
	5131.00	13.31	305.43	5120.55	80.25	70.16	-112.68	1.48	424054.63	662385.54	N 32° 9' 54.72"	W 103° 56' 31.70"
	5225.00	13.56	305.77	5211.98	94.54	82.88	-130.44	0.28	424067.34	662367.78	N 32° 9' 54.84"	W 103° 56' 31.91"
	5320.00	13.33	305.42	5304.38	109.00	95.73	-148.40	0.26	424080.20	662349.82	N 32° 9' 54.97"	W 103° 56' 32.12"
	5509.00	13.12	306.99	5488.36	137.64	121.27	-183.29	0.22	424105.73	662314.94	N 32° 9' 55.23"	W 103° 56' 32.52"
	5603.00	12.60	306.63	5580.01	151.67	133.80	-200.04	0.56	424118.26	662298.19	N 32° 9' 55.35"	W 103° 56' 32.71"
	5698.00	12.82	306.88	5672.68	165.66	146.31	-216.78	0.24	424130.77	662281.74	N 32° 9' 55.48"	W 103° 56' 32.91"
	5792.00	12.71	306.75	5764.35	179.59	158.76	-233.41	0.12	424143.21	662264.82	N 32° 9' 55.60"	W 103° 56' 33.10"
	5887.00	12.16	307.44	5857.13	193.38	171.09	-249.73	0.60	424155.55	662248.50	N 32° 9' 55.72"	W 103° 56' 33.29"
	5981.00	12.55	306.50	5948.95	206.90	183.19	-265.80	0.47	424167.64	662232.43	N 32° 9' 55.84"	W 103° 56' 33.48"
	6076.00	12.51	306.87	6041.69	220.68	195.50	-282.33	0.09	424179.95	662215.90	N 32° 9' 55.96"	W 103° 56' 33.67"
	6264.00	12.42	304.06	6225.26	247.17	219.04	-315.37	0.33	424203.49	662182.87	N 32° 9' 56.20"	W 103° 56' 34.05"
	6359.00	13.02	303.66	6317.92	260.37	230.69	-332.74	0.64	424215.14	662165.50	N 32° 9' 56.31"	W 103° 56' 34.25"
	6453.00	12.68	302.04	6409.57	273.28	242.03	-350.30	0.53	424226.48	662147.94	N 32° 9' 56.43"	W 103° 56' 34.46"
	6547.00	12.58	300.77	6501.30	285.56	252.74	-367.84	0.31	424237.19	662130.40	N 32° 9' 56.53"	W 103° 56' 34.66"
	6641.00	12.25	300.57	6593.10	297.43	263.05	-385.22	0.35	424247.50	662113.02	N 32° 9' 56.64"	W 103° 56' 34.86"
	6736.00	12.61	301.39	6685.87	309.53	273.58	-402.75	0.42	424258.03	662095.49	N 32° 9' 56.74"	W 103° 56' 35.07"
	6830.00	12.68	300.94	6777.59	321.75	284.23	-420.36	0.13	424268.68	662077.89	N 32° 9' 56.85"	W 103° 56' 35.27"
	6924.00	12.22	300.99	6869.38	333.74	294.65	-437.73	0.49	424279.10	662060.51	N 32° 9' 56.95"	W 103° 56' 35.47"
	7018.00	12.53	300.53	6961.20	345.59	304.96	-455.04	0.35	424289.40	662043.20	N 32° 9' 57.05"	W 103° 56' 35.67"
	7113.00	10.10	300.90	7054.34	356.54	314.47	-471.07	2.56	424298.92	662027.18	N 32° 9' 57.15"	W 103° 56' 35.86"
	7207.00	9.46	304.72	7146.98	366.37	323.10	-484.49	0.97	424307.55	662013.75	N 32° 9' 57.23"	W 103° 56' 36.02"
	7302.00	9.51	307.44	7240.68	376.72	332.32	-497.14	0.47	424316.77	662001.11	N 32° 9' 57.33"	W 103° 56' 36.16"
	7396.00	9.56	307.29	7333.38	387.27	341.77	-509.52	0.06	424326.22	661988.73	N 32° 9' 57.42"	W 103° 56' 36.31"
	7491.00	8.97	302.34	7427.14	397.13	350.51	-522.05	1.04	424334.96	661976.20	N 32° 9' 57.51"	W 103° 56' 36.45"
	7585.00	8.20	290.62	7520.10	404.53	356.79	-534.52	2.03	424341.24	661963.73	N 32° 9' 57.57"	W 103° 56' 36.60"
	7679.00	9.09	285.24	7613.04	410.04	361.09	-547.90	1.1				

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 ° ° ' '')
	8056.00	7.07	273.33	7985.47	421.77	367.52	-605.69	1.67	424351.96	661892.56	N 32° 9' 57.68" W	103° 56' 37.42"
	8151.00	7.43	287.32	8079.71	425.01	369.69	-617.39	1.89	424354.13	661880.86	N 32° 9' 57.70" W	103° 56' 37.56"
	8245.00	7.99	295.17	8172.87	430.66	374.28	-629.11	1.27	424358.72	661869.15	N 32° 9' 57.75" W	103° 56' 37.70"
	8340.00	7.99	304.44	8266.95	438.22	380.82	-640.53	1.35	424365.26	661857.73	N 32° 9' 57.81" W	103° 56' 37.83"
	8434.00	7.03	313.86	8360.15	446.75	388.50	-650.07	1.66	424372.94	661848.19	N 32° 9' 57.89" W	103° 56' 37.94"
	8528.00	6.98	318.30	8453.44	455.70	396.75	-658.01	0.58	424381.19	661840.25	N 32° 9' 57.97" W	103° 56' 38.03"
	8622.00	6.45	316.61	8546.80	464.45	404.85	-665.44	0.60	424389.29	661832.82	N 32° 9' 58.05" W	103° 56' 38.12"
	8717.00	8.20	311.20	8641.02	473.56	413.19	-674.20	1.98	424397.63	661824.06	N 32° 9' 58.13" W	103° 56' 38.22"
	8811.00	9.02	315.03	8733.96	484.09	422.82	-684.46	1.06	424407.26	661813.81	N 32° 9' 58.23" W	103° 56' 38.34"
	8906.00	9.80	316.21	8827.68	496.15	433.93	-695.31	0.85	424418.37	661802.95	N 32° 9' 58.34" W	103° 56' 38.46"
	9000.00	9.58	313.84	8920.33	508.39	445.18	-706.55	0.45	424429.61	661791.71	N 32° 9' 58.45" W	103° 56' 38.59"
	9095.00	9.96	315.16	9013.94	520.76	456.54	-718.10	0.38	424440.97	661780.16	N 32° 9' 58.56" W	103° 56' 38.73"
	9189.00	10.66	315.56	9106.42	533.77	468.51	-729.92	0.75	424452.94	661768.34	N 32° 9' 58.68" W	103° 56' 38.86"
	9284.00	11.09	323.23	9199.72	548.38	482.10	-741.55	1.59	424466.53	661756.72	N 32° 9' 58.82" W	103° 56' 39.00"
	9378.00	11.31	319.02	9291.93	563.57	496.30	-753.00	0.90	424480.73	661745.26	N 32° 9' 58.96" W	103° 56' 39.13"
	9473.00	10.15	318.47	9385.27	577.89	509.60	-764.66	1.23	424494.03	661733.61	N 32° 9' 59.09" W	103° 56' 39.27"
	9567.00	8.54	311.94	9478.02	589.70	520.47	-775.35	2.05	424504.90	661722.92	N 32° 9' 59.20" W	103° 56' 39.39"
	9662.00	8.12	312.44	9570.00	599.90	529.76	-785.61	0.35	424514.19	661712.66	N 32° 9' 59.29" W	103° 56' 39.51"
	9695.00	8.07	313.91	9604.67	603.41	532.97	-789.03	0.70	424517.40	661709.24	N 32° 9' 59.32" W	103° 56' 39.55"
	9829.00	8.07	313.96	9737.33	617.70	546.06	-802.61	0.04	424530.49	661695.66	N 32° 9' 59.45" W	103° 56' 39.71"
	9924.00	11.53	306.78	9830.94	629.11	556.38	-815.02	3.86	424540.81	661683.25	N 32° 9' 59.55" W	103° 56' 39.85"
	10018.00	27.22	302.98	9919.34	648.85	573.82	-840.74	16.74	424558.24	661657.53	N 32° 9' 59.73" W	103° 56' 40.15"
	10113.00	38.09	318.32	9999.34	686.07	607.69	-878.63	14.30	424592.11	661619.85	N 32° 10' 0.06" W	103° 56' 40.59"
	10207.00	39.25	331.82	10072.85	736.89	655.64	-912.02	9.04	424640.06	661586.26	N 32° 10' 0.54" W	103° 56' 40.97"
	10301.00	33.57	335.17	10140.88	797.30	713.65	-940.77	9.56	424698.06	661557.51	N 32° 10' 1.12" W	103° 56' 41.31"
	10396.00	55.57	338.08	10199.65	868.18	782.11	-970.25	8.38	424766.52	661528.03	N 32° 10' 1.79" W	103° 56' 41.65"
	10490.00	61.34	340.10	10248.81	945.31	856.92	-998.79	6.41	424841.32	661499.50	N 32° 10' 2.54" W	103° 56' 41.98"
340' FSL Crossing Wolfcamp Intersection	10533.66	62.18	347.27	10269.49	983.03	893.80	-1009.58	14.59	424878.20	661488.71	N 32° 10' 2.90" W	103° 56' 42.10"
	10567.37	63.08	352.71	10285.00	1012.84	923.26	-1014.77	14.59	424907.66	661483.51	N 32° 10' 3.19" W	103° 56' 42.16"
	10585.00	63.63	355.52	10292.91	1028.60	938.94	-1016.39	14.59	424923.34	661481.90	N 32° 10' 3.35" W	103° 56' 42.18"
	10679.00	65.39	3.64	10333.42	1113.04	1023.69	-1016.96	8.02	425008.08	661481.32	N 32° 10' 4.19" W	103° 56' 42.18"
	10774.00	71.66	1.20	10368.18	1200.60	1111.96	-1013.27	7.02	425096.35	661485.01	N 32° 10' 5.06" W	103° 56' 42.13"
	10869.00	79.73	3.67	10391.64	1291.73	1203.85	-1009.33	8.86	425188.23	661488.96	N 32° 10' 5.97" W	103° 56' 42.08"
	10963.00	93.40	8.25	10397.26	1383.51	1296.92	-999.59	15.33	425281.29	661498.70	N 32° 10' 6.89" W	103° 56' 41.97"
	11058.00	93.71	8.22	10391.37	1475.70	1390.76	-986.01	0.33	425375.13	661512.28	N 32° 10' 7.82" W	103° 56' 41.80"
	11217.00	94.79	7.36	10379.59	1630.15	1476.86	-964.51	0.87	425532.21	661533.77	N 32° 10' 9.37" W	103° 56' 41.55"
	11312.00	94.64	5.94	10371.78	1722.78	1641.90	-953.55	1.50	425626.24	661544.73	N 32° 10' 10.30" W	103° 56' 41.42"
	11405.00	92.05	3.62	10366.35	1814.17	1729.40	-945.82	3.74	425718.74	661552.46	N 32° 10' 11.22" W	103° 56' 41.32"
	11500.00	91.19	2.19	10363.67	1908.16	1824.24	-941.01	1.76	425813.57	661557.28	N 32° 10' 12.15" W	103° 56' 41.26"
	11594.00	89.13	1.41	10363.40	2001.44	1923.18	-938.05	2.34	425907.51	661560.23	N 32° 10' 13.08" W	103° 56' 41.22"
	11689.00	88.72	357.98	10365.19	2096.05	2018.15	-936.56	3.64	426002.47	661559.72	N 32° 10' 14.02" W	103° 56' 41.23"
	11783.00	88.72	359.36	10367.29	2189.80	2112.10	-940.74	1.47	426096.41	661557.54	N 32° 10' 14.95" W	103° 56' 41.25"
	11878.00	89.16	358.28	10369.04	2284.54	2207.06	-942.70	1.23	426191.37	661555.59	N 32° 10' 15.89" W	103° 56' 41.27"
	12067.00	88.58	355.84	10372.77	2473.33	2395.76	-952.39	1.33	426380.05	661545.90	N 32° 10' 17.76" W	103° 56' 41.37"
	12162.00	89.03	359.37	10374.75	2568.17	2490.64	-956.35	3.75	426474.92	661541.93	N 32° 10' 18.70" W	103° 56' 41.41"
	12257.00	88.55	358.68	10376.76	2662.89	2585.61	-957.97	0.88	426569.88	661540.31	N 32° 10' 19.64" W	103° 56' 41.43"
	12351.00	86.17	357.41	10381.09	2756.61	2679.45	-961.17	2.87	426663.71	661537.11	N 32° 10' 20.57" W	103° 56' 41.46"
	12446.00	86.72	356.43	10386.98	2851.36	2774.12	-966.27	1.18	426758.38	661532.02	N 32° 10' 21.51" W	103° 56' 41.52"
	12541.00	87.03	356.50	10392.16	2946.17	2868.90	-972.12	0.33	426853.05	661526.17	N 32° 10' 22.44" W	103° 56' 41.58"
	12635.00	87.14	356.19	10396.94	3040.01	2962.49	-978.10	0.35	426946.73	661520.18	N 32° 10' 23.37" W	103° 56' 41.65"
	12730.00	86.90	356.37	10401.88	3134.85	3057.16	-984.26	0.32	427041.40	661514.03	N 32° 10' 24.31" W	103° 56' 41.71"
	12824.00	87.41	356.75	10406.54	3228.68	3150.88	-989.89	0.68	427135.11	661508.40	N 32° 10' 25.23" W	103° 56' 41.78"
	12919.00	88.68	356.89	10409.78	3323.56	3245.67	-995.16	1.34	427229.89	661503.13	N 32° 10' 26.17" W	103° 56' 41.83"
	13013.00	89.13	358.62	10411.58	3417.41	3339.58	-998.84	1.90	427323.79	661499.45	N 32° 10' 27.10" W	103° 56' 41.87"
	13202.00	89.48	358.88	10413.87	3605.93	3528.52	-1002.96	0.23	427512.72	661495.33	N 32° 10' 28.97" W	103° 56' 41.91"
	13297.00	89.06	358.63	10415.08	3700.68	3623.49	-1005.02	0.51	427607.68	661493.26	N 32° 10' 29.91" W	103° 56' 41.93"
	13392.00	89.10	358.86	10416.61	3795.43	3718.45	-1007.10	0.25	427702.64	661491.18	N 32° 10' 30.85" W	103° 56' 41.95"
	13485.00	88.75	357.92	10418.35	3888.22	3811.40	-1008.72	1.08	427795.58	661488.57	N 32° 10' 31.77" W	103° 56' 41.98"
	13580.00	89.75	359.32	10419.60	3982.99	3906.36	-1012.00	1.81	427890.53	661486.28	N 32° 10' 32.71" W	103° 56' 42.00"
	13675.00	89.37	358.46	10420.33	4077.74	4001.34	-1013.84	0.99	427985.50	661484.44	N 32° 10' 33.65" W	103° 56' 42.02"
	13769.00	89.30	358.75	10421.42	4171.51	4095.30	-1016.13	0.32	428079.46	661482.15	N 32° 10' 34.58" W	103° 56' 42.04"
	13863.00	89.65	358.60	10422.28	4265.28	4189.28	-1018.31	0.41	428173.43	661479.98	N 32° 10' 35.51" W	103° 56' 42.06"
	13958.00	88.48	358.10	10423.83	4360.08	4284.22	-1021.04	1.34	428268.37	661477.25	N 32° 10' 36.45" W	103° 56' 42.09"
	14052.00	88.37	358.34	10426.41	4453.87	4378.14	-1023.96	0.28	428362.28	661474.33	N 32° 10' 37.38" W	103° 56' 42.12"
	14147.00	91.26	359.91	10426.72	4548.57	4473.12	-1025.41	3.46	428457.25	661472.88	N 32° 10' 38.32" W	103° 56' 42.13"
	14241.00	89.34	357.78	10426.23	4642.32	4567.09	-1027.31	3.05	428551.21	661470.98	N 32° 10' 39.25" W	103° 56' 42.15"
	14336.00	89.47	359.38	10427.21	4737.09	4662.05	-1029.66	1.69	428646.16	661468.63	N 32° 10' 40.19" W	103° 56' 42.18"
	14431.00	89.20	359.14	10428.32	4831.79	4757.03	-1030.89	0.38	428741.14	661467.40	N 32° 10' 41.13" W	103° 56' 42.19"
	14526.00	89.72	358.65	10429.21	4926.53	4852.01	-1032.72	0.75	428836.11	661465.57	N 32° 10' 42.07" W	103° 56' 42.20"
	14620.00	89.44	359.25	10429.90	5020.27	4945.99	-1034.44	0.70	428930.09	661463.85	N 32° 10' 43.00" W	103° 56' 42.22"
	14715.00	89.37	358.90	10430.89	5114.99	5040.97	-1035.97	0.38	429025.06	661462.31	N 32° 10' 43.94" W	103° 56' 42.23"
	14810.00	89.23	359.03	10432.05	5209.72	5135.95	-1037.69	0.20	429120.03	661460.60	N 32° 10' 44.88" W	103° 56' 42.25"
	14903.00	89.78	0.61	10432.85	5302.34	5228.94	-1037.98	1.80	429213.02	661460.31	N 32° 10' 45.80" W	103° 56' 42.25"
	14997.00	88.99	1.45	10433.85	5395.77	532						

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 ° ' '')
	18781.00	92.92	0.69	10437.15	9156.65	9105.08	-980.10	0.58	433088.85	661518.18	N 32 11 24.15 W	103 56 41.41
	18970.00	90.44	359.67	10431.61	9344.69	9293.98	-979.51	1.42	433277.74	661518.79	N 32 11 26.02 W	103 56 41.40
	19158.00	90.20	1.26	10430.56	9531.74	9481.96	-977.98	0.86	433465.71	661520.30	N 32 11 27.88 W	103 56 41.37
	19346.00	89.37	0.45	10431.26	9718.65	9669.94	-975.18	0.62	433653.67	661523.11	N 32 11 29.74 W	103 56 41.33
	19441.00	89.30	0.19	10432.36	9813.19	9764.93	-974.65	0.28	433748.66	661523.64	N 32 11 30.68 W	103 56 41.32
	19536.00	90.06	0.59	10432.90	9907.73	9859.92	-974.00	0.90	433843.64	661524.28	N 32 11 31.62 W	103 56 41.31
	19631.00	88.34	0.49	10434.22	10002.22	9954.91	-973.10	1.81	433938.62	661525.18	N 32 11 32.56 W	103 56 41.29
	19725.00	90.06	358.63	10435.53	10095.87	10048.89	-973.83	2.69	434032.59	661524.46	N 32 11 33.49 W	103 56 41.30
	19820.00	88.82	357.97	10436.46	10190.68	10143.84	-976.64	1.48	434127.54	661521.64	N 32 11 34.43 W	103 56 41.33
	20009.00	89.65	356.63	10438.99	10379.46	10332.61	-985.55	0.83	434316.29	661512.74	N 32 11 36.30 W	103 56 41.42
	20103.00	89.51	356.35	10439.68	10473.41	10426.43	-991.30	0.33	434410.10	661506.98	N 32 11 37.23 W	103 56 41.49
	20198.00	89.03	357.64	10440.89	10568.33	10521.29	-996.28	1.45	434504.96	661502.00	N 32 11 38.17 W	103 56 41.54
	20387.00	90.27	356.37	10442.04	10757.16	10710.02	-1006.16	0.94	434693.67	661492.13	N 32 11 40.03 W	103 56 41.65
	20481.00	89.51	359.39	10442.22	10851.01	10803.94	-1009.63	3.31	434787.59	661488.65	N 32 11 40.96 W	103 56 41.68
340' FNL Crossing	20498.43	89.47	359.23	10442.38	10868.38	10821.37	-1009.84	0.97	434805.02	661488.44	N 32 11 41.14 W	103 56 41.69
Final MWD Survey	20576.00	89.27	358.50	10443.23	10945.74	10898.92	-1011.38	0.97	434882.56	661486.90	N 32 11 41.90 W	103 56 41.70
Proj to Bit	20630.00	89.27	358.50	10443.92	10999.62	10952.90	-1012.80	0.00	434936.53	661485.49	N 32 11 42.44 W	103 56 41.71

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 Corral Canyon 36-25 Federal Com 31H Gyro + MWD 0-20630'
	1	26.500	26.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Corral Canyon 36-25 Federal Com 31H Gyro + MWD 0-20630'
	1	26.500	553.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Corral Canyon 36-25 Federal Com 31H
	1	553.500	11058.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS	Original Borehole / Oxy Corral Canyon 36-25 Federal Com 31H
	1	11058.000	11217.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Corral Canyon 36-25 Federal Com 31H
	1	11217.000	20630.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS	Original Borehole / Oxy Corral Canyon 36-25 Federal Com 31H