

30-025-42252e



Company: Devon Energy
Lease/Well: Ragin Cajun 12 Federal/2H

Rig Name: Cactus 168
State/County: New Mexico/Lea
Latitude: 32.05, Longitude: -103.43
GRID North is 0.48 Degrees East of True North
VS-Azi: 2.71 Degrees



Depth Reference : RKB 23.8 Feet

DRILLOG MS GYRO SURVEY CALCULATIONS

Filename: ragin cajun 12 fed 2h.ut
Minimum Curvature Method
Report Date/Time: 4/20/2015 / 09:53

VES Survey International
Fort Worth, Texas
817-741-3610

Surveyor: Eric Warner
Ragin Cajun 12 Federal 2H / API 30-025-42256

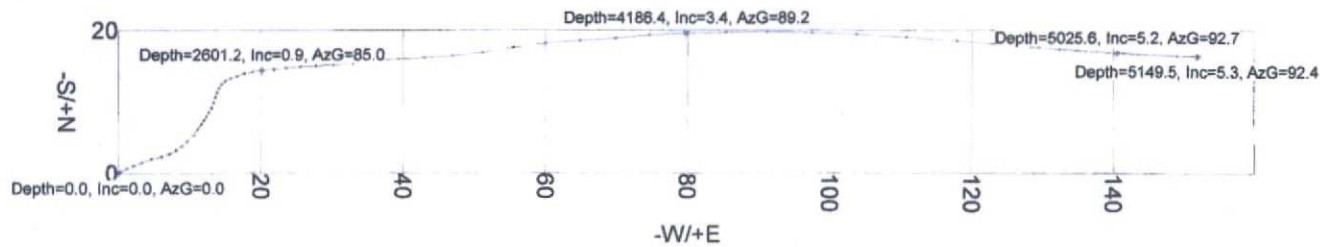
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	----
83.40	0.54	61.06	83.40	0.19	0.35	0.21	0.39	61.06	0.65
176.65	0.63	64.84	176.64	0.62	1.19	0.68	1.34	62.49	0.10
269.90	0.71	68.80	269.89	1.05	2.19	1.15	2.43	64.48	0.10
363.15	0.74	66.72	363.13	1.49	3.29	1.65	3.61	65.55	0.04
456.40	0.91	70.49	456.37	1.98	4.53	2.19	4.95	66.43	0.19
549.65	0.84	81.72	549.61	2.32	5.90	2.60	6.34	68.52	0.20
642.90	0.86	61.22	642.85	2.68	7.05	3.01	7.54	69.18	0.34
736.15	0.65	59.67	736.10	3.21	7.98	3.58	8.60	68.10	0.02
829.40	0.61	52.38	829.34	3.78	8.83	4.19	9.61	66.83	0.10
922.65	0.67	42.65	922.58	4.48	9.59	4.93	10.58	64.97	0.13
1015.90	0.72	40.14	1015.83	5.32	10.33	5.80	11.62	62.75	0.06
1109.15	0.60	37.98	1109.07	6.15	11.01	6.67	12.61	60.80	0.12
1202.40	0.44	31.66	1202.32	6.84	11.50	7.38	13.38	59.24	0.19
1295.65	0.42	35.52	1295.56	7.42	11.88	7.98	14.01	58.01	0.03
1388.90	0.38	29.94	1388.81	7.97	12.24	8.54	14.61	56.92	0.06
1482.15	0.41	36.19	1482.06	8.51	12.59	9.10	15.19	55.94	0.05
1575.40	0.46	23.89	1575.31	9.12	12.93	9.72	15.83	54.82	0.11
1668.65	0.50	21.39	1668.55	9.84	13.24	10.45	16.49	53.37	0.05

NOV 04 2015

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
1761.90	0.46	17.99	1761.80	10.58	13.50	11.21	17.15	51.92	0.05
1855.15	0.43	19.27	1855.05	11.27	13.73	11.91	17.77	50.63	0.03
1948.40	0.41	30.56	1948.30	11.89	14.02	12.54	18.38	49.70	0.09
2041.65	0.41	43.80	2041.54	12.41	14.41	13.08	19.02	49.28	0.10
2134.90	0.45	50.81	2134.79	12.88	14.93	13.57	19.71	49.21	0.07
2228.15	0.55	72.19	2228.04	13.25	15.64	13.97	20.49	49.73	0.23
2321.40	0.64	67.77	2321.28	13.58	16.54	14.35	21.40	50.62	0.10
2414.65	0.73	77.29	2414.53	13.91	17.60	14.72	22.43	51.69	0.16
2507.90	0.82	78.07	2507.77	14.18	18.84	15.05	23.58	53.04	0.10
2601.15	0.91	84.99	2601.01	14.38	20.24	15.32	24.82	54.60	0.14
2694.40	1.04	83.62	2694.24	14.54	21.81	15.55	26.21	56.32	0.14
2787.65	1.18	87.09	2787.48	14.68	23.61	15.76	27.80	58.13	0.17
2880.90	1.30	83.27	2880.70	14.85	25.62	16.05	29.61	59.90	0.16
2974.15	1.43	88.59	2973.93	15.01	27.84	16.31	31.63	61.67	0.19
3067.40	1.57	86.06	3067.15	15.12	30.28	16.54	33.84	63.46	0.16
3160.65	1.77	85.28	3160.38	15.33	32.98	16.87	36.37	65.07	0.22
3253.90	2.02	83.01	3253.55	15.65	36.05	17.33	39.30	66.54	0.28
3347.15	2.12	86.75	3346.74	15.94	39.40	17.79	42.51	67.97	0.18
3440.40	2.32	87.40	3439.92	16.13	43.01	18.14	45.93	69.45	0.22
3533.65	2.55	85.08	3533.09	16.39	46.96	18.59	49.74	70.76	0.27
3626.90	2.60	82.10	3626.25	16.66	51.12	19.26	53.83	71.75	0.15
3720.15	2.77	80.40	3719.39	17.53	55.44	20.13	58.14	72.46	0.21
3813.40	2.89	83.31	3812.53	18.18	60.00	20.99	62.69	73.15	0.20
3906.65	3.09	88.57	3905.65	18.51	64.85	21.56	67.44	74.07	0.36
3999.90	2.97	83.49	3998.77	18.85	69.77	22.13	72.27	74.88	0.32
4093.15	3.04	85.12	4091.89	19.33	74.63	22.84	77.09	75.48	0.12
4186.40	3.43	89.21	4185.00	19.58	79.88	23.34	82.24	76.23	0.48
4279.65	3.46	88.47	4278.08	19.70	85.48	23.72	87.72	77.02	0.06
4372.90	3.69	90.22	4371.15	19.76	91.29	24.05	93.41	77.79	0.27
4466.15	3.92	92.23	4464.19	19.82	97.47	24.21	99.43	78.62	0.29
4559.40	3.97	91.43	4557.22	19.42	103.88	24.31	105.68	79.41	0.08
4652.65	4.52	95.07	4650.21	19.01	110.77	24.23	112.39	80.26	0.55
4745.90	4.25	93.84	4743.19	18.46	117.87	24.01	119.31	81.10	0.31
4839.15	4.40	94.72	4836.18	17.93	124.88	23.82	126.16	81.83	0.18
4932.40	4.91	95.04	4929.12	17.29	132.42	23.53	133.55	82.56	0.55
5025.65	5.15	92.68	5022.01	16.74	140.58	23.37	141.57	83.21	0.34
5118.90	5.33	91.83	5114.87	16.41	149.09	23.44	149.99	83.72	0.21
5149.53	5.27	92.41	5145.37	16.30	151.91	23.47	152.78	83.87	0.27



VES Survey International
Fort Worth, Texas
817-741-3610
Surveyor: Eric Warner
Ragin Cajun 12 Federal 2H / API 30-025-42256



VES Survey Date: 4/10/2015

Well Name: RAGIN CAJUN 12 FED 2H

Sub-Division DELAWARE BASIN		Region DELAWARE BASIN EAST		Field Name RATTLESNAKE (NM)		County LEA		State/Province NM		
Surface Legal Location Sec 12 26S 34E		APN/UVI 3002542250		Latitude (°) 32° 3' 1.982" N		Longitude (°) 103° 25' 40.953" W		Orig KB Elevation (ft) 3,301.20		
								Ground Elev MSL (ft) 3,277.60		
								KB - GL (ft) 23.60		
Wellbore Name OH		Parent Wellbore OH		SAP Well ID 38189				Vertical Section Direction (°) 2.71		
Kick Offs & Key Depths										
Date 4/15/2015				Type Kick Off				Top Depth (ftKS) 8,625.0		
Actual Deviation Survey GYRO AND MWD, Proposed? No				Definitive? Yes		Proposed? No		Proposed Deviation Survey		
Deviation Survey										
Date 4/10/2015		Description GYRO AND MWD								
MD Tie In (ftKS)		TVD Tie in (ftKS)		Inclination Tie in (°)		Azimuth Tie in (°)		NSTie in (ft)		
								EWtie in (ft)		
Survey Data										
Date	MD (ftKS)	Incl (°)	Azm (°)	TVD (ftKS)	VS (ft)	N/S (ft)	E/W (ft)	DLS (°/100ft)	Survey Tool	Survey Company
4/10/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	83.40	0.54	61.06	83.40	0.21	0.19	0.34	0.65	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	176.65	0.63	64.84	176.64	0.68	0.62	1.19	0.10	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	269.90	0.71	68.80	269.89	1.15	1.05	2.20	0.10	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	363.15	0.74	66.72	363.13	1.65	1.49	3.29	0.04	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	456.40	0.91	70.49	456.37	2.19	1.98	4.54	0.19	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	549.65	0.84	81.72	549.61	2.60	2.33	5.91	0.20	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	642.90	0.66	61.22	642.85	3.01	2.68	7.06	0.34	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	736.15	0.65	59.67	736.10	3.58	3.21	7.99	0.02	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	829.40	0.61	52.38	829.34	4.19	3.78	8.84	0.10	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	922.65	0.67	42.65	922.58	4.93	4.48	9.60	0.13	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	1,015.90	0.72	40.14	1,015.83	5.81	5.33	10.35	0.06	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	1,109.15	0.60	37.98	1,109.07	6.68	6.16	11.02	0.13	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	1,202.40	0.44	31.66	1,202.32	7.39	6.85	11.51	0.18	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	1,295.65	0.42	35.52	1,295.56	7.99	7.44	11.90	0.04	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	1,388.90	0.38	29.94	1,388.81	8.55	7.98	12.25	0.06	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	1,482.15	0.41	36.19	1,482.06	9.11	8.52	12.60	0.06	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	1,575.40	0.46	23.89	1,575.31	9.73	9.13	12.95	0.11	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	1,668.65	0.50	21.39	1,668.55	10.47	9.85	13.25	0.05	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	1,761.90	0.46	17.99	1,761.80	11.21	10.59	13.52	0.05	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	1,855.15	0.43	19.27	1,855.05	11.91	11.27	13.75	0.03	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	1,948.40	0.41	30.56	1,948.30	12.54	11.89	14.03	0.09	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	2,041.65	0.41	43.80	2,041.54	13.09	12.42	14.43	0.10	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	2,134.90	0.45	50.81	2,134.79	13.58	12.89	14.95	0.07	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	2,228.15	0.55	72.19	2,228.04	13.99	13.26	15.66	0.23	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	2,321.40	0.64	67.77	2,321.28	14.36	13.59	16.57	0.11	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	2,414.65	0.73	77.29	2,414.53	14.74	13.92	17.63	0.16	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	2,507.90	0.82	78.07	2,507.77	15.07	14.19	18.86	0.10	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	2,601.15	0.91	84.99	2,601.01	15.33	14.39	20.25	0.15	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	2,694.40	1.04	83.62	2,694.24	15.57	14.55	21.83	0.14	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	2,787.65	1.18	87.09	2,787.48	15.80	14.69	23.63	0.17	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	2,880.90	1.30	83.27	2,880.70	16.08	14.87	25.64	0.16	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	2,974.15	1.43	88.59	2,973.93	16.32	15.02	27.85	0.19	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	3,067.40	1.57	86.06	3,067.15	16.55	15.14	30.29	0.17	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	3,160.65	1.77	85.28	3,160.36	16.89	15.34	33.00	0.22	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	3,253.90	2.02	83.01	3,253.55	17.35	15.66	36.07	0.28	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	3,347.15	2.12	86.75	3,346.74	17.80	15.96	39.42	0.18	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	3,440.40	2.32	87.40	3,439.92	18.16	16.14	43.03	0.22	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	3,533.65	2.55	85.08	3,533.09	18.61	16.41	46.98	0.27	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	3,626.90	2.60	82.10	3,626.25	19.27	16.87	51.14	0.15	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	3,720.15	2.77	80.40	3,719.39	20.14	17.54	55.46	0.20	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	3,813.40	2.89	83.31	3,812.53	21.01	18.19	60.01	0.20	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	3,906.65	3.09	88.57	3,905.65	21.57	18.53	64.86	0.36	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	3,999.90	2.97	83.49	3,998.77	22.14	18.86	69.77	0.32	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	4,093.15	3.04	85.12	4,091.89	22.85	19.35	74.64	0.12	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	4,186.40	3.43	89.21	4,185.00	23.35	19.80	79.89	0.49	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	4,279.65	3.46	88.47	4,278.08	23.73	19.71	85.49	0.06	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	4,372.90	3.69	90.22	4,371.15	24.07	19.77	91.31	0.27	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	4,466.15	3.92	92.23	4,464.19	24.23	19.64	97.49	0.29	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	4,559.40	3.97	91.43	4,557.22	24.32	19.43	103.90	0.08	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	4,652.65	4.52	95.07	4,650.21	24.25	19.03	110.79	0.66	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	4,745.90	4.25	93.84	4,743.19	24.03	18.47	117.90	0.31	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	4,839.15	4.40	94.72	4,836.17	23.83	17.95	124.91	0.18	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	4,932.40	4.91	95.04	4,929.12	23.54	17.30	132.45	0.55	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	5,025.65	5.15	92.68	5,022.01	23.38	16.76	140.61	0.34	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	5,118.90	5.33	91.83	5,114.87	23.45	16.42	149.12	0.21	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	5,149.53	5.27	92.41	5,145.37	23.48	16.32	151.94	0.26	GYRO	VAUHGN ENERGY SERVICES
4/10/2015	5,297.00	4.80	95.70	5,292.27	23.20	15.42	164.85	0.37	MWD	LEAM DRILLING SYSTEMS
4/10/2015	5,348.00	5.30	91.50	5,343.07	23.13	15.15	169.33	1.22	MWD	LEAM DRILLING SYSTEMS
4/10/2015	5,443.00	7.80	85.30	5,437.44	24.06	15.56	180.14	2.73	MWD	LEAM DRILLING SYSTEMS
4/10/2015	5,539.00	9.20	85.70	5,532.39	25.84	16.67	194.29	1.46	MWD	LEAM DRILLING SYSTEMS
4/10/2015	5,634.00	9.90	89.50	5,626.07	27.22	17.31	210.03	0.99	MWD	LEAM DRILLING SYSTEMS
4/10/2015	5,730.00	8.70	86.70	5,720.81	28.44	17.80	225.53	1.34	MWD	LEAM DRILLING SYSTEMS
4/10/2015	5,825.00	6.90	83.20	5,814.92	30.14	18.69	238.37	1.96	MWD	LEAM DRILLING SYSTEMS
4/10/2015	5,921.00	6.80	86.50	5,910.24	31.70	19.92	249.77	0.42	MWD	LEAM DRILLING SYSTEMS
4/10/2015	6,017.00	7.10	87.20	6,005.53	32.89	20.55	261.37	0.32	MWD	LEAM DRILLING SYSTEMS
Page 1/3										
Report Printed: 7/30/2015										



Directional Survey

Well Name: RAGIN CAJUN 12 FED 2H

DELAWARE BASIN		Region		Field Name			County		State/Province				
DELAWARE BASIN EAST		RATTLESNAKE (NM)											
Surface Legal Location		APN/UMI		Latitude (°)		Longitude (°)		Orig KB Elevation (ft)		Ground Elev MSL (ft)		KB - GL (ft)	
Sec 12 26S 34E		3002542255		32° 3' 1.982" N		103° 25' 40.953" W		3,301.20		3,277.60		23.60	
Survey Data													
Date	MO (ftKB)	Incl (°)	Azm (°)	TVD (ftKS)	VS (ft)	NS (ft)	E/W (ft)	CLS (°/100ft)	Survey Tool	Survey Company			
4/10/2015	6,112.00	7.50	87.10	6,099.76	34.06	21.16	273.42	0.42	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	6,208.00	6.20	76.70	6,195.08	36.10	22.66	284.72	1.87	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	6,304.00	6.30	73.70	6,290.51	39.25	25.34	294.83	0.36	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	6,399.00	5.60	82.00	6,385.00	41.81	27.44	304.42	1.17	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	6,495.00	5.50	88.60	6,480.55	43.01	28.21	313.66	0.67	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	6,590.00	7.20	90.40	6,574.96	43.57	28.28	324.16	1.80	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	6,686.00	7.80	88.50	6,670.14	44.29	28.41	336.69	0.68	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	6,781.00	8.30	92.30	6,764.21	44.82	28.30	349.99	0.77	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	6,876.00	8.70	84.80	6,858.17	45.85	28.68	363.99	1.24	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	6,972.00	9.30	85.70	6,952.98	47.80	29.92	378.96	0.64	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	7,068.00	9.80	90.80	7,047.65	49.02	30.38	394.86	1.02	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	7,163.00	8.50	84.60	7,141.45	50.28	30.93	409.94	1.72	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	7,258.00	6.50	89.00	7,235.63	51.62	31.69	422.31	2.19	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	7,354.00	6.50	91.30	7,331.01	52.10	31.66	433.17	0.27	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	7,449.00	6.20	92.20	7,425.43	52.28	31.34	443.67	0.33	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	7,544.00	6.60	88.80	7,519.84	52.72	31.27	454.26	0.60	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	7,640.00	6.60	89.70	7,615.20	53.40	31.44	465.29	0.13	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	7,735.00	6.60	88.80	7,709.57	54.08	31.60	476.21	0.13	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	7,831.00	6.40	90.20	7,804.95	54.71	31.72	487.07	0.28	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	7,926.00	6.30	95.50	7,899.37	54.69	31.20	497.56	0.63	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	8,022.00	6.00	85.10	7,994.82	55.10	31.12	507.80	1.20	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	8,117.00	5.50	81.40	8,089.35	56.65	32.23	517.25	0.65	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	8,213.00	4.30	89.00	8,184.99	57.78	32.98	525.39	1.42	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	8,309.00	3.80	85.50	8,280.75	58.41	33.29	532.16	0.58	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	8,404.00	3.60	91.80	8,375.56	58.86	33.44	538.28	0.48	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	8,499.00	3.80	92.30	8,470.36	58.93	33.22	544.41	0.21	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	8,595.00	3.30	99.40	8,566.17	58.63	32.64	550.32	0.69	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	8,627.00	2.60	89.00	8,598.13	58.57	32.51	551.95	2.75	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	8,658.00	2.20	43.80	8,629.11	59.06	32.95	553.06	6.07	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	8,690.00	4.00	8.30	8,661.06	60.64	34.50	553.65	7.97	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	8,722.00	7.10	0.90	8,692.91	63.72	37.58	553.84	9.92	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	8,754.00	10.30	0.20	8,724.54	68.56	42.42	553.88	10.01	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	8,786.00	13.50	359.90	8,755.84	75.15	49.02	553.89	10.00	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	8,818.00	17.40	0.40	8,786.68	83.66	57.54	553.91	12.19	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	8,850.00	21.40	0.20	8,816.86	94.28	68.17	553.97	12.50	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	8,881.00	25.30	0.90	8,845.31	106.56	80.45	554.09	12.61	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	8,913.00	29.00	0.40	8,873.78	121.15	95.05	554.25	11.58	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	8,945.00	32.50	0.20	8,901.28	137.49	111.41	554.34	10.94	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	8,977.00	36.60	0.90	8,927.63	155.62	129.55	554.52	12.87	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,009.00	40.60	0.90	8,952.63	175.57	149.51	554.83	12.50	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,041.00	44.60	1.80	8,976.18	197.22	171.16	555.35	12.64	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,072.00	47.90	2.30	8,997.62	219.61	193.53	556.15	10.71	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,104.00	51.50	3.00	9,018.31	244.01	217.91	557.28	11.37	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,136.00	53.60	3.20	9,037.77	269.41	243.27	558.66	6.58	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,168.00	55.90	3.60	9,056.24	295.54	269.36	560.21	7.26	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,200.00	58.90	3.70	9,073.48	322.49	296.26	561.93	9.38	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,232.00	61.00	4.10	9,089.50	350.19	323.89	563.81	6.65	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,264.00	62.50	3.70	9,104.65	378.37	352.01	565.73	4.82	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,295.00	63.70	3.20	9,118.67	406.01	379.61	567.39	4.13	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,327.00	65.30	2.90	9,132.45	434.89	408.45	568.93	5.07	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,359.00	66.50	2.50	9,145.51	464.10	437.63	570.30	3.92	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,391.00	67.60	2.20	9,157.99	493.57	467.07	571.51	3.54	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,423.00	69.30	2.20	9,169.74	523.33	496.81	572.65	5.31	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,455.00	71.40	2.20	9,180.50	553.46	526.92	573.81	6.56	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,487.00	74.10	2.70	9,189.99	584.02	557.45	575.12	8.57	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,518.00	76.80	2.90	9,197.83	614.01	587.41	576.58	8.09	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,550.00	79.20	3.20	9,204.54	645.30	618.65	578.25	8.18	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,582.00	81.50	3.60	9,209.90	676.84	650.14	580.12	7.29	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,614.00	83.80	3.70	9,214.00	708.57	681.81	582.14	7.19	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,659.00	86.50	3.70	9,217.80	753.40	726.55	585.03	6.00	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,691.00	87.80	3.60	9,219.39	785.35	758.44	587.07	4.07	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,723.00	88.90	3.40	9,220.31	817.34	790.37	589.02	3.49	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,755.00	90.90	2.90	9,220.37	849.33	822.32	590.78	6.44	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,787.00	92.90	3.00	9,219.31	881.31	854.26	592.42	6.26	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,818.00	93.10	2.90	9,217.69	912.27	885.17	594.02	0.72	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	9,914.00	91.40	3.70	9,213.92	1,008.19	980.94	599.54	1.96	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	10,009.00	89.40	3.40	9,213.25	1,103.17	1,075.75	605.42	2.13	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	10,105.00	89.60	4.10	9,214.09	1,199.15	1,171.54	611.70	0.76	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	10,201.00	88.50	3.00	9,215.68	1,295.12	1,267.34	617.64	1.62	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	10,296.00	89.60	4.60	9,217.26	1,390.09	1,362.11	623.94	2.04	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	10,392.00	88.80	4.30	9,218.80	1,486.03	1,457.81	631.38	0.89	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	10,487.00	90.10	3.60	9,219.51	1,581.00	1,552.58	637.93	1.55	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	10,583.00	90.10	1.80	9,219.34	1,677.00	1,648.47	642.45	1.87	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	10,678.00	90.00	2.20	9,219.26	1,771.99	1,743.41	645.77	0.43	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	10,774.00	90.70	2.90	9,218.67	1,867.99	1,839.31	650.04	1.03	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	10,869.00	91.50	4.10	9,216.85	1,962.96	1,934.11	655.83	1.52	MWD	LEAM DRILLING SYSTEMS			
4/10/2015	10,965.00	90.70	2.90	9,215.01	2,058.93	2,029.92	661.69	1.50	MWD	LEAM DRILLING SYSTEMS			
Page 2/3													
Report Printed: 7/30/2014													

Well Name: RAGIN CAJUN 12 FED 2H

Sub-Division DELAWARE BASIN	Region DELAWARE BASIN EAST	Field Name RATTLESNAKE (NM)	County LEA	State/Province NM
Surface Legal Location Sec 12 26S 34E	APRAJN 3002542256	Latitude (°) 32° 3' 1.982" N	Longitude (°) 103° 25' 40.953" W	Orig KB Elevation (ft) 3,301.20
				Ground Elev MSL (ft) 3,277.60
				KB - GL (ft) 23.60

Survey Data										
Date	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	VS (ft)	N/S (ft)	E/W (ft)	DLS (°/100ft)	Survey Tool	Survey Company
4/10/2015	11,060.00	89.90	2.20	9,214.51	2,153.93	2,124.82	665.92	1.12	MWD	LEAM DRILLING SYSTEMS
4/10/2015	11,156.00	88.40	1.60	9,215.93	2,249.90	2,220.75	669.10	1.68	MWD	LEAM DRILLING SYSTEMS
4/10/2015	11,251.00	88.50	1.50	9,218.50	2,344.85	2,315.68	671.67	0.15	MWD	LEAM DRILLING SYSTEMS
4/10/2015	11,347.00	89.60	2.50	9,220.10	2,440.83	2,411.61	675.02	1.55	MWD	LEAM DRILLING SYSTEMS
4/10/2015	11,442.00	89.30	4.40	9,221.01	2,535.81	2,506.43	680.74	2.02	MWD	LEAM DRILLING SYSTEMS
4/10/2015	11,538.00	89.30	4.30	9,222.18	2,631.76	2,602.14	688.02	0.10	MWD	LEAM DRILLING SYSTEMS
4/10/2015	11,633.00	90.20	3.20	9,222.59	2,726.74	2,696.94	694.23	1.50	MWD	LEAM DRILLING SYSTEMS
4/10/2015	11,729.00	89.60	3.00	9,222.76	2,822.74	2,792.80	699.42	0.66	MWD	LEAM DRILLING SYSTEMS
4/10/2015	11,824.00	89.90	2.70	9,223.18	2,917.74	2,887.68	704.15	0.45	MWD	LEAM DRILLING SYSTEMS
4/10/2015	11,920.00	91.40	3.00	9,222.09	3,013.73	2,983.55	708.92	1.59	MWD	LEAM DRILLING SYSTEMS
4/10/2015	12,015.00	91.10	2.50	9,220.02	3,108.71	3,078.42	713.48	0.61	MWD	LEAM DRILLING SYSTEMS
4/10/2015	12,111.00	90.30	1.80	9,218.84	3,204.69	3,174.34	717.08	1.11	MWD	LEAM DRILLING SYSTEMS
4/10/2015	12,206.00	91.90	1.80	9,217.02	3,299.66	3,269.27	720.06	1.68	MWD	LEAM DRILLING SYSTEMS
4/10/2015	12,302.00	91.70	2.30	9,214.00	3,395.61	3,365.16	723.49	0.56	MWD	LEAM DRILLING SYSTEMS
4/10/2015	12,397.00	89.00	2.00	9,213.42	3,490.59	3,460.09	727.06	2.86	MWD	LEAM DRILLING SYSTEMS
4/10/2015	12,493.00	89.30	2.30	9,214.85	3,586.58	3,556.01	730.66	0.44	MWD	LEAM DRILLING SYSTEMS
4/10/2015	12,588.00	90.30	2.70	9,215.18	3,681.58	3,650.92	734.80	1.13	MWD	LEAM DRILLING SYSTEMS
4/10/2015	12,684.00	89.40	2.30	9,215.43	3,777.57	3,746.82	738.99	1.03	MWD	LEAM DRILLING SYSTEMS
4/10/2015	12,779.00	90.80	2.50	9,215.26	3,872.57	3,841.74	742.97	1.49	MWD	LEAM DRILLING SYSTEMS
4/10/2015	12,875.00	90.90	2.70	9,213.84	3,968.56	3,937.83	747.32	0.23	MWD	LEAM DRILLING SYSTEMS
4/10/2015	12,970.00	87.20	1.60	9,215.42	4,063.52	4,032.53	750.89	4.06	MWD	LEAM DRILLING SYSTEMS
4/10/2015	13,066.00	90.10	2.20	9,217.68	4,159.48	4,128.44	754.07	3.08	MWD	LEAM DRILLING SYSTEMS
4/10/2015	13,161.00	90.40	2.90	9,217.26	4,254.47	4,223.34	758.29	0.80	MWD	LEAM DRILLING SYSTEMS
4/10/2015	13,257.00	91.10	3.40	9,216.01	4,350.46	4,319.19	763.57	0.90	MWD	LEAM DRILLING SYSTEMS
4/10/2015	13,352.00	92.00	3.90	9,213.44	4,445.41	4,413.96	769.61	1.08	MWD	LEAM DRILLING SYSTEMS
4/10/2015	13,448.00	91.90	4.30	9,210.17	4,541.33	4,509.66	776.47	0.43	MWD	LEAM DRILLING SYSTEMS
4/10/2015	13,543.00	92.60	5.00	9,206.44	4,636.20	4,604.27	784.17	1.04	MWD	LEAM DRILLING SYSTEMS
4/10/2015	13,639.00	89.80	4.60	9,204.43	4,732.11	4,699.91	792.20	2.95	MWD	LEAM DRILLING SYSTEMS
4/10/2015	13,734.00	90.20	5.10	9,204.43	4,827.04	4,794.57	800.23	0.67	MWD	LEAM DRILLING SYSTEMS
4/10/2015	13,830.00	87.80	4.30	9,206.10	4,922.96	4,890.22	808.10	2.64	MWD	LEAM DRILLING SYSTEMS
4/10/2015	13,884.00	87.10	4.10	9,208.51	4,976.89	4,944.02	812.05	1.35	MWD	LEAM DRILLING SYSTEMS
4/10/2015	13,950.00	87.10	4.10	9,211.85	5,042.78	5,009.77	816.76	0.00	BIT	LEAM DRILLING SYSTEMS