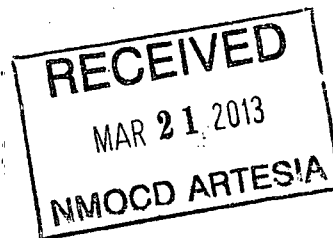




A GYRO TECHNOLOGIES INC. COMPANY

PO Box 261021
Corpus Christi, Texas 78426
(361) 767-0602 • (800) 606-GYRO • Fax (361) 767-0612



March 14, 2013

BOPCO, LP
6 Desta Dr, Suite 3700
Midland, TX 79705

Attn: Courtney Lockhart

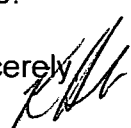
30-015-40288

RE: **BEU Hackberry 34 Federal No 001**

Please find enclosed a copy of the survey from 0' to 13,741.01' ran on the above referenced well.

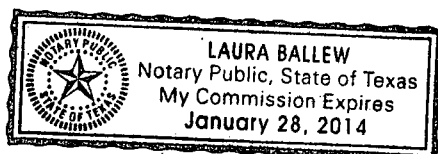
If I can be of any further service please do not hesitate to call me at 800-606-4976.

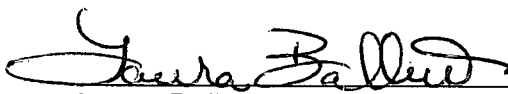
Sincerely,


Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 14th day of March
A.D., 2013, by Keith Havelka.




Laura Balley
Notary Public, State of Texas



Company: BOPCO
Lease/Well: BEU Hackberry 34 Federal/No 001
Location: S34 T19s R31e
Rig Name: Latshaw #7
State/County: New Mexico/Eddy
Latitude: 32.62
GRID North is 0.26 Degrees East of True North
VS-Azi: 0.00 Degrees



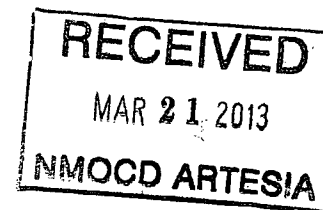
RKB : 26 Feet

DRILLOG MS GYRO SURVEY CALCULATIONS
Filename: ...federal #1 swd gyro survey.ut
Minimum Curvature Method
Report Date/Time: 3/14/2013 / 14:07

Vaughn Energy Services
(432) 563-5444
Gardendale, TX

Surveyor: Dustin Wedel

BEU Hackberry 34 Federal No 001 / API 30-015-40288



Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
48.66	0.13	26.40	48.66	0.05	0.02	0.05	0.06	26.40	0.27
143.09	0.12	13.40	143.09	0.24	0.10	0.24	0.26	21.42	0.03
237.52	0.15	12.27	237.52	0.46	0.15	0.46	0.49	17.44	0.03
331.95	0.18	11.14	331.95	0.73	0.20	0.73	0.75	15.38	0.03
426.38	0.41	12.31	426.38	1.20	0.30	1.20	1.24	14.05	0.25
520.81	0.64	13.47	520.80	2.04	0.49	2.04	2.10	13.62	0.25
615.24	0.57	22.23	615.23	2.99	0.80	2.99	3.10	14.90	0.12
709.67	0.50	28.99	709.65	3.79	1.18	3.79	3.97	17.22	0.10
804.10	0.79	35.33	804.08	4.68	1.75	4.68	5.00	20.50	0.31
898.53	1.07	41.67	898.50	5.87	2.71	5.87	6.47	24.81	0.32
992.96	1.44	41.95	992.90	7.42	4.10	7.42	8.47	28.91	0.39
1087.39	1.81	42.24	1087.29	9.40	5.89	9.40	11.09	32.07	0.39
1181.82	1.95	42.74	1181.67	11.68	7.98	11.68	14.15	34.34	0.15
1276.25	2.09	43.25	1276.05	14.11	10.25	14.11	17.44	35.98	0.15
1370.68	2.16	37.86	1370.41	16.77	12.52	16.77	20.93	36.74	0.23
1465.11	2.23	32.48	1464.77	19.73	14.60	19.73	24.55	36.50	0.23
1559.54	2.09	8.40	1559.14	22.99	15.84	22.99	27.92	34.57	0.97
1653.97	1.94	344.33	1653.51	26.23	15.66	26.23	30.55	30.83	0.90
1748.40	2.03	319.57	1747.88	29.05	14.14	29.05	32.31	25.96	0.91
1842.83	2.12	294.80	1842.25	31.06	11.47	31.06	33.11	20.27	0.95

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N-S FT	+E-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1937.26	1.89	300.27	1936.63	32.57	8.54	32.57	33.68	14.70	0.32
2031.69	1.66	317.74	2031.01	34.37	6.28	34.37	34.94	10.36	0.62
2126.12	1.71	293.16	2125.40	35.93	4.07	35.93	36.16	6.46	0.76
2220.55	1.75	268.58	2219.79	36.45	1.33	36.45	36.47	2.10	0.78
2314.98	1.47	237.09	2314.18	35.75	-1.13	35.75	35.77	358.20	0.97
2409.41	1.18	255.61	2408.59	34.85	-3.09	34.85	34.99	354.94	0.54
2503.84	1.20	301.35	2503.00	35.13	-4.88	35.13	35.46	352.10	0.98
2598.27	1.21	339.09	2597.41	36.57	-6.08	36.57	37.08	350.57	0.83
2692.70	1.46	18.18	2691.82	38.66	-6.06	38.66	39.13	351.09	0.98
2787.13	1.72	51.27	2786.21	40.69	-4.58	40.69	40.94	353.58	0.99
2881.56	1.96	79.60	2880.60	41.86	-1.88	41.86	41.91	357.42	0.99
2975.99	2.21	67.93	2974.96	42.84	1.40	42.84	42.86	1.87	0.52
3070.42	2.61	49.03	3069.31	44.93	4.71	44.93	45.18	5.98	0.93
3164.85	3.00	36.12	3163.63	48.34	7.79	48.34	48.96	9.15	0.79
3259.28	2.71	21.35	3257.94	52.42	10.06	52.42	53.37	10.86	0.83
3353.71	2.43	1.57	3352.28	56.50	10.93	56.50	57.54	10.94	0.98
3448.14	2.24	342.67	3446.63	60.26	10.43	60.26	61.15	9.82	0.83
3542.57	2.05	318.76	3541.00	63.29	8.77	63.29	63.89	7.89	0.96
3637.00	2.10	294.82	3635.37	65.28	6.08	65.28	65.57	5.32	0.91
3731.43	2.15	315.88	3729.74	67.28	3.28	67.28	67.36	2.80	0.82
3825.86	1.97	318.87	3824.10	69.77	0.99	69.77	69.78	0.81	0.22
3920.29	1.80	290.86	3918.49	71.52	-1.46	71.52	71.53	358.83	0.98
4014.72	1.54	261.01	4012.88	71.85	-4.10	71.85	71.96	356.73	0.95
4109.15	1.29	231.17	4107.28	70.98	-6.19	70.98	71.25	355.02	0.82
4203.58	1.13	192.02	4201.69	69.40	-7.21	69.40	69.78	354.07	0.87
4298.01	0.96	162.87	4296.11	67.74	-7.17	67.74	68.12	353.96	0.58
4392.44	0.79	153.12	4390.52	66.40	-6.64	66.40	66.73	354.29	0.24
4486.87	0.62	143.37	4484.95	65.41	-6.05	65.41	65.69	354.72	0.22
4581.30	0.65	138.95	4579.37	64.60	-5.39	64.60	64.82	355.23	0.06
4675.73	0.69	144.53	4673.79	63.73	-4.71	63.73	63.90	355.77	0.08
4770.16	0.70	168.39	4768.22	62.71	-4.26	62.71	62.85	356.11	0.30
4864.59	0.70	172.25	4862.64	61.57	-4.07	61.57	61.71	356.22	0.05
4959.02	0.55	163.31	4957.07	60.56	-3.86	60.56	60.69	356.35	0.19
5053.45	0.39	154.37	5051.49	59.84	-3.59	59.84	59.95	356.56	0.18
5147.88	0.42	152.92	5145.92	59.24	-3.30	59.24	59.34	356.81	0.03
5242.31	0.44	141.47	5240.35	58.66	-2.92	58.66	58.73	357.15	0.09
5336.74	0.36	119.11	5334.78	58.23	-2.43	58.23	58.28	357.61	0.18
5431.17	0.28	116.75	5429.20	57.98	-1.97	57.98	58.01	358.05	0.09
5525.60	0.25	122.97	5523.63	57.77	-1.59	57.77	57.79	358.42	0.04
5620.03	0.22	129.18	5618.06	57.54	-1.28	57.54	57.56	358.72	0.04
5714.46	0.18	139.42	5712.49	57.31	-1.04	57.31	57.32	358.96	0.06
5808.89	0.14	129.66	5806.92	57.13	-0.86	57.13	57.13	359.14	0.05

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
5903.32	0.07	277.72	5901.35	57.06	-0.83	57.06	57.07	359.17	0.22
5997.75	0.00	225.79	5995.78	57.07	-0.89	57.07	57.07	359.11	0.07
6092.18	0.07	248.57	6090.21	57.04	-0.95	57.04	57.05	359.05	0.07
6186.61	0.13	271.35	6184.64	57.02	-1.11	57.02	57.04	358.89	0.08
6281.04	0.21	281.93	6279.07	57.06	-1.39	57.06	57.08	358.61	0.09
6375.47	0.29	292.51	6373.50	57.19	-1.78	57.19	57.22	358.22	0.10
6469.90	0.30	325.78	6467.93	57.49	-2.14	57.49	57.53	357.86	0.18
6564.33	0.31	309.04	6562.36	57.86	-2.48	57.86	57.91	357.54	0.09
6658.76	0.43	257.61	6656.78	57.94	-3.03	57.94	58.02	357.01	0.36
6753.19	0.55	246.17	6751.21	57.68	-3.79	57.68	57.81	356.24	0.16
6847.62	0.73	225.99	6845.64	57.08	-4.64	57.08	57.27	355.35	0.30
6942.05	0.91	231.80	6940.06	56.19	-5.67	56.19	56.48	354.24	0.21
7036.48	1.64	237.81	7034.46	55.01	-7.40	55.01	55.50	352.34	0.78
7130.91	2.37	223.82	7128.83	52.88	-9.89	52.88	53.80	349.40	0.92
7225.34	2.62	203.55	7223.18	49.50	-12.10	49.50	50.96	346.26	0.97
7319.77	2.88	187.27	7317.50	45.17	-13.27	45.17	47.07	343.63	0.87
7414.20	3.19	203.04	7411.80	40.39	-14.60	40.39	42.95	340.13	0.94
7508.63	3.51	216.81	7506.07	35.66	-17.36	35.66	39.66	334.05	0.91
7603.06	3.60	258.28	7600.33	32.75	-21.99	32.75	39.45	326.12	2.66
7697.49	3.69	269.75	7694.57	32.13	-27.93	32.13	42.58	319.00	0.78
7791.92	3.38	275.04	7788.82	32.36	-33.75	32.36	46.76	313.80	0.48
7886.35	3.07	270.33	7883.10	32.62	-39.05	32.62	50.89	309.88	0.43
7980.78	3.18	287.19	7977.39	33.41	-44.09	33.41	55.32	307.16	0.98
8075.21	3.29	302.05	8071.68	35.63	-48.89	35.63	60.49	306.08	0.89
8169.64	3.17	317.88	8165.96	39.00	-52.94	39.00	65.75	306.38	0.95
8264.07	3.04	334.72	8260.25	43.20	-55.75	43.20	70.53	307.77	0.97
8358.50	2.57	348.07	8354.57	47.54	-57.26	47.54	74.42	309.70	0.85
8452.93	2.10	7.43	8448.92	51.33	-57.48	51.33	77.06	311.77	0.97
8547.36	2.02	345.84	8543.29	54.67	-57.66	54.67	79.45	313.47	0.82
8641.79	1.94	323.26	8637.67	57.57	-59.03	57.57	82.45	314.28	0.83
8736.22	1.59	296.06	8732.05	59.43	-61.16	59.43	85.28	314.17	0.95
8830.65	1.24	298.87	8826.45	60.49	-63.23	60.49	87.51	313.73	0.38
8925.08	0.82	322.25	8920.87	61.52	-64.54	61.52	89.17	313.63	0.62
9019.51	0.40	345.64	9015.29	62.38	-65.04	62.38	90.12	313.80	0.51
9113.94	0.30	273.43	9109.72	62.72	-65.37	62.72	90.59	313.81	0.45
9208.37	0.19	201.21	9204.15	62.58	-65.67	62.58	90.71	313.62	0.32
9302.80	0.52	144.94	9298.58	62.08	-65.48	62.08	90.23	313.47	0.47
9397.23	0.84	88.67	9393.00	61.75	-64.55	61.75	89.33	313.73	0.74
9491.66	0.95	147.84	9487.42	61.10	-63.44	61.10	88.08	313.93	0.94
9586.09	1.05	157.00	9581.84	59.65	-62.68	59.65	86.53	313.58	0.20
9680.52	1.03	182.72	9676.25	58.00	-62.39	58.00	85.18	312.91	0.49
9774.95	1.02	138.43	9770.67	56.52	-61.87	56.52	83.80	312.41	0.82

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
9869.38	0.94	120.00	9865.09	55.51	-60.65	55.51	82.21	312.47	0.34
9963.81	0.86	121.56	9959.50	54.75	-59.37	54.75	80.76	312.68	0.09
10058.24	0.69	138.59	10053.93	53.95	-58.40	53.95	79.51	312.74	0.30
10152.67	0.52	155.62	10148.35	53.14	-57.84	53.14	78.55	312.57	0.26
10247.10	0.51	165.35	10242.78	52.34	-57.56	52.34	77.80	312.28	0.09
10341.53	0.51	175.09	10337.20	51.52	-57.42	51.52	77.14	311.90	0.09
10435.96	0.51	214.69	10431.63	50.75	-57.62	50.75	76.79	311.37	0.36
10530.39	0.51	254.29	10526.06	50.29	-58.27	50.29	76.97	310.80	0.37
10624.82	0.66	250.54	10620.48	50.00	-59.19	50.00	77.48	310.19	0.16
10719.25	0.81	246.79	10714.90	49.55	-60.32	49.55	78.06	309.41	0.16
10813.68	0.66	254.57	10809.33	49.15	-61.45	49.15	78.69	308.65	0.19
10908.11	0.51	262.35	10903.75	48.94	-62.40	48.94	79.30	308.11	0.18
11002.54	0.51	275.54	10998.18	48.93	-63.24	48.93	79.96	307.73	0.12
11096.97	0.51	288.74	11092.60	49.10	-64.05	49.10	80.71	307.47	0.12
11191.40	0.50	289.75	11187.03	49.38	-64.84	49.38	81.50	307.29	0.01
11285.83	0.50	290.77	11281.46	49.67	-65.62	49.67	82.30	307.12	0.01
11380.26	0.48	286.33	11375.88	49.92	-66.38	49.92	83.06	306.94	0.05
11474.69	0.46	281.88	11470.31	50.11	-67.13	50.11	83.78	306.74	0.04
11569.12	0.60	283.83	11564.74	50.31	-67.98	50.31	84.57	306.50	0.15
11663.55	0.73	285.79	11659.16	50.59	-69.04	50.59	85.60	306.23	0.15
11757.98	0.70	303.46	11753.58	51.07	-70.11	51.07	86.74	306.07	0.24
11852.41	0.67	321.14	11848.01	51.82	-70.93	51.82	87.85	306.15	0.23
11946.84	0.51	338.37	11942.43	52.64	-71.43	52.64	88.74	306.39	0.25
12041.27	0.36	355.61	12036.86	53.33	-71.61	53.33	89.29	306.68	0.21
12135.70	0.59	25.59	12131.28	54.07	-71.43	54.07	89.58	307.13	0.35
12230.13	0.82	55.57	12225.71	54.89	-70.66	54.89	89.47	307.84	0.45
12324.56	0.89	27.69	12320.13	55.92	-69.76	55.92	89.41	308.71	0.44
12418.99	0.95	359.80	12414.55	57.35	-69.43	57.35	90.05	309.56	0.47
12513.42	0.59	2.73	12508.97	58.62	-69.41	58.62	90.85	310.18	0.39
12607.85	0.23	5.65	12603.39	59.29	-69.37	59.29	91.25	310.52	0.38
12702.28	0.16	18.51	12697.82	59.60	-69.30	59.60	91.41	310.70	0.09
12796.71	0.09	31.36	12792.25	59.79	-69.22	59.79	91.47	310.82	0.08
12891.14	0.29	345.43	12886.68	60.09	-69.24	60.09	91.68	310.95	0.24
12985.57	0.48	299.50	12981.11	60.51	-69.65	60.51	92.26	310.98	0.37
13080.00	0.51	301.85	13075.54	60.92	-70.35	60.92	93.06	310.89	0.04
13174.43	0.55	304.19	13169.96	61.40	-71.08	61.40	93.92	310.82	0.04
13268.86	0.54	332.28	13264.39	62.05	-71.66	62.05	94.79	310.89	0.28
13363.29	0.54	0.38	13358.82	62.90	-71.86	62.90	95.50	311.19	0.28
13457.72	1.10	10.98	13453.24	64.24	-71.69	64.24	96.26	311.86	0.61
13552.15	1.66	21.59	13547.64	66.41	-71.01	66.41	97.22	313.08	0.65
13646.58	1.50	2.74	13642.03	68.92	-70.45	68.92	98.55	314.37	0.57
13741.01	1.35	343.89	13736.43	71.22	-70.70	71.22	100.35	315.21	0.52

