

Reservoir Development
Schlumberger Drilling and Measurements
9200 West Reno Avenue
Oklahoma City, Oklahoma 73127 USA
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Schlumberger

30-015-43808

Well Reference:
22, 24S, 29E, Eddy NM
-32.20710 -103.97510

I, Leslie Bullard certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of July 18, 2016 through August 12, 2016, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 364.00 feet to a depth of 16029.00 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 Cedar Canyon 22 15 Fee 032H Well (Original Hole) API No. 30-015-43808 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
Leslie Bullard
FS

Leslie Bullard

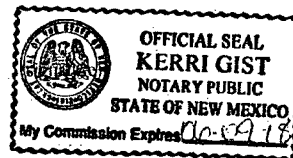
Subscribed and Sworn to before me this 17th day of August (month) 2016 (yr)

My Commission expires:

06-09-18

Kerri Gist
Notary Public

Eddy County, New Mexico
(County State)



Oxy Survey Oxy Cedar Canyon 22-15 Fee 32H MWD 0 to 16075' MD Survey Geodetic Report (Def Survey)



Report Date: August 15, 2016 - 08:41 AM Client: OXY Field: NM Eddy County (NAD 27) Structure / Slot: Oxy Cedar Canyon 22-15 Fee 32H / Oxy Cedar Canyon 22-15 Fee 32H Well: Oxy Cedar Canyon 22-15 Fee 32H Borehole: Oxy CC 22-15 32H - Original Borehole UWI / API#: Unknown / Unknown Survey Name: Oxy Survey Oxy Cedar Canyon 22-15 Fee 32H MWD 0 to 16075' MD Survey Date: July 15, 2016 Tort / AHD / DDI / ERD Ratio: 258.358 * / 6999.460 ft / 6.467 / 0.705 Coordinate Reference System: NAD27 New Mexico State Plane, Eastern Zone, US Feet Location Lat / Long: N 32° 12' 25.56588" W 103° 58' 30.37739" Location Grid N/E Y/X: N 439247.740 IJUS, E 610798.920 IJUS CRS Grid Convergence Angle: 0.1909 ° Grid Scale Factor: 0.99992315 Version / Patch: 2.9.365.0	Survey / DLS Computation: Minimum Curvature / Lubinski Vertical Section Azimuth: 5.410 ° (Grid North) Vertical Section Origin: 0.000 ft, 0.000 ft TVD Reference Datum: RKB=26.5' TVD Reference Elevation: 2952.300 ft above MSL Seabed / Ground Elevation: 2925.800 ft above MSL Magnetic Declination: 7.223 ° Total Gravity Field Strength: 998.4699mgn (9.80665 Based) Gravity Model: GARM Total Magnetic Field Strength: 48216.877 nT Magnetic Dip Angle: 60.060 ° Declination Date: August 04, 2016 Magnetic Declination Model: HDGM 2016 North Reference: Grid North Grid Convergence Used: 0.1909 ° Total Corr Mag North->Grid North: 7.0326 ° Local Coord Referenced To: Well Head	
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Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Tie-In	0.00	0.00	0.00	0.00	-2952.30	0.00	0.00	0.00	N/A	439247.74	610798.92	N 32 12 25.57	W 103 58 30.38
	26.50	0.00	0.00	26.50	-2925.80	0.00	0.00	0.00	0.00	439247.74	610798.92	N 32 12 25.57	W 103 58 30.38
	364.00	1.98	191.88	363.93	-2588.37	-5.79	-5.71	-1.20	0.59	439242.03	610797.72	N 32 12 25.51	W 103 58 30.39
	429.00	1.91	184.93	428.90	-2523.40	-7.99	-7.88	-1.52	0.38	439239.86	610797.40	N 32 12 25.49	W 103 58 30.40
	519.00	1.10	217.20	518.87	-2433.43	-10.23	-10.07	-2.18	1.27	439237.67	610796.74	N 32 12 25.47	W 103 58 30.40
	611.00	0.51	221.45	610.86	-2341.44	-11.31	-11.08	-2.98	0.64	439236.66	610795.94	N 32 12 25.46	W 103 58 30.41
	701.00	0.09	353.56	700.85	-2251.45	-11.56	-11.31	-3.25	0.64	439236.43	610795.67	N 32 12 25.45	W 103 58 30.42
	793.00	0.13	203.15	792.85	-2159.45	-11.59	-11.33	-3.30	0.23	439236.41	610795.62	N 32 12 25.45	W 103 58 30.42
	885.00	0.15	248.80	884.85	-2067.45	-11.75	-11.47	-3.46	0.12	439236.27	610795.46	N 32 12 25.45	W 103 58 30.42
	975.00	0.13	342.67	974.85	-1977.45	-11.70	-11.42	-3.60	0.23	439236.33	610795.32	N 32 12 25.45	W 103 58 30.42
	1066.00	0.15	211.10	1065.85	-1886.45	-11.72	-11.42	-3.69	0.28	439236.32	610795.23	N 32 12 25.45	W 103 58 30.42
	1160.00	0.13	114.78	1159.85	-1792.45	-11.86	-11.57	-3.66	0.22	439236.17	610795.26	N 32 12 25.45	W 103 58 30.42
	1255.00	0.18	224.84	1254.85	-1697.45	-12.01	-11.72	-3.66	0.27	439236.02	610795.26	N 32 12 25.45	W 103 58 30.42
	1350.00	0.13	9.54	1349.85	-1602.45	-12.02	-11.72	-3.75	0.31	439236.02	610795.17	N 32 12 25.45	W 103 58 30.42
	1445.00	0.15	348.87	1444.85	-1507.45	-11.79	-11.49	-3.76	0.06	439236.25	610795.16	N 32 12 25.45	W 103 58 30.42
	1540.00	0.15	262.39	1539.85	-1412.45	-11.70	-11.39	-3.90	0.22	439236.35	610795.02	N 32 12 25.45	W 103 58 30.42
	1634.00	0.15	124.65	1633.85	-1318.45	-11.79	-11.47	-3.92	0.30	439236.27	610795.00	N 32 12 25.45	W 103 58 30.42
	1729.00	0.15	267.06	1728.85	-1223.45	-11.87	-11.55	-3.95	0.30	439236.19	610794.97	N 32 12 25.45	W 103 58 30.42
	1824.00	0.15	250.50	1823.85	-1128.45	-11.94	-11.60	-4.19	0.05	439236.14	610794.73	N 32 12 25.45	W 103 58 30.43
	1919.00	0.15	74.24	1918.85	-1033.45	-11.95	-11.60	-4.19	0.32	439236.14	610794.73	N 32 12 25.45	W 103 58 30.43
	2013.00	0.15	132.49	2012.85	-939.45	-11.98	-11.65	-3.98	0.16	439236.09	610794.94	N 32 12 25.45	W 103 58 30.42
	2108.00	0.02	238.71	2107.85	-844.45	-12.06	-11.75	-3.90	0.17	439235.99	610795.02	N 32 12 25.45	W 103 58 30.42
	2203.00	0.18	358.28	2202.85	-749.45	-11.92	-11.61	-3.92	0.20	439236.13	610795.00	N 32 12 25.45	W 103 58 30.42
	2298.00	0.20	79.71	2297.85	-654.45	-11.73	-11.43	-3.76	0.26	439236.31	610795.16	N 32 12 25.45	W 103 58 30.42
	2488.00	0.13	200.07	2487.85	-464.45	-11.85	-11.57	-3.51	0.15	439236.17	610795.41	N 32 12 25.45	W 103 58 30.42
	2582.00	0.29	152.67	2581.85	-370.45	-12.15	-11.88	-3.43	0.24	439235.86	610795.49	N 32 12 25.45	W 103 58 30.42
	2677.00	0.51	184.53	2676.85	-275.45	-12.78	-12.52	-3.36	0.32	439235.22	610795.56	N 32 12 25.44	W 103 58 30.42
	2772.00	0.37	199.38	2771.85	-180.45	-13.50	-13.23	-3.49	0.19	439234.51	610795.43	N 32 12 25.44	W 103 58 30.42
	2867.00	0.22	288.88	2866.84	-85.46	-13.75	-13.46	-3.77	0.45	439234.28	610795.15	N 32 12 25.43	W 103 58 30.42
	2962.00	0.13	72.73	2961.84	9.54	-13.67	-13.37	-3.84	0.35	439234.37	610795.08	N 32 12 25.43	W 103 58 30.42
	3057.00	0.13	39.71	3056.84	104.54	-13.54	-13.25	-3.66	0.08	439234.49	610795.26	N 32 12 25.43	W 103 58 30.42
	3152.00	0.13	89.25	3151.84	199.54	-13.44	-13.17	-3.49	0.11	439234.57	610795.43	N 32 12 25.44	W 103 58 30.42
	3247.00	0.13	81.19	3246.84	294.54	-13.40	-13.15	-3.27	0.02	439234.59	610795.65	N 32 12 25.44	W 103 58 30.42
	3341.00	0.15	121.52	3340.84	388.54	-13.43	-13.20	-3.06	0.10	439234.54	610795.86	N 32 12 25.44	W 103 58 30.41
	3436.00	0.18	297.87	3435.84	483.54	-13.43	-13.19	-3.09	0.35	439234.55	610795.83	N 32 12 25.44	W 103 58 30.41
	3531.00	0.15	233.07	3530.84	578.54	-13.45	-13.20	-3.32	0.19	439234.54	610795.60	N 32 12 25.44	W 103 58 30.42
	3626.00	0.15	328.02	3625.84	673.54	-13.44	-13.17	-3.49	0.23	439234.57	610795.43	N 32 12 25.44	W 103 58 30.42
	3721.00	0.15	163.18	3720.84	768.54	-13.45	-13.18	-3.52	0.31	439234.56	610795.40	N 32 12 25.44	W 103 58 30.42
	3816.00	0.15	220.97	3815.84	863.54	-13.67	-13.39	-3.56	0.15	439234.35	610795.36	N 32 12 25.43	W 103 58 30.42
	3911.00	0.13	291.62	3910.84	958.54	-13.74	-13.45	-3.74	0.17	439234.29	610795.18	N 32 12 25.43	W 103 58 30.42
	4006.00	0.15	54.07	4005.84	1053.54	-13.63	-13.34	-3.74	0.26	439234.40	610795.18	N 32 12 25.43	W 103 58 30.42
	4100.00	0.15	333.25	4099.84	1147.54	-13.44	-13.15	-3.70	0.21	439234.59	610795.22	N 32 12 25.44	W 103 58 30.42
	4195.00	0.15	142.62	4194.84	1242.54	-13.43	-13.14	-3.68	0.31	439234.60	610795.24	N 32 12 25.44	W 103 58 30.42
	4290.00	0.18	303.08	4289.84	1337.54	-13.45	-13.16	-3.73	0.34	439234.58	610795.19	N 32 12 25.44	W 103 58 30.42
	4385.00	0.13	52.99	4384.84	1432.54	-13.31	-13.01	-3.77	0.27	439234.73	610795.15	N 32 12 25.44	W 103 58 30.42
	4480.00	0.18	196.95	4479.84	1527.54	-13.38	-13.09	-3.72	0.31	439234.65	610795.20	N 32 12 25.44	W 103 58 30.42
	4574.00	0.18	229.44	4573.84	1621.54	-13.63	-13.33	-3.88	0.11	439234.41	610795.04	N 32 12 25.43	W 103 58 30.42
	4669.00	0.15	53.65	4668.84	1716.54	-13.66	-13.35	-3.89	0.35	439234.39	610795.03	N 32 12 25.43	W 103 58 30.42
	4764.00	0.18	119.95	4763.84	1811.54	-13.64	-13.35	-3.66	0.19	439234.39	610795.26	N 32 12 25.43	W 103 58 30.42
	4859.00	0.15	127.01	4858.84	1906.54	-13.77	-13.50	-3.43	0.04	439234.24	610795.49	N 32 12 25.43	W 103 58 30.42
	4954.00	0.13	14.85	4953.84	2001.54	-13.72	-13.47	-3.31	0.25	439234.27	610795.61	N 32 12 25.43	W 103 58 30.42
	5144.00	0.15	104.40	5143.84	2191.54	-13.55	-13.33	-3.01	0.10	439234.42	610795.91	N 32 12 25.43	W 103 58 30.41
	5334.00	0.18	183.09	5333.84	2381.54	-13.89	-13.69	-2.79	0.11	439234.06	610796.13	N 32 12 25.43	W 103 58 30.41
	5428.00	0.15	117.25	5427.84	2475.54	-14.08	-13.89	-2.69	0.19	439233.85	610796.23	N 32 12 25.43	W 103 58 30.41
	5523.00	0.11	113.46	5522.84	2570.54	-14.15	-13.98	-2.49	0.04	439233.76	610796.43	N 32 12 25.43	W 103 58 30.41
	5618.00	0.26	146.83	5617.84	2665.54	-14.35	-14.20	-2.29	0.19	439233.54	610796.63	N 32 12 25.43	W 103 58 30.40
	5713.00	0.70	132.52	5712.83	2760.53	-14.87	-14.77	-1.75	0.48	439232.97	610797.18	N 32 12 25.42	W 103 58 30.40
	5808.00	1.91	125.22	5807.81	2855.51	-16.01	-16.08	-0.02	1.28	439231.66	610798.90	N 32 12 25.41	W 103 58 30.38
	5903.00	3.12	135.45	5902.71	2950.41	-18.46	-18.83	3.08	1.35	439228.91	610802.00	N 32 12 25.38	W 103 58 30.34
	5998.00	4.00	141.81	5997.53	3045.23	-22.52	-23.28	6.95	1.01	439224.46	610805.87	N 32 12 25.34	W 103 58 30.30
	6093.00	4.86	140.14	6092.25	3139.95	-27.75	-28.97	11.57	0.92	439218.77	610810.49	N 32 12 25.28	W 103 58 30.24
	6188.00	5.74	141.08	6186.84	3234.54	-33.98	-35.76	17.14	0.93	439211.98	610816.06	N 32 12 25.21	W 103 58 30.18
	6283.00	6.31	132.34	6281.32	3329.02	-40.52	-42.97	23.98	1.14	439204.77	610822.90	N 32 12 25.14	W 103 58 30.10
	6377.00	7.23	122.78	6374.66	3422.36	-46.34	-49.65	32.77	1.54	439198.09	610831.69	N 32 12 25.07	W 103 58 30.00
	6472.00	7.98	115.96	6468.83	3516.53	-51.40	-55.78	43.73	1.23	439191.97	610842.64	N 32 12 25.01	W 103 58 29.87
	6567.00	9.08	112.10	6562.78	3610.48	-55.87	-61.48	56.60	1.30	439186.26	610855.52	N 32 12 24.96	W 103 58 29.72
	6662.00	10.11	105.74	6656.45	3704.15	-59.52	-66.57	71.57	1.55	439181.18	610870.49	N 32 12 24.90	W 103 58 29.55
	6726.00	9.95	102.51	6719.47	3767.17	-61.21	-69.29	82.38	0.91	439178.46	610881.29	N 32 12 24.88	W

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (NUS)	Easting (EUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	7704.00	11.67	107.38	7684.20	4731.90	-68.25	-90.98	236.79	2.26	439156.77	611035.69	N 32 12 24.66	W 103 58 27.63
	7799.00	13.65	111.42	7776.89	4824.59	-73.33	-97.94	256.40	2.28	439149.80	611055.30	N 32 12 24.59	W 103 58 27.40
	7894.00	13.89	112.24	7869.16	4916.86	-79.73	-106.35	277.39	0.33	439141.39	611076.28	N 32 12 24.50	W 103 58 27.15
	8083.00	12.37	104.74	8053.23	5100.93	-89.58	-120.09	317.97	1.21	439127.66	611116.86	N 32 12 24.37	W 103 58 26.68
	8273.00	14.15	106.64	8238.16	5285.86	-97.40	-131.92	359.90	0.96	439115.83	611158.80	N 32 12 24.25	W 103 58 26.19
	8367.00	14.75	113.04	8329.19	5376.89	-103.26	-139.90	381.93	1.81	439107.85	611180.82	N 32 12 24.17	W 103 58 25.94
	8462.00	15.95	117.80	8420.80	5468.50	-111.90	-150.72	404.60	1.83	439097.03	611203.49	N 32 12 24.06	W 103 58 25.67
	8557.00	15.45	114.07	8512.26	5559.96	-120.92	-161.97	427.70	1.19	439085.79	611226.59	N 32 12 23.95	W 103 58 25.41
	8651.00	10.86	112.95	8603.77	5651.47	-127.60	-170.53	447.30	4.89	439077.22	611246.19	N 32 12 23.86	W 103 58 25.18
	8746.00	8.39	111.88	8697.42	5745.12	-132.26	-176.60	461.98	2.61	439071.15	611260.86	N 32 12 23.80	W 103 58 25.01
	8841.00	7.93	104.06	8791.46	5839.16	-135.21	-180.78	474.76	1.26	439066.97	611273.65	N 32 12 23.76	W 103 58 24.86
	8936.00	7.87	99.81	8885.56	5933.26	-136.70	-183.48	487.53	0.62	439064.27	611286.41	N 32 12 23.73	W 103 58 24.71
	9030.00	6.70	80.87	8978.82	6026.52	-135.81	-183.71	499.29	2.82	439064.05	611298.17	N 32 12 23.73	W 103 58 24.57
	9125.00	6.70	47.58	9073.20	6120.90	-130.31	-179.09	508.85	4.03	439068.67	611307.73	N 32 12 23.78	W 103 58 24.46
	9180.00	7.30	35.73	9127.79	6175.49	-124.92	-174.09	513.26	2.84	439073.67	611312.14	N 32 12 23.83	W 103 58 24.41
	9331.00	9.49	358.12	9277.28	6324.98	-104.27	-153.84	518.46	3.83	439093.91	611317.34	N 32 12 24.03	W 103 58 24.35
	9390.00	9.01	312.65	9335.58	6383.28	-96.64	-145.84	514.90	12.10	439101.91	611313.78	N 32 12 24.11	W 103 58 24.39
	9483.00	14.34	1.42	9426.83	6474.53	-80.70	-129.34	509.81	11.56	439118.41	611308.69	N 32 12 24.27	W 103 58 24.45
	9577.00	19.77	356.02	9516.67	6564.37	-53.38	-101.82	509.00	6.01	439145.92	611307.88	N 32 12 24.54	W 103 58 24.46
	9671.00	30.02	0.17	9601.83	6649.53	-14.17	-62.34	507.96	11.06	439185.40	611306.84	N 32 12 24.93	W 103 58 24.47
	9765.00	41.67	4.39	9677.90	6725.60	40.68	-7.47	510.43	12.66	439240.27	611309.31	N 32 12 25.48	W 103 58 24.44
	9858.00	54.50	9.32	9739.92	6787.62	109.67	61.02	518.97	14.34	439308.75	611317.85	N 32 12 26.15	W 103 58 24.34
	9951.00	64.43	9.42	9787.11	6834.81	189.48	139.95	532.00	10.68	439387.68	611330.87	N 32 12 26.93	W 103 58 24.18
	10044.00	63.82	7.39	9827.70	6875.40	273.04	222.72	544.23	2.07	439470.44	611343.11	N 32 12 27.75	W 103 58 24.03
	10139.00	64.68	5.82	9868.97	6916.67	358.58	307.72	554.07	1.74	439555.43	611352.94	N 32 12 28.59	W 103 58 23.92
	10232.00	76.54	6.59	9899.80	6947.50	446.14	394.77	563.55	12.78	439642.48	611362.43	N 32 12 29.45	W 103 58 23.80
	10325.00	88.87	7.50	9911.58	6959.28	538.17	486.14	574.86	13.29	439733.84	611373.73	N 32 12 30.36	W 103 58 23.67
	10417.00	88.69	3.82	9913.54	6961.24	630.14	577.66	583.93	4.00	439825.35	611382.80	N 32 12 31.26	W 103 58 23.56
	10511.00	89.45	1.41	9915.07	6962.77	724.00	671.54	588.21	2.69	439915.22	611387.09	N 32 12 32.19	W 103 58 23.51
	10604.00	89.59	359.84	9915.85	6963.55	816.67	764.53	589.23	1.69	440012.21	611388.10	N 32 12 33.11	W 103 58 23.49
	10698.00	90.31	358.87	9915.93	6963.63	910.15	858.52	588.17	1.29	440106.19	611387.04	N 32 12 34.04	W 103 58 23.50
	10885.00	90.14	358.02	9915.19	6962.89	1095.76	1045.45	583.10	0.46	440293.10	611381.97	N 32 12 35.89	W 103 58 23.55
	10978.00	90.52	357.66	9914.66	6962.36	1187.95	1138.38	579.59	0.58	440386.03	611378.46	N 32 12 36.81	W 103 58 23.59
	11072.00	90.24	358.09	9914.04	6961.74	1281.14	1232.31	576.10	0.55	440479.95	611374.98	N 32 12 37.74	W 103 58 23.62
	11258.00	90.10	359.03	9913.48	6961.18	1465.81	1418.25	571.43	0.51	440665.88	611370.31	N 32 12 39.58	W 103 58 23.67
	11352.00	90.21	359.15	9913.23	6960.93	1559.24	1512.24	569.94	0.17	440759.86	611368.81	N 32 12 40.51	W 103 58 23.69
	11444.00	90.31	0.84	9912.81	6960.51	1650.82	1604.23	569.93	1.84	440851.85	611368.80	N 32 12 41.42	W 103 58 23.68
	11538.00	90.14	0.88	9912.44	6960.14	1744.52	1698.22	571.34	0.19	440945.83	611370.22	N 32 12 42.35	W 103 58 23.66
	11631.00	90.14	359.86	9912.22	6959.92	1837.16	1791.22	571.94	1.10	441038.82	611370.82	N 32 12 43.27	W 103 58 23.65
	11723.00	90.48	358.48	9911.72	6959.42	1928.61	1883.20	570.61	1.54	441130.80	611369.48	N 32 12 44.18	W 103 58 23.66
	11817.00	89.66	359.77	9911.60	6959.30	2022.05	1977.19	569.17	1.63	441224.77	611368.05	N 32 12 45.11	W 103 58 23.68
	11911.00	89.66	0.61	9912.16	6959.86	2115.65	2071.19	569.48	0.89	441318.76	611368.36	N 32 12 46.04	W 103 58 23.67
	12005.00	89.76	1.13	9912.64	6960.34	2209.36	2165.18	570.91	0.56	441412.74	611369.79	N 32 12 46.97	W 103 58 23.65
	12098.00	89.62	2.86	9913.14	6960.84	2302.19	2258.11	574.15	1.87	441505.68	611373.02	N 32 12 47.89	W 103 58 23.61
	12192.00	89.62	2.20	9913.76	6961.46	2396.07	2352.02	578.30	0.70	441599.57	611377.17	N 32 12 48.82	W 103 58 23.56
	12286.00	89.59	2.09	9914.41	6962.11	2489.91	2445.95	581.82	0.12	441693.50	611380.69	N 32 12 49.75	W 103 58 23.51
	12379.00	89.62	3.13	9915.05	6962.75	2582.80	2538.85	586.05	1.12	441786.39	611384.93	N 32 12 50.67	W 103 58 23.46
	12473.00	89.66	2.93	9915.64	6963.34	2678.71	2632.72	591.02	0.22	441880.25	611389.89	N 32 12 51.60	W 103 58 23.40
	12567.00	89.62	1.96	9916.23	6963.93	2770.58	2726.63	595.03	1.03	441974.15	611393.90	N 32 12 52.53	W 103 58 23.35
	12661.00	89.72	0.98	9916.77	6964.47	2864.36	2820.60	597.44	1.05	442068.11	611396.31	N 32 12 53.46	W 103 58 23.31
	12753.00	89.66	0.01	9917.27	6964.97	2956.02	2912.59	598.24	1.06	442160.10	611397.11	N 32 12 54.37	W 103 58 23.30
	12840.00	89.90	1.37	9917.99	6965.69	3142.38	3099.57	600.49	0.74	442347.07	611399.36	N 32 12 56.22	W 103 58 23.27
	13034.00	89.62	0.69	9918.38	6966.08	3236.10	3193.55	602.18	0.78	442441.04	611401.05	N 32 12 57.15	W 103 58 23.24
	13126.00	89.83	358.97	9918.83	6966.53	3327.66	3285.55	601.91	1.88	442533.03	611400.78	N 32 12 58.06	W 103 58 23.24
	13220.00	89.59	358.36	9919.30	6967.00	3421.10	3379.54	600.54	0.49	442627.01	611399.41	N 32 12 58.99	W 103 58 23.26
	13313.00	89.72	1.00	9919.86	6967.56	3513.71	3472.53	600.83	1.77	442720.00	611399.70	N 32 12 59.91	W 103 58 23.25
	13407.00	89.90	0.27	9920.17	6967.87	3607.38	3566.53	601.87	0.80	442813.98	611400.74	N 32 13 0.84	W 103 58 23.23
	13501.00	89.86	0.99	9920.37	6968.07	3701.06	3660.52	602.90	0.77	442907.97	611401.78	N 32 13 1.77	W 103 58 23.22
	13593.00	89.42	1.10	9920.95	6968.65	3792.79	3752.50	604.58	0.49	442999.95	611403.45	N 32 13 2.68	W 103 58 23.19
	13687.00	89.69	0.92	9921.68	6969.38	3886.51	3846.48	606.24	0.35	443093.92	611405.11	N 32 13 3.61	W 103 58 23.17
	13779.00	90.03	358.21	9921.90	6969.60	3978.02	3938.47	605.54	2.97	443185.90	611404.41	N 32 13 4.52	W 103 58 23.18
	13872.00	89.79	358.45	9922.05	6969.75	4070.31	4031.43	602.83	0.36	443278.85	611401.70	N 32 13 5.44	W 103 58 23.20
	13965.00	90.27	357.35	9922.00	6969.70	4162.51	4124.37	599.42	1.29	443371.78	611398.29	N 32 13 6.36	W 103 58 23.24
	14059.00	90.14	359.37	9921.66	6969.36	4255.79	4218.32	596.73	2.15	443465.73	611395.60	N 32 13 7.29	W 103 58 23.27
	14152.00	90.10	359.44	9921.47	6969.17	4348.28	4311.32	595.77	0.09	443558.72	611394.64	N 32 13 8.21	W 103 58 23.28
	14245.00	89.55	356.23	9921.75	6969.45	4440.46	4404.24	592.25	3.50	443651.63	611391.13	N 32 13 9.13	W 103 58 23.31
	14338.00	89.66	358.79	9922.39	6970.09	4532.34	4497.06	588.59	0.61	443744.45	611385.47	N 32 13 10.05	W 103 58 23.38
	14431.00	89.76	358.30	9922.87	6970.57	4624.46	4589.98	582.61	1.63	443837.35	611381.48	N 32 13 10.97	W 103 58 23.42
	14524.00	90.62	1.89	9922.56	6970.26	4717.04	4682.96	582.76	3.97	443930.33	611381.64	N 32 13 11.89	W 103 58 23.41
	14617.00	90.07	2.53	9922.00	6969.70	4809.90	4775.89	586.35	0.91	444023.25	611385.22	N 32 13 12.81	W 103 58 23.37
	14710.00	90.86	6.04	9921.24	6968.94	4902.86	4868.61	593.30	3.87	444115.96	611		

OXY USA INC.
Cedar Canyon 22-15 Fee #32H
API No. 30-015-43808

14-3/4" hole @ 450'
10-3/4" csg @ 442'
w/ 470sx-TOC-Surf-Circ.

NM OIL CONSERVATION
ARTESIA DISTRICT

SEP 15 2016

RECEIVED

9-7/8" hole @ 9287'
7-5/8" csg @ 9277'
w/ 3130sx-TOC-Surf-Circ.

6-3/4" hole @ 16075'
5-1/2" X 4-1/2" csg @ 16053'
w/ 470sx-TOC-5970' CBL

Perfs @ 9994-15862'

TD- 16075'M 9926'V

Borehole:	Well:	Field:	Structure:
Oxy CC 22-15 32H - Original Borehole	Oxy Cedar Canyon 22-15 Fee 32H	NM Eddy County (NAD 27)	H&P 636

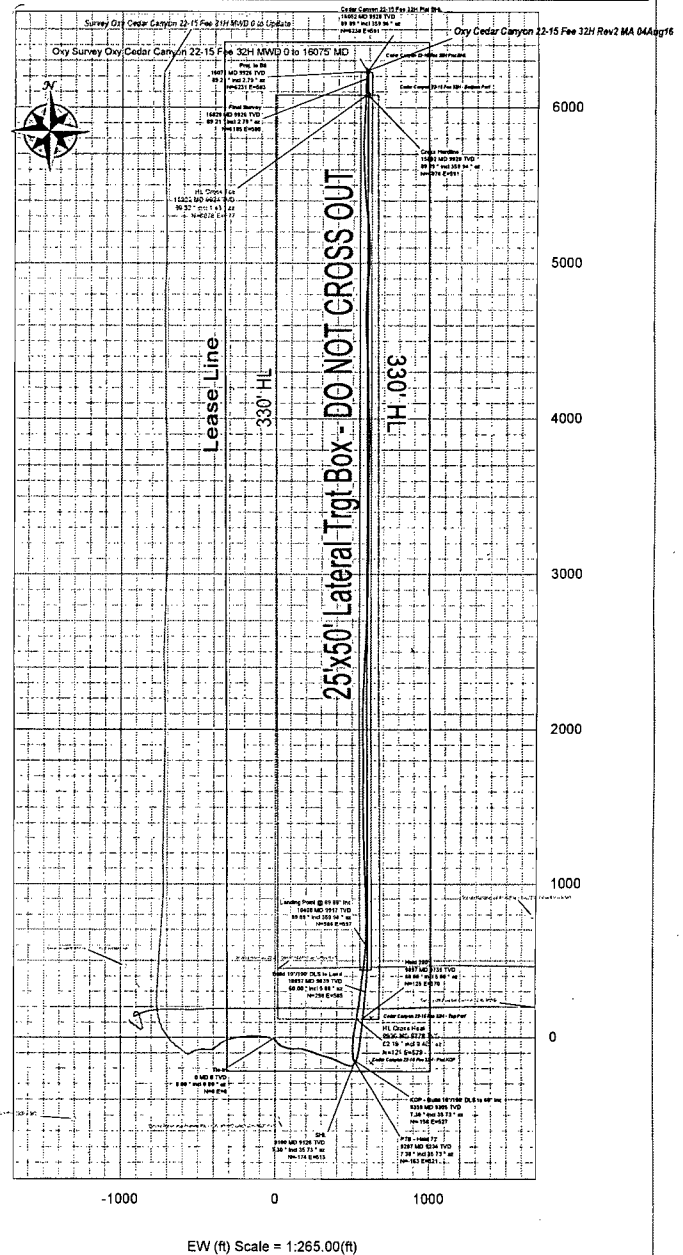
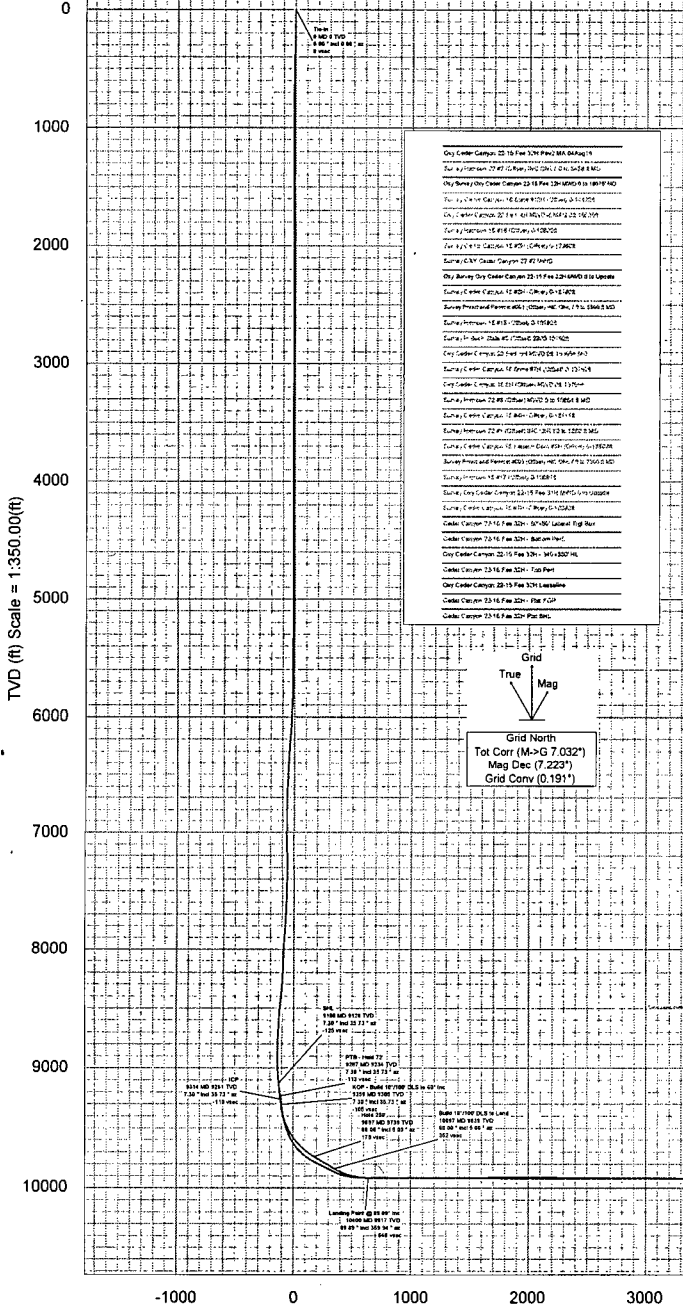
Gravity & Magnetic Parameters	Surface Location	Miscellaneous
Model: HDGM 2016 Dip: 60.96° Date: 04-Aug-2016	NAD27 New Mexico State Plane, Eastern Zone, US Feet	Oxy Cedar Canyon TVD Ref: RKB-26.5' (252.3' above MSL)
MagDec: 7.223° FS: 48216.877m Gravity FS: 998.47mg (9.80665 Based)	Lat: N 32 12 25.57 Northing: 439247.74NUS Grid Conv: 0.1909° Scale Fact: 0.9992315	Plan: Oxy Cedar Canyon 22-15 Fee 32H Rev2 MA 04Aug16

Critical Points

Comments	Survey MD (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Sub-Sea TVD	VS (ft)	NS (ft)	EW (ft)	Latitude (deg)	Longitude (deg)	Easting (ftUS)	Northing (ftUS)	DLS (°/100ft)	Tool Face (deg)
SHL	9180.00	7.30	35.73	9127.79	6175.49	-124.94	-174.09	513.26	N 32 12 23.826	W 103 58 24.411	611312.14	439073.67	2.84	0.00
PTB - Hold 72'	9287.00	7.30	35.73	9233.93	6281.63	-113.20	-163.05	521.20	N 32 12 23.935	W 103 58 24.318	611320.08	439084.70	0.00	0.00
ICP	9314.29	7.30	35.73	9261.00	6308.70	-110.21	-160.23	523.23	N 32 12 23.963	W 103 58 24.294	611322.11	439087.52	0.00	0.00
KOP - Build 10°/100' DLS to 60° Inc	9359.00	7.30	35.73	9305.34	6353.04	-105.31	-155.62	526.55	N 32 12 24.009	W 103 58 24.255	611325.42	439092.13	0.00	-4.64
Cross Hardline	9891.88	59.48	5.05	9736.45	6784.15	173.87	120.72	569.67	N 32 12 26.742	W 103 58 23.743	611368.54	439368.45	10.00	-33.25
Hold 200'	9897.05	60.00	5.00	9739.05	6786.75	178.33	125.17	570.06	N 32 12 26.786	W 103 58 23.738	611368.93	439372.90	10.00	0.00
Build 10°/100' DLS to Land	10097.05	60.00	5.00	9839.05	6886.75	351.53	297.71	585.15	N 32 12 28.493	W 103 58 23.566	611384.03	439545.43	0.00	-10.08
Landing Point @ 89.89° Inc	10399.78	89.89	359.94	9916.85	6964.55	640.04	586.41	596.68	N 32 12 31.349	W 103 58 23.410	611395.56	439834.11	10.00	0.00
Cross Hardline	15891.52	89.89	359.94	9927.68	6975.38	6106.76	6078.14	590.71	N 32 13 25.692	W 103 58 23.266	611389.58	445325.40	0.00	0.00
Cedar Canyon 22-15 Fee 32H Plat BHL	16051.58	89.89	359.94	9928.00	6975.70	6266.09	6238.20	590.54	N 32 13 27.276	W 103 58 23.261	611389.41	445485.45	0.00	0.00

Targets

Name	Latitude(deg)	Longitude(deg)	Northing(ftUS)	Easting(ftUS)	NS(ft)	EW(ft)
Oxy CC 22-15 Fee 31H - Top Part	N 32 12 26.858	W 103 58 38.454	439375.02	610104.55	128.28	-664.42
Oxy CC 22-15 Fee 31H - Plat Bottom Part	N 32 13 25.746	W 103 58 38.625	445326.49	610070.20	6079.22	-698.78
Oxy CC 22-15 Fee 31H - Plat Kick Off Point	N 32 12 23.988	W 103 58 38.446	439086.22	610166.22	-161.73	-662.75
Oxy CC 22-15 Fee 31H - 25x50' Lateral Trgt Box	N 32 12 58.797	W 103 58 38.695	442603.31	610073.16	3365.82	-696.81
Oxy CC 22-15 Fee 31H - Plat BHL	N 32 13 27.330	W 103 58 38.628	445486.48	610069.38	6130.22	-699.60



CONTROLLED	
Project No.	Oxy Cedar Canyon 22-15 Fee 32H Rev2 MA 04Aug16
Drawn By	W 3
Check By	17-Aug-2016
Originator	
2 DE Sign Off Authority	
3 D&M Line Manager	Joel Dunn
4 Client	Oxy
Copy Number	10