

30-015-3947

Provide notarized
survey**CRESCENT**
DIRECTIONAL DRILLING**Minimum Curvature Calculation****Client:** Concho Oil & Gas**M.W.D. OPERATORS:** Stephen de Anda/ Ryan Foust**Well:** Gissler Fed #5H**DIRECTIONAL DRILLERS:** Donnie Hale/ LeRoy Saiz**County:** Eddy, NM**Tool Azimuth to Grid North:** 7.53**Rig:** UDI 40**Job #:** PB-12389**Verticle Section Angle:** 89.20 (deg)

Survey Number	Measured Depth-ft	Drift (Deg.)	Azimuth (Deg.)	Course Length	TVD (Ft.)	Vertical Section	+N-S (Ft.)	+E-W (Ft.)	DLS
Tie In:	4,028	0.2	340.0	n/a	4,027.64	-9.07	-9.07	18.45	#VALUE!
1	4,071	1.0	89.4	43.0	4,070.64	18.68	-9.01	18.80	2.47
2	4,104	4.1	84.5	33.0	4,103.60	20.14	-8.89	20.27	9.41
3	4,136	7.7	83.5	32.0	4,135.43	23.42	-8.54	23.54	11.25
4	4,167	11.3	80.0	31.0	4,166.00	28.48	-7.78	28.59	11.76
5	4,199	14.9	78.9	32.0	4,197.16	35.63	-6.44	35.72	11.28
6	4,231	18.4	78.7	32.0	4,227.81	44.64	-4.66	44.71	10.94
7	4,263	21.8	79.8	32.0	4,257.86	55.47	-2.62	55.52	10.69
8	4,294	25.3	80.8	31.0	4,286.27	67.71	-0.54	67.72	11.36
9	4,326	29.0	81.4	32.0	4,314.74	82.16	1.72	82.15	11.59
10	4,358	32.5	81.7	32.0	4,342.24	98.38	4.12	98.33	10.95
11	4,390	36.1	82.6	32.0	4,368.67	116.27	6.57	116.19	11.36
12	4,421	39.7	83.6	31.0	4,393.13	135.20	8.85	135.09	11.78
13	4,453	43.5	84.0	32.0	4,417.05	156.35	11.15	156.21	11.90
14	4,485	47.3	84.0	32.0	4,439.52	179.04	13.53	178.87	11.88
15	4,516	50.6	83.3	31.0	4,459.87	202.30	16.12	202.10	10.78
16	4,548	53.8	82.4	32.0	4,479.48	227.43	19.27	227.18	10.24
17	4,579	57.3	81.7	31.0	4,497.02	252.79	22.81	252.50	11.44
18	4,611	61.2	82.1	32.0	4,513.38	280.06	26.68	279.72	12.23
19	4,643	64.0	83.3	32.0	4,528.10	308.29	30.28	307.89	9.36
20	4,675	66.7	84.0	32.0	4,541.45	337.23	33.50	336.80	8.67
21	4,706	69.7	84.2	31.0	4,552.96	365.90	36.46	365.42	9.70
22	4,738	73.2	84.3	32.0	4,563.14	396.12	39.49	395.60	10.94
23	4,770	74.7	84.2	32.0	4,571.98	426.75	42.58	426.20	4.70
24	4,802	76.6	84.2	32.0	4,579.91	457.64	45.71	457.04	5.94
25	4,833	79.9	84.3	31.0	4,586.23	487.87	48.75	487.24	10.65
26	4,865	83.9	84.9	32.0	4,590.73	519.44	51.73	518.77	12.64
27	4,897	86.8	86.3	32.0	4,593.33	551.27	54.17	550.57	10.06
28	4,928	88.4	85.8	31.0	4,594.63	582.19	56.31	581.46	5.41
29	4,960	88.4	86.5	32.0	4,595.52	614.14	58.46	613.38	2.19
30	4,992	89.0	87.9	32.0	4,596.25	646.11	60.02	645.33	4.76
31	5,024	90.0	89.1	32.0	4,596.52	678.10	60.86	677.32	4.88
32	5,055	90.5	90.2	31.0	4,596.39	709.10	61.04	708.32	3.90
33	5,119	91.2	90.2	64.0	4,595.44	773.08	60.82	772.31	1.09
34	5,214	91.8	90.3	95.0	4,592.95	868.03	60.41	867.28	0.64
35	5,309	92.2	90.8	95.0	4,589.64	962.95	59.50	962.21	0.67
36	5,404	91.0	90.1	95.0	4,586.99	1,057.88	58.75	1,057.17	1.46
37	5,499	91.5	90.8	95.0	4,584.91	1,152.84	58.00	1,152.14	0.91
38	5,595	90.7	90.8	96.0	4,583.07	1,248.78	56.66	1,248.11	0.83
39	5,690	89.8	90.0	95.0	4,582.66	1,343.75	56.00	1,343.10	1.27
40	5,785	90.2	89.4	95.0	4,582.66	1,438.75	56.50	1,438.10	0.76
41	5,880	89.0	87.2	95.0	4,583.32	1,533.71	59.32	1,533.03	2.64
42	5,975	91.0	88.6	95.0	4,583.32	1,628.68	62.80	1,627.96	2.57

43	6,070	91.5	88.5	95.0	4,581.25	1,723.65	65.20	1,722.91	0.54
44	6,165	92.4	89.5	95.0	4,578.01	1,818.59	66.86	1,817.84	1.42
45	6,260	91.8	90.1	95.0	4,574.53	1,913.52	67.19	1,912.77	0.89
46	6,355	91.5	90.1	95.0	4,571.80	2,008.47	67.02	2,007.73	0.32
47	6,451	90.6	91.3	96.0	4,570.04	2,104.41	65.85	2,103.70	1.56
48	6,546	91.4	91.4	95.0	4,568.38	2,199.33	63.61	2,198.66	0.85
49	6,641	92.3	91.2	95.0	4,565.31	2,294.22	61.46	2,293.58	0.97
50	6,736	90.9	91.3	95.0	4,562.66	2,389.11	59.39	2,388.51	1.48
51	6,831	90.5	90.9	95.0	4,561.50	2,484.05	57.56	2,483.49	0.60
52	6,926	90.8	90.8	95.0	4,560.42	2,579.01	56.15	2,578.47	0.33
53	7,021	89.9	88.9	95.0	4,559.84	2,673.98	56.40	2,673.45	2.21
54	7,116	90.7	88.7	95.0	4,559.34	2,768.98	58.39	2,768.43	0.87
55	7,212	91.2	88.2	96.0	4,557.75	2,864.95	60.99	2,864.38	0.74
56	7,307	91.9	87.9	95.0	4,555.18	2,959.90	64.22	2,959.29	0.80
57	7,402	91.5	88.7	95.0	4,552.37	3,054.84	67.04	3,054.21	0.94
58	7,497	92.5	88.7	95.0	4,549.05	3,149.78	69.19	3,149.12	1.05
59	7,592	90.9	89.7	95.0	4,546.23	3,244.73	70.52	3,244.06	1.99
60	7,687	90.5	91.6	95.0	4,545.07	3,339.68	69.44	3,339.03	2.04
61	7,782	91.1	91.2	95.0	4,543.74	3,434.60	67.12	3,433.99	0.76
62	7,877	90.1	90.9	95.0	4,542.75	3,529.54	65.38	3,528.97	1.10
63	7,972	90.3	90.8	95.0	4,542.42	3,624.50	63.97	3,623.96	0.24
64	8,067	90.8	90.1	95.0	4,541.51	3,719.47	63.22	3,718.95	0.91
65	8,163	90.2	89.9	96.0	4,540.67	3,815.45	63.22	3,814.94	0.66
66	8,258	90.4	89.7	95.0	4,540.17	3,910.45	63.55	3,909.94	0.30
67	8,353	90.5	88.9	95.0	4,539.43	4,005.44	64.71	4,004.93	0.85
68	8,448	90.7	87.7	95.0	4,538.43	4,100.43	67.53	4,099.88	1.28
69	8,543	90.3	89.1	95.0	4,537.60	4,195.40	70.18	4,194.83	1.53
70	8,638	90.3	91.1	95.0	4,537.10	4,290.38	70.02	4,289.82	2.11
71	8,734	90.6	90.8	96.0	4,536.35	4,386.33	68.43	4,385.80	0.44
72	8,829	90.7	90.9	95.0	4,535.27	4,481.28	67.02	4,480.78	0.15
73	8,905	91.2	90.7	76.0	4,534.01	4,557.24	65.96	4,556.77	0.71
TD	8,959	91.2	90.7	54.0	4,532.88	4,611.21	65.30	4,610.75	0.00