

Results of Directional Survey

API number:	30-025-40912			
OGRID:		Operator:	DEVON ENERGY PRODUCTION COMPANY, LP	
		Property:	RATTLESNAKE 13 12 FEDERAL COM	# 1H

surface	ULSTR:	P	13	T 26S	R 34E
				330 FSL	330 FEL

BH Loc	ULSTR:	A	12	T 26S	R 34E
18017	MD	8960.7	TVD	1132 FNL	516 FEL
				9428 FSL	

Top Perf/OH	ULSTR:	P	13	T 26S	R 34E
9148	MD	8983.0	TVD	578 FSL	317 FEL

Bot Perf/OH	ULSTR:	A	12	T 26S	R 34E
17849	MD	8961.3	TVD	1300 FNL	512 FEL
				9260 FSL	

	MD	N/S	E/W	VD
	9138	239.27	15.80	8975.78
TOP PERFS/OH	9148	248.19	12.77	8983.02
	9169	266.93	6.41	8998.23
	17835	8915.95	-181.90	8961.42
BOT PERFS/OH	17849	8929.95	-182.22	8961.29
	17930	9010.92	-184.08	8960.55

NEXT TO LAST	17947	9027.92	-184.51	8960.56
LAST READING	18017	9097.90	-186.12	8960.65
TD	18017	9097.90	-186.12	8960.65

Surface Location	330	FS	330	FE
Projected BHL	9428	FS	516	FE
Location of				
Top Perfs/OH	578	FS	317	FE
Bottom Perfs/OH	9260	FS	512	FE

SUMMARY of Subsurface Locations

Surface Location	P-13-26S-34E	330	FS	330	FE	Vert. Depth
Top Perfs/OH	P-13-26S-34E	578	FS	317	FE	8983.02
Bottom Perfs/OH	A-12-26S-34E	9260	FS	512	FE	8961.29
Projected TD	A-12-26S-34E	9428	FS	516	FE	8960.65

NOV 12 2013



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

March 12, 2013

HOBBS OCD

OCT 31 2013

RECEIVED

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

Attn: Patti Riechers

Re: **RattleSnake 13 12 Federal Com No 001H**

Please find enclosed a copy of the survey from 0' to 8,409' ran on the above referenced well.

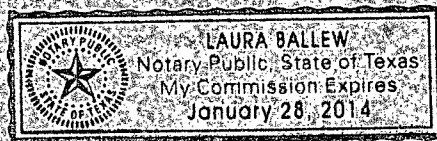
If I can be of any further service, please do not hesitate to call me at 800-606-4976.

Sincerely,


Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 12th day of March
A.D. 2013, by Keith Havelka




Laura Ballew
Notary Public, State of Texas



Company: Devon Energy Production Co., LP
Lease/Well: RattleSnake 13 12 Federal Com/No 001H

Rig Name: H&P #214
State/County: New Mexico/Lea
Latitude: 32.04, Longitude: -103.42
GRID North is 0.49 Degrees East of True North
VS-Azi: 359.22 Degrees



Depth Reference : RKB=25 Feet

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: ...nt_int_int_int_int_int_int.ut

Minimum Curvature Method

Report Date/Time: 3/12/2013 / 08:22

Vaughn Energy Services
Midland, Texas
432-563-5444

Surveyor: Logan Henry

RattleSnake 13 12 Federal Com No 001H / API 30-025-40912

HOBBS OCD
OCT 31 2013

RECEIVED

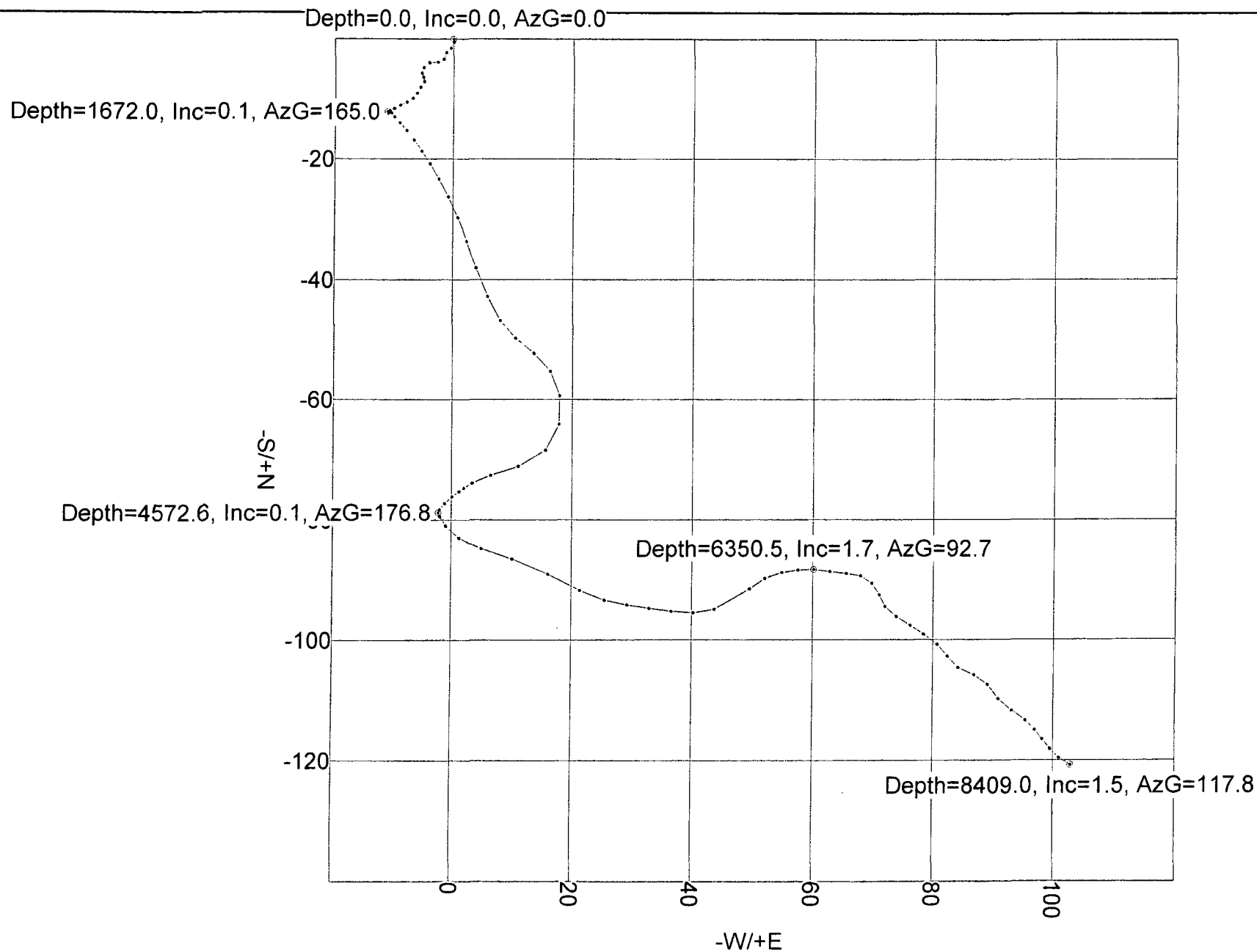
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
81.27	0.79	172.78	81.27	-0.55	0.07	-0.55	0.56	172.78	0.97
174.84	0.80	241.21	174.83	-1.50	-0.42	-1.50	1.56	195.61	0.95
268.41	0.63	207.61	268.39	-2.27	-1.23	-2.26	2.58	208.40	0.47
361.98	0.85	201.32	361.96	-3.38	-1.72	-3.35	3.79	207.00	0.25
455.55	0.93	284.29	455.52	-3.84	-2.71	-3.80	4.70	215.19	1.26
549.12	0.94	247.88	549.08	-3.94	-4.15	-3.88	5.73	226.50	0.62
642.69	0.67	202.10	642.64	-4.74	-5.07	-4.67	6.94	226.96	0.72
736.26	0.56	195.74	736.20	-5.68	-5.40	-5.60	7.84	223.57	0.14
829.83	0.53	119.34	829.77	-6.32	-5.15	-6.25	8.16	219.15	0.71
923.40	0.68	202.75	923.34	-7.05	-4.99	-6.98	8.64	215.30	0.87
1016.97	0.72	221.60	1016.90	-8.00	-5.59	-7.92	9.76	214.96	0.25
1110.54	0.71	204.00	1110.46	-8.97	-6.22	-8.88	10.91	214.74	0.23
1204.11	0.71	232.56	1204.02	-9.85	-6.91	-9.76	12.04	215.06	0.37
1297.68	0.77	242.43	1297.59	-10.49	-7.93	-10.38	13.15	217.07	0.15
1391.25	0.73	249.03	1391.15	-11.00	-9.04	-10.87	14.23	219.42	0.10
1484.82	0.66	233.38	1484.71	-11.53	-10.03	-11.39	15.28	221.01	0.22
1578.39	0.44	259.94	1578.28	-11.91	-10.81	-11.77	16.09	222.22	0.35
1671.96	0.14	165.02	1671.85	-12.08	-11.13	-11.93	16.43	222.66	0.50

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
1765.53	0.15	108.08	1765.42	-12.23	-10.99	-12.08	16.44	221.95	0.15
1859.10	0.16	51.13	1858.99	-12.19	-10.77	-12.04	16.27	221.49	0.16
1952.67	0.32	142.31	1952.56	-12.31	-10.51	-12.17	16.19	220.49	0.39
2046.24	0.66	140.66	2046.12	-12.94	-10.01	-12.80	16.36	217.73	0.36
2139.81	0.99	136.01	2139.68	-13.94	-9.11	-13.81	16.65	213.16	0.37
2233.38	1.16	138.61	2233.24	-15.23	-7.92	-15.12	17.16	207.47	0.18
2326.95	1.32	142.22	2326.78	-16.79	-6.63	-16.70	18.05	201.56	0.19
2420.52	1.48	146.83	2420.33	-18.65	-5.31	-18.58	19.39	195.90	0.21
2514.09	1.64	147.44	2513.86	-20.79	-3.93	-20.73	21.16	190.71	0.17
2607.66	1.91	150.33	2607.39	-23.28	-2.44	-23.24	23.40	185.98	0.31
2701.23	2.19	152.22	2700.90	-26.21	-0.83	-26.20	26.23	181.82	0.30
2794.80	2.46	156.11	2794.39	-29.63	0.81	-29.64	29.64	178.43	0.34
2888.37	2.73	159.00	2887.86	-33.55	2.43	-33.58	33.64	175.86	0.32
2981.94	3.01	161.89	2981.32	-37.97	3.99	-38.02	38.18	174.00	0.33
3075.51	3.28	154.79	3074.74	-42.73	5.89	-42.80	43.13	172.15	0.51
3169.08	2.34	148.08	3168.20	-46.77	8.05	-46.88	47.46	170.24	1.06
3262.65	2.39	132.03	3261.69	-49.70	10.51	-49.84	50.80	168.06	0.71
3356.22	2.44	126.98	3355.18	-52.21	13.55	-52.39	53.94	165.45	0.23
3449.79	2.64	147.65	3448.66	-55.22	16.29	-55.44	57.58	163.56	0.99
3543.36	2.83	169.32	3542.13	-59.31	17.87	-59.55	61.95	163.23	1.12
3636.93	3.03	190.99	3635.58	-64.01	17.83	-64.25	66.45	164.44	1.20
3730.50	3.23	222.67	3729.01	-68.38	15.57	-68.58	70.13	167.17	1.83
3824.07	3.42	254.34	3822.43	-71.07	11.10	-71.21	71.93	171.12	1.95
3917.64	2.47	248.65	3915.88	-72.55	6.53	-72.64	72.85	174.86	1.07
4011.21	1.51	242.97	4009.39	-73.85	3.56	-73.89	73.93	177.24	1.04
4104.78	0.56	237.28	4102.95	-74.66	2.07	-74.68	74.68	178.41	1.03
4198.35	0.75	234.09	4196.51	-75.26	1.20	-75.27	75.27	179.09	0.20
4291.92	0.93	230.90	4290.07	-76.10	0.11	-76.09	76.10	179.91	0.21
4385.49	1.12	227.71	4383.62	-77.19	-1.16	-77.17	77.20	180.86	0.21
4479.06	0.59	202.28	4477.18	-78.26	-2.02	-78.22	78.28	181.48	0.68
4572.63	0.06	176.84	4570.75	-78.75	-2.20	-78.72	78.78	181.60	0.57
4666.20	0.78	159.47	4664.32	-79.41	-1.97	-79.37	79.43	181.42	0.77
4759.77	1.51	142.11	4757.87	-80.98	-0.99	-80.95	80.98	180.70	0.85
4853.34	2.23	124.75	4851.39	-82.98	1.26	-82.99	82.99	179.13	0.97
4946.91	2.95	107.39	4944.87	-84.74	5.05	-84.80	84.89	176.59	1.13
5040.48	3.67	110.03	5038.28	-86.48	10.16	-86.61	87.08	173.30	0.79
5134.05	4.21	115.54	5131.63	-88.99	16.07	-89.20	90.43	169.76	0.71
5227.62	3.07	118.55	5225.01	-91.67	21.38	-91.95	94.13	166.87	1.24
5321.19	2.38	102.86	5318.47	-93.30	25.47	-93.64	96.71	164.73	1.08

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
5414.76	2.34	100.19	5411.96	-94.07	29.24	-94.46	98.51	162.73	0.12
5508.33	2.21	98.49	5505.46	-94.67	32.91	-95.11	100.23	160.83	0.16
5601.90	2.30	96.50	5598.96	-95.15	36.56	-95.64	101.94	158.98	0.13
5695.47	2.23	91.47	5692.45	-95.41	40.25	-95.95	103.56	157.13	0.23
5789.04	2.20	68.64	5785.96	-94.81	43.74	-95.39	104.41	155.23	0.94
5976.18	1.96	50.10	5972.97	-91.44	49.54	-92.11	104.00	151.55	0.38
6069.75	1.82	61.61	6066.49	-89.71	52.08	-90.41	103.73	149.87	0.43
6163.32	1.86	79.80	6160.02	-88.74	54.88	-89.47	104.33	148.27	0.62
6256.89	1.45	82.30	6253.55	-88.31	57.54	-89.08	105.40	146.91	0.45
6350.46	1.71	92.70	6347.08	-88.22	60.11	-89.03	106.75	145.73	0.41
6444.03	1.65	102.12	6440.61	-88.56	62.83	-89.41	108.58	144.65	0.30
6537.60	1.65	92.05	6534.14	-88.90	65.49	-89.78	110.42	143.62	0.31
6631.17	1.30	108.06	6627.68	-89.27	67.85	-90.19	112.13	142.76	0.58
6724.74	1.56	135.49	6721.22	-90.51	69.75	-91.45	114.27	142.38	0.77
6818.31	1.34	162.74	6814.76	-92.46	70.97	-93.42	116.56	142.49	0.77
6911.88	1.35	143.05	6908.31	-94.39	71.96	-95.36	118.69	142.68	0.49
7005.45	1.78	122.12	7001.85	-96.04	73.85	-97.04	121.15	142.44	0.75
7099.02	1.59	122.63	7095.37	-97.51	76.17	-98.54	123.74	142.01	0.20
7192.59	1.76	125.12	7188.90	-99.04	78.44	-100.10	126.34	141.62	0.20
7286.16	1.67	128.41	7282.43	-100.71	80.68	-101.80	129.05	141.30	0.14
7379.73	1.55	149.41	7375.97	-102.65	82.40	-103.77	131.63	141.25	0.64
7473.30	1.72	124.99	7469.50	-104.55	84.20	-105.69	134.24	141.15	0.76
7566.87	1.87	105.24	7563.02	-105.76	86.83	-106.93	136.83	140.62	0.68
7660.44	1.75	146.11	7656.55	-107.35	89.10	-108.55	139.51	140.31	1.36
7754.01	1.87	140.80	7750.07	-109.72	90.86	-110.95	142.46	140.37	0.22
7847.58	1.83	121.14	7843.60	-111.68	93.11	-112.94	145.40	140.18	0.68
7941.15	1.56	129.39	7937.13	-113.26	95.37	-114.55	148.07	139.90	0.39
8034.72	1.21	144.07	8030.67	-114.87	96.94	-116.18	150.31	139.84	0.53
8128.29	1.23	138.42	8124.22	-116.42	98.18	-117.75	152.30	139.86	0.13
8221.86	1.30	144.19	8217.76	-118.03	99.47	-119.38	154.36	139.88	0.16
8315.43	1.30	126.00	8311.31	-119.52	100.95	-120.88	156.45	139.81	0.44
8409.00	1.46	117.78	8404.85	-120.70	102.87	-122.09	158.59	139.56	0.27



Vaughn Energy Services
Midland, Texas
432-563-5444
Surveyor: Logan Henry
RattleSnake 13 12 Federal Com No 001H / API 30-025-40912





Weatherford

**DRILLING SERVICES
END OF WELL REPORT
FOR**

John Logemann

Devon Energy

Rattlesnake Unit 13-12 Fed 1H

Lea County, New Mexico

HOBBS OCD

OCT 31 2013

RECEIVED

Weatherford Drilling Services job start date : 3-1-2013

Weatherford Drilling Services job end date : 4-4-2013

Presented By:

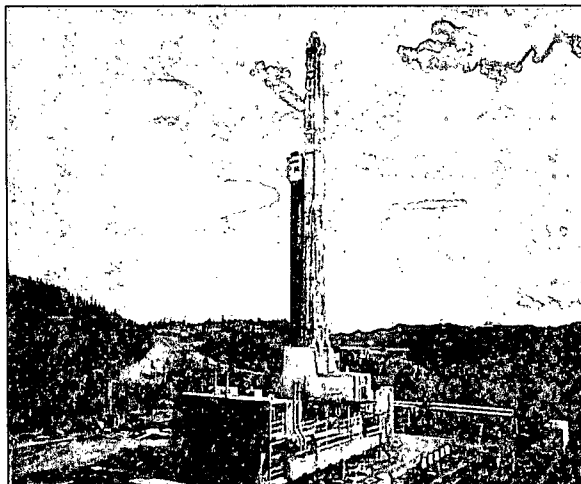
Damien Tarpley
Area Manager

Scott Dixon
Account Manager

Orry Armendariz
Directional Drilling Coordinator

Jesse Aguilar
MWD Coordinator

H&P 214





Weatherford

10000 West County Road 116
P.O. Box 61028
Midland, Texas 79711
Phone (432) 561-8892

April 5, 2013

John Logemann
333 W. Sherridan Ave
Oklahoma City, OK 73102

Reference Well Name : Rattlesnake Unit 13-12 Fed 1H
Location : Lea County, New Mexico
Wft Job # : 4028854
Rig : H&P 214

Dear Mr. Logemann

Thank you for allowing us the opportunity to provide our services on your Rattlesnake Unit 13-12 Fed 1H in Lea County, New Mexico.

Please find the final End Of Well (EOW) report enclosed behind this coverletter.

The EOW report contains the following information :

Section 1 - Weatherford (Wft) Final Definitive Survey & 8.5" x 11".

* Note: This survey contains the Directional Survey's obtained by Weatherford Drilling Services via Weatherford MWD Services, and any gyro survey needed for Tie On (if required).

Section 2- Days vs. Feet Drilled (24 hrs) and Days vs. Depth Graphs

Section 3- Wft Gamma Logs

Section 4 - Wft Final BHA reports (BHA Graphic Reports, BHA Detail Reports, Motor Evaluation Reports, and BHA Slide Reports).

Section 5 - Wft Final Daily Drilling reports.

Section 6 - Wft Personnel list with contact numbers.

We at *Weatherford Drilling Services'* understand the importance of this project to you and hope that you were satisfied with our Directional Drilling and MWD services provided.

Please feel free to contact me if you have any questions.

Sincerely,

Damien Tarpley
Area Manager
Weatherford Drilling Services
Midland, TX (432) 561-8892



Weatherford®

Devon Energy
Rattlesnake Unit 13-12 Fed 1H
Lea County, New Mexico

Section 1

Weatherford (Wft) Final Definitive

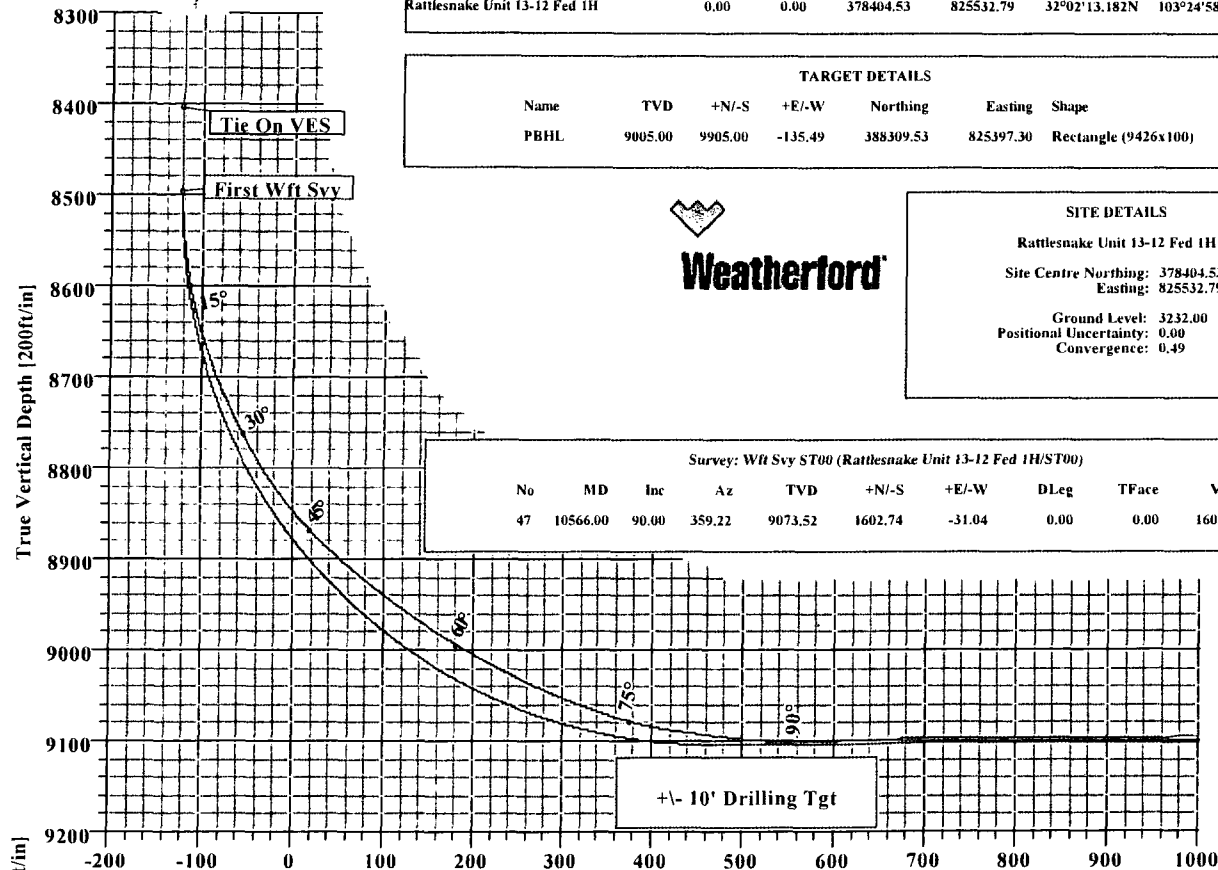
Plot & Survey



Rattlesnake Unit 13-12 Fed 1H
Lea County, New Mexico

ST00

KB ELEV: 3257
GL ELEV: 3232



SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	8409.00	1.46	117.78	8404.85	-120.70	102.87	0.00	0.00	-122.09	
2	8500.00	1.46	117.78	8495.83	-121.78	104.92	0.00	0.00	-123.20	
3	8815.22	30.00	334.90	8797.36	-50.52	74.29	9.89	215.65	-51.53	
4	9454.26	90.32	359.22	9104.05	467.23	-6.19	9.89	27.47	467.27	
5	18893.06	90.32	359.22	9052.00	9905.00	-135.49	0.00	0.00	9905.93	PBHL

WELL DETAILS							
Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Rattlesnake Unit 13-12 Fed 1H	0.00	0.00	378404.53	825532.79	32°02'13.182N	103°24'58.295W	N/A

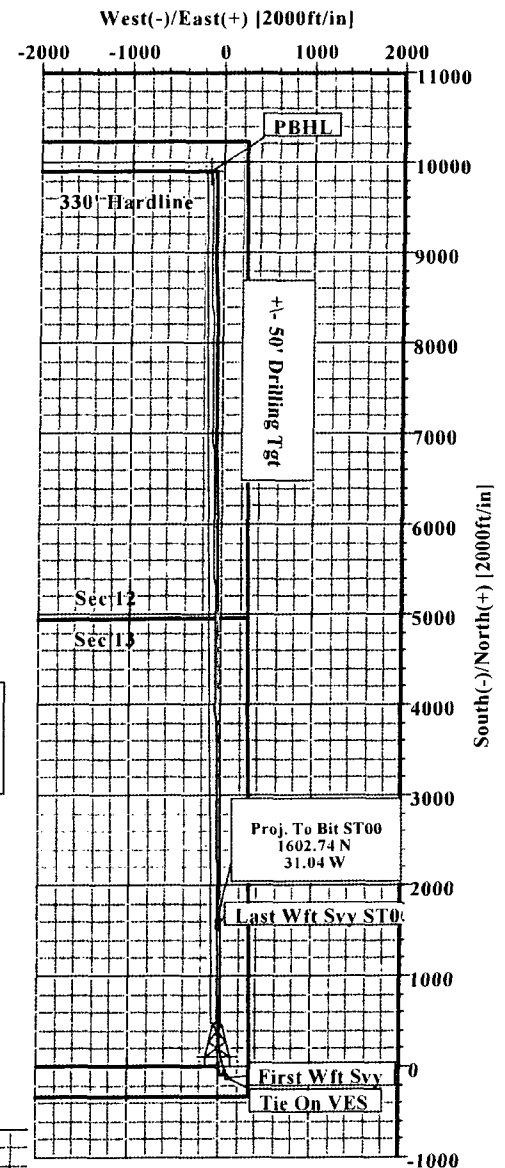
TARGET DETAILS						
Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	9005.00	9905.00	-135.49	388309.53	825397.30	Rectangle (9426x100)



Weatherford

SITE DETAILS	
Rattlesnake Unit 13-12 Fed 1H	
Site Centre Northing: 378404.53	
Easting: 825532.79	
Ground Level: 3232.00	
Positional Uncertainty: 0.00	
Convergence: 0.49	

Survey: Wft Svy ST00 (Rattlesnake Unit 13-12 Fed 1H/ST00)									
No	MD	Inc	Az	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
47	10566.00	90.00	359.22	9073.52	1602.74	-31.04	0.00	0.00	1603.02





Weatherford

WFT Survey Report X & Y's

**Weatherford**

Company: Devon Energy Date: 3/6/2013 Time: 15:25:12 Page: 1
Field: Lea County, New Mexico (NAD 83) Co-ordinate(NE) Reference: Well: Rattlesnake Unit 13-12 Fed 1H
Site: Rattlesnake Unit 13-12 Fed 1H Vertical (TVD) Reference: SITE 3257.0
Well: Rattlesnake Unit 13-12 Fed 1H Section (VS) Reference: Well (0.00N,0.00E,359.22Azi)
Wellpath: (ST00) Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: Wft Svy ST00 Start Date: 3/4/2013
Company: Weatherford Engineer: Russell W. Joyner
Tool: MWD;MWD - Standard Tied-to: User Defined

Site: Rattlesnake Unit 13-12 Fed 1H

Site Position: Northing: 378404.53 ft Latitude: 32 2 13.182 N
From: Map Easting: 825532.79 ft Longitude: 103 24 58.295 W
Position Uncertainty: 0.00 ft North Reference: Grid
Ground Level: 3232.00 ft Grid Convergence: 0.49 deg

Well: Rattlesnake Unit 13-12 Fed 1H Slot Name:
Well Position: +N/-S 0.00 ft Northing: 378404.53 ft Latitude: 32 2 13.182 N
+E/-W 0.00 ft Easting: 825532.79 ft Longitude: 103 24 58.295 W
Position Uncertainty: 0.00 ft

Wellpath: ST00 Drilled From: Surface
Current Datum: SITE Height 3257.00 ft Tie-on Depth: 0.00 ft
Magnetic Data: 3/15/2013 Above System Datum: Mean Sea Level
Field Strength: 48371 nT Declination: 7.29 deg
Vertical Section: Depth From (TVD) +N/-S +E/-W Direction
ft ft ft deg
0.00 0.00 0.00 359.22

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
8409.00	1.46	117.78	8404.85	-120.70	102.87	0.00	-122.09	378283.83	825635.66	Tie On VES First Wft Svy
8500.00	0.40	46.09	8495.84	-121.02	104.12	1.52	-122.43	378283.51	825636.91	
8532.00	3.42	334.28	8527.82	-120.08	103.79	10.37	-121.48	378284.45	825636.58	
8563.00	7.03	328.13	8558.69	-117.64	102.39	11.77	-119.02	378286.89	825635.18	
8595.00	10.29	329.20	8590.32	-113.52	99.89	10.20	-114.87	378291.01	825632.68	
8626.00	14.32	333.29	8620.60	-107.71	96.75	13.29	-109.02	378296.82	825629.54	
8657.00	17.97	335.83	8650.38	-99.92	93.06	11.99	-101.18	378304.61	825625.85	
8689.00	20.95	338.08	8680.54	-90.11	88.91	9.60	-91.31	378314.42	825621.70	
8720.00	24.39	337.66	8709.15	-79.04	84.40	11.11	-80.19	378325.49	825617.19	
8752.00	27.41	335.84	8737.93	-66.21	78.88	9.76	-67.28	378338.32	825611.67	
8783.00	30.17	334.41	8765.09	-52.67	72.59	9.18	-53.65	378351.86	825605.38	
8815.00	33.39	333.80	8792.29	-37.51	65.23	10.11	-38.40	378367.02	825598.02	
8846.00	37.03	334.83	8817.62	-21.41	57.49	11.90	-22.19	378383.12	825590.28	
8878.00	40.52	336.71	8842.56	-3.13	49.28	11.51	-3.80	378401.40	825582.07	
8909.00	44.42	339.73	8865.43	16.31	41.53	14.19	15.74	378420.84	825574.32	
8941.00	47.68	342.93	8887.64	38.13	34.18	12.47	37.66	378442.66	825566.97	
8972.00	50.19	345.85	8908.00	60.64	27.90	10.77	60.25	378465.17	825560.69	
9003.00	51.96	346.60	8927.48	84.06	22.16	6.01	83.75	378488.59	825554.95	
9035.00	54.22	347.36	8946.69	108.99	16.40	7.31	108.75	378513.52	825549.19	
9066.00	56.28	348.00	8964.36	133.87	10.97	6.86	133.71	378538.40	825543.76	
9097.00	58.12	349.46	8981.16	159.42	5.88	7.13	159.33	378563.95	825538.67	
9129.00	60.37	351.05	8997.52	186.52	1.23	8.23	186.49	378591.05	825534.02	
9160.00	62.05	352.29	9012.45	213.40	-2.71	6.45	213.42	378617.93	825530.08	
9192.00	64.01	354.65	9026.96	241.73	-5.94	8.98	241.79	378646.26	825526.85	
9223.00	65.54	357.33	9040.18	269.71	-7.90	9.25	269.79	378674.24	825524.89	
9255.00	67.39	358.65	9052.95	299.02	-8.93	6.91	299.12	378703.55	825523.86	
9286.00	70.90	356.95	9063.99	327.97	-10.04	12.43	328.07	378732.50	825522.75	
9317.00	72.68	356.42	9073.68	357.36	-11.75	5.97	357.49	378761.89	825521.04	
9349.00	76.58	355.69	9082.16	388.14	-13.87	12.38	388.29	378792.67	825518.92	
9380.00	80.66	355.69	9088.27	418.44	-16.15	13.16	418.62	378822.97	825516.64	



Weatherford

WFT Survey Report X & Y's

**Weatherford**

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Site: Rattlesnake Unit 13-12 Fed 1H
Well: Rattlesnake Unit 13-12 Fed 1H
Wellpath: ST00

Date: 3/6/2013 Time: 15:25:12 Page: 2
Co-ordinate(NE) Reference: Well: Rattlesnake Unit 13-12 Fed 1H
Vertical (TVD) Reference: SITE 3257.0
Section (VS) Reference: Well (0.00N,0.00E,359.22Azi)
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
9411.00	82.77	357.60	9092.74	449.06	-17.95	9.14	449.26	378853.59	825514.84	
9443.00	83.34	358.36	9096.61	480.80	-19.07	2.95	481.02	378885.33	825513.72	
9474.00	84.68	359.38	9099.84	511.63	-19.68	5.42	511.85	378916.16	825513.11	
9505.00	88.53	359.86	9101.68	542.57	-19.88	12.52	542.79	378947.10	825512.91	
9535.00	91.05	359.82	9101.79	572.56	-19.96	8.40	572.78	378977.09	825512.83	
9618.00	92.03	359.37	9099.56	655.53	-20.55	1.30	655.75	379060.06	825512.24	
9713.00	90.21	359.06	9097.70	750.50	-21.85	1.94	750.73	379155.03	825510.94	
9807.00	89.86	359.20	9097.64	844.49	-23.28	0.40	844.73	379249.02	825509.51	
9901.00	90.56	359.14	9097.30	938.48	-24.64	0.75	938.72	379343.01	825508.15	
9996.00	91.19	359.05	9095.85	1033.45	-26.14	0.67	1033.71	379437.98	825506.65	
10089.00	93.71	359.85	9091.87	1126.36	-27.03	2.84	1126.62	379530.89	825505.76	
10183.00	94.70	359.89	9084.98	1220.10	-27.25	1.05	1220.36	379624.63	825505.54	
10278.00	93.57	359.67	9078.13	1314.85	-27.61	1.21	1315.11	379719.38	825505.18	
10372.00	90.98	359.25	9074.40	1408.76	-28.50	2.79	1409.02	379813.29	825504.29	
10466.00	90.07	359.29	9073.54	1502.75	-29.69	0.97	1503.02	379907.28	825503.10	
10496.00	90.00	359.22	9073.52	1532.75	-30.08	0.33	1533.02	379937.28	825502.71	Last Wft Svy ST
10566.00	90.00	359.22	9073.52	1602.74	-31.04	0.00	1603.02	380007.27	825501.75	Prij. To Bit ST

Annotation

MD ft	TVD ft	
8409.00	8404.85	Tie On VES
8500.00	8495.84	First Wft Svy
10496.00	9073.52	Last Wft Svy ST00
10566.00	9073.52	Prij. To Bit ST00

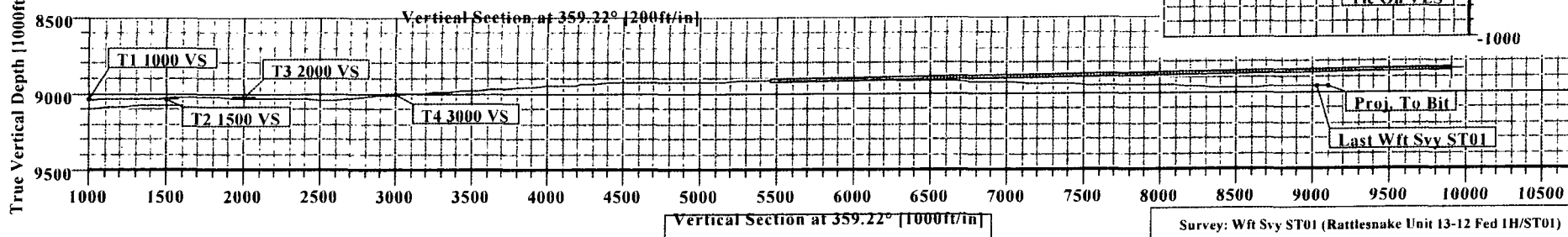
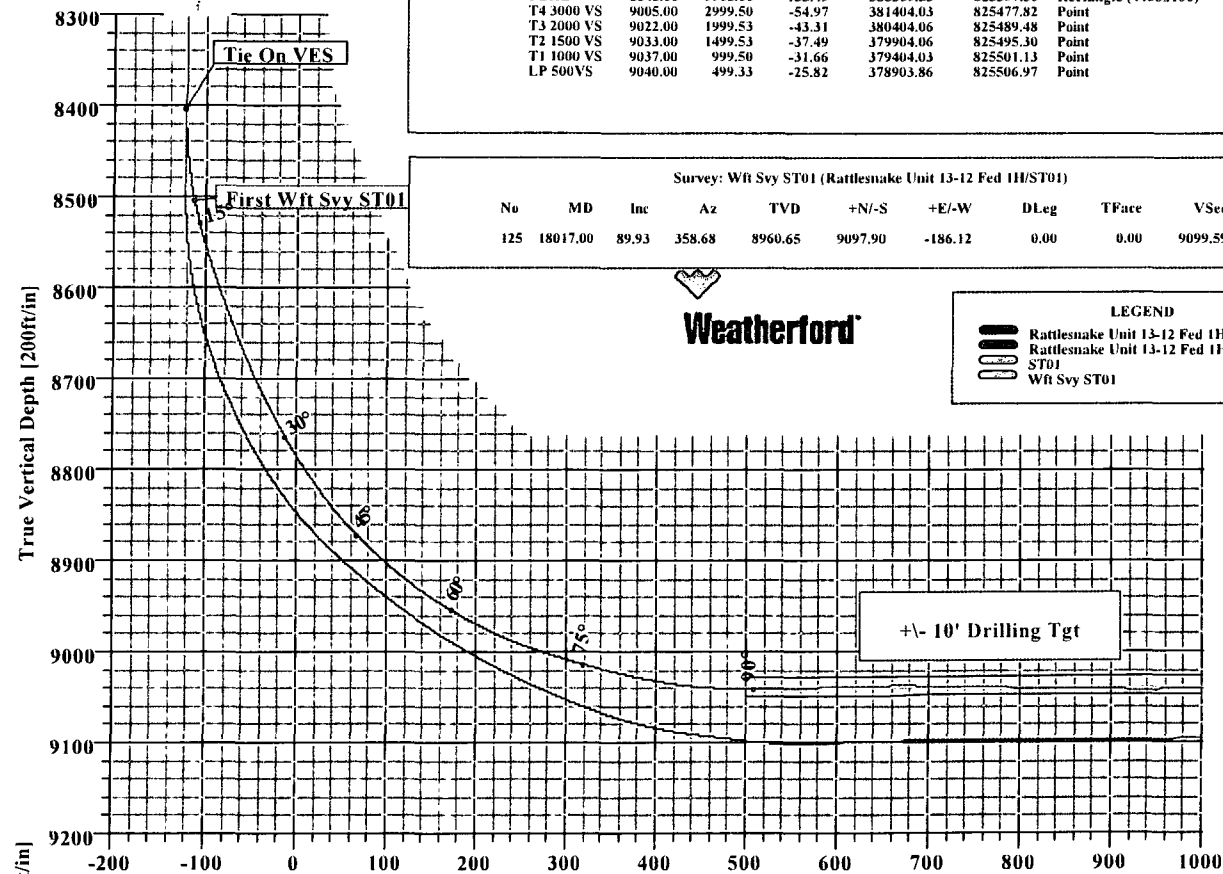


Rattlesnake Unit 13-12 Fed 1H
Lea County, New Mexico

ST01



KB ELEV: 3257
GL ELEV: 3232



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	14360.00	90.28	359.63	8924.22	5443.40	-113.74	0.00	0.00	5444.45	
2	14384.83	91.02	359.72	8923.94	5468.23	-113.88	3.00	7.02	5469.27	
3	18822.35	91.02	359.72	8845.00	9905.00	-135.49	0.00	0.00	9905.93	PBHL

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
PBHL	8845.00	9905.00	-135.49	388309.53	825397.30	Rectangle (4450x100)
T4 3000 VS	9005.00	2999.50	-54.97	381404.03	825477.82	Point
T3 2000 VS	9022.00	1999.53	-43.31	380404.06	825489.48	Point
T2 1500 VS	9033.00	1499.53	-37.49	379904.06	825495.30	Point
T1 1000 VS	9037.00	999.50	-31.66	379404.03	825501.13	Point
LP 500 VS	9040.00	499.33	-25.82	378903.86	825506.97	Point

Survey: Wft Svy ST01 (Rattlesnake Unit 13-12 Fed 1H/ST01)

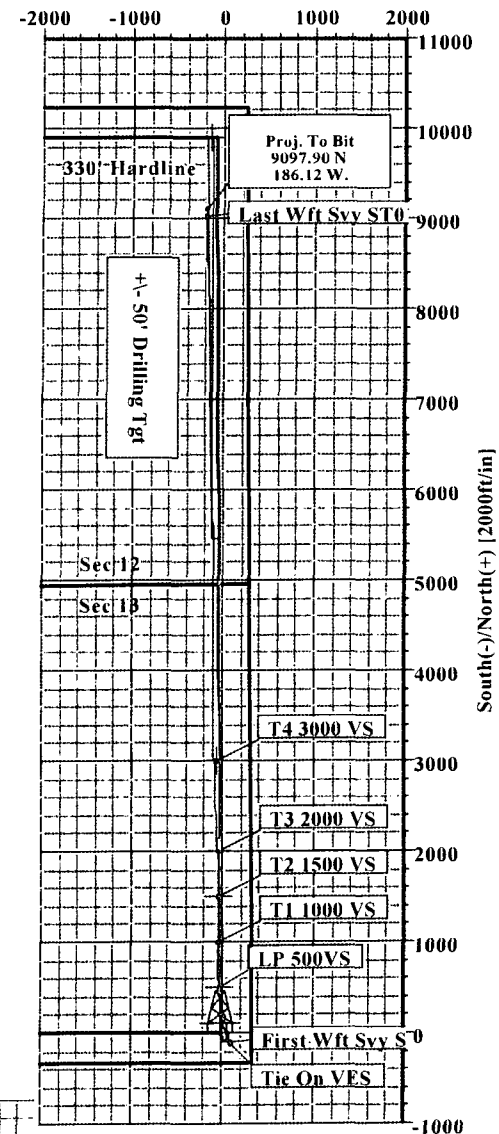
No	MD	Inc	Az	TVD	+N/-S	+E/-W	DLeg	TFace	VSec
125	18017.00	89.93	358.68	8960.65	9097.90	-186.12	0.00	0.00	9099.59

Weatherford

LEGEND

- Rattlesnake Unit 13-12 Fed 1H/ST01, Plan #2
- Rattlesnake Unit 13-12 Fed 1H (ST00)
- ST01
- Wft Svy ST01

West(-)/East(+) [2000ft/in]



Survey: Wft Svy ST01 (Rattlesnake Unit 13-12 Fed 1H/ST01)

Created By: Russell W. Joyner

Date: 4/3/2013



Weatherford

WFT Survey Report X & Y's

**Weatherford**

Company: Devon Energy	Date: 4/3/2013	Time: 04:57:19	Page: 1
Field: Lea County, New Mexico (NAD 83)	Co-ordinate(NE) Reference: Well: Rattlesnake Unit 13-12 Fed 1H		
Site: Rattlesnake Unit 13-12 Fed 1H	Vertical (TVD) Reference: SITE 3257.0		
Well: Rattlesnake Unit 13-12 Fed 1H	Section (VS) Reference: Well (0.00N,0.00E,359.22Azi)		
Wellpath: ST01	Survey Calculation Method: Minimum Curvature	Db: Sybase	

Survey: Wft Svy ST01	Start Date: 3/11/2013
Company: Weatherford	Engineer: Russell W. Joyner
Tool: MWD;MWD - Standard	Tied-to: User Defined

Site: Rattlesnake Unit 13-12 Fed 1H
Site Position: Northing: 378404.53 ft Latitude: 32 2 13.182 N
From: Map Easting: 825532.79 ft Longitude: 103 24 58.295 W
Position Uncertainty: 0.00 ft North Reference: Grid
Ground Level: 3232.00 ft Grid Convergence: 0.49 deg

Well: Rattlesnake Unit 13-12 Fed 1H				Slot Name:			
Well Position:	+N/-S	0.00 ft	Northing:	378404.53 ft	Latitude:	32 2	13.182 N
	+E/-W	0.00 ft	Easting :	825532.79 ft	Longitude:	103 24	58.295 W
Position Uncertainty:		0.00 ft					

Wellpath: ST01	Drilled From: ST00
Current Datum: SITE	Tie-on Depth: 14360.00 ft
Magnetic Data: 3/6/2013	Above System Datum: Mean Sea Level
Field Strength: 48373 nT	Declination: 7.29 deg
Vertical Section: Depth From (TVD)	Mag Dip Angle: 60.00 deg
ft	+N/-S ft
0.00	+E/-W ft
	Direction deg
	359.22

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
8409.00	1.46	117.78	8404.85	-120.69	102.87	0.00	-122.08	378283.84	825635.66	Tie On VES
8509.00	12.77	332.79	8504.10	-111.41	98.92	13.99	-112.75	378293.12	825631.71	First Wft Svy S
8541.00	15.59	342.77	8535.12	-104.15	96.03	11.63	-105.45	378300.38	825628.82	
8572.00	17.71	344.49	8564.82	-95.63	93.54	7.02	-96.90	378308.90	825626.33	
8604.00	19.47	344.22	8595.15	-85.81	90.79	5.51	-87.04	378318.72	825623.58	
8635.00	21.04	344.81	8624.23	-75.47	87.92	5.11	-76.66	378329.06	825620.71	
8667.00	22.66	347.11	8653.93	-63.91	85.04	5.72	-65.06	378340.62	825617.83	
8698.00	23.54	350.82	8682.45	-51.98	82.72	5.49	-53.10	378352.55	825615.51	
8729.00	25.70	352.37	8710.63	-39.20	80.84	7.27	-40.30	378365.33	825613.63	
8761.00	27.84	351.82	8739.20	-24.93	78.86	6.73	-26.00	378379.60	825611.65	
8792.00	30.09	349.39	8766.32	-10.12	76.40	8.19	-11.16	378394.41	825609.19	
8824.00	33.04	347.80	8793.58	6.29	73.07	9.58	5.30	378410.82	825605.86	
8855.00	36.31	347.11	8819.07	23.50	69.24	10.62	22.56	378428.03	825602.03	
8887.00	39.45	348.03	8844.33	42.69	65.02	9.97	41.80	378447.22	825597.81	
8918.00	44.21	347.23	8867.42	62.88	60.58	15.45	62.05	378467.41	825593.37	
8950.00	48.02	348.31	8889.60	85.41	55.70	12.15	84.65	378489.94	825588.49	
8981.00	51.40	347.80	8909.64	108.54	50.81	10.98	107.84	378513.07	825583.60	
9013.00	54.99	347.55	8928.81	133.57	45.34	11.24	132.94	378538.10	825578.13	
9044.00	58.36	346.42	8945.84	158.80	39.50	11.29	158.25	378563.33	825572.29	
9075.00	61.48	345.14	8961.38	184.80	32.91	10.68	184.34	378589.33	825565.70	
9107.00	65.02	341.99	8975.78	212.20	24.81	14.13	211.84	378616.73	825557.60	
9138.00	69.02	341.18	8987.88	239.27	15.80	13.13	239.03	378643.80	825548.59	
9169.00	71.95	341.32	8998.23	266.93	6.41	9.46	266.82	378671.46	825539.20	
9201.00	73.54	345.27	9007.73	296.20	-2.37	12.79	296.20	378700.73	825530.42	
9232.00	75.51	348.65	9016.00	325.30	-9.11	12.28	325.39	378729.83	825523.68	
9264.00	76.58	349.80	9023.72	355.80	-14.91	4.83	355.97	378760.33	825517.88	
9295.00	79.01	352.98	9030.27	385.76	-19.44	12.73	385.98	378790.29	825513.35	
9327.00	81.65	354.94	9035.65	417.12	-22.76	10.22	417.39	378821.65	825510.03	
9358.00	84.67	355.88	9039.34	447.80	-25.22	10.20	448.10	378852.33	825507.57	
9390.00	87.76	358.45	9041.45	479.68	-26.80	12.55	480.00	378884.21	825505.99	



Weatherford

WFT Survey Report X & Y's

**Weatherford**

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Site: Rattlesnake Unit 13-12 Fed 1H
Well: Rattlesnake Unit 13-12 Fed 1H
Wellpath: ST01

Date: 4/3/2013 Time: 04:57:19 Page: 2
Co-ordinate(NE) Reference: Well: Rattlesnake Unit 13-12 Fed 1H
Vertical (TVD) Reference: SITE 3257.0
Section (VS) Reference: Well (0.00N,0.00E,359.22Azi)
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
9421.00	90.21	358.20	9042.00	510.66	-27.70	7.94	510.99	378915.19	825505.09	
9450.00	91.33	357.03	9041.61	539.63	-28.91	5.58	539.98	378944.16	825503.88	
9518.00	92.03	357.76	9039.62	607.53	-32.00	1.49	607.91	379012.06	825500.79	
9613.00	89.02	358.04	9038.75	702.46	-35.48	3.18	702.87	379106.99	825497.31	
9707.00	88.53	357.40	9040.76	796.36	-39.22	0.86	796.82	379200.89	825493.57	
9802.00	89.37	359.10	9042.50	891.29	-42.12	2.00	891.78	379295.82	825490.67	
9896.00	90.70	359.98	9042.44	985.29	-42.87	1.70	985.78	379389.82	825489.92	
9991.00	92.45	2.73	9039.83	1080.21	-40.63	3.43	1080.67	379484.74	825492.16	
10086.00	91.61	0.97	9036.47	1175.10	-37.57	2.05	1175.50	379579.63	825495.22	
10180.00	91.68	0.74	9033.77	1269.05	-36.16	0.26	1269.42	379673.58	825496.63	
10275.00	90.00	359.80	9032.37	1364.03	-35.72	2.03	1364.39	379768.56	825497.07	
10370.00	90.07	0.47	9032.32	1459.03	-35.49	0.71	1459.38	379863.56	825497.30	
10464.00	91.68	0.84	9030.88	1553.01	-34.42	1.76	1553.34	379957.54	825498.37	
10559.00	90.42	359.46	9029.14	1647.99	-34.17	1.97	1648.30	380052.52	825498.62	
10654.00	90.84	357.44	9028.10	1742.95	-36.74	2.17	1743.29	380147.48	825496.05	
10749.00	88.39	356.04	9028.73	1837.78	-42.14	2.97	1838.18	380242.31	825490.65	
10843.00	87.41	356.58	9032.18	1931.52	-48.19	1.19	1932.00	380336.05	825484.60	
10937.00	89.23	356.26	9034.93	2025.29	-54.05	1.97	2025.84	380429.82	825478.74	
11031.00	89.44	356.64	9036.02	2119.11	-59.87	0.46	2119.73	380523.64	825472.92	
11125.00	89.02	357.48	9037.29	2212.97	-64.69	1.00	2213.65	380617.50	825468.10	
11219.00	89.16	357.95	9038.78	2306.89	-68.44	0.52	2307.60	380711.42	825464.35	
11313.00	87.83	358.28	9041.25	2400.80	-71.53	1.46	2401.55	380805.33	825461.26	
11407.00	89.37	357.71	9043.55	2494.71	-74.82	1.75	2495.50	380899.24	825457.97	
11501.00	92.59	358.52	9041.94	2588.63	-77.91	3.53	2589.46	380993.16	825454.88	
11595.00	93.22	357.80	9037.17	2682.46	-80.93	1.02	2683.32	381086.99	825451.86	
11690.00	95.32	357.09	9030.10	2777.10	-85.15	2.33	2778.00	381181.63	825447.64	
11784.00	96.51	358.02	9020.41	2870.51	-89.14	1.60	2871.46	381275.04	825443.65	
11878.00	93.78	357.65	9011.99	2964.06	-92.67	2.93	2965.04	381368.59	825440.12	
11973.00	93.64	358.85	9005.84	3058.81	-95.57	1.27	3059.83	381463.34	825437.22	
12067.00	93.22	357.43	9000.21	3152.59	-98.61	1.57	3153.64	381557.12	825434.18	
12161.00	93.08	357.75	8995.05	3246.37	-102.56	0.37	3247.46	381650.90	825430.23	
12255.00	91.75	357.48	8991.09	3340.20	-106.47	1.44	3341.34	381744.73	825426.32	
12350.00	92.59	359.34	8987.49	3435.09	-109.10	2.15	3436.26	381839.62	825423.69	
12444.00	92.59	359.87	8983.24	3528.99	-109.75	0.56	3530.16	381933.52	825423.04	
12539.00	93.50	0.87	8978.20	3623.85	-109.14	1.42	3625.00	382028.38	825423.65	
12633.00	93.57	0.42	8972.40	3717.67	-108.08	0.48	3718.80	382122.20	825424.71	
12728.00	93.29	0.55	8966.72	3812.49	-107.28	0.32	3813.60	382217.02	825425.51	
12822.00	93.08	0.10	8961.49	3906.35	-106.75	0.53	3907.44	382310.88	825426.04	
12916.00	92.73	359.09	8956.73	4000.22	-107.41	1.14	4001.31	382404.75	825425.38	
13011.00	92.31	1.06	8952.55	4095.13	-107.29	2.12	4096.21	382499.66	825425.50	
13105.00	93.01	359.59	8948.19	4189.02	-106.75	1.73	4190.09	382593.55	825426.04	
13129.00	93.01	359.16	8946.93	4212.99	-107.02	1.79	4214.05	382617.52	825425.77	
13224.00	93.64	359.31	8941.42	4307.82	-108.28	0.68	4308.89	382712.35	825424.51	
13318.00	93.29	359.49	8935.74	4401.64	-109.26	0.42	4402.72	382806.17	825423.53	
13413.00	90.49	0.31	8932.61	4496.58	-109.43	3.07	4497.65	382901.11	825423.36	
13508.00	89.79	359.36	8932.37	4591.58	-109.70	1.24	4592.64	382996.11	825423.09	
13602.00	89.86	359.65	8932.66	4685.57	-110.52	0.32	4686.64	383090.10	825422.27	
13697.00	89.30	359.81	8933.36	4780.57	-110.96	0.61	4781.63	383185.10	825421.83	
13792.00	88.88	0.05	8934.87	4875.55	-111.08	0.51	4876.62	383280.08	825421.71	
13886.00	91.61	0.06	8934.46	4969.55	-110.99	2.90	4970.60	383374.08	825421.80	
13981.00	92.10	359.62	8931.39	5064.49	-111.25	0.69	5065.54	383469.02	825421.54	
14076.00	91.19	359.75	8928.66	5159.45	-111.78	0.97	5160.50	383563.98	825421.01	



Weatherford

WFT Survey Report X & Y's

**Weatherford**

Company: Devon Energy
Field: Lea County, New Mexico (NAD 83)
Site: Rattlesnake Unit 13-12 Fed 1H
Well: Rattlesnake Unit 13-12 Fed 1H
Wellpath: ST01

Date: 4/3/2013 Time: 04:57:19 Page: 3
Co-ordinate(NE) Reference: Well: Rattlesnake Unit 13-12 Fed 1H
Vertical (TVD) Reference: SITE 3257.0
Section (VS) Reference: Well (0.00N,0.00E,359.22Azi)
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
14170.00	91.47	359.55	8926.48	5253.43	-112.35	0.37	5254.47	383657.96	825420.44	
14265.00	90.49	359.57	8924.86	5348.41	-113.08	1.03	5349.45	383752.94	825419.71	
14360.00	90.28	359.63	8924.22	5443.40	-113.74	0.23	5444.45	383847.93	825419.05	
14454.00	91.19	359.28	8923.01	5537.39	-114.64	1.04	5538.44	383941.92	825418.15	
14548.00	91.33	359.75	8920.94	5631.36	-115.43	0.52	5632.41	384035.89	825417.36	
14642.00	92.03	359.96	8918.19	5725.32	-115.67	0.78	5726.37	384129.85	825417.12	
14736.00	91.82	359.91	8915.03	5819.27	-115.78	0.23	5820.31	384223.80	825417.01	
14830.00	90.49	359.49	8913.14	5913.25	-116.27	1.48	5914.28	384317.78	825416.52	
14925.00	89.44	359.24	8913.19	6008.24	-117.32	1.14	6009.28	384412.77	825415.47	
15019.00	90.14	359.60	8913.54	6102.23	-118.27	0.84	6103.28	384506.76	825414.52	
15112.00	88.46	359.11	8914.67	6195.22	-119.32	1.88	6196.27	384599.75	825413.47	
15207.00	88.39	358.65	8917.29	6290.16	-121.18	0.49	6291.23	384694.69	825411.61	
15301.00	88.32	358.35	8919.98	6384.09	-123.64	0.33	6385.18	384788.62	825409.15	
15395.00	88.74	358.41	8922.40	6478.02	-126.29	0.45	6479.14	384882.55	825406.50	
15490.00	89.51	359.77	8923.85	6573.00	-127.80	1.64	6574.13	384977.53	825404.99	
15584.00	88.25	0.14	8925.68	6666.98	-127.87	1.40	6668.10	385071.51	825404.92	
15678.00	88.18	359.63	8928.61	6760.93	-128.06	0.55	6762.05	385165.46	825404.73	
15773.00	88.39	359.60	8931.45	6855.89	-128.70	0.22	6857.00	385260.42	825404.09	
15867.00	88.88	359.12	8933.69	6949.85	-129.75	0.73	6950.97	385354.38	825403.04	
15961.00	88.11	359.58	8936.16	7043.81	-130.82	0.95	7044.94	385448.34	825401.97	
16056.00	88.39	359.39	8939.06	7138.76	-131.67	0.36	7139.90	385543.29	825401.12	
16150.00	88.67	358.79	8941.48	7232.72	-133.16	0.70	7233.86	385637.25	825399.63	
16245.00	89.09	358.46	8943.33	7327.68	-135.44	0.56	7328.84	385732.21	825397.35	
16339.00	88.04	359.25	8945.69	7421.63	-137.32	1.40	7422.81	385826.16	825395.47	
16433.00	88.25	358.65	8948.73	7515.56	-139.04	0.68	7516.76	385920.09	825393.75	
16528.00	88.60	358.78	8951.34	7610.50	-141.17	0.39	7611.72	386015.03	825391.62	
16622.00	88.95	358.07	8953.35	7704.44	-143.75	0.84	7705.69	386108.97	825389.04	
16716.00	90.21	358.73	8954.04	7798.40	-146.38	1.51	7799.67	386202.93	825386.41	
16810.00	90.49	358.16	8953.46	7892.36	-148.93	0.68	7893.66	386296.89	825383.86	
16903.00	89.58	358.32	8953.41	7985.32	-151.79	0.99	7986.65	386389.85	825381.00	
16998.00	87.90	357.32	8955.50	8080.22	-155.40	2.06	8081.59	386484.75	825377.39	
17092.00	86.08	355.74	8960.43	8173.91	-161.08	2.56	8175.35	386578.44	825371.71	
17175.00	85.94	355.89	8966.21	8256.49	-167.12	0.25	8258.00	386661.02	825365.67	
17269.00	88.32	357.71	8970.92	8350.22	-172.36	3.19	8351.79	386754.75	825360.43	
17364.00	90.07	358.52	8972.25	8445.15	-175.48	2.03	8446.76	386849.68	825357.31	
17458.00	90.84	359.28	8971.50	8539.13	-177.29	1.15	8540.75	386943.66	825355.50	
17552.00	92.10	359.74	8969.09	8633.09	-178.09	1.43	8634.72	387037.62	825354.70	
17647.00	91.82	359.43	8965.84	8728.04	-178.78	0.44	8729.66	387132.57	825354.01	
17741.00	91.26	358.93	8963.32	8821.99	-180.12	0.80	8823.63	387226.52	825352.67	
17835.00	91.05	358.90	8961.42	8915.95	-181.90	0.23	8917.61	387320.48	825350.89	
17930.00	90.00	358.47	8960.55	9010.92	-184.08	1.19	9012.60	387415.45	825348.71	
17947.00	89.93	358.68	8960.56	9027.92	-184.51	1.30	9029.59	387432.45	825348.28	Last Wft Svy ST
18017.00	89.93	358.68	8960.65	9097.90	-186.12	0.00	9099.59	387502.43	825346.67	Proj. To Bit

Annotation

MD ft	TVD ft	
8409.00	8404.85	Tie On VES
8509.00	8504.10	First Wft Svy ST01
17947.00	8960.56	Last Wft Svy ST01
18017.00	8960.65	Proj. To Bit