

30-015-44702

Schlumberger

Oxy Corral Fly 35-26 Federal Com 21H Gyro+MWD(IFR1) 0-19,584' Survey
Geodetic Report
(Del Survey)

Report Date: May 30, 2018 - 01:29 PM
Client: OXY
Field: NMI Eddy County (NAD 83)
Structure / Slot: Oxy Corral Fly 35-26 Federal Com 21H / Oxy Corral Fly 35-26 Federal Com 21H
Well: Oxy Corral Fly 35-26 Federal Com 21H
Borehole: Original Borehole
UVB / API# : Unknown / 30-015-44702
Survey Name: Oxy Corral Fly 35-26 Federal Com 21H Gyro+MWD(IFR1) 0-19,584'
Survey Date: May 12, 2018
Tort / AMD / DDI / ERD Ratio: 273.869° / 11536.398 ft / 6.841 / 1.292
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 9' 52.65985", W 103° 57' 34.77500"
Location Grid N/E Y/X: N 423827.350 NUS, E 656964.770 NUS
CRS Grid Convergence Angle: 0.1989°
Grid Scale Factor: 0.9999244
Version / Patch: 2.10.720.0

Survey / DLS Computation: Minimum Curvature / Lutinski
Vertical Section Azimuth: 355.933° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB=26.5'
TVD Reference Elevation: 3042.500 ft above MSL
Seabed / Ground Elevation: 3016.000 ft above MSL
Magnetic Declination: 7.004°
Total Gravity Field Strength: 998.4576mgn (9.80605 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47997.264 nT
Magnetic Dip Angle: 59.925°
Declination Date: May 12, 2018
Magnetic Declination Model: HDGM 2018
North Reference: Grid North
Grid Convergence Used: 0.1989°
Total Corr Mag North->Grid North: 8.8047°
Local Coord Referenced To: Well Head

NM OIL CONSERVATION
ARTESIA DISTRICT

JUL 13 2018

RECEIVED

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 ° ° ' '')
RKB SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	423827.35	656964.77	N 32° 9' 52.66" W 103° 57' 34.77"	
	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	423827.35	656964.77	N 32° 9' 52.66" W 103° 57' 34.77"	
	102.50	0.23	208.67	102.50	-0.13	-0.13	-0.07	0.30	423827.22	656964.70	N 32° 9' 52.66" W 103° 57' 34.78"	
Last Gyo	133.00	0.18	242.01	133.00	-0.20	-0.21	-0.14	0.42	423827.14	656964.63	N 32° 9' 52.66" W 103° 57' 34.78"	
	219.50	0.60	21.83	219.50	0.15	0.15	-0.10	0.88	423827.50	656964.67	N 32° 9' 52.66" W 103° 57' 34.78"	
	319.20	1.08	37.00	319.19	1.22	1.27	0.59	0.58	423826.62	656963.38	N 32° 9' 52.67" W 103° 57' 34.77"	
	399.50	0.95	56.83	399.47	2.22	2.35	1.72	0.42	423826.70	656966.49	N 32° 9' 52.68" W 103° 57' 34.75"	
	539.00	0.30	75.52	538.97	2.85	3.07	3.04	0.48	423830.42	656967.81	N 32° 9' 52.69" W 103° 57' 34.74"	
	639.00	0.04	224.17	629.97	2.87	3.11	3.25	0.37	423830.46	656968.02	N 32° 9' 52.69" W 103° 57' 34.74"	
	719.00	0.04	242.12	718.97	2.84	3.07	3.20	0.01	423830.42	656967.97	N 32° 9' 52.69" W 103° 57' 34.74"	
	808.00	0.07	222.67	807.97	2.79	3.02	3.14	0.04	423830.37	656967.91	N 32° 9' 52.69" W 103° 57' 34.74"	
	898.00	0.02	166.06	897.97	2.73	2.96	3.10	0.07	423830.31	656967.87	N 32° 9' 52.69" W 103° 57' 34.74"	
	988.00	0.02	214.53	988.97	2.71	2.93	3.10	0.02	423830.26	656967.87	N 32° 9' 52.69" W 103° 57' 34.74"	
	1088.00	0.02	78.35	1079.97	2.70	2.92	3.11	0.04	423830.27	656967.87	N 32° 9' 52.69" W 103° 57' 34.74"	
	1172.00	0.07	333.02	1171.97	2.75	2.98	3.10	0.08	423830.33	656967.87	N 32° 9' 52.69" W 103° 57' 34.74"	
	1263.00	0.02	153.73	1262.97	2.79	3.01	3.08	0.10	423830.36	656967.85	N 32° 9' 52.69" W 103° 57' 34.74"	
	1357.00	0.02	312.68	1356.97	2.78	3.01	3.07	0.04	423830.36	656967.84	N 32° 9' 52.69" W 103° 57' 34.74"	
	1452.00	0.02	241.40	1451.97	2.79	3.01	3.05	0.02	423830.36	656967.82	N 32° 9' 52.69" W 103° 57' 34.74"	
	1547.00	0.02	174.15	1546.97	2.78	2.99	3.03	0.02	423830.34	656967.80	N 32° 9' 52.69" W 103° 57' 34.74"	
	1642.00	0.07	305.38	1641.97	2.78	3.00	2.99	0.09	423830.35	656967.76	N 32° 9' 52.69" W 103° 57' 34.74"	
	1737.00	0.43	105.40	1736.96	2.70	2.94	3.26	0.52	423830.29	656968.05	N 32° 9' 52.69" W 103° 57' 34.74"	
	1832.00	0.02	348.48	1831.96	2.60	2.88	3.62	0.48	423830.21	656968.19	N 32° 9' 52.69" W 103° 57' 34.73"	
	2022.00	0.02	81.83	2021.96	2.64	2.91	3.68	0.02	423830.25	656968.42	N 32° 9' 52.69" W 103° 57' 34.73"	
	2117.00	0.02	83.94	2116.96	2.64	2.91	3.71	0.00	423830.28	656968.45	N 32° 9' 52.69" W 103° 57' 34.73"	
	2212.00	0.02	89.95	2211.96	2.65	2.90	3.71	0.61	423830.25	656968.48	N 32° 9' 52.69" W 103° 57' 34.73"	
	2307.00	0.07	169.36	2306.96	2.58	2.88	3.75	0.00	423830.20	656968.52	N 32° 9' 52.69" W 103° 57' 34.73"	
	2402.00	0.07	149.43	2401.96	2.47	2.75	3.81	0.01	423830.10	656968.58	N 32° 9' 52.69" W 103° 57' 34.73"	
	2591.00	0.02	217.23	2590.96	2.35	2.63	3.85	0.04	423829.98	656968.52	N 32° 9' 52.69" W 103° 57' 34.73"	
	2686.00	0.08	175.13	2685.96	2.27	2.55	3.85	0.07	423829.90	656968.62	N 32° 9' 52.69" W 103° 57' 34.73"	
	2781.00	0.02	238.97	2780.96	2.19	2.47	3.84	0.08	423829.82	656968.61	N 32° 9' 52.69" W 103° 57' 34.73"	
	2876.00	0.10	198.68	2875.96	2.11	2.39	3.80	0.09	423829.74	656968.57	N 32° 9' 52.69" W 103° 57' 34.73"	
	2971.00	0.07	162.77	2970.96	1.98	2.25	3.77	0.04	423829.60	656968.54	N 32° 9' 52.69" W 103° 57' 34.73"	
	3066.00	0.02	97.03	3065.96	1.92	2.19	3.79	0.08	423829.54	656968.56	N 32° 9' 52.68" W 103° 57' 34.73"	
3161.00	0.02	309.02	3160.96	1.92	2.20	3.79	0.04	423829.55	656968.56	N 32° 9' 52.68" W 103° 57' 34.73"		
3256.00	0.02	313.33	3255.96	1.95	2.22	3.77	0.00	423829.57	656968.54	N 32° 9' 52.68" W 103° 57' 34.73"		
3445.00	0.02	278.74	3444.96	1.98	2.25	3.71	0.01	423829.60	656968.48	N 32° 9' 52.68" W 103° 57' 34.73"		
3635.00	0.02	277.59	3634.96	1.99	2.26	3.64	0.00	423829.61	656968.41	N 32° 9' 52.68" W 103° 57' 34.73"		
3730.00	0.02	178.20	3729.96	1.98	2.24	3.63	0.03	423829.59	656968.40	N 32° 9' 52.68" W 103° 57' 34.73"		
3825.00	0.02	165.31	3824.96	1.95	2.21	3.63	0.00	423829.58	656968.40	N 32° 9' 52.68" W 103° 57' 34.73"		
4015.00	0.02	101.10	4014.96	1.90	2.17	3.68	0.01	423829.52	656968.43	N 32° 9' 52.68" W 103° 57' 34.73"		
4110.00	0.02	119.39	4109.96	1.89	2.16	3.69	0.01	423829.51	656968.40	N 32° 9' 52.68" W 103° 57' 34.73"		
4299.00	0.07	208.47	4298.96	1.88	2.14	3.60	0.08	423829.48	656968.37	N 32° 9' 52.68" W 103° 57' 34.73"		
4489.00	1.83	291.12	4488.93	1.18	1.23	0.65	0.93	423830.58	656965.42	N 32° 9' 52.69" W 103° 57' 34.77"		
4584.00	3.06	293.67	4583.84	5.00	4.80	-3.08	1.20	423832.15	656961.69	N 32° 9' 52.71" W 103° 57' 34.81"		
4679.00	4.14	294.16	4678.85	7.81	7.22	-8.53	1.14	423834.57	656956.24	N 32° 9' 52.73" W 103° 57' 34.87"		
4869.00	5.87	296.71	4867.92	18.02	14.39	-23.47	0.82	423841.74	656941.30	N 32° 9' 52.80" W 103° 57' 35.05"		
4964.00	6.67	298.83	4962.33	21.58	19.30	-32.80	1.08	423846.65	656931.97	N 32° 9' 52.85" W 103° 57' 35.16"		
5153.00	8.39	298.05	5149.65	35.02	31.20	-54.69	0.81	423856.55	656909.88	N 32° 9' 52.97" W 103° 57' 35.41"		
5248.00	8.96	298.13	5243.57	42.64	37.95	-67.53	0.60	423865.30	656897.24	N 32° 9' 53.04" W 103° 57' 35.56"		
5343.00	9.40	298.29	5337.35	50.74	45.11	-80.89	0.46	423872.48	656883.99	N 32° 9' 53.11" W 103° 57' 35.71"		
5438.00	9.48	298.33	5431.06	59.08	52.30	-84.60	0.58	423879.85	656870.17	N 32° 9' 53.16" W 103° 57' 35.87"		
5533.00	9.82	297.26	5524.71	67.53	59.96	-108.77	0.50	423887.31	656856.01	N 32° 9' 53.26" W 103° 57' 36.04"		
5722.00	11.07	297.39	5710.54	85.46	75.77	-139.35	0.81	423903.11	656825.43	N 32° 9' 53.41" W 103° 57' 36.39"		
5817.00	11.29	295.89	5803.74	94.86	84.02	-155.81	0.38	423911.37	656808.97	N 32° 9' 53.50" W 103° 57' 36.58"		
5912.00	11.41	294.06	5896.88	103.94	91.82	-172.78	0.40	423919.26	656792.02	N 32° 9' 53.58" W 103° 57' 36.78"		
6102.00	12.36	292.22	6088.81	121.60	107.27	-208.75	0.54	423934.61	656756.04	N 32° 9' 53.73" W 103° 57' 37.20"		
6292.00	13.40	291.47	6286.02	140.30	123.02	-248.00	0.55	423950.36	656718.73	N 32° 9' 53.89" W 103° 57' 37.68"		
6387.00	13.48	290.42	6380.42	149.63	130.81	-288.68	0.27	423958.25	656686.11	N 32° 9' 53.96" W 103° 57' 37.90"		
6481.00	12.82	288.03	6451.96	158.10	137.98	-328.87	0.91	423965.30	656675.93	N 32° 9' 54.03" W 103° 57' 38.13"		
6671.00	12.62	283.07	6637.30	172.14	149.18	-329.13	0.58	423976.52	656635.87	N 32° 9' 54.15" W 103° 57' 38.60"		
6766.00	12.76	280.49	6729.98	177.84	153.43	-349.56	0.61	423989.77	656615.24	N 32° 9' 54.19" W 103° 57' 38.84"		
6861.00	12.89	278.40	6822.61	182.76	156.89	-370.35	0.51	423984.23	656594.45	N 32° 9' 54.23" W 103° 57' 39.08"		
6956.00	11.24	282.24	6914.53	187.60	160.37	-389.68	1.95	423987.70	656575.12	N 32° 9' 54.26" W 103° 57' 39.30"		
7050.00	12.25	286.15	7007.54	193.68	165.13	-408.41	1.35	423992.47	656556.39	N 32° 9' 54.31" W 103° 57' 39.52"		
7240.00	11.10	289.46	7193.61	207.95	176.83	-445.02	0.70	424004.17	656519.79	N 32° 9' 54.42" W 103° 57' 39.94"		
7429.00	7.67	294.76	7380.08	221.30	188.18	-473.63	1.87	424015.52	656491.17	N 32° 9' 54.54" W 103° 57' 40.28"		
7619.00	4.60	285.73	7568.92	230.11	195.65	-492.80	1.59	424022.98	656472.00	N 32° 9' 54.61" W 103° 57' 40.50"		
7714.00	4.63	283.25	7663.60	232.59	197.60	-500.36	0.28	424024.94	656464.45	N 32° 9' 54.63" W 103° 57' 40.59"		
7804.00	5.24	297.09	7852.90	239.37	203.31	-515.55	0.70	424030.65	656449.26	N 32° 9' 54.69" W 103° 57' 40.78"		
8087.00	4.72	309.73	8015.29	247.86	210.99	-527.34	0.74	424038.32	656437.47	N 32° 9' 54.77" W 103° 57' 40.90"		
8247.00	3.82	328.31	8194.79	258.30	220.83	-536.18	0.91	424048.18	656428.03	N 32° 9' 54.86" W 103° 57' 41.00"		
8371.00	3.85	300.10	8318.53	264.30	226.43	-541.95	1.51	424053.76	656422.86	N 32° 9' 54.92" W 103° 57' 41.05"		
8466.00	12.71	334.75	8412.48	275.68	237.51	-549.19	10.30	424064.84	656415.62	N 32° 9' 55.03" W 103° 57' 41.17"		
8561.00	26.04	346.27	8501.78	306.88	267.98	-558.02	15.33	424095.31	656406.79	N 32° 9' 55.32" W 103° 57' 41.26"		
8656.00	38.74	342.71	8581.58	357.12	317.41	-571.24	13.11	424144.73	656393.57	N 32° 9' 55.82" W 103° 57' 41.41"		
8751.00	48.39											

[illegible]

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 ° ' ")
----------	------------	-------------	------------------	-------------	--------------	------------	------------	------------------	--------------------	-------------------	-------------------------	--------------------------

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7855 sigma
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EDU 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 Corral Fly 35-26 Federal Com 21H Gyro+MWD(IFR1) 0-19,584'
	1	26.500	26.500	Act Strs	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Corral Fly 35-26 Federal Com 21H Gyro+MWD(IFR1) 0-19,584'
	1	26.500	399.500	Act Strs	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Corral Fly 35-26 Federal Com 21H
	1	399.500	19584.000	Act Strs	30.000	30.000	NAL_MWD_IFR1+MS	Original Borehole / Oxy Corral Fly 35-26 Federal Com 21H