

Results of Directional Survey

API number:	30-025-40898		
OGRID:		Operator:	DEVON ENERGY PRODUCTION COMPANY, LP
		Property:	THISTLE UNIT # 43H

surface	ULSTR:	M	33	T	23S	R	33E
				200	FSL	500	FWL

BH Loc	ULSTR:	D	33	T	23S	R	33E
15737	MD	11128.0	TVD	321	FNL	475	FWL
				4959	FSL		

Top Perf/OH	ULSTR:	M	33	T	23S	R	33E
11322	MD	11172.1	TVD	552	FSL	430	FWL

Bot Perf/OH	ULSTR:	D	33	T	23S	R	33E
15654	MD	11133.8	TVD	401	FNL	475	FWL
				4879	FSL		

	MD	N/S	E/W	VD
	11312	342.46	-70.13	11168.86
TOP PERFS/OH	11322	351.91	-69.81	11172.11
	11344	372.69	-69.09	11179.26
	15604	4626.76	-24.83	11137.20
BOT PERFS/OH	15654	4678.85	-24.87	11133.78
	15672	4697.60	-24.89	11132.55

NEXT TO LAST	15672	4697.60	-24.89	11132.55
LAST READING	15737	4759.44	-24.90	11127.95
TD	15737	4759.44	-24.90	11127.95

Surface Location	200	FS	500	FW
Projected BHL	4959	FS	475	FW
Location of				
Top Perfs/OH	552	FS	430	FW
Bottom Perfs/OH	4879	FS	475	FW

SUMMARY of Subsurface Locations

Surface Location	M-33-23S-33E	200	FS	500	FW	Vert. Depth
Top Perfs/OH	M-33-23S-33E	552	FS	430	FW	11172.11
Bottom Perfs/OH	D-33-23S-33E	4879	FS	475	FW	11133.78
Projected TD	D-33-23S-33E	4959	FS	475	FW	11127.95

AUG 15 2013



A GYRO TECHNOLOGIES INC. COMPANY

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

March 18, 2013

HOBBS OCD

JUL 15 2013

RECEIVED

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

Attn: Patti Riechers

Re: **Thistle Unit No 043H**

Please find enclosed a copy of the survey from 0' to 10,578' 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.

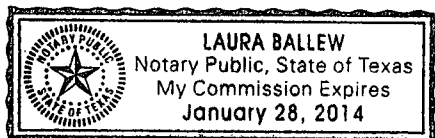
Sincerely,

Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 18th day of March
A.D., 2013, by Keith Havelka.

Laura Ballew
Notary Public, State of Texas





Company: Devon Energy Production Co., LP

Lease/Well: Thistle Unit/No 043H

Rig Name: H&P 416

State/County: New Mexico/Lea

Latitude: 32.25, Longitude: -103.58

GRID North is 0.40 Degrees East of True North

VS-Azi: 0.00 Degrees



Depth Reference : RKB=28 Ft

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: survey.ut

Minimum Curvature Method

Report Date/Time: 3/18/2013 / 14:24

Vaughn Energy Services

432-563-5444

Gardendale, Texas

Surveyor: Kyle Willis

Thistle Unit No 043H / API 30-025-40898

HOBBS OCD

JUL 15 2013

RECEIVED

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	****
108.48	1.12	6.86	108.47	1.06	0.13	1.06	1.06	6.86	1.04
202.80	1.09	7.48	202.78	2.86	0.35	2.86	2.88	7.05	0.04
297.12	1.09	4.03	297.08	4.64	0.53	4.64	4.67	6.55	0.07
391.44	1.01	24.33	391.38	6.29	0.94	6.29	6.36	8.50	0.40
485.76	0.78	29.78	485.69	7.61	1.60	7.61	7.77	11.90	0.26
580.08	0.58	31.05	580.00	8.58	2.17	8.58	8.85	14.20	0.22
674.40	0.28	26.79	674.32	9.19	2.52	9.19	9.53	15.33	0.32
768.72	0.28	38.47	768.64	9.58	2.77	9.58	9.97	16.12	0.06
863.04	0.27	55.30	862.96	9.88	3.09	9.88	10.36	17.37	0.09
957.36	0.22	93.95	957.28	10.00	3.45	10.00	10.58	19.05	0.18
1051.68	0.20	53.59	1051.60	10.08	3.76	10.08	10.76	20.47	0.15
1146.00	0.15	31.15	1145.92	10.28	3.96	10.28	11.02	21.05	0.09
1240.32	0.12	21.32	1240.24	10.48	4.05	10.48	11.23	21.16	0.04
1334.64	0.14	46.17	1334.56	10.65	4.17	10.65	11.44	21.41	0.06
1428.96	0.12	14.76	1428.88	10.82	4.28	10.82	11.64	21.59	0.08
1523.28	0.19	85.81	1523.20	10.93	4.46	10.93	11.81	22.21	0.20
1617.60	0.20	10.02	1617.52	11.11	4.65	11.11	12.04	22.70	0.25
1711.92	0.32	9.18	1711.84	11.53	4.72	11.53	12.45	22.25	0.12

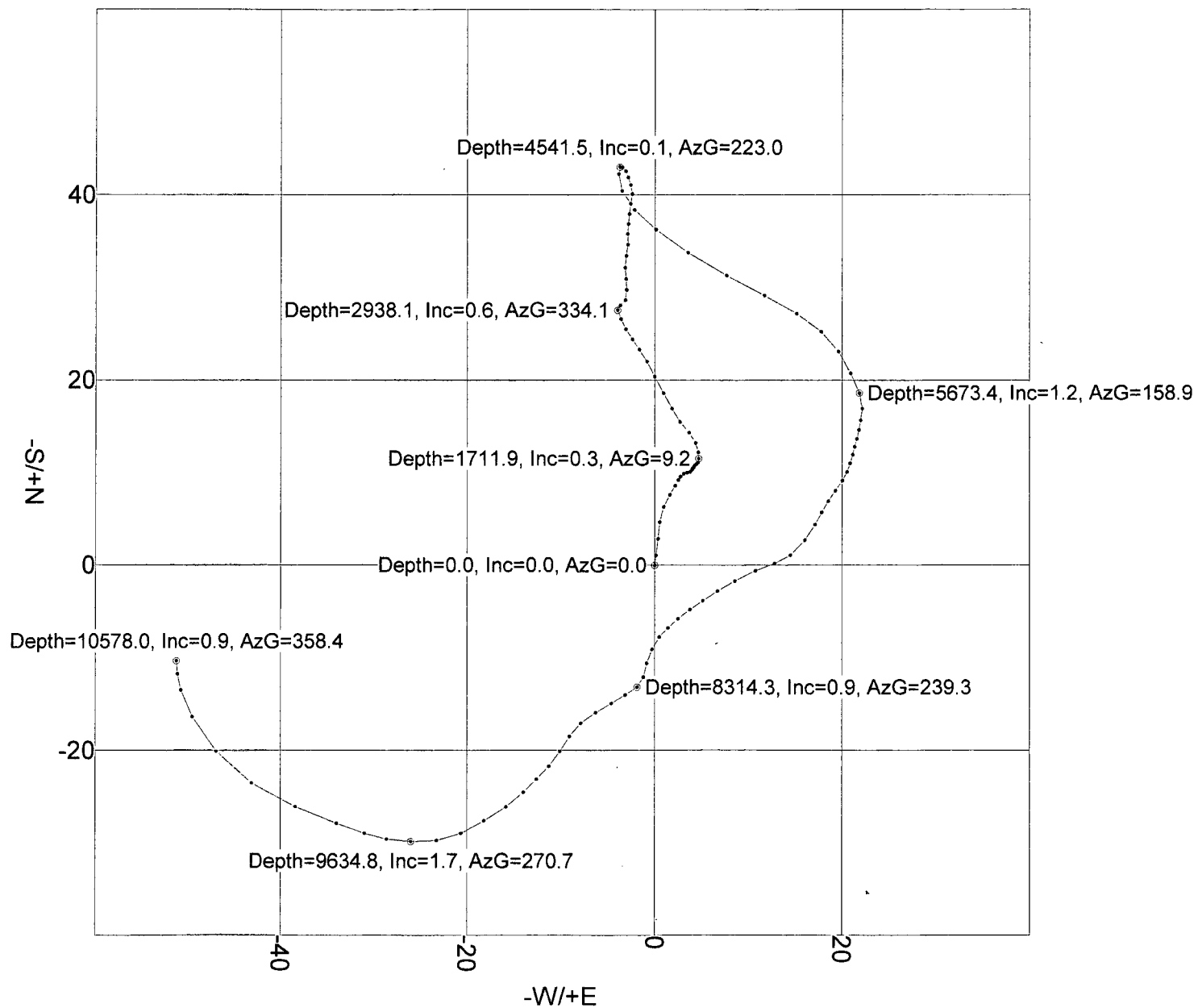
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1806.24	0.52	348.18	1806.15	12.20	4.67	12.20	13.06	20.94	0.27
1900.56	0.74	340.81	1900.47	13.20	4.38	13.20	13.91	18.36	0.25
1994.88	0.89	317.97	1994.78	14.32	3.69	14.32	14.79	14.46	0.37
2089.20	0.98	320.87	2089.09	15.48	2.70	15.48	15.72	9.88	0.11
2183.52	1.09	335.55	2183.39	16.92	1.82	16.92	17.02	6.13	0.30
2277.84	1.22	327.88	2277.69	18.59	0.91	18.59	18.61	2.81	0.21
2372.16	1.22	336.64	2371.99	20.36	-0.02	20.36	20.36	359.95	0.20
2466.48	1.03	328.22	2466.29	22.00	-0.86	22.00	22.02	357.76	0.27
2560.80	0.83	327.10	2560.60	23.30	-1.68	23.30	23.36	355.87	0.21
2655.12	0.79	326.14	2654.91	24.41	-2.41	24.41	24.53	354.35	0.05
2749.44	0.79	328.73	2749.22	25.50	-3.11	25.50	25.69	353.04	0.04
2843.76	0.69	343.58	2843.53	26.61	-3.61	26.61	26.85	352.27	0.23
2938.08	0.57	334.05	2937.85	27.57	-3.98	27.57	27.85	351.79	0.17
3032.40	0.58	81.12	3032.16	28.06	-3.71	28.06	28.31	352.48	0.98
3126.72	0.64	9.07	3126.48	28.66	-3.15	28.66	28.83	353.73	0.77
3221.04	0.71	3.57	3220.79	29.76	-3.03	29.76	29.92	354.19	0.10
3315.36	0.73	352.03	3315.11	30.95	-3.07	30.95	31.10	354.33	0.16
3409.68	0.76	359.51	3409.42	32.17	-3.16	32.17	32.32	354.38	0.11
3504.00	0.78	10.04	3503.73	33.43	-3.06	33.43	33.57	354.78	0.15
3598.32	0.70	6.48	3598.04	34.63	-2.88	34.63	34.75	355.25	0.10
3692.64	0.72	350.77	3692.36	35.79	-2.91	35.79	35.90	355.35	0.21
3786.96	0.64	17.45	3786.67	36.87	-2.85	36.87	36.98	355.59	0.34
3881.28	0.69	355.30	3880.98	37.94	-2.73	37.94	38.04	355.88	0.28
3975.60	0.68	18.26	3975.30	39.03	-2.61	39.03	39.12	356.18	0.29
4069.92	0.65	359.97	4069.61	40.09	-2.43	40.09	40.17	356.53	0.22
4164.24	0.56	339.05	4163.92	41.05	-2.60	41.05	41.14	356.38	0.25
4258.56	0.47	345.03	4258.24	41.85	-2.86	41.85	41.95	356.09	0.11
4352.88	0.42	333.42	4352.56	42.53	-3.11	42.53	42.64	355.81	0.11
4447.20	0.29	295.11	4446.88	42.94	-3.49	42.94	43.08	355.36	0.28
4541.52	0.05	223.00	4541.20	43.01	-3.74	43.01	43.17	355.04	0.30
4635.84	0.91	187.97	4635.51	42.24	-3.87	42.24	42.42	354.77	0.92
4730.16	1.43	157.51	4729.81	40.41	-3.52	40.41	40.57	355.02	0.84
4824.48	1.57	137.03	4824.10	38.39	-2.19	38.39	38.45	356.73	0.58
4918.80	2.26	129.66	4918.37	36.26	0.11	36.26	36.26	0.18	0.78
5013.12	2.90	122.42	5012.59	33.79	3.56	33.79	33.98	6.01	0.76
5107.44	2.97	119.51	5106.79	31.31	7.70	31.31	32.24	13.82	0.17
5201.76	2.60	116.72	5201.00	29.14	11.74	29.14	31.42	21.94	0.42
5296.08	2.19	122.92	5295.24	27.20	15.16	27.20	31.14	29.13	0.52
5390.40	1.79	131.93	5389.50	25.24	17.77	25.24	30.87	35.14	0.53

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
5484.72	1.70	147.22	5483.78	23.08	19.62	23.08	30.29	40.36	0.50
5579.04	1.59	155.40	5578.06	20.72	20.92	20.72	29.44	45.28	0.27
5673.36	1.23	158.94	5672.35	18.58	21.83	18.58	28.67	49.59	0.39
5767.68	0.88	185.24	5766.65	16.91	22.13	16.91	27.85	52.61	0.63
5862.00	0.66	189.97	5860.96	15.65	21.97	15.65	26.97	54.53	0.25
5956.32	0.63	190.31	5955.28	14.61	21.78	14.61	26.23	56.15	0.02
6050.64	0.56	196.03	6049.59	13.65	21.56	13.65	25.52	57.66	0.10
6144.96	0.53	193.02	6143.91	12.78	21.33	12.78	24.87	59.07	0.05
6239.28	0.55	195.00	6238.22	11.93	21.12	11.93	24.25	60.54	0.03
6333.60	0.65	198.20	6332.54	10.98	20.84	10.98	23.55	62.20	0.12
6427.92	0.53	198.28	6426.85	10.06	20.53	10.06	22.87	63.89	0.13
6522.24	0.74	213.52	6521.17	9.14	20.06	9.14	22.04	65.50	0.29
6616.56	0.88	215.71	6615.48	8.05	19.30	8.05	20.91	67.37	0.15
6710.88	0.79	211.84	6709.79	6.91	18.53	6.91	19.78	69.56	0.11
6805.20	0.91	209.45	6804.10	5.70	17.82	5.70	18.71	72.26	0.13
6899.52	0.92	206.72	6898.41	4.37	17.11	4.37	17.66	75.67	0.05
6993.84	1.49	215.63	6992.71	2.70	16.06	2.70	16.29	80.45	0.63
7088.16	1.27	232.80	7087.00	1.08	14.52	1.08	14.56	85.76	0.49
7182.48	1.07	253.16	7181.30	0.19	12.84	0.19	12.84	89.16	0.48
7276.80	1.58	245.39	7275.59	-0.61	10.81	-0.61	10.83	93.22	0.56
7371.12	1.42	241.91	7369.88	-1.70	8.60	-1.70	8.76	101.20	0.19
7465.44	1.20	236.11	7464.18	-2.80	6.74	-2.80	7.30	112.57	0.28
7559.76	1.08	236.73	7558.48	-3.84	5.18	-3.84	6.45	126.57	0.12
7654.08	0.97	234.84	7652.78	-4.79	3.78	-4.79	6.10	141.69	0.13
7748.40	1.03	228.47	7747.09	-5.81	2.50	-5.81	6.32	156.69	0.13
7842.72	0.76	224.56	7841.40	-6.81	1.43	-6.81	6.96	168.12	0.29
7937.04	0.90	222.67	7935.71	-7.80	0.49	-7.80	7.81	176.37	0.16
8031.36	0.98	199.67	8030.01	-9.10	-0.28	-9.10	9.11	181.76	0.41
8125.68	1.01	201.45	8124.32	-10.64	-0.86	-10.64	10.67	184.60	0.05
8220.00	0.86	183.71	8218.63	-12.13	-1.21	-12.13	12.19	185.68	0.34
8314.32	0.88	239.25	8312.94	-13.21	-1.88	-13.21	13.34	188.08	0.86
8408.64	0.98	234.60	8407.25	-14.05	-3.16	-14.05	14.40	192.67	0.14
8502.96	1.11	239.84	8501.55	-14.98	-4.61	-14.98	15.67	197.11	0.17
8597.28	1.26	239.35	8595.85	-15.96	-6.30	-15.96	17.16	201.52	0.15
8691.60	1.13	228.58	8690.15	-17.11	-7.89	-17.11	18.84	204.75	0.27
8785.92	1.16	211.93	8784.45	-18.54	-9.09	-18.54	20.65	206.12	0.35
8880.24	1.14	214.00	8878.75	-20.13	-10.12	-20.13	22.53	206.70	0.05
8974.56	1.27	218.27	8973.05	-21.73	-11.30	-21.73	24.49	207.47	0.17
9068.88	1.09	229.01	9067.35	-23.14	-12.63	-23.14	26.36	208.61	0.30

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
9163.20	1.30	221.64	9161.65	-24.54	-14.02	-24.54	28.26	209.74	0.27
9257.52	1.66	235.27	9255.94	-26.11	-15.85	-26.11	30.55	211.26	0.53
9351.84	1.73	239.26	9350.22	-27.62	-18.20	-27.62	33.07	213.38	0.14
9446.16	1.69	242.43	9444.50	-28.99	-20.65	-28.99	35.59	215.46	0.11
9540.48	1.68	265.01	9538.78	-29.75	-23.25	-29.75	37.76	218.01	0.70
9634.80	1.67	270.75	9633.06	-29.85	-26.00	-29.85	39.59	221.06	0.18
9729.12	1.52	281.24	9727.34	-29.59	-28.60	-29.59	41.15	224.03	0.34
9823.44	1.47	288.52	9821.63	-28.96	-30.98	-28.96	42.41	226.93	0.21
9917.76	2.43	290.07	9915.89	-27.89	-34.00	-27.89	43.98	230.63	1.02
10012.08	3.36	293.21	10010.09	-26.12	-38.41	-26.12	46.45	235.78	1.00
10106.40	3.21	304.66	10104.26	-23.53	-43.12	-23.53	49.12	241.38	0.71
10200.72	3.05	319.32	10198.44	-20.12	-46.94	-20.12	51.07	246.80	0.86
10295.04	2.52	332.84	10292.65	-16.37	-49.52	-16.37	52.16	251.71	0.89
10389.36	1.27	345.00	10386.91	-13.51	-50.74	-13.51	52.51	255.09	1.38
10483.68	0.88	352.15	10481.22	-11.78	-51.11	-11.78	52.45	257.02	0.44
10578.00	0.87	358.40	10575.53	-10.35	-51.23	-10.35	52.26	258.58	0.10



Vaughn Energy Services
432-563-5444
Gardendale, Texas
Surveyor: Kyle Willis
Thistle Unit No 043H / API 30-025-40898



VES Survey Date: 03/13/2013



**DRILLING SERVICES
END OF WELL REPORT
FOR
Kurtis Schmitz
Devon Energy
Thistle Unit 33 State 43H
Lea County, New Mexico**

HOBBS OCD

JUL 15 2013

RECEIVED

Weatherford Drilling Services job start date : 3-13-2013

Weatherford Drilling Services job end date : 3-25-2013

Presented By:

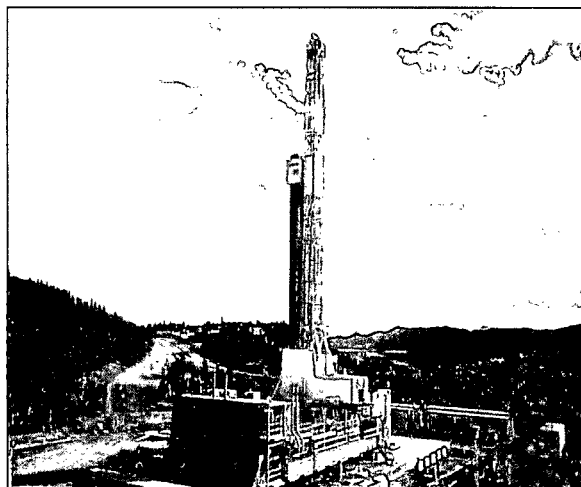
Damien Tarpley
Area Manager

Scott Dixon
Account Manager

Orry Armendariz
Directional Drilling Coordinator

Jesse Aguilar
MWD Coordinator

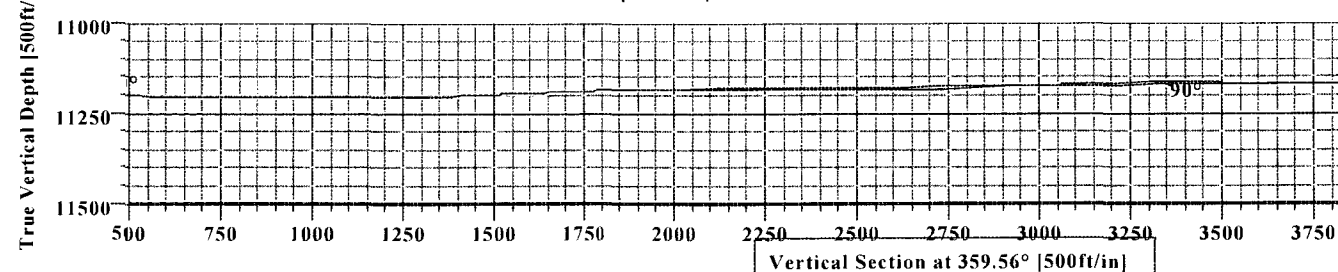
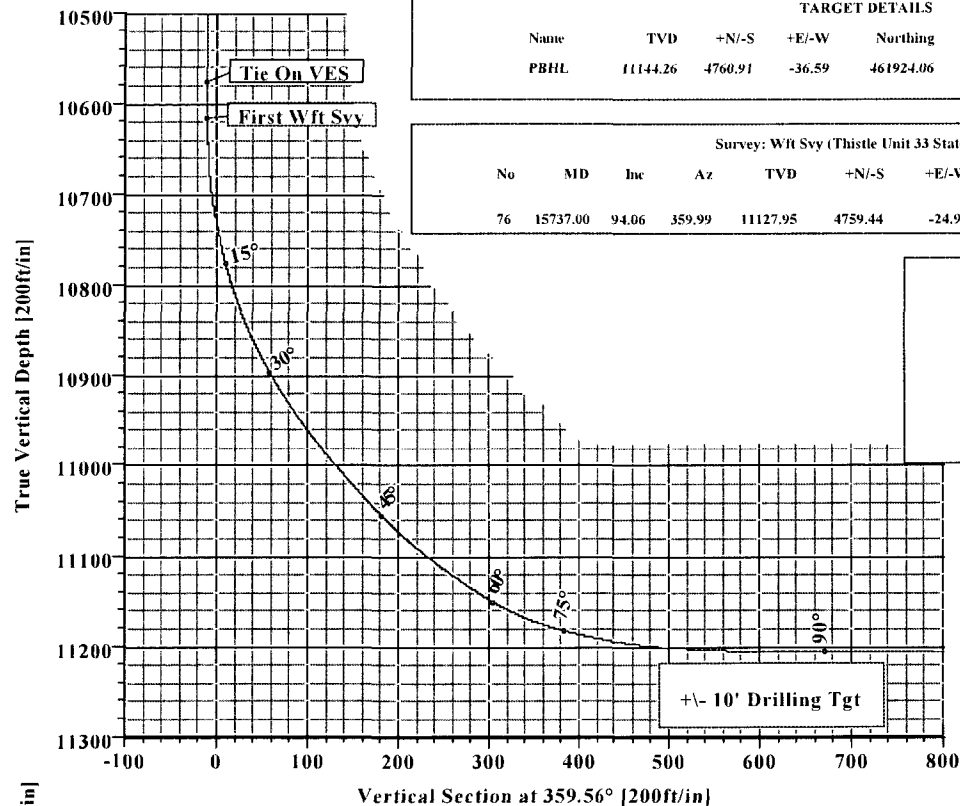
H&P 416





Thistle Unit 33 State 43H
Lea County, New Mexico

KB ELEV: 3681
GL ELEV: 3656



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	15033.00	89.51	2.90	11171.23	4057.33	-34.49	0.00	0.00	4057.48	
2	15223.74	94.00	359.35	11165.39	4247.87	-30.74	3.00	321.72	4247.98	
3	15438.24	94.00	359.35	11150.43	4461.83	-33.17	0.00	0.00	4461.96	
4	15554.95	90.50	359.34	11145.85	4578.43	-34.50	3.00	-179.89	4578.56	
5	15737.45	90.50	359.34	11144.26	4760.91	-36.59	0.00	0.00	4761.05	PBHL

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Thistle Unit 33 State 43H	0.00	0.00	457163.15	772899.82	32°15'16.537N	103°35'03.359W	N/A

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	11144.26	4760.91	-36.59	461924.06	772863.23	Rectangle (2672x50)

Survey: Wft Svy (Thistle Unit 33 State 43H/I)

No	MD	Inc	Az	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
76	15737.00	94.06	359.99	11127.95	4759.44	-24.90	0.00	0.00	4759.49

SITE DETAILS

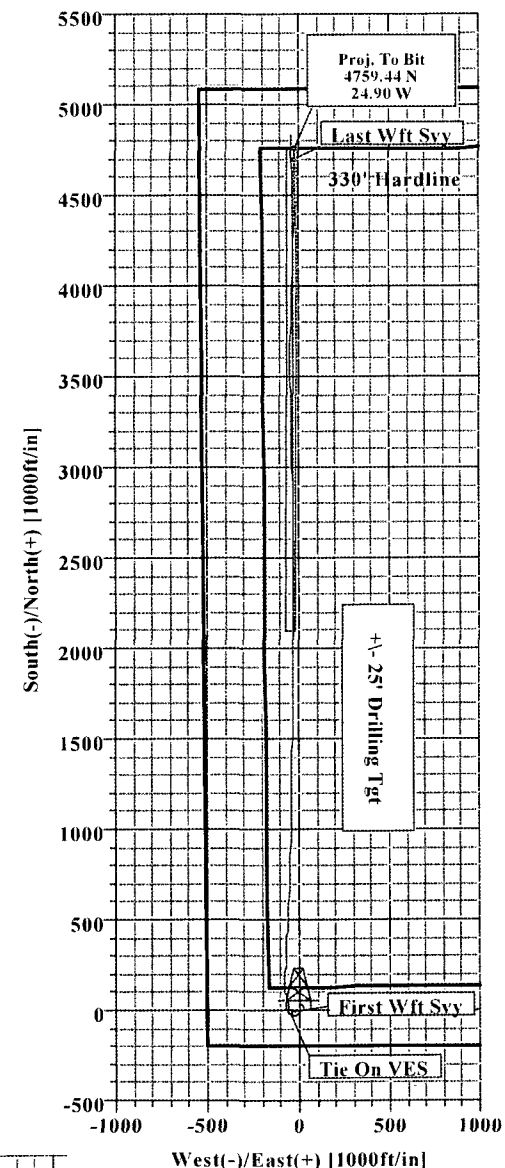
Thistle Unit 33 State 43H
Site Centre Northing: 457163.15
Easting: 772899.82
Ground Level: 3656.00
Positional Uncertainty: 0.00
Convergence: 0.40

LEGEND

- Thistle Unit 33 State 43H, I, Gyro
- Thistle Unit 33 State 43H, I, Plan #5
- Wft Svy



Weatherford



West(-)/East(+) [1000ft/in]

Last Wft Svy
Proj. To Bit

Survey: Wft Svy (Thistle Unit 33 State 43H/I)

Created By: Russell W. Joyner

Date: 3/25/2013



Weatherford

WFT Survey Report X & Y's

**Weatherford**

Company: Devon Energy		Date: 3/25/2013	Time: 05:44:45	Page: 1
Field: Lea County, New Mexico (NAD 83)		Co-ordinate(NE) Reference: Well: Thistle Unit 33 State 43H		
Site: Thistle Unit 33 State 43H		Vertical (TVD) Reference: SITE 3681.0		
Well: Thistle Unit 33 State 43H		Section (VS) Reference: Well (0.00N,0.00E,359.56Azi)		
Wellpath: 1		Survey Calculation Method: Minimum Curvature Db: Sybase		

Survey: Wft Svy	Start Date: 3/15/2013
Company: Weatherford	Engineer: Russell W. Joyner
Tool: MWD;MWD - Standard	Tied-to: User Defined

Site: Thistle Unit 33 State 43H		
Site Position:	Northing: 457163.15 ft	Latitude: 32 15 16.537 N
From: Map	Easting: 772899.82 ft	Longitude: 103 35 3.359 W
Position Uncertainty: 0.00 ft		North Reference: Grid
Ground Level: 3656.00 ft		Grid Convergence: 0.40 deg

Well: Thistle Unit 33 State 43H		Slot Name:
Well Position: +N/-S 0.00 ft	Northing: 457163.15 ft	Latitude: 32 15 16.537 N
+E/-W 0.00 ft	Easting: 772899.82 ft	Longitude: 103 35 3.359 W
Position Uncertainty: 0.00 ft		

Wellpath: 1		Drilled From: Surface
Current Datum: SITE	Height 3681.00 ft	Tie-on Depth: 0.00 ft
Magnetic Data: 2/28/2013		Above System Datum: Mean Sea Level
Field Strength: 48488 nT		Declination: 7.39 deg
Vertical Section: Depth From (TVD)	+N/-S	Mag Dip Angle: 60.17 deg
ft	ft	+E/-W
		ft
		Direction
		deg
0.00	0.00	0.00 359.56

Survey											
MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	DLS deg/100ft	VS ft	MapN ft	MapE ft	Comment	
10578.00	0.87	358.40	10575.53	-10.35	-51.23	0.00	-9.96	457152.80	772848.59	Tie On VES First Wft Svy	
10618.00	1.21	264.83	10615.53	-10.08	-51.66	3.83	-9.69	457153.07	772848.16		
10650.00	2.21	313.45	10647.51	-9.69	-52.44	5.24	-9.29	457153.46	772847.38		
10681.00	5.61	342.82	10678.44	-7.83	-53.33	12.39	-7.42	457155.32	772846.49		
10713.00	9.21	346.18	10710.17	-3.85	-54.40	11.33	-3.43	457159.30	772845.42		
10744.00	11.32	347.11	10740.67	1.53	-55.67	6.83	1.95	457164.68	772844.15		
10776.00	14.41	344.71	10771.86	8.43	-57.42	9.80	8.87	457171.58	772842.40		
10807.00	18.60	342.99	10801.58	16.88	-59.89	13.61	17.34	457180.03	772839.93		
10839.00	22.06	341.59	10831.58	27.47	-63.28	10.92	27.95	457190.62	772836.54		
10870.00	25.79	343.75	10859.91	39.47	-67.01	12.36	39.98	457202.62	772832.81		
10902.00	29.11	346.27	10888.31	53.72	-70.80	10.99	54.26	457216.87	772829.02		
10934.00	31.82	348.36	10915.89	69.55	-74.35	9.09	70.12	457232.70	772825.47		
10965.00	34.37	350.67	10941.86	86.19	-77.42	9.18	86.78	457249.34	772822.40		
10997.00	37.84	353.41	10967.71	104.86	-80.01	11.96	105.47	457268.01	772819.81		
11028.00	40.07	355.61	10991.81	124.26	-81.87	8.46	124.88	457287.41	772817.95		
11060.00	40.99	358.90	11016.14	145.02	-82.86	7.27	145.65	457308.17	772816.96		
11091.00	43.11	2.73	11039.16	165.77	-82.55	10.73	166.40	457328.92	772817.27		
11123.00	45.84	5.76	11061.99	188.12	-80.87	10.81	188.74	457351.27	772818.95		
11154.00	49.21	6.48	11082.93	210.85	-78.43	11.00	211.45	457374.00	772821.39		
11186.00	52.75	4.47	11103.07	235.60	-76.07	12.09	236.17	457398.75	772823.75		
11218.00	54.67	3.84	11122.01	261.32	-74.21	6.21	261.88	457424.47	772825.61		
11249.00	57.13	3.19	11139.39	286.94	-72.63	8.12	287.49	457450.09	772827.19		
11281.00	61.58	2.54	11155.70	314.43	-71.26	14.02	314.97	457477.58	772828.56		
11312.00	68.15	2.11	11168.86	342.46	-70.13	21.23	342.98	457505.61	772829.69		
11344.00	73.90	1.84	11179.26	372.69	-69.09	17.99	373.21	457535.84	772830.73		
11375.00	77.39	2.46	11186.94	402.69	-67.96	11.42	403.20	457565.84	772831.86		
11407.00	80.30	2.82	11193.13	434.05	-66.51	9.16	434.55	457597.20	772833.31		
11438.00	83.13	3.93	11197.60	464.67	-64.70	9.79	465.15	457627.82	772835.12		
11470.00	85.87	4.04	11200.66	496.44	-62.49	8.57	496.91	457659.59	772837.33		
11501.00	87.13	4.13	11202.56	527.31	-60.29	4.07	527.75	457690.46	772839.53		



Weatherford

WFT Survey Report X & Y's

**Weatherford®**

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Site: Thistle Unit 33 State 43H
Well: Thistle Unit 33 State 43H
Wellpath: 1

Date: 3/25/2013 Time: 05:44:45 Page: 2
Co-ordinate(NE) Reference: Well: Thistle Unit 33 State 43H
Vertical (TVD) Reference: SITE 3681.0
Section (VS) Reference: Well (0.00N,0.00E,359.56Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey

MD ft	Incl deg	Azim deg	TVD ft	N/S ft	E/W ft	DLS deg/100ft	VS ft	MapN ft	MapE ft	Comment
11533.00	87.62	3.93	11204.02	559.19	-58.04	1.65	559.62	457722.34	772841.78	
11627.00	89.79	1.57	11206.15	653.05	-53.53	3.41	653.44	457816.20	772846.29	
11722.00	90.98	1.67	11205.51	748.01	-50.85	1.26	748.38	457911.16	772848.97	
11817.00	90.56	2.17	11204.23	842.94	-47.67	0.69	843.29	458006.09	772852.15	
11911.00	89.58	1.67	11204.12	936.89	-44.52	1.17	937.20	458100.04	772855.30	
12006.00	88.11	1.36	11206.03	1031.83	-42.00	1.58	1032.13	458194.98	772857.82	
12101.00	89.79	0.24	11207.77	1126.80	-40.68	2.13	1127.08	458289.95	772859.14	
12196.00	89.79	0.55	11208.12	1221.80	-40.02	0.33	1222.07	458384.95	772859.80	
12290.00	92.52	1.00	11206.23	1315.76	-38.75	2.94	1316.02	458478.91	772861.07	
12385.00	92.73	1.04	11201.88	1410.65	-37.06	0.23	1410.89	458573.80	772862.76	
12479.00	91.61	1.42	11198.32	1504.56	-35.05	1.26	1504.78	458667.71	772864.77	
12574.00	92.59	1.17	11194.84	1599.47	-32.90	1.06	1599.68	458762.62	772866.92	
12668.00	92.10	1.09	11190.99	1693.37	-31.05	0.53	1693.56	458856.52	772868.77	
12763.00	92.45	1.72	11187.22	1788.27	-28.72	0.76	1788.44	458951.42	772871.10	
12858.00	91.05	0.44	11184.32	1883.20	-26.93	2.00	1883.35	459046.35	772872.89	
12953.00	90.00	0.14	11183.45	1978.20	-26.45	1.15	1978.34	459141.35	772873.37	
13047.00	90.00	359.92	11183.45	2072.20	-26.40	0.23	2072.34	459235.35	772873.42	
13141.00	89.16	359.04	11184.14	2166.19	-27.26	1.29	2166.33	459329.34	772872.56	
13236.00	90.35	359.19	11184.54	2261.17	-28.72	1.26	2261.33	459424.32	772871.10	
13331.00	90.14	359.40	11184.14	2356.17	-29.89	0.31	2356.33	459519.32	772869.93	
13425.00	90.35	359.46	11183.73	2450.16	-30.83	0.23	2450.33	459613.31	772868.99	
13520.00	90.14	359.82	11183.33	2545.16	-31.42	0.44	2545.32	459708.31	772868.40	
13614.00	89.51	359.43	11183.61	2639.15	-32.04	0.79	2639.32	459802.30	772867.78	
13709.00	91.82	359.66	11182.51	2734.14	-32.79	2.44	2734.31	459897.29	772867.03	
13803.00	91.75	359.16	11179.58	2828.09	-33.76	0.54	2828.26	459991.24	772866.06	
13898.00	91.75	358.85	11176.68	2923.03	-35.41	0.33	2923.21	460086.18	772864.41	
13992.00	92.10	359.03	11173.52	3016.96	-37.15	0.42	3017.16	460180.11	772862.67	
14087.00	92.31	358.08	11169.87	3111.86	-39.54	1.02	3112.07	460275.01	772860.28	
14182.00	91.26	358.86	11166.91	3206.78	-42.08	1.38	3207.00	460369.93	772857.74	
14276.00	91.19	358.42	11164.90	3300.73	-44.31	0.47	3300.97	460463.88	772855.51	
14371.00	88.95	359.30	11164.78	3395.70	-46.20	2.53	3395.96	460558.85	772853.62	
14465.00	88.81	359.33	11166.62	3489.68	-47.32	0.15	3489.94	460652.83	772852.50	
14559.00	88.32	359.20	11168.98	3583.64	-48.53	0.54	3583.91	460746.79	772851.29	
14654.00	89.86	0.82	11170.48	3678.62	-48.51	2.35	3678.89	460841.77	772851.31	
14748.00	89.44	1.46	11171.06	3772.60	-46.64	0.81	3772.85	460935.75	772853.18	
14843.00	90.35	2.84	11171.23	3867.53	-43.08	1.74	3867.75	461030.68	772856.74	
14938.00	90.07	2.31	11170.89	3962.43	-38.81	0.63	3962.61	461125.58	772861.01	
15033.00	89.51	2.90	11171.23	4057.33	-34.49	0.86	4057.48	461220.48	772865.33	
15129.00	90.07	1.81	11171.59	4153.25	-30.55	1.28	4153.36	461316.40	772869.27	
15224.00	93.01	1.81	11169.03	4248.16	-27.55	3.09	4248.24	461411.31	772872.27	
15319.00	94.48	0.41	11162.83	4342.93	-25.71	2.13	4343.00	461506.08	772874.11	
15414.00	95.74	0.40	11154.37	4437.55	-25.04	1.33	4437.61	461600.70	772874.78	
15509.00	95.61	359.98	11144.97	4532.08	-24.73	0.46	4532.14	461695.23	772875.09	
15604.00	93.78	359.90	11137.20	4626.76	-24.83	1.93	4626.82	461789.91	772874.99	
15672.00	94.06	359.99	11132.55	4694.60	-24.89	0.43	4694.65	461857.75	772874.93	Last Wft Svy
15737.00	94.06	359.99	11127.95	4759.44	-24.90	0.00	4759.49	461922.59	772874.92	Proj. To Bit



Weatherford

WFT Survey Report X & Y's



Weatherford

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Site: Thistle Unit 33 State 43H
Well: Thistle Unit 33 State 43H
Wellpath: 1

Date: 3/25/2013 Time: 05:44:45 Page: 3
Co-ordinate(NE) Reference: Well: Thistle Unit 33 State 43H
Vertical (TVD) Reference: SITE 3681.0
Section (VS) Reference: Well (0.00N,0.00E,359.56Azi)
Survey Calculation Method: Minimum Curvature Db: Sybase

Annotation

MD ft	TVD ft	
10578.00	10575.53	Tie On VES
10618.00	10615.53	First Wft Svy
15672.00	11132.55	Last Wft Svy
15737.00	11127.95	Proj. To Bit