

Results of Directional Survey

API number:	30-025-41245		
OGRID:		Operator:	DEVON ENERGY PRODUCTION COMPANY, LP
		Property:	IRONHOUSE 19 STATE COM # 4H

surface	ULSTR:	M	19	T 18S	R 35E
				150 FSL	1215 FWL

BH Loc	ULSTR:	D	19	T 18S	R 35E
14634	MD	9547.4	TVD	322 FNL	599 FWL
				4958 FSL	

Top Perf/OH	ULSTR:	M	19	T 18S	R 35E
10204	MD	9903.0	TVD	630 FSL	981 FWL

Bot Perf/OH	ULSTR:	D	19	T 18S	R 35E
14580	MD	9553.4	TVD	375 FNL	598 FWL
				4905 FSL	

	MD	N/S	E/W	VD
	10171	454.80	-212.76	9903.09
TOP PERFS/OH	10204	480.00	-234.05	9903.03
	10204	480.00	-234.05	9903.03
	14571	4745.70	-616.72	9554.44
BOT PERFS/OH	14580	4754.64	-616.60	9553.44
	14634	4808.30	-615.85	9547.44

NEXT TO LAST	14571	4745.70	-616.72	9554.44
LAST READING	14634	4808.30	-615.85	9547.44
TD	14634	4808.30	-615.85	9547.44

Surface Location	150	FS	1215	FW
Projected BHL	4958	FS	599	FW
Location of				
Top Perfs/OH	630	FS	981	FW
Bottom Perfs/OH	4905	FS	598	FW

SUMMARY of Subsurface Locations

Surface Location	M-19-18S-35E	150	FS	1215	FW	Vert. Depth
Top Perfs/OH	M-19-18S-35E	630	FS	981	FW	9903.03
Bottom Perfs/OH	D-19-18S-35E	4905	FS	598	FW	9553.44
Projected TD	D-19-18S-35E	4958	FS	599	FW	9547.44

FEB 20 2014



A GYRO TECHNOLOGIES INC. COMPANY

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

September 27, 2013

HOBBS OCD

JAN 23 2014

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

RECEIVED

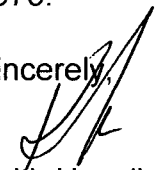
Attn: Patti Riechers

Re: **Ironhouse 19 State Com No 004H**

Please find enclosed a copy of the survey from 0' to 9,253' ran on the above referenced well.

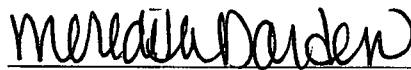
If I can be of any further service, please do not hesitate to call me at 800-606-4976.

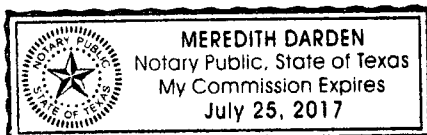
Sincerely,


Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 27th day of September A.D., 2013, by Keith Havelka.


Meredith Darden
Notary Public, State of Texas





Company: Devon Energy
Lease/Well: Ironhouse 19 State Com/No 004H
Location: M19 18S 35E 4 150S 1215W LEA
Rig Name: Patterson #228
State/County: New Mexico/Lea
Latitude: 32.73, Longitude: -103.50
GRID North is 0.45 Degrees East of True North
VS-Azi: 0.00 Degrees



RKB : 25 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut
Minimum Curvature Method
Report Date/Time: 9/27/2013 / 12:45

Vaughn Energy Services
Fort Worth, TX
817- 741-3610

Surveyor: Jason Wilson
Ironhouse 19 State Com No 004H / API 30-025-41245

HOBBS OCD
JAN 23 2014
RECEIVED

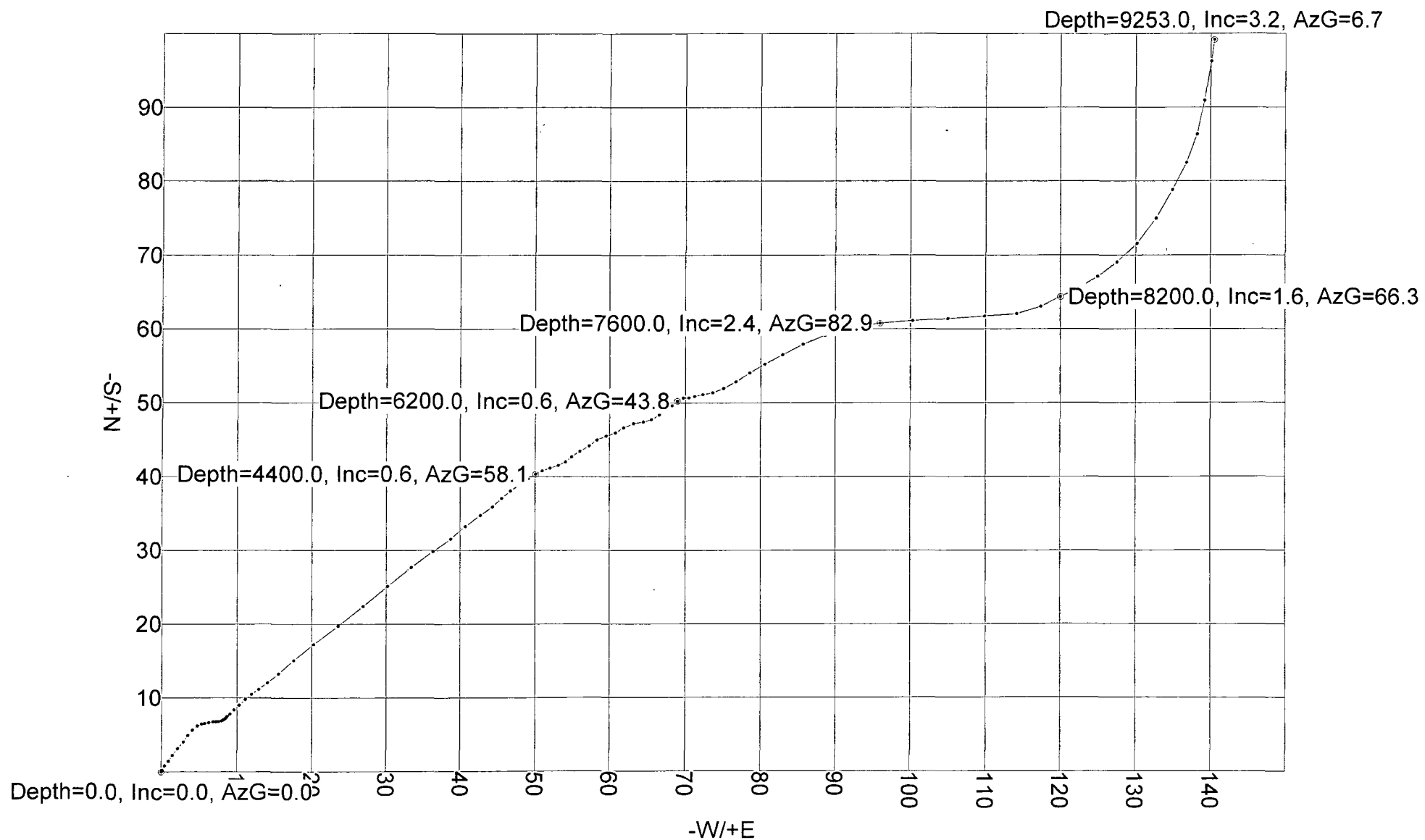
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.29	23.05	100.00	0.23	0.10	0.23	0.25	23.05	0.29
200.00	0.49	32.21	200.00	0.82	0.42	0.82	0.93	27.30	0.22
300.00	0.45	46.57	299.99	1.46	0.94	1.46	1.73	32.81	0.13
400.00	0.65	23.12	399.99	2.25	1.45	2.25	2.67	32.77	0.30
500.00	0.67	47.37	499.98	3.16	2.10	3.16	3.80	33.58	0.28
600.00	0.65	34.59	599.98	4.03	2.86	4.03	4.94	35.32	0.15
700.00	0.54	34.29	699.97	4.89	3.44	4.89	5.98	35.17	0.12
800.00	0.57	42.40	799.97	5.64	4.05	5.64	6.94	35.63	0.09
900.00	0.42	61.10	899.96	6.19	4.71	6.19	7.78	37.24	0.22
1000.00	0.25	71.32	999.96	6.44	5.23	6.44	8.30	39.10	0.19
1100.00	0.26	87.59	1099.96	6.52	5.67	6.52	8.64	41.01	0.07
1200.00	0.38	69.29	1199.96	6.65	6.21	6.65	9.09	43.05	0.15
1300.00	0.32	90.36	1299.96	6.76	6.80	6.76	9.59	45.14	0.14
1400.00	0.12	87.31	1399.96	6.76	7.18	6.76	9.86	46.70	0.20
1500.00	0.29	84.81	1499.95	6.79	7.53	6.79	10.14	47.97	0.17
1600.00	0.18	56.13	1599.95	6.90	7.92	6.90	10.50	48.92	0.16
1700.00	0.12	75.19	1699.95	7.02	8.15	7.02	10.75	49.27	0.07
1800.00	0.24	43.35	1799.95	7.19	8.39	7.19	11.06	49.41	0.15

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
1900.00	0.05	48.82	1899.95	7.37	8.57	7.37	11.31	49.29	0.18
2000.00	0.11	36.48	1999.95	7.48	8.66	7.48	11.44	49.18	0.06
2100.00	0.45	52.53	2099.95	7.80	9.03	7.80	11.93	49.19	0.35
2200.00	0.45	33.46	2199.95	8.37	9.57	8.37	12.71	48.81	0.15
2300.00	0.63	57.69	2299.94	9.00	10.25	9.00	13.64	48.73	0.29
2400.00	0.71	37.24	2399.94	9.79	11.10	9.79	14.80	48.59	0.25
2500.00	0.57	62.24	2499.93	10.51	11.91	10.51	15.88	48.56	0.31
2600.00	0.78	52.02	2599.92	11.16	12.88	11.16	17.04	49.09	0.24
2700.00	0.88	51.58	2699.91	12.06	14.02	12.06	18.49	49.31	0.11
2800.00	1.31	49.00	2799.90	13.29	15.49	13.29	20.40	49.37	0.43
2900.00	1.79	48.57	2899.86	15.07	17.52	15.07	23.11	49.30	0.48
3000.00	2.18	53.18	2999.80	17.25	20.22	17.25	26.57	49.54	0.42
3100.00	2.55	52.58	3099.71	19.74	23.51	19.74	30.70	49.98	0.37
3200.00	2.40	51.00	3199.62	22.41	26.91	22.41	35.02	50.21	0.16
3300.00	2.49	50.52	3299.53	25.11	30.21	25.11	39.28	50.27	0.09
3400.00	2.17	50.36	3399.45	27.70	33.35	27.70	43.35	50.28	0.32
3500.00	1.98	57.42	3499.38	29.84	36.26	29.84	46.96	50.55	0.32
3600.00	1.43	50.25	3599.34	31.56	38.67	31.56	49.92	50.78	0.59
3700.00	1.56	48.96	3699.30	33.26	40.66	33.26	52.53	50.72	0.14
3800.00	1.32	58.59	3799.27	34.75	42.67	34.75	55.03	50.84	0.34
3900.00	0.98	50.09	3899.25	35.90	44.31	35.90	57.03	50.98	0.38
4000.00	0.97	42.13	3999.23	37.07	45.53	37.07	58.71	50.84	0.14
4100.00	0.78	58.26	4099.22	38.06	46.68	38.06	60.23	50.81	0.31
4200.00	0.87	53.44	4199.21	38.87	47.86	38.87	61.66	50.92	0.11
4300.00	0.80	57.13	4299.20	39.70	49.06	39.70	63.11	51.02	0.08
4400.00	0.56	58.09	4399.20	40.34	50.07	40.34	64.30	51.14	0.24
4500.00	0.60	69.34	4499.19	40.78	50.97	40.78	65.28	51.34	0.12
4600.00	0.67	71.84	4599.18	41.15	52.01	41.15	66.32	51.65	0.08
4700.00	0.66	71.65	4699.18	41.51	53.10	41.51	67.40	51.99	0.01
4800.00	0.60	54.15	4799.17	42.00	54.07	42.00	68.47	52.16	0.20
4900.00	0.66	45.74	4899.17	42.71	54.91	42.71	69.57	52.13	0.11
5000.00	0.90	65.63	4999.16	43.43	56.04	43.43	70.90	52.22	0.36
5100.00	0.77	51.74	5099.15	44.18	57.28	44.18	72.34	52.36	0.24
5200.00	0.72	53.24	5199.14	44.97	58.32	44.97	73.64	52.36	0.06
5300.00	0.86	75.62	5299.13	45.53	59.55	45.53	74.96	52.60	0.34
5400.00	0.60	63.21	5399.12	45.95	60.74	45.95	76.17	52.89	0.31
5500.00	0.89	54.98	5499.11	46.63	61.84	46.63	77.46	52.98	0.31
5600.00	0.79	79.62	5599.10	47.21	63.16	47.21	78.85	53.23	0.37
5700.00	0.71	82.55	5699.09	47.41	64.46	47.41	80.02	53.67	0.09

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
5800.00	0.59	60.34	5799.09	47.75	65.52	47.75	81.07	53.92	0.28
5900.00	0.76	56.27	5899.08	48.37	66.52	48.37	82.25	53.98	0.18
6000.00	0.56	53.91	5999.07	49.02	67.47	49.02	83.40	54.00	0.20
6100.00	0.52	50.90	6099.07	49.60	68.22	49.60	84.35	53.98	0.05
6200.00	0.59	43.78	6199.06	50.26	68.93	50.26	85.30	53.90	0.09
6300.00	0.48	85.97	6299.06	50.66	69.70	50.66	86.16	53.99	0.40
6400.00	0.37	95.06	6399.06	50.66	70.44	50.66	86.76	54.28	0.13
6500.00	0.58	63.46	6499.05	50.86	71.21	50.86	87.51	54.47	0.33
6600.00	0.75	87.65	6599.05	51.11	72.32	51.11	88.56	54.75	0.32
6700.00	0.80	71.16	6699.04	51.36	73.64	51.36	89.78	55.10	0.23
6800.00	0.97	64.29	6799.03	51.96	75.06	51.96	91.29	55.31	0.20
6900.00	1.14	59.19	6899.01	52.83	76.68	52.83	93.12	55.43	0.19
7000.00	1.36	54.64	6998.98	54.03	78.50	54.03	95.30	55.46	0.24
7100.00	1.35	64.75	7098.96	55.22	80.53	55.22	97.64	55.56	0.24
7200.00	1.75	59.80	7198.92	56.49	82.92	56.49	100.33	55.74	0.42
7300.00	1.81	64.82	7298.87	57.93	85.66	57.93	103.41	55.93	0.17
7400.00	1.85	71.05	7398.82	59.12	88.63	59.12	106.54	56.29	0.20
7500.00	2.19	76.73	7498.76	60.09	92.01	60.09	109.90	56.85	0.39
7600.00	2.41	82.90	7598.68	60.78	95.95	60.78	113.59	57.65	0.33
7700.00	2.59	88.18	7698.58	61.12	100.30	61.12	117.45	58.64	0.29
7800.00	2.79	84.99	7798.47	61.40	104.98	61.40	121.62	59.68	0.25
7900.00	2.81	86.90	7898.35	61.75	109.85	61.75	126.02	60.66	0.09
8000.00	2.11	84.42	7998.26	62.06	114.13	62.06	129.91	61.47	0.70
8100.00	1.84	60.30	8098.20	63.03	117.36	63.03	133.22	61.76	0.87
8200.00	1.57	66.35	8198.16	64.38	120.01	64.38	136.19	61.79	0.33
8300.00	1.56	63.25	8298.12	65.54	122.48	65.54	138.91	61.85	0.09
8400.00	1.81	53.95	8398.08	67.08	124.97	67.08	141.84	61.77	0.37
8500.00	1.92	51.15	8498.03	69.06	127.56	69.06	145.05	61.57	0.14
8600.00	2.26	42.22	8597.96	71.57	130.19	71.57	148.56	61.20	0.47
8700.00	2.64	32.27	8697.87	74.98	132.74	74.98	152.45	60.54	0.57
8800.00	2.43	26.58	8797.77	78.83	134.92	78.83	156.26	59.70	0.33
8900.00	2.30	27.08	8897.68	82.51	136.78	82.51	159.74	58.90	0.13
9000.00	2.41	13.91	8997.60	86.35	138.21	86.35	162.96	58.00	0.55
9100.00	2.94	10.38	9097.49	90.92	139.17	90.92	166.24	56.84	0.55
9200.00	3.22	8.82	9197.35	96.22	140.07	96.22	169.93	55.51	0.29
9253.00	3.16	6.69	9250.26	99.14	140.47	99.14	171.93	54.79	0.26



Vaughn Energy Services
Fort Worth, TX
817- 741-3610
Surveyor: Jason Wilson
Ironhouse 19 State Com No 004H / API 30-025-41245



VES Survey Date: 09/24/2013

PATHFINDER

A Schlumberger Company

A WORLD OF TECHNOLOGY

End-of-Well Report



Devon Energy
Ironhouse 19 State Com 4H
Lee County, NM



Azimuths to Grid North
True North: -0.45°
Magnetic North: 6.98°

Magnetic Field
Strength: 48674.1 nT
Dip Angle: 60.57°
Date: 8/15/2013
Model: BGGM2012



A Schlumberger Company

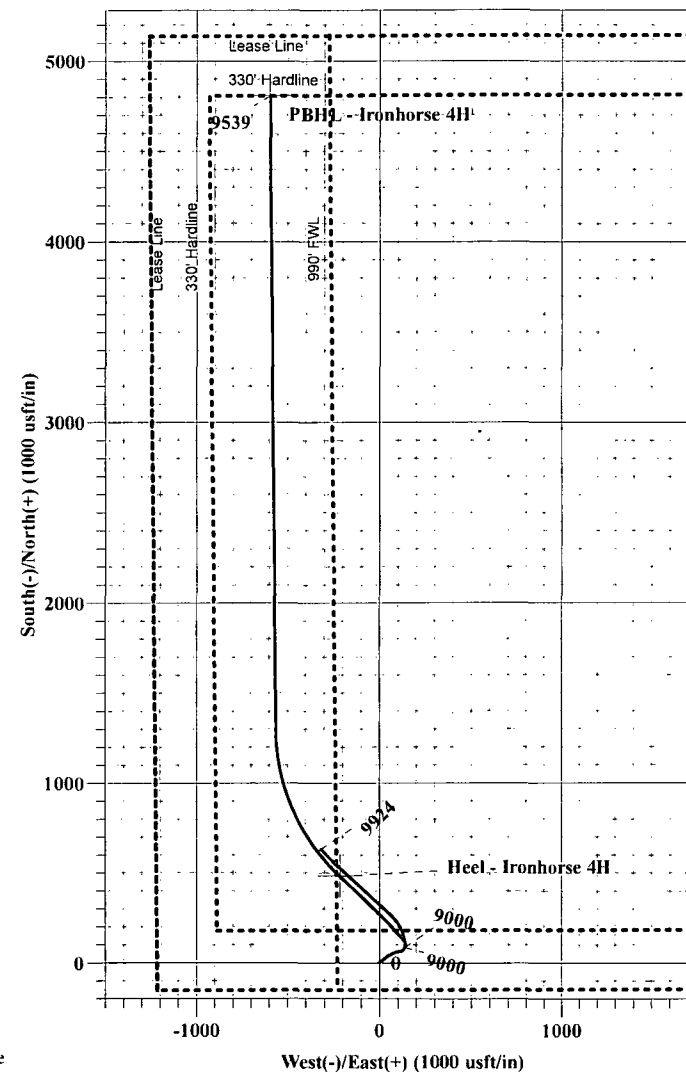
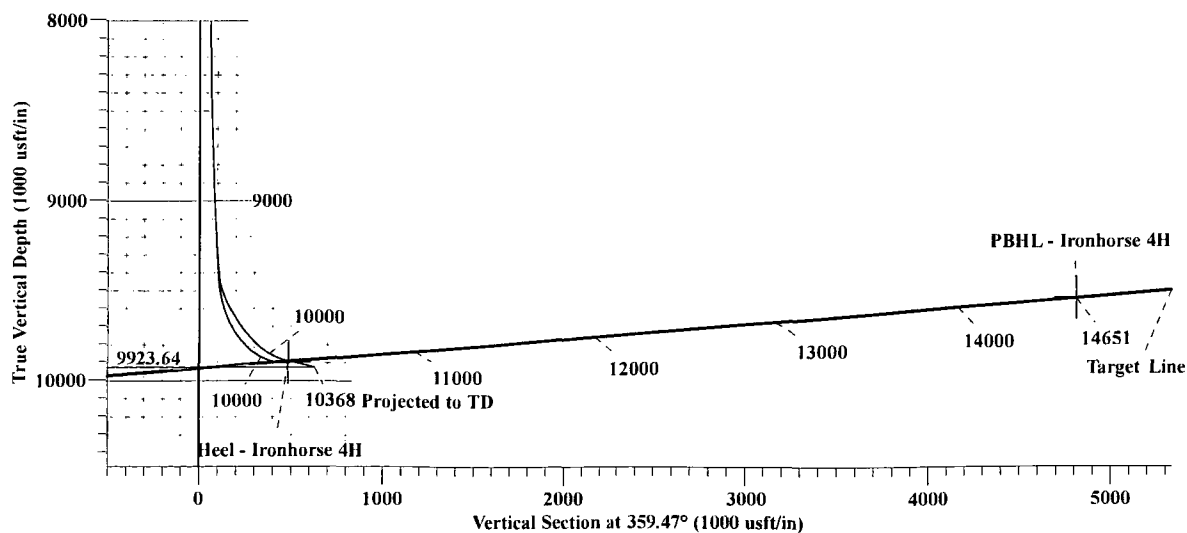
Project: Lea County (NAD83)
Site: Ironhouse 19 State Com
Well: #4H
Original Hole
Original Hole

WELL DETAILS: #4H

GL + 26.5' RKB @ 3980.50usft (Patterson 228)		3954.00
+N/-S	+E/-W	
0.00	0.00	
Northings	Easting	Latitude
629021.91	797202.73	$32^\circ 43' 35.254\text{ N}$
		Longitude
		$103^\circ 30' 4.734\text{ W}$

LEGEND

- △ #4H, Original Hole, Design 4 V0
- Original Hole



Design: Original Hole (#4H/Original Hole)

Created By: Jenise Kirkpatrick Date: 8:17, November 05 2013

Devon Energy, Inc.

Lea County (NAD83)
Ironhouse 19 State Com
#4H

Original Hole

Design: Original Hole

Standard Survey Report

05 November, 2013

HOBBS OCD

JAN 23 2014

RECEIVED

Pathfinder - A Schlumberger Company

Survey Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County (NAD83)	TVD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Site:	Ironhouse 19 State Com	MD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Well:	#4H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

Project	Lea County (NAD83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Ironhouse 19 State Com		
Site Position:		Northing:	629,074.70 usft
From:	Map	Easting:	797,786.70 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 43' 35.731 N
		Longitude:	103° 29' 57.894 W
		Grid Convergence:	0.45 °

Well	#4H		
Well Position	+N/-S	0.00 usft	Northing: 629,021.91 usft
	+E/-W	0.00 usft	Easting: 797,202.73 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	26.50 usft
		Latitude:	32° 43' 35.254 N
		Longitude:	103° 30' 4.734 W
		Ground Level:	3,954.00 usft

Wellbore	Original Hole		
Magnetics	Model Name	Sample Date	Declination (°)
	BGGM2012	8/15/2013	7.43
			Dip Angle (°) 60.57
			Field Strength (nT) 48,674

Design	Original Hole		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.00	0.00	0.00
			Direction (°) 359.47

Survey Program	Date 11/5/2013		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name
100.00	9,253.00	#1 VES Gyro (Original Hole)	GG ISCWSA
9,423.00	10,368.00	#2 Pathfinder MWD (Original Hole)	Pathfinder
			Description
			Good Gyro
			Pathfinder MWD

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.29	23.05	100.00	0.23	0.10	0.23	0.29	0.29	0.00
200.00	0.49	32.21	200.00	0.83	0.43	0.82	0.21	0.20	9.16
300.00	0.45	46.57	299.99	1.46	0.94	1.45	0.12	-0.04	14.36
400.00	0.65	23.12	399.99	2.25	1.45	2.24	0.30	0.20	-23.45
500.00	0.67	47.37	499.98	3.17	2.10	3.15	0.28	0.02	24.25
600.00	0.65	34.59	599.98	4.03	2.85	4.00	0.15	-0.02	-12.78
700.00	0.54	34.29	699.97	4.89	3.44	4.86	0.11	-0.11	-0.30
800.00	0.57	42.40	799.97	5.64	4.04	5.61	0.08	0.03	8.11
900.00	0.42	61.10	899.96	6.19	4.70	6.15	0.22	-0.15	18.70

Pathfinder - A Schlumberger Company

Survey Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County (NAD83)	TVD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Site:	Ironhouse 19 State Com	MD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Well:	#4H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,000.00	0.25	71.32	999.96	6.44	5.22	6.39	0.18	-0.17	10.22
1,100.00	0.26	87.59	1,099.96	6.52	5.66	6.46	0.07	0.01	16.27
1,200.00	0.38	69.29	1,199.96	6.64	6.19	6.58	0.16	0.12	-18.30
1,300.00	0.32	90.36	1,299.96	6.76	6.78	6.69	0.14	-0.06	21.07
1,400.00	0.12	87.31	1,399.96	6.76	7.17	6.69	0.20	-0.20	-3.05
1,500.00	0.29	84.81	1,499.96	6.79	7.52	6.72	0.17	0.17	-2.50
1,600.00	0.18	56.13	1,599.95	6.90	7.91	6.83	0.16	-0.11	-28.68
1,700.00	0.12	75.19	1,699.95	7.01	8.14	6.94	0.08	-0.06	19.06
1,800.00	0.24	43.35	1,799.95	7.19	8.38	7.11	0.15	0.12	-31.84
1,900.00	0.05	48.82	1,899.95	7.37	8.56	7.29	0.19	-0.19	5.47
2,000.00	0.11	36.48	1,999.95	7.48	8.65	7.40	0.06	0.06	-12.34
2,100.00	0.45	52.53	2,099.95	7.80	9.02	7.71	0.35	0.34	16.05
2,200.00	0.45	33.46	2,199.95	8.36	9.55	8.27	0.15	0.00	-19.07
2,300.00	0.63	57.69	2,299.94	8.98	10.23	8.89	0.29	0.18	24.23
2,400.00	0.71	37.24	2,399.94	9.77	11.07	9.67	0.25	0.08	-20.45
2,500.00	0.57	62.24	2,499.93	10.50	11.88	10.39	0.31	-0.14	25.00
2,600.00	0.78	52.02	2,599.92	11.15	12.86	11.03	0.24	0.21	-10.22
2,700.00	0.88	51.58	2,699.91	12.04	14.00	11.91	0.10	0.10	-0.44
2,800.00	1.31	49.00	2,799.90	13.27	15.46	13.13	0.43	0.43	-2.58
2,900.00	1.79	48.57	2,899.86	15.05	17.50	14.89	0.48	0.48	-0.43
3,000.00	2.18	53.18	2,999.80	17.23	20.19	17.04	0.42	0.39	4.61
3,100.00	2.55	52.58	3,099.71	19.72	23.48	19.50	0.37	0.37	-0.60
3,200.00	2.40	51.00	3,199.62	22.39	26.87	22.14	0.16	-0.15	-1.58
3,300.00	2.49	50.52	3,299.53	25.09	30.18	24.81	0.09	0.09	-0.48
3,400.00	2.17	50.36	3,399.45	27.67	33.31	27.37	0.32	-0.32	-0.16
3,500.00	1.98	57.42	3,499.38	29.81	36.22	29.48	0.32	-0.19	7.06
3,600.00	1.43	50.25	3,599.34	31.54	38.64	31.18	0.59	-0.55	-7.17
3,700.00	1.56	48.96	3,699.30	33.23	40.63	32.86	0.13	0.13	-1.29
3,800.00	1.32	58.59	3,799.27	34.73	42.64	34.33	0.34	-0.24	9.63
3,900.00	0.98	50.09	3,899.25	35.88	44.27	35.46	0.38	-0.34	-8.50
4,000.00	0.97	42.13	3,999.24	37.05	45.50	36.63	0.14	-0.01	-7.96
4,100.00	0.78	58.26	4,099.22	38.04	46.64	37.60	0.31	-0.19	16.13
4,200.00	0.87	53.44	4,199.21	38.85	47.83	38.40	0.11	0.09	-4.82
4,300.00	0.80	57.13	4,299.20	39.68	49.03	39.22	0.09	-0.07	3.69
4,400.00	0.56	58.09	4,399.20	40.32	50.03	39.85	0.24	-0.24	0.96
4,500.00	0.60	69.34	4,499.19	40.76	50.94	40.29	0.12	0.04	11.25
4,600.00	0.67	71.84	4,599.18	41.13	51.98	40.64	0.08	0.07	2.50
4,700.00	0.66	71.65	4,699.18	41.49	53.08	41.00	0.01	-0.01	-0.19
4,800.00	0.60	54.15	4,799.17	41.98	54.05	41.48	0.20	-0.06	-17.50
4,900.00	0.66	45.74	4,899.17	42.69	54.89	42.18	0.11	0.06	-8.41
5,000.00	0.90	65.63	4,999.16	43.41	56.02	42.89	0.36	0.24	19.89
5,100.00	0.77	51.74	5,099.15	44.15	57.26	43.62	0.24	-0.13	-13.89
5,200.00	0.72	53.24	5,199.14	44.94	58.29	44.40	0.05	-0.05	1.50

Pathfinder - A Schlumberger Company

Survey Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County (NAD83)	TVD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Site:	Ironhouse 19 State Com	MD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Well:	#4H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.00	0.86	75.62	5,299.13	45.51	59.52	44.95	0.34	0.14	22.38
5,400.00	0.60	63.21	5,399.12	45.93	60.72	45.37	0.30	-0.26	-12.41
5,500.00	0.89	54.98	5,499.11	46.61	61.82	46.04	0.31	0.29	-8.23
5,600.00	0.79	79.62	5,599.10	47.18	63.14	46.59	0.37	-0.10	24.64
5,700.00	0.71	82.55	5,699.09	47.39	64.43	46.79	0.09	-0.08	2.93
5,800.00	0.59	60.34	5,799.09	47.72	65.49	47.11	0.28	-0.12	-22.21
5,900.00	0.76	56.27	5,899.08	48.34	66.49	47.73	0.18	0.17	-4.07
6,000.00	0.56	53.91	5,999.07	49.00	67.43	48.37	0.20	-0.20	-2.36
6,100.00	0.52	50.90	6,099.07	49.57	68.18	48.94	0.05	-0.04	-3.01
6,200.00	0.59	43.78	6,199.06	50.23	68.89	49.59	0.10	0.07	-7.12
6,300.00	0.48	85.97	6,299.06	50.63	69.66	49.99	0.40	-0.11	42.19
6,400.00	0.37	95.06	6,399.06	50.63	70.40	49.98	0.13	-0.11	9.09
6,500.00	0.58	63.46	6,499.05	50.83	71.18	50.17	0.33	0.21	-31.60
6,600.00	0.75	87.65	6,599.05	51.08	72.29	50.41	0.32	0.17	24.19
6,700.00	0.80	71.16	6,699.04	51.34	73.60	50.65	0.23	0.05	-16.49
6,800.00	0.97	64.29	6,799.03	51.93	75.02	51.23	0.20	0.17	-6.87
6,900.00	1.14	59.19	6,899.01	52.81	76.64	52.10	0.19	0.17	-5.10
7,000.00	1.36	54.64	6,998.99	54.00	78.46	53.27	0.24	0.22	-4.55
7,100.00	1.35	64.75	7,098.96	55.19	80.50	54.44	0.24	-0.01	10.11
7,200.00	1.75	59.80	7,198.92	56.46	82.88	55.69	0.42	0.40	-4.95
7,300.00	1.81	64.82	7,298.87	57.90	85.63	57.11	0.17	0.06	5.02
7,400.00	1.85	71.05	7,398.82	59.10	88.59	58.28	0.20	0.04	6.23
7,500.00	2.19	76.73	7,498.76	60.06	91.97	59.21	0.39	0.34	5.68
7,600.00	2.41	82.90	7,598.68	60.76	95.92	59.87	0.33	0.22	6.17
7,700.00	2.59	88.18	7,698.58	61.09	100.26	60.16	0.29	0.18	5.28
7,800.00	2.79	84.99	7,798.47	61.38	104.95	60.40	0.25	0.20	-3.19
7,900.00	2.81	86.90	7,898.35	61.72	109.82	60.70	0.10	0.02	1.91
8,000.00	2.11	84.42	7,998.26	62.03	114.10	60.97	0.71	-0.70	-2.48
8,100.00	1.84	60.30	8,098.20	63.01	117.32	61.92	0.87	-0.27	-24.12
8,200.00	1.57	66.35	8,198.16	64.35	119.97	63.24	0.32	-0.27	6.05
8,300.00	1.56	63.25	8,298.12	65.51	122.44	64.38	0.09	-0.01	-3.10
8,400.00	1.81	53.95	8,398.08	67.06	124.94	65.90	0.37	0.25	-9.30
8,500.00	1.92	51.15	8,498.03	69.04	127.52	67.85	0.14	0.11	-2.80
8,600.00	2.26	42.22	8,597.96	71.55	130.15	70.34	0.47	0.34	-8.93
8,700.00	2.64	32.27	8,697.87	74.95	132.70	73.72	0.57	0.38	-9.95
8,800.00	2.43	26.58	8,797.77	78.80	134.88	77.55	0.33	-0.21	-5.69
8,900.00	2.30	27.08	8,897.69	82.48	136.74	81.21	0.13	-0.13	0.50
9,000.00	2.41	13.91	8,997.60	86.31	138.16	85.03	0.55	0.11	-13.17
9,100.00	2.94	10.38	9,097.49	90.87	139.13	89.58	0.55	0.53	-3.53
9,200.00	3.22	8.82	9,197.35	96.17	140.02	94.87	0.29	0.28	-1.56
9,253.00	3.16	6.69	9,250.27	99.09	140.42	97.79	0.25	-0.11	-4.02
9,423.00	5.28	354.88	9,419.80	111.54	140.27	110.23	1.34	1.25	-6.95
9,455.00	9.94	347.31	9,451.51	115.70	139.53	114.40	14.86	14.56	-23.66

Pathfinder - A Schlumberger Company

Survey Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County (NAD83)	TVD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Site:	Ironhouse 19 State Com	MD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Well:	#4H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,486.00	15.04	346.13	9,481.77	122.22	137.98	120.94	16.47	16.45	-3.81
9,517.00	20.14	345.82	9,511.31	131.30	135.70	130.04	16.45	16.45	-1.00
9,549.00	23.65	344.71	9,540.99	142.84	132.66	141.61	11.04	10.97	-3.47
9,580.00	26.73	343.30	9,569.04	155.52	129.02	154.32	10.12	9.94	-4.55
9,611.00	29.28	340.99	9,596.41	169.37	124.54	168.21	8.94	8.23	-7.45
9,643.00	31.66	338.36	9,623.99	184.57	118.90	183.47	8.52	7.44	-8.22
9,674.00	34.38	333.10	9,649.99	199.95	111.93	198.90	12.74	8.77	-16.97
9,705.00	37.72	326.66	9,675.06	215.69	102.75	214.73	16.28	10.77	-20.77
9,737.00	41.42	322.27	9,699.72	232.24	90.89	231.39	14.49	11.56	-13.72
9,768.00	45.99	318.46	9,722.13	248.71	77.21	247.99	17.01	14.74	-12.29
9,799.00	49.24	315.63	9,743.03	265.45	61.60	264.87	12.46	10.48	-9.13
9,831.00	50.83	312.97	9,763.58	282.58	44.05	282.16	8.08	4.97	-8.31
9,862.00	53.64	311.94	9,782.57	299.11	25.97	298.86	9.44	9.06	-3.32
9,893.00	56.54	312.72	9,800.31	316.23	7.18	316.15	9.58	9.35	2.52
9,925.00	59.53	313.40	9,817.25	334.77	-12.65	334.87	9.52	9.34	2.13
9,956.00	63.05	314.10	9,832.14	353.57	-32.29	353.85	11.53	11.35	2.26
9,988.00	66.39	314.55	9,845.80	373.78	-52.98	374.26	10.51	10.44	1.41
10,019.00	69.73	314.31	9,857.38	393.91	-73.51	394.57	10.80	10.77	-0.77
10,050.00	72.55	313.43	9,867.40	414.24	-94.66	415.09	9.49	9.10	-2.84
10,082.00	74.66	312.82	9,876.43	435.22	-117.07	436.28	6.84	6.59	-1.91
10,113.00	76.41	312.53	9,884.18	455.57	-139.14	456.83	5.72	5.65	-0.94
10,145.00	78.88	312.77	9,891.02	476.74	-162.12	478.22	7.75	7.72	0.75
10,147.87	79.21	312.83	9,891.57	478.66	-164.19	480.16	11.80	11.61	2.12
Target Line									
10,176.00	82.48	313.42	9,896.04	497.64	-184.46	499.32	11.80	11.61	2.09
10,187.74	84.18	314.08	9,897.40	505.70	-192.88	507.46	15.56	14.52	5.63
Heel - Ironhorse 4H									
10,199.00	85.82	314.71	9,898.39	513.55	-200.90	515.39	15.56	14.52	5.59
10,239.00	80.55	314.49	9,903.13	541.43	-229.17	543.52	13.19	-13.18	-0.55
10,270.00	80.20	314.90	9,908.31	562.92	-250.89	565.22	1.72	-1.13	1.32
10,302.00	81.16	314.91	9,913.50	585.22	-273.26	587.72	3.00	3.00	0.03
10,368.00	81.16	314.91	9,923.64	631.26	-319.44	634.19	0.00	0.00	0.00
Projected to TD - PBHL - Ironhorse 4H									

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
10,147.87	9,891.57	Target Line		-4.65	0.00

Pathfinder - A Schlumberger Company

Survey Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County (NAD83)	TVD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Site:	Ironhouse 19 State Com	MD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Well:	#4H	North Reference:	Grid
Wellbore:	Original Hole	Survey Calculation Method:	Minimum Curvature
Design:	Original Hole	Database:	EDM 5000.1 Single User Db

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
10,368.00	9,923.64	631.26	-319.44	Projected to TD

Checked By: _____	Approved By: _____	Date: _____
-------------------	--------------------	-------------



Project: Lea County (NAD83)
 Site: Ironhouse 19 State Com
 Well: #4H
 Stk
 Stk



Azimuths to Grid North
 True North: -0.45°
 Magnetic North: 6.97°

Magnetic Field
 Strength: 48657.8nT
 Dip Angle: 60.57°
 Date: 9/30/2013
 Model: BGGM2012



A Schlumberger Company

WELL DETAILS: #4H

+N/-S	+E/-W	GL + 26.5' RKB @ 3980.50usft (Patterson 228)	3954.00
0.00	0.00	Northing 629021.91	Longitude 103° 30' 4.734 W
		Easting 797202.73	Latitude 32° 43' 35.254 N

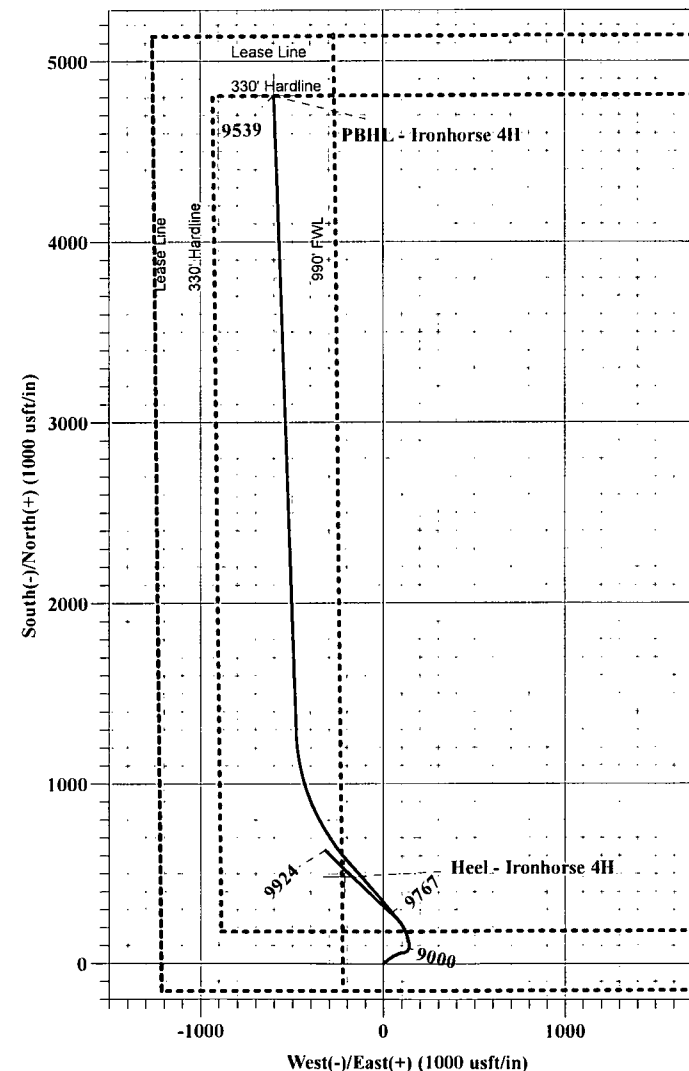
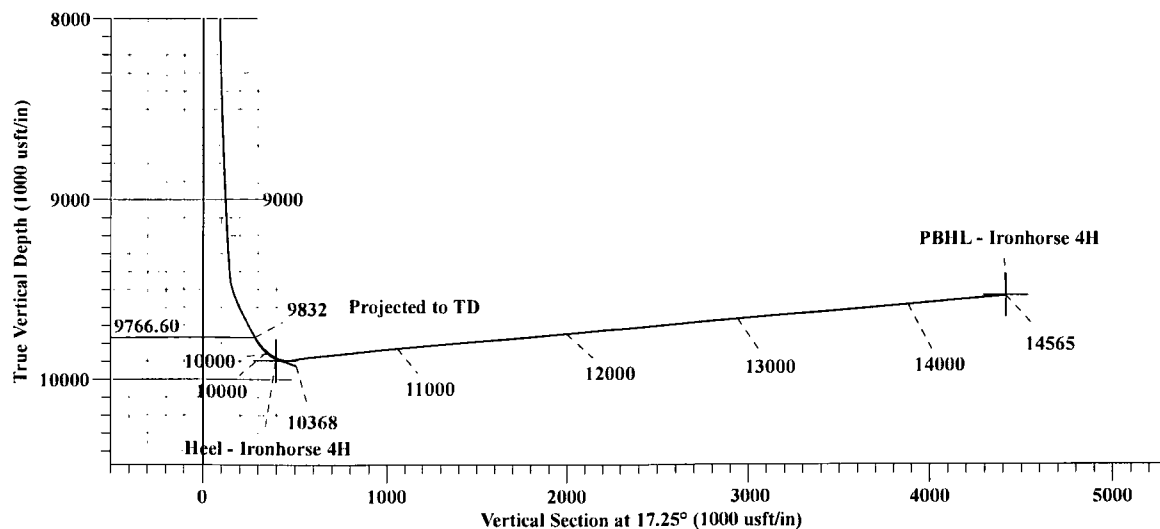
HOBBS OCD

JAN 23 2014

RECEIVED

LEGEND

- #4H, Stk, Design #2 V0
- #4H, Original Hole, Original Hole V0
- Stk



Design: Stk (#4H/Stk)

Created By: Jenise Kirkpatrick Date: 8:21, November 05 2013

HOBBS OCD

JAN 23 2014

RECEIVED

Devon Energy, Inc.

Lea County (NAD83)
Ironhouse 19 State Com
#4H

Stk

Design: Stk

Standard Survey Report

05 November, 2013

Pathfinder - A Schlumberger Company

Survey Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County (NAD83)	TVD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Site:	Ironhouse 19 State Com	MD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Well:	#4H	North Reference:	Grid
Wellbore:	Stk	Survey Calculation Method:	Minimum Curvature
Design:	Stk	Database:	EDM 5000.1 Single User Db

Project	Lea County (NAD83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site		Ironhouse 19 State Com			
Site Position:		Northing:	629,074.70 usft	Latitude:	32° 43' 35.731 N
From:	Map	Easting:	797,786.70 usft	Longitude:	103° 29' 57.894 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.45 °

Well	#4H					
Well Position	+N/-S	0.00 usft	Northing:	629,021.91 usft	Latitude:	32° 43' 35.254 N
	+E/-W	0.00 usft	Easting:	797,202.73 usft	Longitude:	103° 30' 4.734 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	26.50 usft	Ground Level:	3,954.00 usft

Wellbore	Stk				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2012	9/30/2013	7.42	60.57	48,658

Design	Stk				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	9,253.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	17.25	

Survey Program	Date 11/5/2013				
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.00	9,253.00	#1 VES Gyro (Original Hole)	GG ISCWSA	Good Gyro	
9,423.00	9,832.00	#1 Pathfinder MWD (Stk)	MWD ISCWSA	MWD - Standard	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.29	23.05	100.00	0.23	0.10	0.25	0.29	0.29	0.00	
200.00	0.49	32.21	200.00	0.83	0.43	0.92	0.21	0.20	9.16	
300.00	0.45	46.57	299.99	1.46	0.94	1.67	0.12	-0.04	14.36	
400.00	0.65	23.12	399.99	2.25	1.45	2.58	0.30	0.20	-23.45	
500.00	0.67	47.37	499.98	3.17	2.10	3.65	0.28	0.02	24.25	
600.00	0.65	34.59	599.98	4.03	2.85	4.70	0.15	-0.02	-12.78	
700.00	0.54	34.29	699.97	4.89	3.44	5.69	0.11	-0.11	-0.30	
800.00	0.57	42.40	799.97	5.64	4.04	6.59	0.08	0.03	8.11	
900.00	0.42	61.10	899.96	6.19	4.70	7.30	0.22	-0.15	18.70	

Pathfinder - A Schlumberger Company

Survey Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County (NAD83)	TVD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Site:	Ironhouse 19 State Com	MD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Well:	#4H	North Reference:	Grid
Wellbore:	Stk	Survey Calculation Method:	Minimum Curvature
Design:	Stk	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,000.00	0.25	71.32	999.96	6.44	5.22	7.70	0.18	-0.17	10.22
1,100.00	0.26	87.59	1,099.96	6.52	5.66	7.90	0.07	0.01	16.27
1,200.00	0.38	69.29	1,199.96	6.64	6.19	8.18	0.16	0.12	-18.30
1,300.00	0.32	90.36	1,299.96	6.76	6.78	8.47	0.14	-0.06	21.07
1,400.00	0.12	87.31	1,399.96	6.76	7.17	8.58	0.20	-0.20	-3.05
1,500.00	0.29	84.81	1,499.96	6.79	7.52	8.71	0.17	0.17	-2.50
1,600.00	0.18	56.13	1,599.95	6.90	7.91	8.93	0.16	-0.11	-28.68
1,700.00	0.12	75.19	1,699.95	7.01	8.14	9.11	0.08	-0.06	19.06
1,800.00	0.24	43.35	1,799.95	7.19	8.38	9.35	0.15	0.12	-31.84
1,900.00	0.05	48.82	1,899.95	7.37	8.56	9.58	0.19	-0.19	5.47
2,000.00	0.11	36.48	1,999.95	7.48	8.65	9.71	0.06	0.06	-12.34
2,100.00	0.45	52.53	2,099.95	7.80	9.02	10.12	0.35	0.34	16.05
2,200.00	0.45	33.46	2,199.95	8.36	9.55	10.82	0.15	0.00	-19.07
2,300.00	0.63	57.69	2,299.94	8.98	10.23	11.61	0.29	0.18	24.23
2,400.00	0.71	37.24	2,399.94	9.77	11.07	12.61	0.25	0.08	-20.45
2,500.00	0.57	62.24	2,499.93	10.50	11.88	13.55	0.31	-0.14	25.00
2,600.00	0.78	52.02	2,599.92	11.15	12.86	14.46	0.24	0.21	-10.22
2,700.00	0.88	51.58	2,699.91	12.04	14.00	15.65	0.10	0.10	-0.44
2,800.00	1.31	49.00	2,799.90	13.27	15.46	17.26	0.43	0.43	-2.58
2,900.00	1.79	48.57	2,899.86	15.05	17.50	19.56	0.48	0.48	-0.43
3,000.00	2.18	53.18	2,999.80	17.23	20.19	22.44	0.42	0.39	4.61
3,100.00	2.55	52.58	3,099.71	19.72	23.48	25.79	0.37	0.37	-0.60
3,200.00	2.40	51.00	3,199.62	22.39	26.87	29.35	0.16	-0.15	-1.58
3,300.00	2.49	50.52	3,299.53	25.09	30.18	32.90	0.09	0.09	-0.48
3,400.00	2.17	50.36	3,399.45	27.67	33.31	36.31	0.32	-0.32	-0.16
3,500.00	1.98	57.42	3,499.38	29.81	36.22	39.21	0.32	-0.19	7.06
3,600.00	1.43	50.25	3,599.34	31.54	38.64	41.58	0.59	-0.55	-7.17
3,700.00	1.56	48.96	3,699.30	33.23	40.63	43.78	0.13	0.13	-1.29
3,800.00	1.32	58.59	3,799.27	34.73	42.64	45.81	0.34	-0.24	9.63
3,900.00	0.98	50.09	3,899.25	35.88	44.27	47.39	0.38	-0.34	-8.50
4,000.00	0.97	42.13	3,999.24	37.05	45.50	48.88	0.14	-0.01	-7.96
4,100.00	0.78	58.26	4,099.22	38.04	46.64	50.16	0.31	-0.19	16.13
4,200.00	0.87	53.44	4,199.21	38.85	47.83	51.28	0.11	0.09	-4.82
4,300.00	0.80	57.13	4,299.20	39.68	49.03	52.43	0.09	-0.07	3.69
4,400.00	0.56	58.09	4,399.20	40.32	50.03	53.34	0.24	-0.24	0.96
4,500.00	0.60	69.34	4,499.19	40.76	50.94	54.03	0.12	0.04	11.25
4,600.00	0.67	71.84	4,599.18	41.13	51.98	54.69	0.08	0.07	2.50
4,700.00	0.66	71.65	4,699.18	41.49	53.08	55.36	0.01	-0.01	-0.19
4,800.00	0.60	54.15	4,799.17	41.98	54.05	56.12	0.20	-0.06	-17.50
4,900.00	0.66	45.74	4,899.17	42.69	54.89	57.04	0.11	0.06	-8.41
5,000.00	0.90	65.63	4,999.16	43.41	56.02	58.07	0.36	0.24	19.89
5,100.00	0.77	51.74	5,099.15	44.15	57.26	59.15	0.24	-0.13	-13.89
5,200.00	0.72	53.24	5,199.14	44.94	58.29	60.21	0.05	-0.05	1.50

Pathfinder - A Schlumberger Company

Survey Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County (NAD83)	TVD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Site:	Ironhouse 19 State Com	MD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Well:	#4H	North Reference:	Grid
Wellbore:	Stk	Survey Calculation Method:	Minimum Curvature
Design:	Stk	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.00	0.86	75.62	5,299.13	45.51	59.52	61.11	0.34	0.14	22.38
5,400.00	0.60	63.21	5,399.12	45.93	60.72	61.87	0.30	-0.26	-12.41
5,500.00	0.89	54.98	5,499.11	46.61	61.82	62.84	0.31	0.29	-8.23
5,600.00	0.79	79.62	5,599.10	47.18	63.14	63.78	0.37	-0.10	24.64
5,700.00	0.71	82.55	5,699.09	47.39	64.43	64.36	0.09	-0.08	2.93
5,800.00	0.59	60.34	5,799.09	47.72	65.49	64.99	0.28	-0.12	-22.21
5,900.00	0.76	56.27	5,899.08	48.34	66.49	65.88	0.18	0.17	-4.07
6,000.00	0.56	53.91	5,999.07	49.00	67.43	66.79	0.20	-0.20	-2.36
6,100.00	0.52	50.90	6,099.07	49.57	68.18	67.56	0.05	-0.04	-3.01
6,200.00	0.59	43.78	6,199.06	50.23	68.89	68.40	0.10	0.07	-7.12
6,300.00	0.48	85.97	6,299.06	50.63	69.66	69.01	0.40	-0.11	42.19
6,400.00	0.37	95.06	6,399.06	50.63	70.40	69.23	0.13	-0.11	9.09
6,500.00	0.58	63.46	6,499.05	50.83	71.18	69.65	0.33	0.21	-31.60
6,600.00	0.75	87.65	6,599.05	51.08	72.29	70.22	0.32	0.17	24.19
6,700.00	0.80	71.16	6,699.04	51.34	73.60	70.85	0.23	0.05	-16.49
6,800.00	0.97	64.29	6,799.03	51.93	75.02	71.84	0.20	0.17	-6.87
6,900.00	1.14	59.19	6,899.01	52.81	76.64	73.16	0.19	0.17	-5.10
7,000.00	1.36	54.64	6,998.99	54.00	78.46	74.84	0.24	0.22	-4.55
7,100.00	1.35	64.75	7,098.96	55.19	80.50	76.58	0.24	-0.01	10.11
7,200.00	1.75	59.80	7,198.92	56.46	82.88	78.50	0.42	0.40	-4.95
7,300.00	1.81	64.82	7,298.87	57.90	85.63	80.69	0.17	0.06	5.02
7,400.00	1.85	71.05	7,398.82	59.10	88.59	82.71	0.20	0.04	6.23
7,500.00	2.19	76.73	7,498.76	60.06	91.97	84.63	0.39	0.34	5.68
7,600.00	2.41	82.90	7,598.68	60.76	95.92	86.47	0.33	0.22	6.17
7,700.00	2.59	88.18	7,698.58	61.09	100.26	88.07	0.29	0.18	5.28
7,800.00	2.79	84.99	7,798.47	61.38	104.95	89.73	0.25	0.20	-3.19
7,900.00	2.81	86.90	7,898.35	61.72	109.82	91.51	0.10	0.02	1.91
8,000.00	2.11	84.42	7,998.26	62.03	114.10	93.07	0.71	-0.70	-2.48
8,100.00	1.84	60.30	8,098.20	63.01	117.32	94.96	0.87	-0.27	-24.12
8,200.00	1.57	66.35	8,198.16	64.35	119.97	97.03	0.32	-0.27	6.05
8,300.00	1.56	63.25	8,298.12	65.51	122.44	98.87	0.09	-0.01	-3.10
8,400.00	1.81	53.95	8,398.08	67.06	124.94	101.08	0.37	0.25	-9.30
8,500.00	1.92	51.15	8,498.03	69.04	127.52	103.74	0.14	0.11	-2.80
8,600.00	2.26	42.22	8,597.96	71.55	130.15	106.92	0.47	0.34	-8.93
8,700.00	2.64	32.27	8,697.87	74.95	132.70	110.93	0.57	0.38	-9.95
8,800.00	2.43	26.58	8,797.77	78.80	134.88	115.25	0.33	-0.21	-5.69
8,900.00	2.30	27.08	8,897.69	82.48	136.74	119.31	0.13	-0.13	0.50
9,000.00	2.41	13.91	8,997.60	86.31	138.16	123.39	0.55	0.11	-13.17
9,100.00	2.94	10.38	9,097.49	90.87	139.13	128.04	0.55	0.53	-3.53
9,200.00	3.22	8.82	9,197.35	96.17	140.02	133.36	0.29	0.28	-1.56
9,253.00	3.16	6.69	9,250.27	99.09	140.42	136.27	0.25	-0.11	-4.02
9,423.00	5.28	354.88	9,419.80	111.54	140.27	148.11	1.34	1.25	-6.95
9,455.00	9.94	347.31	9,451.51	115.70	139.53	151.87	14.86	14.56	-23.66

Pathfinder - A Schlumberger Company

Survey Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County (NAD83)	TVD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Site:	Ironhouse 19 State Com	MD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Well:	#4H	North Reference:	Grid
Wellbore:	Stk	Survey Calculation Method:	Minimum Curvature
Design:	Stk	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,486.00	15.04	346.13	9,481.77	122.22	137.98	157.63	16.47	16.45	-3.81
9,517.00	20.14	345.82	9,511.31	131.30	135.70	165.64	16.45	16.45	-1.00
9,549.00	23.65	344.71	9,540.99	142.84	132.66	175.75	11.04	10.97	-3.47
9,580.00	26.73	343.30	9,569.04	155.52	129.02	186.78	10.12	9.94	-4.55
9,611.00	29.28	340.99	9,596.41	169.37	124.54	198.68	8.94	8.23	-7.45
9,643.00	31.66	338.36	9,623.99	184.57	118.90	211.53	8.52	7.44	-8.22
9,674.00	34.38	333.10	9,649.99	199.95	111.93	224.14	12.74	8.77	-16.97
9,705.00	37.72	326.66	9,675.06	215.69	102.75	236.45	16.28	10.77	-20.77
9,737.00	41.42	322.27	9,699.72	232.24	90.89	248.75	14.49	11.56	-13.72
9,768.00	45.99	318.46	9,722.13	248.71	77.21	260.42	17.01	14.74	-12.29
9,832.00	45.99	318.46	9,766.60	283.16	46.69	284.27	0.00	0.00	0.00

Projected to TD - PBHL - Ironhorse 4H - Heel - Ironhorse 4H

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,832.00	9,766.60	283.16	46.69	Projected to TD

Checked By: _____ Approved By: _____ Date: _____



Azimuths to Grid North
True North: -0.45°
Magnetic North: 6.97°

Magnetic Field
Strength: 48657.1snT
Dip Angle: 60.57°
Date: 10/2/2013
Model: BGGM2012



A Schlumberger Company

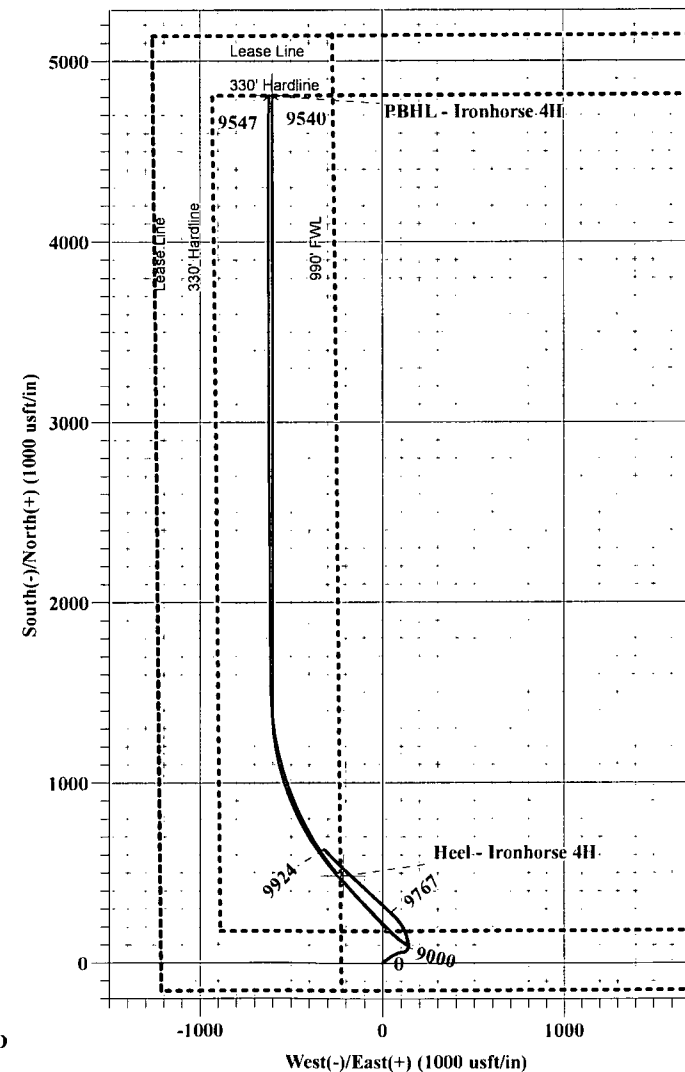
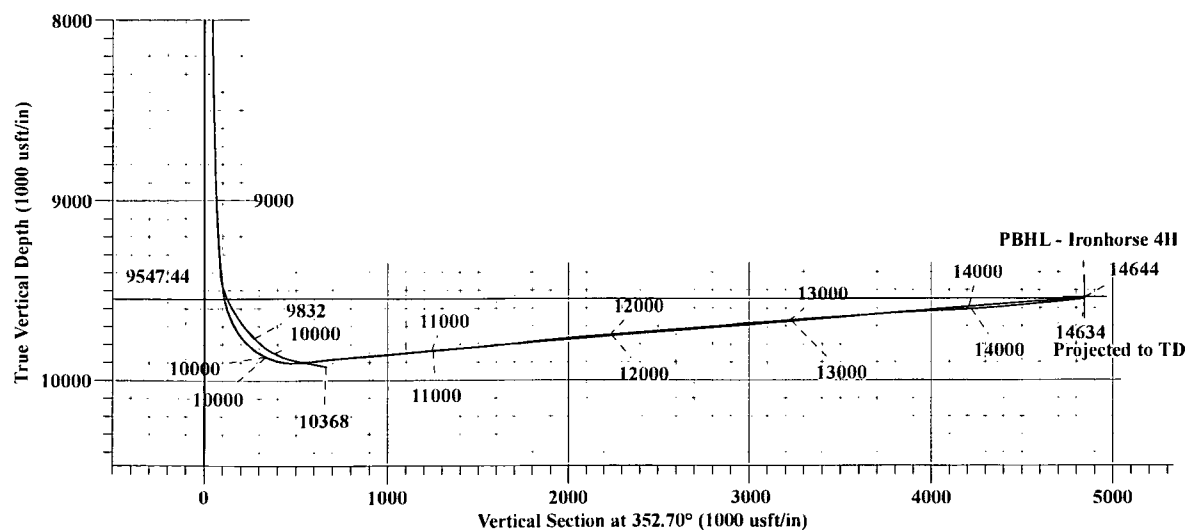
Project: Lea County (NAD83)
Site: Ironhouse 19 State Com
Well: #4H
Stk 2
Stk 2

WELL DETAILS: #4H

GL + 26.5' RKB @ 3980.50usft (Patterson 228)		3954.00
+N/-S	+E/-W	
0.00	0.00	
Northing	Easting	Latitude
629021.91	797202.73	32° 43' 35.254 N
		Longitude
		103° 30' 4.734 W

LEGEND

- #4H, Stk, Stk V0
- ± #4H, Stk 2, Design #1 V0
- #4H, Original Hole, Original Hole V0
- Stk 2



Design: Stk 2 (#4H/Stk 2)

Created By: Jenise Kirkpatrick Date: 8:29, November 05 2013

Devon Energy, Inc.

Lea County (NAD83)
Ironhouse 19 State Com
#4H

Stk 2

Design: Stk 2

Standard Survey Report

05 November, 2013

HOBBS OCD

JAN 23 2014

RECEIVED

Pathfinder - A Schlumberger Company

Survey Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County (NAD83)	TVD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Site:	Ironhouse 19 State Com	MD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Well:	#4H	North Reference:	Grid
Wellbore:	Stk 2	Survey Calculation Method:	Minimum Curvature
Design:	Stk 2	Database:	EDM 5000.1 Single User Db

Project	Lea County (NAD83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Ironhouse 19 State Com				
Site Position:		Northing:	629,074.70 usft	Latitude:	32° 43' 35.731 N
From:	Map	Easting:	797,786.70 usft	Longitude:	103° 29' 57.894 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.45 °

Well	#4H					
Well Position	+N/-S	0.00 usft	Northing:	629,021.91 usft	Latitude:	32° 43' 35.254 N
	+E/-W	0.00 usft	Easting:	797,202.73 usft	Longitude:	103° 30' 4.734 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	26.50 usft	Ground Level:	3,954.00 usft

Wellbore	Stk 2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2012	10/2/2013	7.42	60.57	48,657

Design	Stk 2				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	9,200.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	352.70	

Survey Program	Date	11/5/2013			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
100.00	9,200.00	#1 VES Gyro (Original Hole)	GG ISWWSA	Good Gyro	
9,262.00	14,634.00	#1 Pathfinder MWD (Stk 2)	Pathfinder	Pathfinder MWD	

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.29	23.05	100.00	0.23	0.10	0.22	0.29	0.29	0.00	
200.00	0.49	32.21	200.00	0.83	0.43	0.77	0.21	0.20	9.16	
300.00	0.45	46.57	299.99	1.46	0.94	1.33	0.12	-0.04	14.36	
400.00	0.65	23.12	399.99	2.25	1.45	2.05	0.30	0.20	-23.45	
500.00	0.67	47.37	499.98	3.17	2.10	2.88	0.28	0.02	24.25	
600.00	0.65	34.59	599.98	4.03	2.85	3.64	0.15	-0.02	-12.78	
700.00	0.54	34.29	699.97	4.89	3.44	4.41	0.11	-0.11	-0.30	
800.00	0.57	42.40	799.97	5.64	4.04	5.09	0.08	0.03	8.11	
900.00	0.42	61.10	899.96	6.19	4.70	5.54	0.22	-0.15	18.70	

Pathfinder - A Schlumberger Company

Survey Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County (NAD83)	TVD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Site:	Ironhouse 19 State Corn	MD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Well:	#4H	North Reference:	Grid
Wellbore:	Stk 2	Survey Calculation Method:	Minimum Curvature
Design:	Stk 2	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
1,000.00	0.25	71.32	999.96	6.44	5.22	5.72	0.18	-0.17	10.22
1,100.00	0.26	87.59	1,099.96	6.52	5.66	5.74	0.07	0.01	16.27
1,200.00	0.38	69.29	1,199.96	6.64	6.19	5.80	0.16	0.12	-18.30
1,300.00	0.32	90.36	1,299.96	6.76	6.78	5.84	0.14	-0.06	21.07
1,400.00	0.12	87.31	1,399.96	6.76	7.17	5.80	0.20	-0.20	-3.05
1,500.00	0.29	84.81	1,499.96	6.79	7.52	5.78	0.17	0.17	-2.50
1,600.00	0.18	56.13	1,599.95	6.90	7.91	5.84	0.16	-0.11	-28.68
1,700.00	0.12	75.19	1,699.95	7.01	8.14	5.92	0.08	-0.06	19.06
1,800.00	0.24	43.35	1,799.95	7.19	8.38	6.07	0.15	0.12	-31.84
1,900.00	0.05	48.82	1,899.95	7.37	8.56	6.23	0.19	-0.19	5.47
2,000.00	0.11	36.48	1,999.95	7.48	8.65	6.32	0.06	0.06	-12.34
2,100.00	0.45	52.53	2,099.95	7.80	9.02	6.59	0.35	0.34	16.05
2,200.00	0.45	33.46	2,199.95	8.36	9.55	7.08	0.15	0.00	-19.07
2,300.00	0.63	57.69	2,299.94	8.98	10.23	7.61	0.29	0.18	24.23
2,400.00	0.71	37.24	2,399.94	9.77	11.07	8.29	0.25	0.08	-20.45
2,500.00	0.57	62.24	2,499.93	10.50	11.88	8.90	0.31	-0.14	25.00
2,600.00	0.78	52.02	2,599.92	11.15	12.86	9.42	0.24	0.21	-10.22
2,700.00	0.88	51.58	2,699.91	12.04	14.00	10.17	0.10	0.10	-0.44
2,800.00	1.31	49.00	2,799.90	13.27	15.46	11.20	0.43	0.43	-2.58
2,900.00	1.79	48.57	2,899.86	15.05	17.50	12.71	0.48	0.48	-0.43
3,000.00	2.18	53.18	2,999.80	17.23	20.19	14.52	0.42	0.39	4.61
3,100.00	2.55	52.58	3,099.71	19.72	23.48	16.57	0.37	0.37	-0.60
3,200.00	2.40	51.00	3,199.62	22.39	26.87	18.79	0.16	-0.15	-1.58
3,300.00	2.49	50.52	3,299.53	25.09	30.18	21.05	0.09	0.09	-0.48
3,400.00	2.17	50.36	3,399.45	27.67	33.31	23.22	0.32	-0.32	-0.16
3,500.00	1.98	57.42	3,499.38	29.81	36.22	24.97	0.32	-0.19	7.06
3,600.00	1.43	50.25	3,599.34	31.54	38.64	26.38	0.59	-0.55	-7.17
3,700.00	1.56	48.96	3,699.30	33.23	40.63	27.80	0.13	0.13	-1.29
3,800.00	1.32	58.59	3,799.27	34.73	42.64	29.03	0.34	-0.24	9.63
3,900.00	0.98	50.09	3,899.25	35.88	44.27	29.96	0.38	-0.34	-8.50
4,000.00	0.97	42.13	3,999.24	37.05	45.50	30.97	0.14	-0.01	-7.96
4,100.00	0.78	58.26	4,099.22	38.04	46.64	31.80	0.31	-0.19	16.13
4,200.00	0.87	53.44	4,199.21	38.85	47.83	32.46	0.11	0.09	-4.82
4,300.00	0.80	57.13	4,299.20	39.68	49.03	33.13	0.09	-0.07	3.69
4,400.00	0.56	58.09	4,399.20	40.32	50.03	33.63	0.24	-0.24	0.96
4,500.00	0.60	69.34	4,499.19	40.76	50.94	33.96	0.12	0.04	11.25
4,600.00	0.67	71.84	4,599.18	41.13	51.98	34.19	0.08	0.07	2.50
4,700.00	0.66	71.65	4,699.18	41.49	53.08	34.41	0.01	-0.01	-0.19
4,800.00	0.60	54.15	4,799.17	41.98	54.05	34.77	0.20	-0.06	-17.50
4,900.00	0.66	45.74	4,899.17	42.69	54.89	35.37	0.11	0.06	-8.41
5,000.00	0.90	65.63	4,999.16	43.41	56.02	35.94	0.36	0.24	19.89
5,100.00	0.77	51.74	5,099.15	44.15	57.26	36.52	0.24	-0.13	-13.89
5,200.00	0.72	53.24	5,199.14	44.94	58.29	37.17	0.05	-0.05	1.50

Pathfinder - A Schlumberger Company

Survey Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County (NAD83)	TVD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Site:	Ironhouse 19 State Com	MD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Well:	#4H	North Reference:	Grid
Wellbore:	Stk 2	Survey Calculation Method:	Minimum Curvature
Design:	Stk 2	Database:	EDM 5000.1 Single User Db

Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
5,300.00	0.86	75.62	5,299.13	45.51	59.52	37.58	0.34	0.14	22.38	
5,400.00	0.60	63.21	5,399.12	45.93	60.72	37.84	0.30	-0.26	-12.41	
5,500.00	0.89	54.98	5,499.11	46.61	61.82	38.38	0.31	0.29	-8.23	
5,600.00	0.79	79.62	5,599.10	47.18	63.14	38.78	0.37	-0.10	24.64	
5,700.00	0.71	82.55	5,699.09	47.39	64.43	38.82	0.09	-0.08	2.93	
5,800.00	0.59	60.34	5,799.09	47.72	65.49	39.01	0.28	-0.12	-22.21	
5,900.00	0.76	56.27	5,899.08	48.34	66.49	39.51	0.18	0.17	-4.07	
6,000.00	0.56	53.91	5,999.07	49.00	67.43	40.04	0.20	-0.20	-2.36	
6,100.00	0.52	50.90	6,099.07	49.57	68.18	40.51	0.05	-0.04	-3.01	
6,200.00	0.59	43.78	6,199.06	50.23	68.89	41.07	0.10	0.07	-7.12	
6,300.00	0.48	85.97	6,299.06	50.63	69.66	41.37	0.40	-0.11	42.19	
6,400.00	0.37	95.06	6,399.06	50.63	70.40	41.28	0.13	-0.11	9.09	
6,500.00	0.58	63.46	6,499.05	50.83	71.18	41.38	0.33	0.21	-31.60	
6,600.00	0.75	87.65	6,599.05	51.08	72.29	41.49	0.32	0.17	24.19	
6,700.00	0.80	71.16	6,699.04	51.34	73.60	41.57	0.23	0.05	-16.49	
6,800.00	0.97	64.29	6,799.03	51.93	75.02	41.98	0.20	0.17	-6.87	
6,900.00	1.14	59.19	6,899.01	52.81	76.64	42.64	0.19	0.17	-5.10	
7,000.00	1.36	54.64	6,998.99	54.00	78.46	43.60	0.24	0.22	-4.55	
7,100.00	1.35	64.75	7,098.96	55.19	80.50	44.52	0.24	-0.01	10.11	
7,200.00	1.75	59.80	7,198.92	56.46	82.88	45.48	0.42	0.40	-4.95	
7,300.00	1.81	64.82	7,298.87	57.90	85.63	46.55	0.17	0.06	5.02	
7,400.00	1.85	71.05	7,398.82	59.10	88.59	47.37	0.20	0.04	6.23	
7,500.00	2.19	76.73	7,498.76	60.06	91.97	47.89	0.39	0.34	5.68	
7,600.00	2.41	82.90	7,598.68	60.76	95.92	48.08	0.33	0.22	6.17	
7,700.00	2.59	88.18	7,698.58	61.09	100.26	47.86	0.29	0.18	5.28	
7,800.00	2.79	84.99	7,798.47	61.38	104.95	47.55	0.25	0.20	-3.19	
7,900.00	2.81	86.90	7,898.35	61.72	109.82	47.27	0.10	0.02	1.91	
8,000.00	2.11	84.42	7,998.26	62.03	114.10	47.03	0.71	-0.70	-2.48	
8,100.00	1.84	60.30	8,098.20	63.01	117.32	47.59	0.87	-0.27	-24.12	
8,200.00	1.57	66.35	8,198.16	64.35	119.97	48.59	0.32	-0.27	6.05	
8,300.00	1.56	63.25	8,298.12	65.51	122.44	49.43	0.09	-0.01	-3.10	
8,400.00	1.81	53.95	8,398.08	67.06	124.94	50.64	0.37	0.25	-9.30	
8,500.00	1.92	51.15	8,498.03	69.04	127.52	52.28	0.14	0.11	-2.80	
8,600.00	2.26	42.22	8,597.96	71.55	130.15	54.43	0.47	0.34	-8.93	
8,700.00	2.64	32.27	8,697.87	74.95	132.70	57.49	0.57	0.38	-9.95	
8,800.00	2.43	26.58	8,797.77	78.80	134.88	61.02	0.33	-0.21	-5.69	
8,900.00	2.30	27.08	8,897.69	82.48	136.74	64.44	0.13	-0.13	0.50	
9,000.00	2.41	13.91	8,997.60	86.31	138.16	68.06	0.55	0.11	-13.17	
9,100.00	2.94	10.38	9,097.49	90.87	139.13	72.46	0.55	0.53	-3.53	
9,200.00	3.22	8.82	9,197.35	96.17	140.02	77.60	0.29	0.28	-1.56	
9,262.00	6.42	299.61	9,259.16	99.61	137.27	81.36	9.79	5.16	-111.63	
9,356.00	8.53	302.45	9,352.36	105.94	126.82	88.97	2.28	2.24	3.02	
9,450.00	8.62	301.24	9,445.31	113.34	114.91	97.82	0.21	0.10	-1.29	

Pathfinder - A Schlumberger Company

Survey Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County (NAD83)	TVD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Site:	Ironhouse 19 State Com	MD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Well:	#4H	North Reference:	Grid
Wellbore:	Stk 2	Survey Calculation Method:	Minimum Curvature
Design:	Stk 2	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,513.00	12.75	304.29	9,507.20	119.71	105.13	105.38	6.61	6.56	4.84
9,544.00	15.48	306.48	9,537.26	124.09	98.97	110.51	8.97	8.81	7.06
9,575.00	18.64	309.10	9,566.90	129.68	91.80	116.97	10.49	10.19	8.45
9,607.00	21.98	311.24	9,596.90	136.85	83.33	125.16	10.69	10.44	6.69
9,638.00	25.32	312.61	9,625.30	145.17	74.08	134.58	10.92	10.77	4.42
9,669.00	28.58	313.52	9,652.93	154.76	63.82	145.40	10.60	10.52	2.94
9,701.00	31.39	314.34	9,680.64	165.86	52.31	157.87	8.87	8.78	2.56
9,732.00	34.73	314.18	9,706.62	177.66	40.20	171.12	10.78	10.77	-0.52
9,763.00	38.87	313.75	9,731.44	190.55	26.84	185.60	13.38	13.35	-1.39
9,795.00	43.70	313.75	9,755.47	205.14	11.59	202.01	15.09	15.09	0.00
9,826.00	47.75	314.95	9,777.11	220.66	-4.27	219.42	13.35	13.06	3.87
9,857.00	51.53	316.48	9,797.18	237.58	-20.76	238.29	12.76	12.19	4.94
9,889.00	55.05	317.88	9,816.31	256.39	-38.18	259.17	11.55	11.00	4.38
9,920.00	58.83	318.06	9,833.22	275.69	-55.58	280.52	12.20	12.19	0.58
9,952.00	62.87	318.22	9,848.80	296.50	-74.22	303.53	12.63	12.63	0.50
9,983.00	66.48	318.06	9,862.06	317.36	-92.92	326.60	11.65	11.65	-0.52
10,015.00	70.35	317.65	9,873.83	339.42	-112.88	351.01	12.15	12.09	-1.28
10,046.00	73.95	317.99	9,883.33	361.29	-132.69	375.21	11.66	11.61	1.10
10,077.00	77.47	319.05	9,890.98	383.79	-152.58	400.06	11.83	11.35	3.42
10,109.00	80.81	319.60	9,897.01	407.62	-173.06	426.30	10.57	10.44	1.72
10,140.00	84.24	320.08	9,901.04	431.11	-192.88	452.12	11.17	11.06	1.55
10,171.00	88.20	319.91	9,903.09	454.80	-212.76	478.14	12.79	12.77	-0.55
10,204.00	91.98	319.73	9,903.03	480.00	-234.05	505.85	11.47	11.45	-0.55
10,236.00	94.79	321.00	9,901.14	504.60	-254.42	532.84	9.63	8.78	3.97
10,299.00	95.50	323.83	9,895.49	554.32	-292.69	587.01	4.61	1.13	4.49
10,393.00	95.23	327.96	9,886.70	631.80	-345.16	670.53	4.38	-0.29	4.39
10,487.00	94.35	331.00	9,878.85	712.48	-392.72	756.60	3.36	-0.94	3.23
10,581.00	93.83	333.84	9,872.14	795.58	-436.12	844.54	3.06	-0.55	3.02
10,675.00	94.44	336.83	9,865.36	880.77	-475.24	934.01	3.24	0.65	3.18
10,769.00	95.41	340.19	9,857.29	967.90	-509.55	1,024.79	3.71	1.03	3.57
10,863.00	95.94	343.37	9,847.99	1,056.73	-538.79	1,116.62	3.41	0.56	3.38
10,958.00	94.44	346.62	9,839.40	1,148.10	-563.28	1,210.36	3.76	-1.58	3.42
11,052.00	93.83	349.73	9,832.62	1,239.86	-582.49	1,303.81	3.36	-0.65	3.31
11,146.00	94.44	353.34	9,825.84	1,332.58	-596.29	1,397.53	3.88	0.65	3.84
11,240.00	94.79	356.41	9,818.27	1,425.88	-604.66	1,491.15	3.28	0.37	3.27
11,334.00	95.41	359.42	9,809.92	1,519.44	-608.07	1,584.38	3.26	0.66	3.20
11,429.00	96.11	359.60	9,800.38	1,613.95	-608.88	1,678.23	0.76	0.74	0.19
11,522.00	97.08	359.57	9,789.70	1,706.34	-609.54	1,769.95	1.04	1.04	-0.03
11,616.00	95.58	359.93	9,779.34	1,799.76	-609.95	1,862.67	1.64	-1.60	0.38
11,710.00	95.06	359.06	9,770.62	1,893.35	-610.78	1,955.60	1.07	-0.55	-0.93
11,805.00	95.94	359.47	9,761.52	1,987.90	-611.99	2,049.54	1.02	0.93	0.43
11,899.00	94.00	359.48	9,753.37	2,081.54	-612.85	2,142.53	2.06	-2.06	0.01
11,993.00	93.65	359.65	9,747.10	2,175.33	-613.56	2,235.65	0.41	-0.37	0.18
12,087.00	94.09	359.99	9,740.76	2,269.11	-613.86	2,328.71	0.59	0.47	0.36

Pathfinder - A Schlumberger Company

Survey Report

Company:	Devon Energy, Inc.	Local Co-ordinate Reference:	Well #4H
Project:	Lea County (NAD83)	TVD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Site:	Ironhouse 19 State Com	MD Reference:	GL + 26.5' RKB @ 3980.50usft (Patterson 228)
Well:	#4H	North Reference:	Grid
Wellbore:	Stk 2	Survey Calculation Method:	Minimum Curvature
Design:	Stk 2	Database:	EDM 5000.1 Single User Db

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,181.00	94.62	359.57	9,733.62	2,362.84	-614.21	2,421.73	0.72	0.56	-0.45
12,275.00	95.23	359.49	9,725.55	2,456.49	-614.98	2,514.72	0.65	0.65	-0.09
12,370.00	94.18	0.14	9,717.76	2,551.17	-615.29	2,608.66	1.30	-1.11	0.68
12,464.00	94.70	359.64	9,710.48	2,644.89	-615.47	2,701.65	0.77	0.55	-0.53
12,558.00	95.14	358.87	9,702.42	2,738.53	-616.69	2,794.69	0.94	0.47	-0.82
12,652.00	95.67	358.69	9,693.56	2,832.09	-618.68	2,887.74	0.60	0.56	-0.19
12,746.00	95.14	359.97	9,684.71	2,925.66	-619.77	2,980.70	1.47	-0.56	1.36
12,840.00	93.65	0.07	9,677.51	3,019.38	-619.74	3,073.65	1.59	-1.59	0.11
12,934.00	94.00	0.09	9,671.24	3,113.18	-619.61	3,166.67	0.37	0.37	0.02
13,028.00	94.35	0.08	9,664.39	3,206.93	-619.47	3,259.64	0.37	0.37	-0.01
13,122.00	94.70	359.61	9,656.98	3,300.63	-619.72	3,352.62	0.62	0.37	-0.50
13,216.00	93.39	0.07	9,650.35	3,394.39	-619.98	3,445.66	1.48	-1.39	0.49
13,280.00	93.56	0.22	9,646.47	3,458.28	-619.82	3,509.00	0.35	0.27	0.23
13,374.00	93.83	359.99	9,640.41	3,552.08	-619.65	3,602.02	0.38	0.29	-0.24
13,469.00	93.74	0.04	9,634.14	3,646.87	-619.63	3,696.04	0.11	-0.09	0.05
13,563.00	93.83	359.81	9,627.93	3,740.67	-619.75	3,789.09	0.26	0.10	-0.24
13,656.00	93.21	359.39	9,622.22	3,833.49	-620.40	3,881.25	0.80	-0.67	-0.45
13,750.00	92.33	359.69	9,617.68	3,927.38	-621.15	3,974.47	0.99	-0.94	0.32
13,844.00	92.24	358.96	9,613.93	4,021.29	-622.26	4,067.76	0.78	-0.10	-0.78
13,941.00	93.30	359.66	9,609.24	4,118.17	-623.42	4,164.01	1.31	1.09	0.72
14,035.00	94.18	0.68	9,603.11	4,211.97	-623.15	4,257.01	1.43	0.94	1.09
14,129.00	95.06	0.49	9,595.54	4,305.66	-622.19	4,349.82	0.96	0.94	-0.20
14,223.00	95.23	0.77	9,587.11	4,399.27	-621.16	4,442.54	0.35	0.18	0.30
14,317.00	94.97	0.57	9,578.76	4,492.90	-620.07	4,535.27	0.35	-0.28	-0.21
14,411.00	95.14	0.85	9,570.47	4,586.52	-618.90	4,627.99	0.35	0.18	0.30
14,505.00	95.85	0.75	9,561.47	4,680.08	-617.60	4,720.62	0.76	0.76	-0.11
14,571.00	96.38	0.79	9,554.44	4,745.70	-616.72	4,785.59	0.81	0.80	0.06
14,634.00	96.38	0.79	9,547.44	4,808.30	-615.85	4,847.58	0.00	0.00	0.00

Projected to TD - PBHL - Ironhorse 4H

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
14,634.00	9,547.44	4,808.30	-615.85	Projected to TD

Checked By: _____ Approved By: _____ Date: _____