



June 8, 2015

Devon Energy Production Co., L. P.
333 West Sheridan Ave
Oklahoma City, Oklahoma 73102-5010

Attn: Megan Moravec

Re: **H B 11 Federal 1**

Please find enclosed a copy of the survey from 0' to 9000' 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

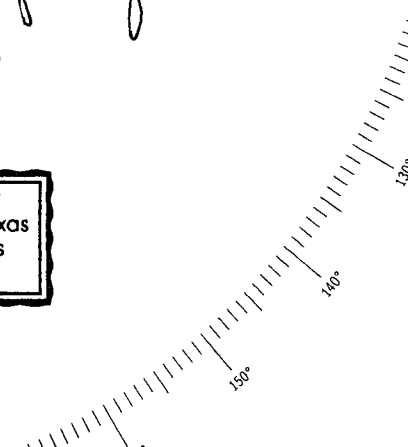
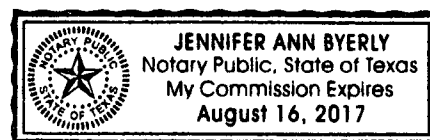
STATE OF TEXAS §
 §
COUNTY OF NUECES §

NM OIL CONSERVATION
ARTESIA DISTRICT
JUL 06 2015

RECEIVED

This instrument was acknowledged before me on the 8 day of June,
A.D., 2015, by Keith Havelka.

Jennifer Ann Byerly
Notary Public, State of Texas





Company: Devon Energy
 Lease/Well: HB 11 Federal/1
 Location: 7.5 Miles East OF Malaga, NM
 Rig Name: Production , Pulling Unit
 State/County: New Mexico/Eddy
 VS-Azi: 0.00 Degrees
 Latitude: 32.23375, Longitude: -103.96197
 Grid Convergence Applied = -0.20 degs (NAD 27)
 Grid North = True North -0.20 degs



NM OIL CONSERVATION
 ARTESIA DISTRICT
 JUL 08 2015
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RKB : 26 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut
 Minimum Curvature Method
 Report Date/Time: 6/8/2015 / 11:18

VES Survey International
 Fort Worth Tx
 Surveyor: Jason Wilson
 (817) 718-1320
 H B 11 Federal 1 / API 30-015-28693

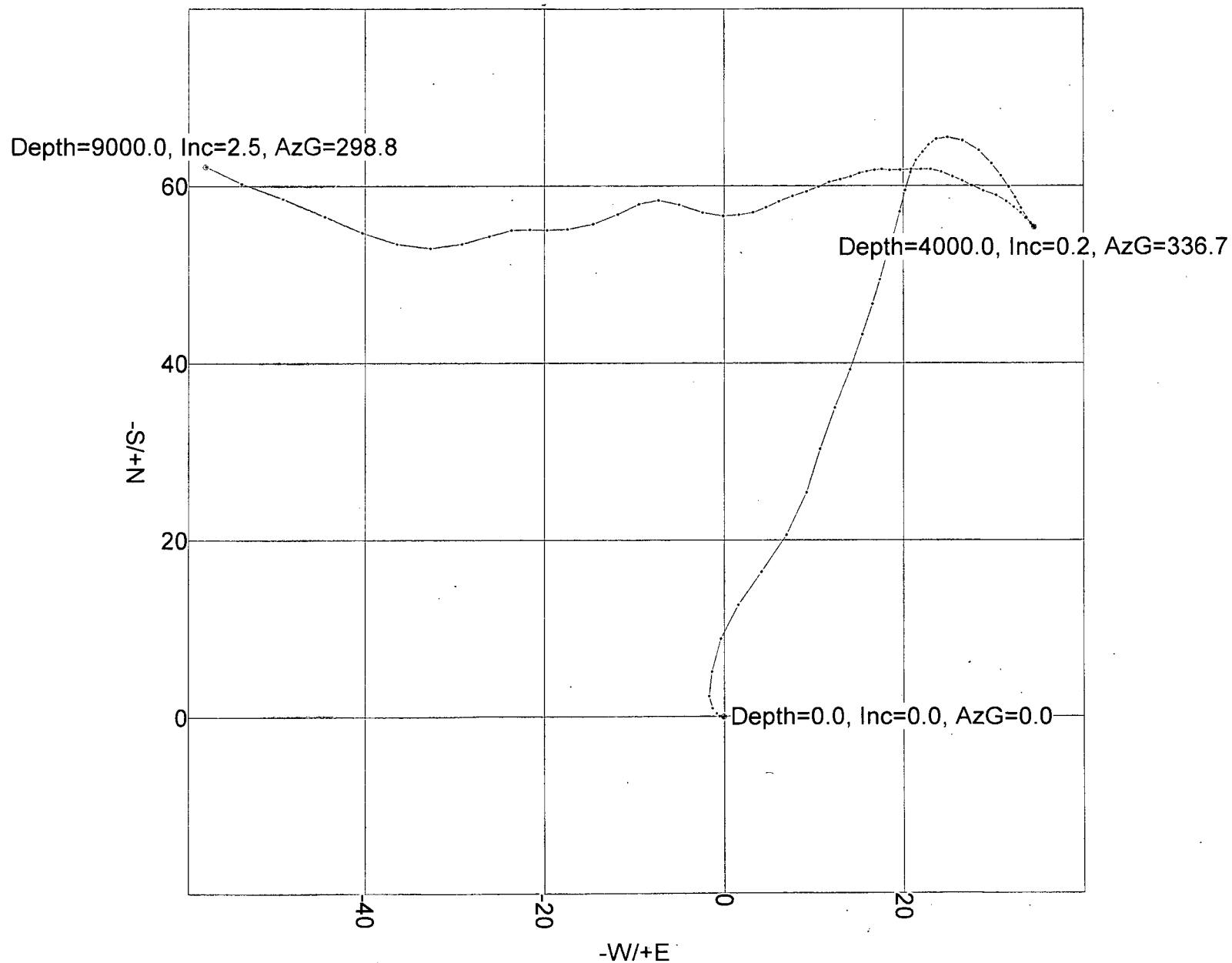
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
50.00	0.19	218.34	50.00	-0.06	-0.05	-0.06	0.08	218.34	0.38
100.00	0.12	310.01	100.00	-0.10	-0.14	-0.10	0.17	236.21	0.45
200.00	0.34	280.13	200.00	0.02	-0.51	0.02	0.51	272.66	0.24
300.00	0.29	350.31	300.00	0.32	-0.84	0.32	0.90	291.09	0.36
400.00	0.62	310.04	399.99	0.92	-1.30	0.92	1.59	305.37	0.44
500.00	1.18	2.29	499.98	2.29	-1.67	2.29	2.84	323.94	0.93
600.00	2.05	8.43	599.94	5.09	-1.37	5.09	5.27	344.97	0.89
700.00	2.40	19.91	699.87	8.83	-0.39	8.83	8.84	357.47	0.57
800.00	2.58	33.15	799.77	12.69	1.55	12.69	12.78	6.99	0.60
900.00	2.66	35.95	899.67	16.45	4.15	16.45	16.96	14.15	0.15
1000.00	3.07	31.94	999.54	20.60	6.93	20.60	21.73	18.58	0.46
1100.00	3.01	18.45	1099.41	25.36	9.17	25.36	26.97	19.89	0.72
1200.00	2.93	16.12	1199.27	30.30	10.71	30.30	32.14	19.47	0.14
1300.00	2.74	22.50	1299.15	34.97	12.34	34.97	37.08	19.44	0.37
1400.00	2.57	20.47	1399.04	39.27	14.04	39.27	41.71	19.67	0.20
1500.00	2.26	17.29	1498.95	43.25	15.40	43.25	45.91	19.60	0.34

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
1600.00	1.89	19.74	1598.89	46.69	16.55	46.69	49.53	19.52	0.37
1700.00	1.41	12.56	1698.85	49.44	17.37	49.44	52.40	19.36	0.53
1800.00	1.61	18.85	1798.81	51.96	18.09	51.96	55.02	19.20	0.26
1900.00	1.54	17.09	1898.77	54.57	18.94	54.57	57.76	19.14	0.08
2000.00	1.43	11.99	1998.74	57.07	19.59	57.07	60.34	18.95	0.17
2100.00	1.43	16.77	2098.71	59.48	20.21	59.48	62.82	18.77	0.12
2200.00	0.98	15.73	2198.69	61.49	20.80	61.49	64.91	18.69	0.45
2300.00	0.78	34.08	2298.68	62.88	21.41	62.88	66.42	18.81	0.34
2400.00	0.60	44.36	2398.67	63.82	22.16	63.82	67.56	19.15	0.22
2500.00	0.62	34.89	2498.66	64.64	22.84	64.64	68.55	19.46	0.10
2600.00	0.63	69.13	2598.66	65.28	23.67	65.28	69.44	19.93	0.37
2700.00	0.82	90.18	2698.65	65.47	24.90	65.47	70.05	20.82	0.32
2800.00	1.18	110.52	2798.63	65.11	26.58	65.11	70.33	22.20	0.50
2900.00	1.30	132.18	2898.61	63.99	28.38	63.99	70.00	23.92	0.48
3000.00	1.03	142.08	2998.59	62.52	29.77	62.52	69.25	25.46	0.34
3100.00	0.96	144.22	3098.58	61.14	30.81	61.14	68.46	26.75	0.08
3200.00	0.83	146.54	3198.56	59.85	31.70	59.85	67.73	27.91	0.13
3300.00	0.74	150.64	3298.55	58.69	32.41	58.69	67.04	28.91	0.11
3400.00	0.80	153.26	3398.54	57.50	33.05	57.50	66.32	29.89	0.07
3500.00	0.64	145.63	3498.54	56.41	33.68	56.41	65.70	30.84	0.19
3600.00	0.32	144.86	3598.53	55.72	34.15	55.72	65.36	31.50	0.32
3700.00	0.10	131.56	3698.53	55.44	34.38	55.44	65.23	31.81	0.23
3800.00	0.04	112.55	3798.53	55.36	34.48	55.36	65.22	31.91	0.06
3900.00	0.12	143.86	3898.53	55.26	34.57	55.26	65.19	32.03	0.09
4000.00	0.23	336.69	3998.53	55.37	34.56	55.37	65.27	31.97	0.35
4100.00	0.52	308.18	4098.53	55.83	34.12	55.83	65.43	31.43	0.33
4200.00	0.34	323.15	4198.53	56.35	33.58	56.35	65.60	30.79	0.21
4300.00	0.60	313.76	4298.52	56.95	33.03	56.95	65.84	30.11	0.27
4400.00	0.53	304.87	4398.52	57.58	32.26	57.58	66.01	29.26	0.12
4500.00	0.70	311.41	4498.51	58.25	31.43	58.25	66.19	28.35	0.18
4600.00	0.85	292.13	4598.50	58.93	30.29	58.93	66.26	27.20	0.30
4700.00	0.88	287.11	4698.49	59.44	28.86	59.44	66.08	25.90	0.08
4800.00	0.73	302.70	4798.48	60.01	27.59	60.01	66.05	24.69	0.26
4900.00	0.61	292.89	4898.48	60.56	26.56	60.56	66.13	23.68	0.17
5000.00	0.77	292.60	4998.47	61.03	25.45	61.03	66.12	22.64	0.15
5100.00	0.78	294.02	5098.46	61.56	24.21	61.56	66.15	21.47	0.02
5200.00	0.64	272.31	5198.45	61.86	23.04	61.86	66.01	20.43	0.30
5300.00	0.60	269.37	5298.45	61.88	21.96	61.88	65.66	19.54	0.05
5400.00	0.68	270.37	5398.44	61.87	20.85	61.87	65.29	18.62	0.08

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
5500.00	0.72	260.92	5498.43	61.78	19.63	61.78	64.82	17.63	0.12
5600.00	0.62	278.71	5598.43	61.76	18.47	61.76	64.46	16.65	0.23
5700.00	0.37	272.97	5698.42	61.86	17.61	61.86	64.32	15.89	0.25
5800.00	0.57	257.73	5798.42	61.77	16.80	61.77	64.02	15.21	0.23
5900.00	0.45	263.52	5898.41	61.62	15.92	61.62	63.65	14.49	0.13
6000.00	0.53	250.79	5998.41	61.42	15.09	61.42	63.25	13.80	0.14
6100.00	0.67	245.99	6098.41	61.04	14.12	61.04	62.65	13.03	0.14
6200.00	0.72	264.01	6198.40	60.73	12.97	60.73	62.10	12.05	0.22
6300.00	0.74	248.76	6298.39	60.43	11.74	60.43	61.56	10.99	0.19
6400.00	0.76	243.52	6398.38	59.90	10.54	59.90	60.82	9.98	0.07
6500.00	0.92	251.04	6498.37	59.35	9.19	59.35	60.05	8.80	0.20
6600.00	0.96	253.56	6598.36	58.85	7.62	58.85	59.34	7.38	0.05
6700.00	0.92	242.72	6698.34	58.24	6.10	58.24	58.56	5.98	0.18
6800.00	0.89	245.55	6798.33	57.55	4.68	57.55	57.74	4.65	0.06
6900.00	0.91	253.22	6898.32	57.00	3.21	57.00	57.09	3.22	0.12
7000.00	0.92	266.49	6998.31	56.72	1.64	56.72	56.74	1.66	0.21
7100.00	1.09	265.36	7098.29	56.59	-0.11	56.59	56.59	359.89	0.17
7200.00	1.61	289.73	7198.26	56.99	-2.38	56.99	57.04	357.61	0.76
7300.00	1.55	287.59	7298.23	57.87	-4.99	57.87	58.09	355.07	0.08
7400.00	1.15	275.24	7398.20	58.38	-7.28	58.38	58.83	352.89	0.50
7500.00	1.50	245.39	7498.17	57.92	-9.47	57.92	58.69	350.72	0.76
7600.00	1.49	243.39	7598.14	56.80	-11.81	56.80	58.01	348.25	0.05
7700.00	1.87	251.11	7698.09	55.69	-14.52	55.69	57.55	345.39	0.44
7800.00	1.52	267.50	7798.05	55.10	-17.39	55.10	57.78	342.48	0.59
7900.00	1.08	268.70	7898.03	55.02	-19.66	55.02	58.43	340.33	0.44
8000.00	1.15	274.02	7998.01	55.07	-21.61	55.07	59.16	338.57	0.12
8100.00	1.22	262.26	8097.99	55.00	-23.67	55.00	59.88	336.71	0.25
8200.00	1.74	249.07	8197.95	54.31	-26.14	54.31	60.28	334.30	0.62
8300.00	1.94	259.54	8297.90	53.47	-29.22	53.47	60.93	331.35	0.39
8400.00	2.12	264.60	8397.84	52.99	-32.72	52.99	62.27	328.31	0.26
8500.00	2.29	289.34	8497.77	53.48	-36.44	53.48	64.71	325.72	0.96
8600.00	2.37	286.69	8597.68	54.73	-40.31	54.73	67.98	323.63	0.13
8700.00	2.92	298.07	8697.58	56.52	-44.54	56.52	71.96	321.76	0.76
8800.00	3.05	287.91	8797.44	58.54	-49.32	58.54	76.54	319.89	0.54
8900.00	2.68	292.52	8897.32	60.25	-54.01	60.25	80.92	318.13	0.43
9000.00	2.47	298.75	8997.22	62.18	-58.06	62.18	85.07	316.97	0.35



VES Survey International
Fort Worth Tx
Surveyor: Jason Wilson
(817) 718-1320
H B 11 Federal 1 / API 30-015-28693



VES Survey Date: 6/2/2015