

September 1, 2015

HOBBS OGD
JAN 06 2016
RECEIVED

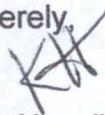
Devon Energy Production Co., L. P.
333 West Sheridan Ave
Oklahoma City, Oklahoma 73102-5010

Attn: Megan Moravec

Re: **Thistle Unit No 060H**

Please find enclosed a copy of the survey from 0' to 1361' ran on the above referenced well.

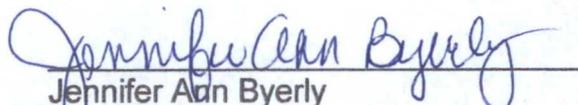
If I can be of any further service please do not hesitate to call me at 800-606-4976.

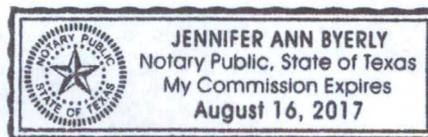
Sincerely,


Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 1 day of September A.D., 2015, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas





Company: Devon Energy
 Lease/Well: Thistle Unit No/060H

Rig Name: Cactus 153
 State/County: New Mexico /Lea
 VS-Azi: 0.00 Degrees
 Latitude: 32.28240, Longitude: -103.57215
 Grid North = True North -0.41 degs (NAD 83)
 Grid Correction Applied = -0.41 degs



Depth Reference : R.K.B = 23.6 Ft

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: msgyro_run01-01-de_01.ut

Minimum Curvature Method

Report Date/Time: 9/1/2015 / 14:23

VES Survey International
 Midland, Texas
 432-563-5444

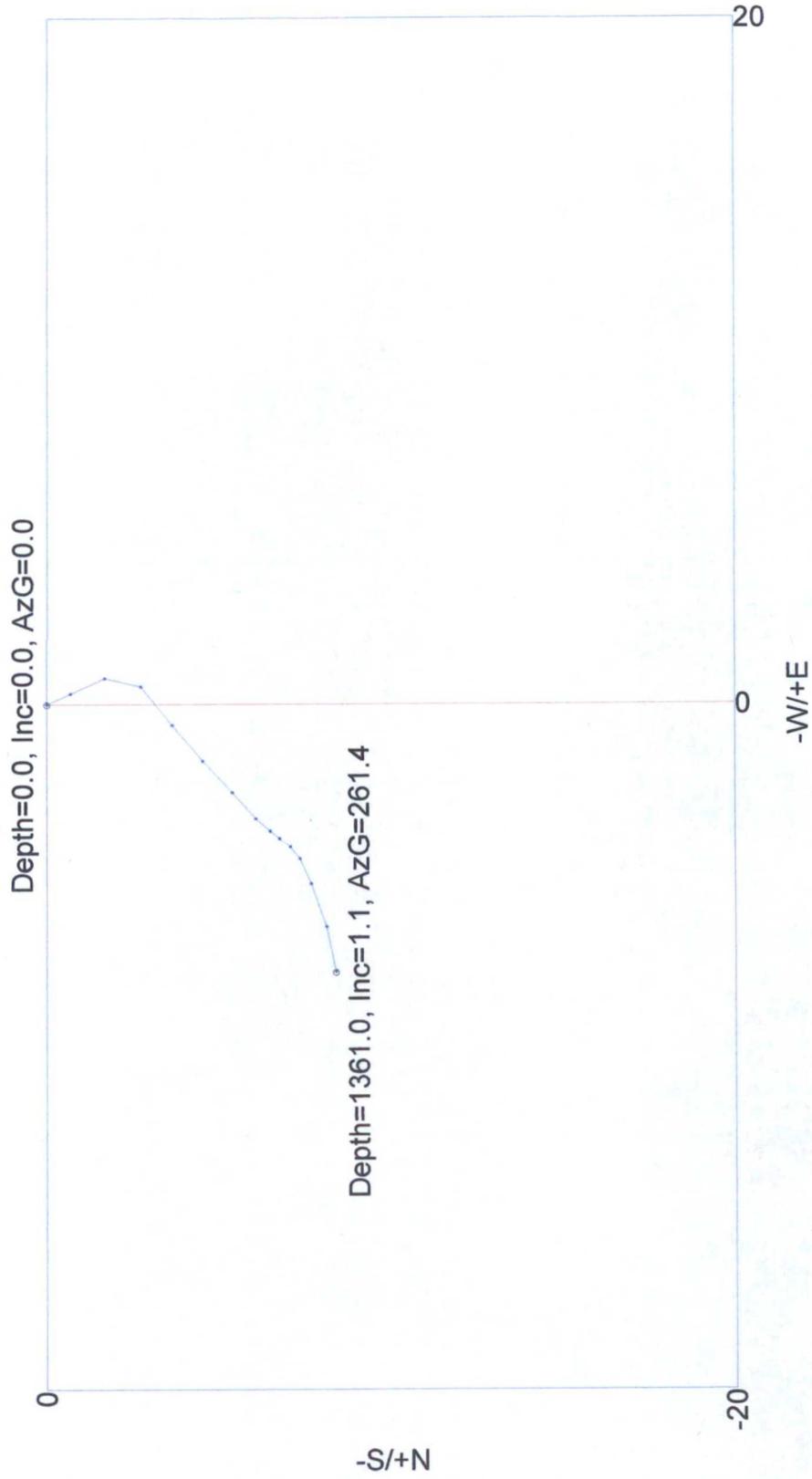
Surveyor: Javier Estrada

Thistle Unit No 060H / API 30-025-41797

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	****
154.00	0.57	156.02	154.00	-0.69	0.31	-0.69	0.76	156.02	0.37
248.50	0.75	155.06	248.49	-1.68	0.76	-1.68	1.84	155.70	0.19
343.00	0.84	225.93	342.98	-2.72	0.52	-2.72	2.77	169.24	0.98
437.50	0.93	235.87	437.47	-3.63	-0.62	-3.63	3.68	189.62	0.18
532.00	0.74	221.39	531.96	-4.52	-1.65	-4.52	4.81	200.07	0.30
626.50	0.80	231.72	626.45	-5.38	-2.57	-5.38	5.96	205.51	0.16
721.00	0.45	222.84	720.95	-6.06	-3.33	-6.06	6.91	208.83	0.38
815.50	0.22	217.24	815.45	-6.47	-3.69	-6.47	7.45	209.72	0.24
910.00	0.21	221.38	909.95	-6.74	-3.92	-6.74	7.80	210.15	0.02
1004.50	0.27	212.92	1004.45	-7.06	-4.15	-7.06	8.19	210.46	0.08
1099.00	0.30	248.14	1098.94	-7.34	-4.51	-7.34	8.62	211.54	0.19
1193.50	0.66	244.98	1193.44	-7.67	-5.23	-7.67	9.28	214.32	0.38
1288.00	0.96	254.33	1287.93	-8.11	-6.49	-8.11	10.39	218.68	0.35
1361.00	1.13	261.41	1360.92	-8.39	-7.80	-8.39	11.45	222.92	0.29



VES Survey International
Midland, Texas
432-563-5444
Surveyor: Javier Estrada
Thistle Unit No 060H / API 30-025-41797





I JAVIER ESTRADA certify that I am employed by Vaughn Energy Services. That I did on the day(s) of 08/25/15 through 08/25/15 conduct or supervise the taking of a HASS GYRO survey from a depth of 0 feet to a depth of 1361 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Vaughn Energy Services, that I am authorized and qualified to make this report; that this survey was conducted at the request of DEVON ENERGY for the THISTLE UNIT No Well # 060 H API # 30-025-41797 in LEA County / Parish NEW MEXICO; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by Vaughn Energy Services

A handwritten signature in blue ink, appearing to read "Javier Estrada", is written over a horizontal line.

JAVIER ESTRADA
Service Technician
Vaughn Energy Services



I JAVIER ESTRADA certify that I am employed by Vaughn Energy Services. That I did on the day(s) of 08/25/15 through 08/25/15 conduct or supervise the taking of a HASS GYRO survey from a depth of 0 feet to a depth of 1361 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Vaughn Energy Services, that I am authorized and qualified to make this report; that this survey was conducted at the request of DEVON ENERGY for the THISTLE UNIT No Well # 060 H API # 30-025-41797 in LEA County / Parish NEW MEXICO; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by Vaughn Energy Services

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JAVIER ESTRADA
Service Technician
Vaughn Energy Services