

NEXUS

DIRECTIONAL SOLUTIONS, L.P.

Survey Sheet

Company:	E.O.G. RESOURCES, Inc.	Job Number:	15-0115
Well:	Dragon 36 State 4H	GRID Decl.:	6.69
Location:	LEA COUNTY, NM	Dir Driller:	Joe Paup / Luke
Rig:	CACTUS 123	MWD Eng:	Kenny Stroud
Leg:	Vert / Curve / Lateral	MWD Eng:	Jonathan White

Calculation Method:	Minimum Curvature
Reference point:	GRID NORTH
Proposed Azimuth	0.00
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	194	0.70	219.80	194	194.00	-0.91	0.91 S	0.76 W	1.19	219.80	0.36	0.36	113.30
2	373	0.50	243.80	179	372.99	-2.10	2.10 S	2.16 W	3.01	225.86	0.18	-0.11	13.41
3	595	0.00	213.00	222	594.98	-2.52	2.52 S	3.03 W	3.94	230.20	0.23	-0.23	-13.87
4	784	0.40	258.80	189	783.98	-2.65	2.65 S	3.68 W	4.53	234.20	0.21	0.21	24.23
5	974	0.40	216.90	190	973.98	-3.31	3.31 S	4.72 W	5.77	234.98	0.15	0.00	-22.05
6	1163	0.40	163.20	189	1162.97	-4.47	4.47 S	4.93 W	6.65	227.80	0.19	0.00	-28.41
7	1392	0.40	188.20	229	1391.97	-6.03	6.03 S	4.81 W	7.71	218.61	0.08	0.00	10.92
8	1582	0.50	237.50	190	1581.96	-7.13	7.13 S	5.61 W	9.07	218.19	0.20	0.05	25.95
9	1772	0.70	220.80	190	1771.95	-8.45	8.45 S	7.06 W	11.02	219.89	0.14	0.11	-8.79
10	1962	0.70	212.20	190	1961.94	-10.31	10.31 S	8.44 W	13.33	219.30	0.06	0.00	-4.53
11	2152	0.80	217.70	190	2151.92	-12.34	12.34 S	9.87 W	15.81	218.65	0.06	0.05	2.89
12	2342	0.80	192.20	190	2341.90	-14.69	14.69 S	10.96 W	18.33	216.73	0.19	0.00	-13.42
13	2531	0.80	165.20	189	2530.89	-17.26	17.26 S	10.90 W	20.41	212.29	0.20	0.00	-14.29
14	2721	0.50	138.10	190	2720.87	-19.15	19.15 S	10.01 W	21.61	207.59	0.22	-0.16	-14.26
15	2911	0.40	120.10	190	2910.87	-20.10	20.10 S	8.88 W	21.98	203.84	0.09	-0.05	-9.47
16	3101	1.10	72.30	190	3100.85	-19.88	19.88 S	6.57 W	20.94	198.29	0.46	0.37	-25.16
17	3197	1.30	73.00	96	3196.83	-19.28	19.28 S	4.65 W	19.84	193.57	0.21	0.21	0.73
18	3386	1.80	102.50	189	3385.76	-19.30	19.30 S	0.29 E	19.30	179.12	0.49	0.26	15.61
19	3577	2.40	102.80	191	3576.63	-20.83	20.83 S	7.12 E	22.02	161.12	0.31	0.31	0.16
20	3767	2.50	104.80	190	3766.46	-22.77	22.77 S	15.01 E	27.28	146.61	0.07	0.05	1.05
21	3957	2.40	111.30	190	3956.29	-25.28	25.28 S	22.72 E	33.99	138.05	0.16	-0.05	3.42
22	4146	2.20	107.90	189	4145.13	-27.83	27.83 S	29.86 E	40.82	132.98	0.13	-0.11	-1.80
23	4337	2.00	111.20	191	4336.01	-30.16	30.16 S	36.46 E	47.32	129.60	0.12	-0.10	1.73
24	4527	2.50	105.50	190	4525.86	-32.47	32.47 S	43.54 E	54.31	126.71	0.29	0.26	-3.00
25	4717	3.10	108.40	190	4715.63	-35.20	35.20 S	52.41 E	63.13	123.89	0.32	0.32	1.53
26	4907	4.50	108.90	190	4905.21	-39.23	39.23 S	64.34 E	75.36	121.38	0.74	0.74	0.26
27	5097	3.10	112.80	190	5094.79	-43.64	43.64 S	76.12 E	87.75	119.82	0.75	-0.74	2.05
28	5105	3.10	114.40	8	5102.78	-43.81	43.81 S	76.52 E	88.18	119.79	1.08	0.00	20.00

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Reference point:	GRID NORTH
Proposed Azimuth	0.00
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					
29	5234	2.20	112.90	129	5231.64	-46.22	46.22	S	81.98	E	94.11	119.41	0.70	-0.70	-1.16
30	5424	1.60	139.90	190	5421.53	-49.67	49.67	S	87.05	E	100.22	119.71	0.56	-0.32	14.21
31	5614	1.90	177.50	190	5611.45	-54.84	54.84	S	88.89	E	104.45	121.67	0.61	0.16	19.79
32	5804	2.10	178.20	190	5801.34	-61.47	61.47	S	89.14	E	108.28	124.59	0.11	0.11	0.37
33	5994	2.40	197.80	190	5991.19	-68.74	68.74	S	88.03	E	111.69	127.98	0.43	0.16	10.32
34	6184	2.10	202.50	190	6181.05	-75.74	75.74	S	85.48	E	114.21	131.54	0.19	-0.16	2.47
35	6373	1.80	197.00	189	6369.94	-81.78	81.78	S	83.29	E	116.73	134.47	0.19	-0.16	-2.91
36	6563	1.80	197.20	190	6559.84	-87.48	87.48	S	81.54	E	119.59	137.01	0.00	0.00	0.11
37	6753	1.80	194.90	190	6749.75	-93.22	93.22	S	79.89	E	122.76	139.40	0.04	0.00	-1.21
38	6943	1.60	195.60	190	6939.66	-98.65	98.65	S	78.41	E	126.02	141.52	0.11	-0.11	0.37
39	7133	1.50	193.00	190	7129.59	-103.63	103.63	S	77.13	E	129.19	143.34	0.06	-0.05	-1.37
40	7323	1.50	190.90	190	7319.53	-108.50	108.50	S	76.10	E	132.53	144.95	0.03	0.00	-1.11
41	7512	1.40	190.30	189	7508.47	-113.20	113.20	S	75.22	E	135.91	146.39	0.05	-0.05	-0.32
42	7702	1.50	184.20	190	7698.41	-117.96	117.96	S	74.63	E	139.59	147.68	0.10	0.05	-3.21
43	7893	1.50	180.30	191	7889.34	-122.95	122.95	S	74.43	E	143.73	148.81	0.05	0.00	-2.04
44	8083	2.70	183.30	190	8079.21	-129.91	129.91	S	74.16	E	149.59	150.28	0.63	0.63	1.58
45	8273	3.00	195.90	190	8268.98	-139.16	139.16	S	72.54	E	156.93	152.47	0.36	0.16	6.63
46	8463	2.30	192.20	190	8458.77	-147.67	147.67	S	70.37	E	163.58	154.52	0.38	-0.37	-1.95
47	8652	2.70	192.40	189	8647.59	-155.72	155.72	S	68.61	E	170.17	156.22	0.21	0.21	0.11
48	8842	2.50	213.50	190	8837.40	-163.55	163.55	S	65.37	E	176.13	158.21	0.51	-0.11	11.11
49	8898	2.00	231.40	56	8893.36	-165.18	165.18	S	63.93	E	177.12	158.84	1.53	-0.89	31.96
50	8945	4.00	348.00	47	8940.32	-164.08	164.08	S	62.95	E	175.74	159.01	11.09	4.26	248.09
51	8992	10.20	7.30	47	8986.94	-158.35	158.35	S	63.13	E	170.47	158.26	13.95	13.19	-724.89
52	9039	15.40	9.70	47	9032.76	-148.06	148.06	S	64.72	E	161.59	156.39	11.12	11.06	5.11
53	9086	21.90	8.10	47	9077.27	-133.21	133.21	S	67.00	E	149.12	153.30	13.87	13.83	-3.40
54	9134	26.90	1.90	48	9120.97	-113.48	113.48	S	68.63	E	132.62	148.84	11.69	10.42	-12.92
55	9181	33.30	358.10	47	9161.62	-89.94	89.94	S	68.55	E	113.08	142.68	14.20	13.62	757.87
56	9228	39.60	0.90	47	9199.41	-62.03	62.03	S	68.36	E	92.31	132.22	13.86	13.40	-760.00
57	9276	45.00	3.90	48	9234.90	-29.78	29.78	S	69.75	E	75.85	113.12	12.01	11.25	6.25
58	9323	46.70	3.50	47	9267.64	3.87	3.87	N	71.93	E	72.03	86.92	3.67	3.62	-0.85
59	9371	49.80	1.90	48	9299.60	39.64	39.64	N	73.60	E	83.60	61.70	6.92	6.46	-3.33
60	9418	54.10	1.50	47	9328.56	76.62	76.62	N	74.70	E	107.01	44.27	9.17	9.15	-0.85
61	9466	56.40	1.00	48	9355.92	116.05	116.05	N	75.56	E	138.48	33.07	4.87	4.79	-1.04
62	9513	59.10	0.10	47	9380.99	155.79	155.79	N	75.93	E	173.31	25.98	5.97	5.74	-1.91
63	9561	63.10	0.30	48	9404.19	197.81	197.81	N	76.08	E	211.93	21.04	8.34	8.33	0.42
64	9608	69.10	359.10	47	9423.22	240.76	240.76	N	75.85	E	252.42	17.49	12.98	12.77	763.40
65	9655	75.80	358.70	47	9437.39	285.53	285.53	N	74.98	E	295.22	14.71	14.28	14.26	-0.85
66	9702	78.70	358.10	47	9447.76	331.35	331.35	N	73.70	E	339.45	12.54	6.29	6.17	-1.28

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67	9750	81.80	358.70	48	9455.88	378.64	378.64	N	72.38	E	385.49	10.82	6.57	6.46	1.25
68	9797	82.20	358.80	47	9462.43	425.17	425.17	N	71.37	E	431.11	9.53	0.88	0.85	0.21
69	9844	83.60	358.20	47	9468.24	471.79	471.79	N	70.15	E	476.97	8.46	3.24	2.98	-1.28
70	9891	87.50	1.20	47	9471.88	518.63	518.63	N	69.90	E	523.32	7.68	10.46	8.30	-759.57
71	9925	88.30	1.20	34	9473.13	552.60	552.60	N	70.61	E	557.10	7.28	2.35	2.35	0.00
72	10020	89.50	0.80	95	9474.95	647.57	647.57	N	72.27	E	651.59	6.37	1.33	1.26	-0.42
73	10115	91.30	1.80	95	9474.29	742.54	742.54	N	74.43	E	746.26	5.72	2.17	1.89	1.05
74	10209	90.50	1.90	94	9472.81	836.47	836.47	N	77.46	E	840.05	5.29	0.86	-0.85	0.11
75	10305	89.40	359.70	96	9472.90	932.46	932.46	N	78.80	E	935.78	4.83	2.56	-1.15	372.71
76	10399	90.70	359.70	94	9472.81	1026.45	1026.45	N	78.31	E	1029.44	4.36	1.38	1.38	0.00
77	10493	90.80	358.00	94	9471.58	1120.42	1120.42	N	76.42	E	1123.03	3.90	1.81	0.11	-1.81
78	10588	92.60	357.60	95	9468.76	1215.31	1215.31	N	72.78	E	1217.49	3.43	1.94	1.89	-0.42
79	10682	90.90	358.40	94	9465.89	1309.20	1309.20	N	69.50	E	1311.05	3.04	2.00	-1.81	0.85
80	10778	91.10	356.10	96	9464.22	1405.07	1405.07	N	64.90	E	1406.57	2.64	2.40	0.21	-2.40
81	10873	90.40	355.80	95	9462.98	1499.82	1499.82	N	58.19	E	1500.95	2.22	0.80	-0.74	-0.32
82	10968	92.30	355.80	95	9460.74	1594.54	1594.54	N	51.23	E	1595.36	1.84	2.00	2.00	0.00
83	11063	90.60	355.80	95	9458.33	1689.25	1689.25	N	44.28	E	1689.83	1.50	1.79	-1.79	0.00
84	11159	90.30	356.50	96	9457.58	1785.03	1785.03	N	37.83	E	1785.43	1.21	0.79	-0.31	0.73
85	11254	89.10	356.50	95	9458.08	1879.85	1879.85	N	32.03	E	1880.12	0.98	1.26	-1.26	0.00
86	11349	89.10	357.10	95	9459.57	1974.69	1974.69	N	26.73	E	1974.87	0.78	0.63	0.00	0.63
87	11444	90.30	356.30	95	9460.07	2069.53	2069.53	N	21.26	E	2069.64	0.59	1.52	1.26	-0.84
88	11539	91.10	357.50	95	9458.91	2164.38	2164.38	N	16.12	E	2164.44	0.43	1.52	0.84	1.26
89	11633	92.00	357.40	94	9456.36	2258.25	2258.25	N	11.94	E	2258.28	0.30	0.96	0.96	-0.11
90	11728	91.10	359.10	95	9453.79	2353.17	2353.17	N	9.04	E	2353.18	0.22	2.02	-0.95	1.79
91	11815	90.10	359.50	87	9452.88	2440.16	2440.16	N	7.98	E	2440.17	0.19	1.24	-1.15	0.46
92	11911	88.10	359.20	96	9454.39	2536.13	2536.13	N	6.89	E	2536.14	0.16	2.11	-2.08	-0.31
93	12005	89.10	358.30	94	9456.69	2630.08	2630.08	N	4.84	E	2630.08	0.11	1.43	1.06	-0.96
94	12101	89.90	359.20	96	9457.52	2726.05	2726.05	N	2.75	E	2726.05	0.06	1.25	0.83	0.94
95	12195	90.80	1.20	94	9456.95	2820.04	2820.04	N	3.07	E	2820.04	0.06	2.33	0.96	-380.85
96	12291	91.90	0.30	96	9454.69	2916.01	2916.01	N	4.33	E	2916.01	0.09	1.48	1.15	-0.94
97	12386	91.40	1.20	95	9451.95	3010.96	3010.96	N	5.57	E	3010.96	0.11	1.08	-0.53	0.95
98	12481	90.00	2.40	95	9450.79	3105.90	3105.90	N	8.56	E	3105.91	0.16	1.94	-1.47	1.26
99	12576	90.60	1.20	95	9450.29	3200.85	3200.85	N	11.54	E	3200.87	0.21	1.41	0.63	-1.26
100	12671	88.50	1.30	95	9451.04	3295.82	3295.82	N	13.61	E	3295.85	0.24	2.21	-2.21	0.11
101	12766	88.90	1.00	95	9453.20	3390.77	3390.77	N	15.52	E	3390.81	0.26	0.53	0.42	-0.32
102	12860	88.80	0.10	94	9455.08	3484.75	3484.75	N	16.42	E	3484.79	0.27	0.96	-0.11	-0.96
103	12955	89.30	0.30	95	9456.66	3579.74	3579.74	N	16.75	E	3579.77	0.27	0.57	0.53	0.21
104	13050	89.50	359.90	95	9457.65	3674.73	3674.73	N	16.92	E	3674.77	0.26	0.47	0.21	378.53

