



DIRECTIONAL DRILLING SPECIALISTS

Directional Survey Certification

Survey Company: Native Navigation Survey Company Job #: 12030515

Well Name: McCOY 24-33 A.P.I.#: 05-123-35230 Operator: MAK-J ENERGY

Latitude: 40.266750° N Longitude: 105.016910° W County, State: WELD Co, CO

Legal Description (S,TS,R): NW 1/4 SW 1/4 SEC 33 T4N R68W 1613' FSL 219' FWL

Final Report 5/7/2012 Date of First Survey: 4/16/2012 Date of Last Survey: 4/21/2012

Datum: NAD 83 Survey MD From: 106 FT. To: 7857 FT. Tool Type: MWD

Bit to Sensor: 56 FT. Rig (Company & Number): Fort Drilling # 5 RKB Height: 12 FT.

Ground Elevation: 5066 FT. Northings: 1340385.71 FT. Eastings: 3134809.35 FT.

Surveyor: Baca Depth of Final Projection: 7913 FT.

The data and calculations for this survey have been checked by me and conform to the calibration standards and operational procedures set forth by Native Navigation. I am authorized and qualified to review the data, calculations and this report, and that the report represents a true and correct Directional Survey of this well, based on the original data corrected to True North and obtained at the well site. Wellbore coordinates are calculated using the minimum curvature method.

Frank Watcott
Signature

Well Planner
Title

Native Navigation
Company

6/6/12
Date

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Operator:	MAK-J ENERGY COLORADO
A.P.I.#:	05-123-35230
Rig (Company & Number):	Fort Drilling # 5
Directional Company:	Native Navigation
Directional Company Job #:	12030515
Survey Company:	Native Navigation
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No.	MD	CL	Inc.	Azi.	TVD	VS	+N/S-	+E/W-	BR	WR	DLS	Comments
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00				Surface
2	106.00	106.00	0.26	81.05	106.00	0.19	0.04	0.24	0.25	76.46	0.25	Native Navigation EM
3	195.00	89.00	0.48	291.99	195.00	-0.02	0.21	0.09	0.25	-167.48	0.80	Native Navigation EM
4	283.00	88.00	0.97	278.89	282.99	-1.09	0.46	-0.99	0.56	-14.89	0.58	Native Navigation EM
5	372.00	89.00	1.41	282.32	371.97	-2.86	0.81	-2.80	0.49	3.85	0.50	Native Navigation EM
6	465.00	93.00	0.53	225.54	464.96	-4.10	0.75	-4.23	-0.95	-61.05	1.29	Native Navigation EM
7	556.00	91.00	0.88	271.68	555.95	-4.86	0.48	-5.22	0.38	50.70	0.70	Native Navigation EM
8	643.00	87.00	1.19	290.67	642.94	-6.35	0.82	-6.74	0.36	21.83	0.53	Surface Casing TD
9	751.00	108.00	1.32	302.09	750.91	-8.71	1.88	-8.84	0.12	10.57	0.26	Native Navigation EM
10	845.00	94.00	1.41	127.00	844.90	-8.65	1.75	-8.83	0.10	-186.27	2.90	KOP
11	939.00	94.00	3.34	135.10	938.82	-4.89	-0.88	-5.98	2.05	8.62	2.08	Native Navigation EM
12	1033.00	94.00	5.27	126.84	1032.55	1.98	-5.41	-0.59	2.05	-8.79	2.15	Native Navigation EM
13	1128.00	95.00	7.65	124.99	1126.94	12.55	-11.65	8.08	2.51	-1.95	2.51	Native Navigation EM
14	1223.00	95.00	9.14	121.83	1220.92	26.35	-19.26	19.68	1.57	-3.33	1.64	Native Navigation EM
15	1316.00	93.00	9.98	122.12	1312.63	41.74	-27.44	32.78	0.90	0.31	0.90	Motor Yields Drop to 6.2 deg/100 ft
16	1410.00	94.00	12.48	120.86	1404.82	60.01	-36.98	48.40	2.66	-1.34	2.67	Native Navigation EM
17	1504.00	94.00	14.50	122.01	1496.22	81.88	-48.43	67.10	2.15	1.22	2.17	Native Navigation EM
18	1598.00	94.00	16.48	119.37	1586.81	106.94	-61.21	88.70	2.11	-2.81	2.24	Native Navigation EM
19	1693.00	95.00	17.80	117.43	1677.59	134.93	-74.51	113.33	1.39	-2.04	1.51	Native Navigation EM
20	1788.00	95.00	20.30	119.36	1767.38	165.93	-89.28	140.58	2.63	2.03	2.71	Native Navigation EM
21	1883.00	95.00	21.35	120.84	1856.17	199.66	-106.22	169.80	1.11	1.56	1.24	BUR Dropped to 2 deg/100 ft
22	1977.00	94.00	23.42	123.41	1943.08	235.33	-125.28	200.09	2.20	2.73	2.44	Native Navigation EM
23	2072.00	95.00	24.30	120.42	2029.97	273.63	-145.58	232.70	0.93	-3.15	1.57	Native Navigation EM
24	2166.00	94.00	25.22	116.82	2115.33	312.98	-164.41	267.26	0.98	-3.83	1.88	Native Navigation EM
25	2261.00	95.00	25.62	114.01	2201.13	353.72	-181.90	304.08	0.42	-2.96	1.34	Native Navigation EM
26	2355.00	94.00	26.02	113.30	2285.75	394.57	-198.32	341.58	0.43	-0.76	0.54	Native Navigation EM
27	2449.00	94.00	26.15	115.15	2370.18	435.83	-215.28	379.27	0.14	1.97	0.88	Native Navigation EM
28	2544.00	95.00	27.50	117.87	2454.96	478.68	-234.43	417.61	1.42	2.86	1.92	BUR Falling Off
29	2638.00	94.00	26.63	117.79	2538.66	521.45	-254.40	455.44	-0.93	-0.09	0.93	Native Navigation EM
30	2733.00	95.00	24.30	116.20	2624.43	562.29	-272.96	491.82	-2.45	-1.67	2.56	Native Navigation EM
31	2827.00	94.00	22.94	114.53	2710.55	599.92	-289.11	525.84	-1.45	-1.78	1.61	Native Navigation EM
32	2920.00	93.00	23.07	115.68	2796.15	636.23	-304.53	558.75	0.14	1.24	0.50	Native Navigation EM
33	3015.00	95.00	23.47	115.33	2883.43	673.74	-320.69	592.62	0.42	-0.37	0.45	Native Navigation EM
34	3110.00	95.00	25.40	116.91	2969.91	713.02	-338.00	627.89	2.03	1.66	2.14	Native Navigation EM
35	3204.00	94.00	25.14	117.87	3054.92	753.15	-356.46	663.52	-0.28	1.02	0.52	Native Navigation EM
36	3298.00	94.00	24.96	119.19	3140.08	792.94	-375.47	698.49	-0.19	1.40	0.62	Native Navigation EM
37	3393.00	95.00	24.70	111.55	3226.32	832.73	-392.54	734.46	-0.27	-8.04	3.39	Native Navigation EM
38	3489.00	96.00	25.05	114.18	3313.41	872.97	-408.23	771.65	0.36	2.74	1.21	Native Navigation EM
39	3584.00	95.00	25.22	115.24	3399.42	913.27	-425.10	808.31	0.18	1.12	0.51	Native Navigation EM
40	3679.00	95.00	25.18	114.36	3485.38	953.67	-442.07	845.03	-0.04	-0.93	0.40	Native Navigation EM
41	3773.00	94.00	25.49	116.73	3570.34	993.86	-459.41	881.31	0.33	2.52	1.13	Native Navigation EM
42	3868.00	95.00	28.13	119.90	3655.12	1036.69	-479.78	918.99	2.78	3.34	3.16	Native Navigation EM
43	3962.00	94.00	27.82	122.18	3738.14	1080.69	-502.51	956.77	-0.33	2.43	1.18	Native Navigation EM
44	4057.00	95.00	27.29	122.44	3822.37	1124.49	-525.99	993.91	-0.56	0.27	0.57	Native Navigation EM
45	4152.00	95.00	25.31	123.41	3907.53	1166.39	-548.86	1029.24	-2.08	1.02	2.13	Native Navigation EM
46	4246.00	94.00	23.38	124.82	3993.17	1204.88	-570.58	1061.33	-2.05	1.50	2.14	Native Navigation EM
47	4341.00	95.00	23.03	127.89	4080.48	1241.85	-592.75	1091.47	-0.37	3.23	1.33	Native Navigation EM
48	4435.00	94.00	24.35	125.26	4166.56	1279.14	-615.23	1121.81	1.40	-2.80	1.80	Native Navigation EM
49	4530.00	95.00	25.48	123.32	4252.72	1318.88	-637.77	1154.88	1.19	-2.04	1.47	Native Navigation EM
50	4625.00	95.00	25.62	122.70	4338.43	1359.67	-660.09	1189.24	0.15	-0.65	0.32	Native Navigation EM
51	4719.00	94.00	23.39	122.62	4423.96	1398.49	-681.13	1222.06	-2.37	-0.09	2.37	Native Navigation EM
52	4813.00	94.00	23.95	120.86	4510.05	1436.13	-700.97	1254.15	0.60	-1.87	0.96	Native Navigation EM
53	4908.00	95.00	22.81	123.24	4597.25	1473.70	-720.96	1286.11	-1.20	2.51	1.56	Native Navigation EM
54	5001.00	93.00	22.76	123.41	4683.00	1509.53	-740.74	1316.20	-0.05	0.18	0.09	Native Navigation EM
55	5096.00	95.00	23.16	121.47	4770.47	1546.45	-760.62	1347.48	0.42	-2.04	0.90	Native Navigation EM
56	5192.00	96.00	22.36	118.05	4859.00	1583.54	-779.06	1379.70	-0.83	-3.56	1.61	Native Navigation EM
57	5286.00	94.00	20.74	116.91	4946.43	1618.07	-795.00	1410.32	-1.72	-1.21	1.78	Native Navigation EM
58	5380.00	94.00	19.95	116.29	5034.56	1650.75	-809.64	1439.54	-0.84	-0.66	0.87	Native Navigation EM
59	5476.00	96.00	18.94	114.09	5125.09	1682.67	-823.25	1468.45	-1.05	-2.29	1.30	Native Navigation EM
60	5570.00	94.00	18.33	113.66	5214.16	1712.65	-835.41	1495.91	-0.65	-0.46	0.67	Native Navigation EM
61	5665.00	95.00	16.74	113.66	5304.74	1741.21	-846.90	1522.13	-1.67	0.00	1.67	Native Navigation EM
62	5760.00	95.00	15.56	114.01	5395.99	1767.58	-857.57	1546.30	-1.24	0.37	1.25	Native Navigation EM
63	5855.00	95.00	14.50	116.29	5487.74	1792.18	-868.02	1568.60	-1.12	2.40	1.28	Native Navigation EM
64	5950.00	95.00	12.88	117.35	5580.04	1814.66	-878.16	1588.67	-1.71	1.12	1.73	Native Navigation EM
65	6045.00	95.00	12.39	111.63	5672.74	1835.39	-886.78	1607.55	-0.52	-6.02	1.41	Native Navigation EM
66	6139.00	94.00	10.42	109.88	5764.88	1853.85	-893.39	1624.92	-2.10	-1.86	2.13	Native Navigation EM
67	6233.00	94.00	9.49	107.06	5857.46	1869.90	-898.55	1640.32	-0.99	-3.00	1.12	Native Navigation EM
68	6328.00	95.00	7.60	110.14	5951.40	1883.83	-903.01	1653.71	-1.99	3.24	2.05	Native Navigation EM
69	6423.00	95.00	6.59	112.42	6045.68	1895.49	-907.26	1664.65	-1.06	2.40	1.10	Native Navigation EM
70	6518.00	95.00	5.01	109.17	6140.19	1905.03	-910.70	1673.61	-1.66	-3.42	1.70	Native Navigation EM
71	6613.00	95.00	4.70	110.14	6234.85	1912.99	-913.40	1681.18	-0.33	1.02	0.34	Native Navigation EM
72	6708.00	95.00	3.82	110.75	6329.58	1919.99	-915.86	1687.79	-0.93	0.64	0.93	Native Navigation EM
73	6801.00	93.00	2.59	111.54	6422.44	1925.16	-917.73	1692.64	-1.32	0.85	1.32	Native Navigation EM
74	6896.00	95.00	1.67	109.05	6517.37	1928.66	-918.97	1695.95	-0.97	-2.62	0.97	Native Navigation EM
75	6989.00	93.00	1.23	98.89	6610.34	1930.95	-919.57	1698.22	-0.47	-10.92	0.55	Native Navigation EM
76	7083.00	94.00	1.19	105.22	6704.32	1932.86	-919.98	1700.15	-0.04	6.73	0.15	Native Navigation EM
77	7178.00	95.00	0.83	115.68	6799.30	1934.51	-920.54	1701.73	-0.38	11.01	0.42	Native Navigation EM
78	7272.00	94.00	0.92	145.91	6893.29	1935.86	-921.46	1702.76	0.10	32.16	0.49	Native Navigation EM
79	7366.00	94.00	0.35	154.35	6987.29	1936.75	-922.34	1703.31	-0.61	8.98	0.61	Native Navigation EM
80	7461.00	95.00	1.09	163.31	7082.28	1937.61	-923.47	1703.70	0.78	9.43	0.79	Native Navigation EM
81	7554.00	93.00	1.45	156.63	7175.26	1939.14	-925.39	1704.42	0.39	-7.18	0.42	Native Navigation EM
82	7648.00	94.00	1.41	147.84	7269.23	1941.06	-927.46	1705.50	-0.04	-9.35	0.24	Native Navigation EM
83	7742.00	94.00	0.97	167.88	7363.21	1942.57	-929.22	1706.29	-0.47	21.32	0.64	Native Navigation EM
84	7837.00	95.00	1.14	123.41	7458.19	1944.02	-930.53	1707.24	0.18	-46.81	0.86	Native Navigation EM
85	7857.00	20.00	0.88	150.48	7478.19	1944.35	-930.77	1707.49	-1.30	135.35	2.68	Native Navigation EM
86	7913.00	56.00	0.88	150.48	7							