

NEXUS

DIRECTIONAL SOLUTIONS, L.P.

Survey Sheet

Company:	E.O.G. RESOURCES, Inc.	Job Number:	15-0121
Well:	Neptune 10 State #501H	GRID Decl.:	6.79
Location:	LEA COUNTY, NM	Dir Driller:	Mark Snelson
Rig:	CACTUS 123	MWD Eng:	Kenny Stroud
Leg:	Vert / Curve / Lateral	MWD Eng:	Johnathan White

Calculation Method:	Minimum Curvature
Reference point:	GRID NORTH
Proposed Azimuth	8.09
Depth Reference	Rig
Tie Into:	SURFACE

Survey Number	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (ft/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Direction Azimuth			
Tie In	0	0.00	0.00		0	0	0	0					
THE FOLLOWING ARE NEXUS MWD SURVEYS													
1	187	1.00	324.30	187	186.99	1.18	1.33 N	0.95 W	1.63	324.30	0.53	0.53	173.42
2	366	1.40	324.20	179	365.95	3.88	4.37 N	3.14 W	5.38	324.26	0.22	0.22	-0.06
3	487	1.50	306.00	121	486.91	5.69	6.50 N	5.29 W	8.38	320.85	0.39	0.08	-15.04
4	667	0.40	313.30	180	666.89	7.15	8.31 N	7.65 W	11.30	317.37	0.61	-0.61	4.06
5	844	1.30	76.10	177	843.87	8.26	9.22 N	6.15 W	11.08	326.28	0.88	0.51	-134.01
6	1024	1.20	71.30	180	1023.83	9.88	10.31 N	2.39 W	10.59	346.98	0.08	-0.06	-2.67
7	1208	0.70	88.40	184	1207.80	10.93	10.96 N	0.56 E	10.98	2.94	0.31	-0.27	9.29
8	1306	0.80	92.30	98	1305.79	11.10	10.95 N	1.85 E	11.11	9.56	0.11	0.10	3.98
9	1436	0.50	89.10	130	1435.79	11.28	10.92 N	3.32 E	11.42	16.90	0.23	-0.23	-2.46
10	1626	1.00	66.20	190	1625.77	12.29	11.61 N	5.67 E	12.92	26.02	0.30	0.26	-12.05
11	1816	1.00	56.20	190	1815.74	14.27	13.20 N	8.56 E	15.73	32.97	0.09	0.00	-5.26
12	2006	0.50	74.50	190	2005.72	15.71	14.34 N	10.74 E	17.92	36.82	0.29	-0.26	9.63
13	2196	0.50	79.60	190	2195.72	16.30	14.71 N	12.35 E	19.21	40.01	0.02	0.00	2.68
14	2386	0.60	82.90	190	2385.71	16.83	14.99 N	14.15 E	20.61	43.36	0.06	0.05	1.74
15	2575	0.70	75.90	189	2574.70	17.52	15.39 N	16.26 E	22.38	46.57	0.07	0.05	-3.70
16	2764	0.70	47.10	189	2763.68	18.86	16.46 N	18.22 E	24.55	47.91	0.18	0.00	-15.24
17	2954	1.10	45.70	190	2953.66	21.20	18.52 N	20.38 E	27.54	47.73	0.21	0.21	-0.74
18	3143	0.60	347.90	189	3142.64	23.57	20.75 N	21.47 E	29.86	45.97	0.49	-0.26	159.89
19	3333	1.40	202.10	190	3332.62	22.25	19.58 N	20.39 E	28.26	46.16	1.01	0.42	-76.74
20	3523	1.10	194.00	190	3522.58	18.18	15.66 N	19.07 E	24.67	50.61	0.18	-0.16	-4.26
21	3713	1.30	176.50	190	3712.54	14.26	11.74 N	18.76 E	22.13	57.97	0.22	0.11	-9.21
22	3902	1.50	177.70	189	3901.48	9.73	7.12 N	18.99 E	20.28	69.44	0.11	0.11	0.63
23	4092	1.60	180.80	190	4091.41	4.65	1.99 N	19.05 E	19.16	84.05	0.07	0.05	1.63
24	4282	1.90	180.10	190	4281.32	-1.10	3.81 S	19.01 E	19.39	101.35	0.16	0.16	-0.37
25	4472	2.30	137.90	190	4471.21	-6.66	9.79 S	21.56 E	23.68	114.43	0.82	0.21	-22.21
26	4661	0.80	341.80	189	4660.16	-7.91	11.35 S	23.69 E	26.27	115.61	1.61	-0.79	107.88
27	4851	1.30	116.80	190	4850.15	-7.41	11.07 S	25.20 E	27.53	113.71	1.03	0.26	-118.42
28	5040	1.10	138.50	189	5039.11	-9.27	13.39 S	28.32 E	31.33	115.31	0.26	-0.11	11.48
29	5112	1.20	144.20	72	5111.09	-10.26	14.52 S	29.22 E	32.63	116.43	0.21	0.14	7.92
30	5215	0.60	154.90	103	5214.08	-11.49	15.88 S	30.08 E	34.01	117.84	0.60	-0.58	10.39
31	5405	2.60	119.50	190	5404.00	-13.90	18.91 S	34.25 E	39.12	118.90	1.13	1.05	-18.63
32	5596	4.40	103.10	191	5594.64	-16.12	22.70 S	45.16 E	50.54	116.69	1.07	0.94	-8.59

32-025-42322

SEP 09 2015

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Rig:	CACTUS 123	MWD Eng:	Kenny Stroud
Leg:	Vert / Curve / Lateral	MWD Eng:	Johnathan White

Calculation Method:	Minimum Curvature
Reference point:	GRID NORTH
Proposed Azimuth	8.09
Depth Reference	Rig
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							N/S (ft)	E/W (ft)	Distance (ft)	Direction Azimuth			
33	5691	6.50	97.00	95	5689.21	-16.34	24.18 S	54.05 E	59.21	114.11	2.29	2.21	-6.42
34	5786	7.00	93.00	95	5783.55	-15.72	25.14 S	65.16 E	69.85	111.10	0.72	0.53	-4.21
35	5881	6.90	89.70	95	5877.85	-14.37	25.41 S	76.65 E	80.75	108.34	0.43	-0.11	-3.47
36	5976	6.90	87.10	95	5972.16	-12.45	25.10 S	88.06 E	91.56	105.91	0.33	0.00	-2.74
37	6071	7.00	85.60	95	6066.46	-10.11	24.36 S	99.53 E	102.47	103.75	0.22	0.11	-1.58
38	6166	7.10	92.80	95	6160.75	-8.32	24.21 S	111.16 E	113.77	102.28	0.94	0.11	7.58
39	6261	6.70	100.80	95	6255.06	-8.04	25.53 S	122.47 E	125.10	101.78	1.09	-0.42	8.42
40	6356	6.50	101.50	95	6349.43	-8.62	27.64 S	133.18 E	136.02	101.72	0.23	-0.21	0.74
41	6451	7.50	105.40	95	6443.72	-9.73	30.36 S	144.43 E	147.59	101.87	1.16	1.05	4.11
42	6547	7.60	105.90	96	6538.89	-11.39	33.76 S	156.58 E	160.18	102.17	0.12	0.10	0.52
43	6642	7.70	103.70	95	6633.05	-12.87	36.99 S	168.80 E	172.81	102.36	0.33	0.11	-2.32
44	6737	7.30	107.30	95	6727.23	-14.46	40.29 S	180.75 E	185.19	102.57	0.65	-0.42	3.79
45	6832	7.30	106.60	95	6821.46	-16.32	43.81 S	192.29 E	197.22	102.84	0.09	0.00	-0.74
46	6927	7.00	104.40	95	6915.72	-17.84	46.98 S	203.69 E	209.03	102.99	0.43	-0.32	-2.32
47	7022	7.20	103.70	95	7010.00	-19.06	49.83 S	215.08 E	220.77	103.04	0.23	0.21	-0.74
48	7116	7.10	103.20	94	7103.27	-20.16	52.55 S	226.46 E	232.47	103.06	0.13	-0.11	-0.53
49	7211	7.20	112.00	95	7197.53	-22.11	56.12 S	237.69 E	244.23	103.28	1.16	0.11	9.26
50	7306	7.30	113.10	95	7291.77	-25.10	60.72 S	248.76 E	256.07	103.72	0.18	0.11	1.16
51	7401	7.30	113.00	95	7386.00	-28.22	65.44 S	259.87 E	267.98	104.13	0.01	0.00	-0.11
52	7495	7.10	110.60	94	7479.26	-31.02	69.82 S	270.81 E	279.66	104.46	0.38	-0.21	-2.55
53	7590	6.70	109.30	95	7573.57	-33.36	73.72 S	281.53 E	291.02	104.67	0.45	-0.42	-1.37
54	7685	6.60	107.20	95	7667.93	-35.31	77.16 S	291.98 E	302.00	104.80	0.28	-0.11	-2.21
55	7780	6.30	112.80	95	7762.33	-37.49	80.80 S	302.00 E	312.62	104.98	0.73	-0.32	5.89
56	7875	5.60	112.70	95	7856.82	-39.99	84.61 S	311.08 E	322.38	105.22	0.74	-0.74	-0.11
57	7970	5.90	114.10	95	7951.34	-42.50	88.39 S	319.81 E	331.80	105.45	0.35	0.32	1.47
58	8065	6.70	113.30	95	8045.77	-45.30	92.58 S	329.36 E	342.12	105.70	0.85	0.84	-0.84
59	8159	6.60	114.60	94	8139.13	-48.28	96.99 S	339.31 E	352.90	105.95	0.19	-0.11	1.38
60	8255	6.90	110.90	96	8234.47	-51.12	101.35 S	349.71 E	364.10	106.16	0.55	0.31	-3.85
61	8350	7.50	108.60	95	8328.72	-53.52	105.36 S	360.92 E	375.98	106.27	0.70	0.63	-2.42
62	8444	6.90	106.40	94	8421.98	-55.46	108.91 S	372.15 E	387.76	106.31	0.70	-0.64	-2.34
63	8539	7.30	105.80	95	8516.25	-57.09	112.17 S	383.43 E	399.50	106.31	0.43	0.42	-0.63
64	8633	7.00	104.80	94	8609.52	-58.56	115.25 S	394.72 E	411.20	106.28	0.35	-0.32	-1.06
65	8728	7.40	108.00	95	8703.77	-60.29	118.62 S	406.13 E	423.10	106.28	0.60	0.42	3.37
66	8823	7.20	108.20	95	8798.00	-62.39	122.37 S	417.61 E	435.17	106.33	0.21	-0.21	0.21
67	8918	6.80	109.00	95	8892.29	-64.50	126.06 S	428.58 E	446.73	106.39	0.43	-0.42	0.84
68	9013	6.30	109.50	95	8986.67	-66.59	129.64 S	438.81 E	457.56	106.46	0.53	-0.53	0.53
69	9108	6.50	111.20	95	9081.08	-68.84	133.32 S	448.74 E	468.12	106.55	0.29	0.21	1.79
70	9202	6.70	110.10	94	9174.46	-71.19	137.13 S	458.85 E	478.90	106.64	0.25	0.21	-1.17
71	9297	6.10	107.80	95	9268.86	-73.20	140.58 S	468.86 E	489.48	106.69	0.69	-0.63	-2.42
72	9392	6.20	104.40	95	9363.32	-74.61	143.39 S	478.63 E	499.65	106.68	0.40	0.11	-3.58
73	9487	6.40	104.50	95	9457.74	-75.77	146.00 S	488.73 E	510.07	106.63	0.21	0.21	0.11
74	9581	6.90	101.20	94	9551.11	-76.66	148.40 S	499.34 E	520.92	106.55	0.67	0.53	-3.51

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75	9677	6.20	94.20	96	9646.48	-76.62	149.90	S	510.16	E	531.73	106.37	1.10	-0.73	-7.29
76	9772	5.80	82.70	95	9740.97	-75.00	149.67	S	520.04	E	541.15	106.06	1.33	-0.42	-12.11
77	9866	6.20	92.00	94	9834.45	-73.20	149.24	S	529.83	E	550.45	105.73	1.12	0.43	9.89
78	9961	6.70	96.40	95	9928.85	-72.49	150.04	S	540.46	E	560.90	105.52	0.74	0.53	4.63
79	10056	5.90	101.80	95	10023.28	-72.64	151.66	S	550.75	E	571.25	105.40	1.05	-0.84	5.68
80	10150	6.60	106.50	94	10116.72	-73.74	154.18	S	560.66	E	581.47	105.38	0.92	0.74	5.00
81	10244	7.30	113.10	94	10210.03	-76.08	158.06	S	571.33	E	592.79	105.46	1.13	0.74	7.02
82	10339	5.90	116.00	95	10304.40	-79.15	162.57	S	581.27	E	603.58	105.62	1.51	-1.47	3.05
83	10434	5.30	109.40	95	10398.95	-81.51	166.16	S	589.80	E	612.76	105.73	0.93	-0.63	-6.95
84	10528	5.30	105.30	94	10492.55	-82.90	168.75	S	598.08	E	621.43	105.76	0.40	0.00	-4.36
85	10624	5.50	123.70	96	10588.13	-85.45	172.47	S	606.19	E	630.24	105.88	1.81	0.21	19.17
86	10677	6.30	126.10	53	10640.85	-87.91	175.60	S	610.65	E	635.39	106.04	1.58	1.51	4.53
87	10725	10.50	107.20	48	10688.33	-89.84	178.44	S	616.96	E	642.25	106.13	10.36	8.75	-39.38
88	10773	14.10	94.70	48	10735.23	-90.19	180.22	S	626.97	E	652.36	106.04	9.29	7.50	-26.04
89	10820	20.10	77.20	47	10780.16	-86.97	178.89	S	640.57	E	665.08	105.60	16.69	12.77	-37.23
90	10868	25.20	61.90	48	10824.48	-77.98	172.24	S	657.65	E	679.84	104.68	16.16	10.63	-31.88
91	10915	30.20	47.60	47	10866.13	-62.92	159.54	S	675.24	E	693.83	103.29	17.63	10.64	-30.43
92	10963	35.60	35.10	48	10906.46	-41.12	139.93	S	692.22	E	706.22	101.43	18.02	11.25	-26.04
93	11010	40.60	26.00	47	10943.46	-14.34	114.96	S	706.81	E	716.10	99.24	15.97	10.64	-19.36
94	11057	45.30	14.60	47	10977.91	16.87	84.98	S	717.75	E	722.76	96.75	19.29	10.00	-24.26
95	11104	47.60	3.00	47	11010.35	50.82	51.43	S	722.88	E	724.70	94.07	18.53	4.89	-24.68
96	11152	50.90	354.20	48	11041.71	86.60	15.15	S	721.92	E	722.08	91.20	15.49	6.87	731.67
97	11200	54.50	353.20	48	11070.79	123.58	22.80	N	717.72	E	718.09	88.18	7.68	7.50	-2.08
98	11247	61.30	354.50	47	11095.76	162.15	62.36	N	713.48	E	716.20	85.00	14.66	14.47	2.77
99	11295	68.30	356.60	48	11116.18	204.52	105.63	N	710.13	E	717.95	81.54	15.11	14.58	4.38
100	11342	71.50	357.70	47	11132.33	247.85	149.71	N	707.94	E	723.60	78.06	7.15	6.81	2.34
101	11390	73.80	356.70	48	11146.65	292.83	195.47	N	705.70	E	732.27	74.52	5.19	4.79	-2.08
102	11440	81.20	359.50	50	11157.46	340.87	244.22	N	704.10	E	745.25	70.87	15.78	14.80	5.60
103	11487	88.10	359.70	47	11161.84	387.13	290.98	N	703.78	E	761.56	67.54	14.69	14.68	0.43
104	11519	89.10	359.20	32	11162.62	418.76	322.97	N	703.47	E	774.07	65.34	3.49	3.13	-1.56
105	11614	90.50	0.00	95	11162.95	512.71	417.96	N	702.81	E	817.70	59.26	1.70	1.47	-378.11
106	11709	91.00	359.80	95	11161.71	606.73	512.96	N	702.64	E	869.96	53.87	0.57	0.53	378.74
107	11804	90.50	359.70	95	11160.47	700.72	607.95	N	702.23	E	928.83	49.12	0.54	-0.53	-0.11
108	11899	88.40	359.80	95	11161.38	794.71	702.94	N	701.81	E	993.31	44.95	2.21	-2.21	0.11
109	11994	89.10	0.00	95	11163.45	888.71	797.91	N	701.65	E	1062.53	41.33	0.77	0.74	-378.74
110	12089	88.80	0.60	95	11165.19	982.82	892.90	N	702.14	E	1135.90	38.18	0.71	-0.32	0.63
111	12184	90.20	2.10	95	11166.02	1077.16	987.86	N	704.38	E	1213.27	35.49	2.16	1.47	1.58
112	12279	90.20	1.30	95	11165.69	1171.56	1082.82	N	707.20	E	1293.30	33.15	0.84	0.00	-0.84
113	12374	89.60	0.80	95	11165.86	1265.85	1177.80	N	708.94	E	1374.70	31.04	0.82	-0.63	-0.53
114	12469	89.30	359.10	95	11166.77	1359.88	1272.79	N	708.86	E	1456.87	29.11	1.82	-0.32	377.16
115	12563	90.40	358.80	94	11167.01	1452.69	1366.77	N	707.14	E	1538.87	27.36	1.21	1.17	-0.32
116	12658	90.20	358.40	95	11166.52	1546.39	1461.74	N	704.81	E	1622.79	25.74	0.47	-0.21	-0.42

