



May 27, 2014

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

NM OIL CONSERVATION
ARTESIA DISTRICT

SEP 17 2014

RECEIVED

Attn: David Cook

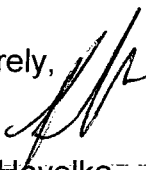
15-41513

Re: **Rigel 20 Fed Com 6H**

Please find enclosed a copy of the survey from 0.00' to 7280.00' 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,

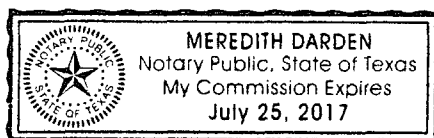

Keith Havelka
Operations

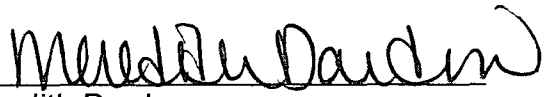
STATE OF TEXAS §

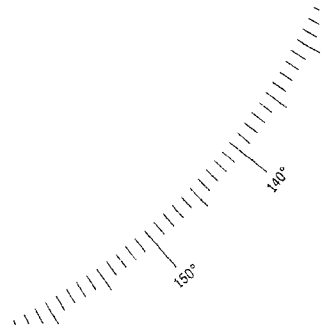
§

COUNTY OF NUECES §

This instrument was acknowledged before me on the 27th day of May,
A.D., 2014, by Keith Havelka.




Meredith Darden
Notary Public, State of Texas





Company: Devon Energy
Lease/Well: Rigel 20 Fed Com/6H

Location: S20 T19S R31E

Rig Name: Scan Texas

State/County: New Mexico/Eddy

Latitude: 32.55, Longitude: -103.90

GRID North is 0.23 Degrees East of True North

VS-Azi: 89.67 Degrees



Depth Reference : R.K.B. = 26 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: gyro survey.ut

Minimum Curvature Method

Report Date/Time: 5/27/2014 / 14:02

VES Survey International

Midland, TX

432-563-5444

Surveyor: Andrew Askew

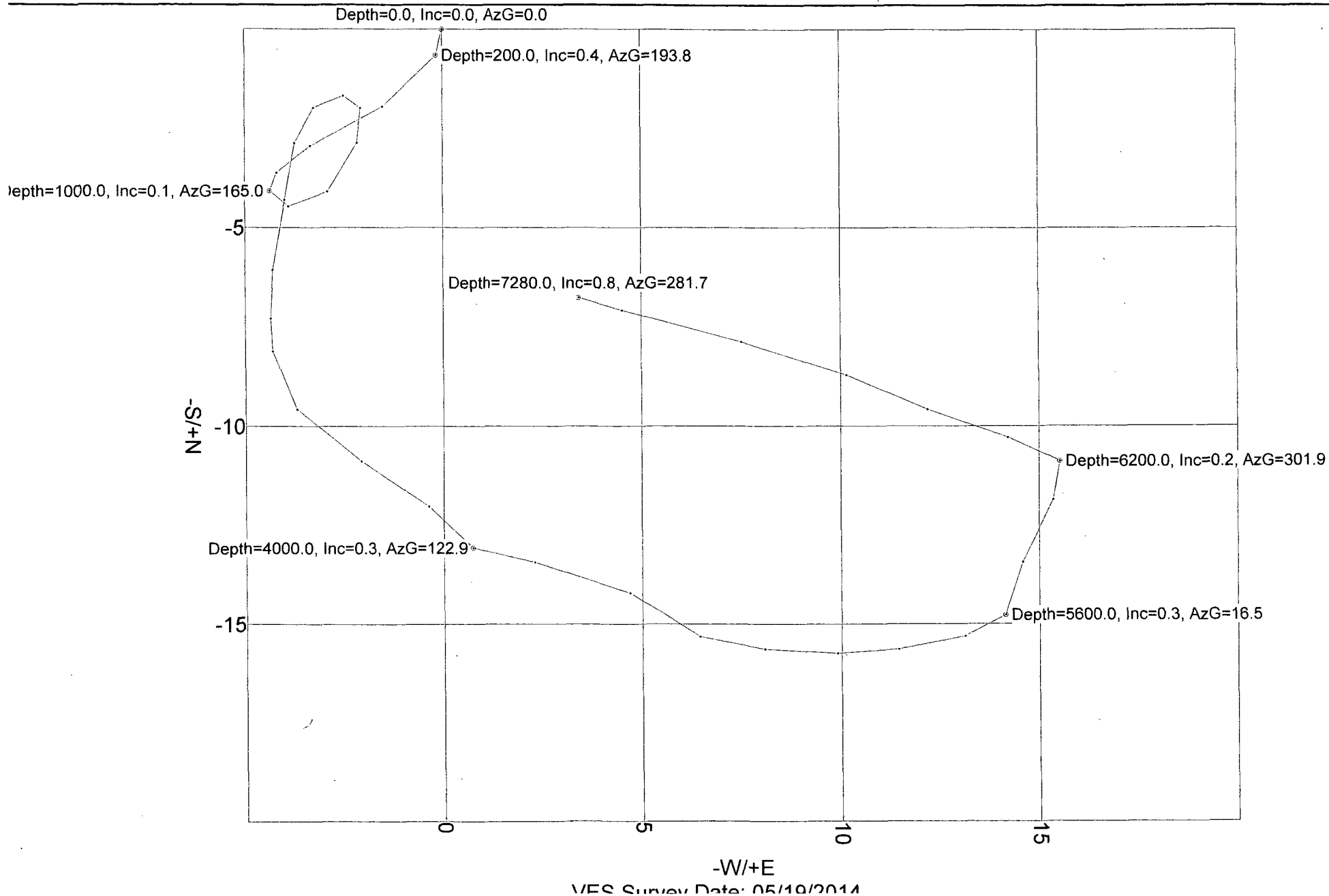
Rigel 20 Fed Com 6H / API 30-015-41513

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	****
200.00	0.39	193.76	200.00	-0.66	-0.16	-0.17	0.68	193.76	0.19
400.00	0.78	242.13	399.99	-1.96	-1.53	-1.54	2.48	217.98	0.30
600.00	0.42	241.46	599.98	-2.94	-3.37	-3.39	4.48	228.90	0.18
800.00	0.22	211.04	799.97	-3.62	-4.21	-4.23	5.55	229.33	0.13
1000.00	0.08	165.03	999.97	-4.07	-4.37	-4.40	5.98	227.03	0.09
1200.00	0.29	121.51	1199.97	-4.47	-3.91	-3.93	5.94	221.20	0.12
1400.00	0.48	40.58	1399.97	-4.10	-2.94	-2.96	5.04	215.66	0.26
1600.00	0.36	19.02	1599.96	-2.87	-2.19	-2.21	3.61	217.40	0.10
1800.00	0.17	339.39	1799.96	-1.99	-2.09	-2.10	2.89	226.37	0.13
2000.00	0.20	275.62	1999.96	-1.68	-2.54	-2.54	3.04	236.42	0.10
2200.00	0.30	230.56	2199.96	-1.98	-3.28	-3.29	3.83	238.84	0.11
2400.00	0.32	187.33	2399.96	-2.87	-3.76	-3.78	4.73	232.60	0.12
2600.00	0.51	191.50	2599.95	-4.30	-4.01	-4.03	5.88	222.99	0.09
2800.00	0.52	188.03	2799.94	-6.06	-4.31	-4.35	7.44	215.42	0.02
3000.00	0.19	168.27	2999.94	-7.29	-4.37	-4.41	8.50	210.93	0.17
3200.00	0.28	182.90	3199.94	-8.11	-4.32	-4.37	9.19	208.05	0.05
3400.00	0.66	147.18	3399.93	-9.57	-3.73	-3.78	10.27	201.27	0.23
3600.00	0.60	109.24	3599.92	-10.88	-2.11	-2.18	11.09	190.99	0.21

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
3800.00	0.62	137.10	3799.91	-12.02	-0.39	-0.45	12.03	181.83	0.15
4000.00	0.27	122.92	3999.90	-13.07	0.74	0.67	13.09	176.75	0.18
4200.00	0.67	95.60	4199.90	-13.44	2.30	2.22	13.63	170.28	0.23
4400.00	0.80	118.54	4399.88	-14.21	4.69	4.61	14.97	161.75	0.16
4600.00	0.40	129.11	4599.87	-15.32	6.45	6.36	16.62	157.17	0.21
4800.00	0.63	83.64	4799.86	-15.63	8.08	7.99	17.60	152.67	0.23
5000.00	0.44	107.70	4999.85	-15.74	9.90	9.81	18.60	147.84	0.15
5200.00	0.51	67.41	5199.85	-15.64	11.44	11.35	19.38	143.81	0.17
5400.00	0.49	90.72	5399.84	-15.31	13.12	13.03	20.16	139.41	0.10
5600.00	0.33	16.53	5599.83	-14.78	14.14	14.05	20.45	136.26	0.26
5800.00	0.48	19.40	5799.83	-13.44	14.58	14.50	19.83	132.67	0.08
6000.00	0.53	32.41	5999.82	-11.87	15.35	15.28	19.41	127.72	0.06
6200.00	0.22	301.95	6199.82	-10.90	15.52	15.46	18.97	125.07	0.29
6400.00	0.61	292.54	6399.81	-10.29	14.22	14.16	17.55	125.89	0.20
6600.00	0.62	286.06	6599.80	-9.58	12.19	12.14	15.50	128.16	0.04
6800.00	0.66	299.27	6799.79	-8.72	10.14	10.09	13.37	130.67	0.08
7000.00	0.94	279.59	6999.77	-7.88	7.51	7.47	10.89	136.35	0.19
7200.00	0.84	290.59	7199.75	-7.09	4.52	4.48	8.40	147.48	0.10
7280.00	0.80	281.67	7279.74	-6.77	3.42	3.39	7.58	153.16	0.17



VES Survey International
Midland, TX
432-563-5444
Surveyor: Andrew Askew
Rigel 20 Fed Com 6H / API 30-015-41513





Directional Survey

District DELAWARE BASIN	County EDDY	Field Name HACKBERRY	Project Group DELAWARE BASIN REG	State/Province NM			
Surface Legal Location SEC20 T19S R31E	API/UWI 3001541513	Latitude (°) 32° 38' 54.524" N	Longitude (°) 103° 53' 56.336" W	Ground Elev... 3,415.70	KB - GL (ft) 26.00	Orig KB Elev (ft) 3,441.70	Tubing Head Elevation (ft)
Wellbores							
Wellbore Name OH	Parent Wellbore	SAP Well ID	Kick Off Depth (ftKB)	Vertical Section Direction (°) 89.67			
Actual Deviation Survey VES GYRO, Proposed? No		Definitive? Yes	Proposed? No	Proposed Deviation Survey			

Deviation Survey					
Date 5/20/2014	Description VES GYRO				
MD Tie In (ftKB) 0.00	TVD Tie In (ftKB) 0.00	Inclination Tie In (°) 0.00	Azimuth Tie In (°) 0.00	NS Tie In (ft) 0.00	EWTie In (ft) 0.00

Survey Data										
Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (#/100ft)	Survey Tool	Survey Company
5/20/2014	200.00	0.39	193.76	200.00	-0.17	-0.66	-0.16	0.20	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	400.00	0.78	242.13	399.99	-1.54	-1.96	-1.53	0.30	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	600.00	0.42	241.46	599.98	-3.39	-2.95	-3.37	0.18	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	800.00	0.22	211.04	799.97	-4.24	-3.62	-4.22	0.13	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	1,000.00	0.08	165.03	999.97	-4.40	-4.09	-4.38	0.09	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	1,200.00	0.29	121.51	1,199.97	-3.94	-4.49	-3.91	0.12	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	1,400.00	0.48	40.58	1,399.97	-2.96	-4.12	-2.93	0.26	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	1,600.00	0.36	19.02	1,599.96	-2.20	-2.89	-2.18	0.10	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	1,800.00	0.17	339.39	1,799.96	-2.10	-2.01	-2.08	0.13	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	2,000.00	0.20	275.62	1,999.96	-2.55	-1.70	-2.54	0.10	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	2,200.00	0.30	230.56	2,199.96	-3.30	-2.00	-3.29	0.11	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	2,400.00	0.32	187.33	2,399.96	-3.78	-2.89	-3.76	0.11	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	2,600.00	0.51	191.50	2,599.95	-4.04	-4.31	-4.01	0.10	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	2,800.00	0.52	188.03	2,799.94	-4.35	-6.08	-4.32	0.02	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	3,000.00	0.19	168.27	2,999.94	-4.42	-7.31	-4.38	0.17	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	3,200.00	0.28	182.90	3,199.94	-4.38	-8.12	-4.33	0.05	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	3,400.00	0.66	147.18	3,399.93	-3.79	-9.58	-3.73	0.23	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	3,600.00	0.60	109.24	3,599.92	-2.18	-10.89	-2.12	0.21	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	3,800.00	0.62	137.10	3,799.91	-0.46	-12.03	-0.40	0.15	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	4,000.00	0.27	122.92	3,999.90	0.66	-13.08	0.74	0.18	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	4,200.00	0.67	95.60	4,199.90	2.22	-13.45	2.30	0.22	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	4,400.00	0.80	118.54	4,399.88	4.60	-14.23	4.69	0.16	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	4,600.00	0.40	129.11	4,599.87	6.37	-15.33	6.45	0.21	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	4,800.00	0.63	83.64	4,799.86	8.00	-15.65	8.09	0.23	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	5,000.00	0.44	107.70	4,999.85	9.82	-15.77	9.91	0.15	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	5,200.00	0.51	67.41	5,199.85	11.38	-15.66	11.47	0.17	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	5,400.00	0.49	90.72	5,399.84	13.06	-15.33	13.14	0.10	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	5,600.00	0.33	16.53	5,599.83	14.08	-14.78	14.16	0.26	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	5,800.00	0.48	19.40	5,799.83	14.53	-13.44	14.61	0.08	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	6,000.00	0.53	32.41	5,999.82	15.31	-11.87	15.38	0.06	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	6,200.00	0.22	301.95	6,199.82	15.49	-10.89	15.55	0.29	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	6,400.00	0.61	292.54	6,399.81	14.18	-10.28	14.24	0.20	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	6,600.00	0.62	286.06	6,599.80	12.16	-9.57	12.22	0.04	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	6,800.00	0.66	299.27	6,799.79	10.12	-8.71	10.17	0.08	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	7,000.00	0.94	279.59	6,999.77	7.50	-7.87	7.55	0.19	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	7,200.00	0.84	290.59	7,199.75	4.52	-7.08	4.56	0.10	GYRO	VAUHG N ENERGY SERVICES
5/20/2014	7,280.00	0.80	281.67	7,279.74	3.42	-6.76	3.46	0.17	GYRO	VAUHG N ENERGY SERVICES
5/21/2014	7,325.00	0.64	279.33	7,324.73	2.87	-6.66	2.91	0.36	MWD	VAUHG N ENERGY SERVICES
5/21/2014	7,357.00	0.44	320.90	7,356.73	2.62	-6.53	2.65	1.33	MWD	VAUHG N ENERGY SERVICES
5/21/2014	7,388.00	1.72	77.89	7,387.73	3.00	-6.34	3.03	6.32	MWD	VAUHG N ENERGY SERVICES
5/21/2014	7,420.00	4.73	89.37	7,419.67	4.79	-6.23	4.82	9.57	MWD	VAUHG N ENERGY SERVICES
5/21/2014	7,451.00	7.94	89.24	7,450.48	8.21	-6.18	8.24	10.35	MWD	VAUHG N ENERGY SERVICES
5/21/2014	7,483.00	11.15	94.20	7,482.03	13.50	-6.38	13.54	10.35	MWD	VAUHG N ENERGY SERVICES
5/22/2014	7,514.00	11.71	98.81	7,512.42	19.60	-7.08	19.64	3.46	MWD	VAUHG N ENERGY SERVICES
5/22/2014	7,546.00	11.05	101.07	7,543.79	25.81	-8.17	25.86	2.49	MWD	VAUHG N ENERGY SERVICES
5/22/2014	7,577.00	13.81	102.21	7,574.06	32.34	-9.52	32.39	8.94	MWD	VAUHG N ENERGY SERVICES
5/22/2014	7,608.00	16.58	101.64	7,603.97	40.28	-11.20	40.34	8.95	MWD	VAUHG N ENERGY SERVICES



Directional Survey

District DELAWARE BASIN	County EDDY	Field Name HACKBERRY	Project Group DELAWARE BASIN REG	State/Province NM
Surface Legal Location SEC20 T19S R31E	API/UWI 3001541513	Latitude (") 32° 38' 54.524" N	Longitude (") 103° 53' 56.336" W	Ground Elev... 3,415.70
			KB - GL (ft) 26.00	Orig KB Elev (ft) 3,441.70
				Tubing Head Elevation (ft)

Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS (%/100ft)	Survey Tool	Survey Company
5/22/2014	7,640.00	20.48	101.25	7,634.31	50.23	-13.21	50.31	12.19	MWD	VAUHG N ENERGY SERVICES
5/22/2014	7,671.00	24.05	100.94	7,662.99	61.74	-15.47	61.83	11.52	MWD	VAUHG N ENERGY SERVICES
5/22/2014	7,703.00	27.67	100.81	7,691.78	75.43	-18.10	75.54	11.31	MWD	VAUHG N ENERGY SERVICES
5/22/2014	7,734.00	31.32	99.19	7,718.76	90.44	-20.74	90.57	12.05	MWD	VAUHG N ENERGY SERVICES
5/22/2014	7,766.00	34.53	98.29	7,745.62	107.62	-23.38	107.75	10.15	MWD	VAUHG N ENERGY SERVICES
5/22/2014	7,797.00	36.69	99.12	7,770.82	125.44	-26.11	125.60	7.14	MWD	VAUHG N ENERGY SERVICES
5/22/2014	7,829.00	39.26	99.96	7,796.04	144.84	-29.38	145.01	8.19	MWD	VAUHG N ENERGY SERVICES
5/22/2014	7,860.00	41.88	100.05	7,819.59	164.67	-32.88	164.86	8.45	MWD	VAUHG N ENERGY SERVICES
5/22/2014	7,892.00	44.86	98.49	7,842.85	186.34	-36.41	186.55	9.90	MWD	VAUHG N ENERGY SERVICES
5/22/2014	7,923.00	49.37	96.45	7,863.94	208.83	-39.35	209.06	15.33	MWD	VAUHG N ENERGY SERVICES
5/22/2014	7,955.00	53.39	94.51	7,883.91	233.70	-41.72	233.95	13.42	MWD	VAUHG N ENERGY SERVICES
5/22/2014	7,986.00	57.43	93.58	7,901.51	259.14	-43.52	259.40	13.26	MWD	VAUHG N ENERGY SERVICES
5/22/2014	8,017.00	62.03	92.54	7,917.13	285.86	-44.94	286.12	15.12	MWD	VAUHG N ENERGY SERVICES
5/22/2014	8,049.00	66.51	92.63	7,931.02	314.64	-46.24	314.91	14.00	MWD	VAUHG N ENERGY SERVICES
5/22/2014	8,080.00	70.51	92.27	7,942.37	343.45	-47.47	343.73	12.95	MWD	VAUHG N ENERGY SERVICES
5/22/2014	8,112.00	75.43	91.35	7,951.74	374.01	-48.44	374.30	15.62	MWD	VAUHG N ENERGY SERVICES
5/22/2014	8,143.00	80.30	90.85	7,958.26	404.30	-49.02	404.59	15.79	MWD	VAUHG N ENERGY SERVICES
5/22/2014	8,175.00	84.80	90.87	7,962.40	436.02	-49.49	436.31	14.06	MWD	VAUHG N ENERGY SERVICES
5/22/2014	8,206.00	86.64	90.64	7,964.72	466.92	-49.90	467.22	5.98	MWD	VAUHG N ENERGY SERVICES
5/22/2014	8,238.00	88.11	90.03	7,966.18	498.89	-50.09	499.18	4.97	MWD	VAUHG N ENERGY SERVICES
5/22/2014	8,269.00	88.11	89.88	7,967.21	529.87	-50.06	530.17	0.48	MWD	VAUHG N ENERGY SERVICES
5/22/2014	8,363.00	88.04	89.15	7,970.36	623.82	-49.27	624.11	0.78	MWD	VAUHG N ENERGY SERVICES
5/22/2014	8,457.00	90.21	90.15	7,971.80	717.80	-48.69	718.09	2.54	MWD	VAUHG N ENERGY SERVICES
5/22/2014	8,552.00	90.70	89.98	7,971.04	812.79	-48.80	813.09	0.55	MWD	VAUHG N ENERGY SERVICES
5/22/2014	8,646.00	90.98	89.80	7,969.67	906.78	-48.62	907.08	0.35	MWD	VAUHG N ENERGY SERVICES
5/22/2014	8,741.00	91.54	89.64	7,967.58	1,001.76	-48.16	1,002.05	0.61	MWD	VAUHG N ENERGY SERVICES
5/22/2014	8,835.00	90.21	89.16	7,966.14	1,095.74	-47.17	1,096.03	1.50	MWD	VAUHG N ENERGY SERVICES
5/22/2014	8,929.00	90.70	88.79	7,965.40	1,189.73	-45.49	1,190.02	0.65	MWD	VAUHG N ENERGY SERVICES
5/22/2014	9,023.00	89.72	89.36	7,965.05	1,283.73	-43.97	1,284.00	1.21	MWD	VAUHG N ENERGY SERVICES
5/22/2014	9,117.00	90.21	89.64	7,965.11	1,377.73	-43.15	1,378.00	0.60	MWD	VAUHG N ENERGY SERVICES
5/22/2014	9,212.00	88.95	89.90	7,965.80	1,472.72	-42.77	1,472.99	1.35	MWD	VAUHG N ENERGY SERVICES
5/22/2014	9,307.00	88.74	89.42	7,967.72	1,567.70	-42.21	1,567.97	0.55	MWD	VAUHG N ENERGY SERVICES
5/22/2014	9,401.00	89.44	89.36	7,969.21	1,661.69	-41.21	1,661.95	0.75	MWD	VAUHG N ENERGY SERVICES
5/22/2014	9,495.00	87.69	88.93	7,971.57	1,755.65	-39.81	1,755.91	1.92	MWD	VAUHG N ENERGY SERVICES
5/22/2014	9,590.00	87.69	88.92	7,975.40	1,850.57	-38.03	1,850.82	0.01	MWD	VAUHG N ENERGY SERVICES
5/22/2014	9,684.00	87.62	88.75	7,979.24	1,944.48	-36.12	1,944.72	0.20	MWD	VAUHG N ENERGY SERVICES
5/22/2014	9,779.00	87.90	88.57	7,982.96	2,039.39	-33.90	2,039.62	0.35	MWD	VAUHG N ENERGY SERVICES
5/22/2014	9,874.00	88.74	89.93	7,985.74	2,134.34	-32.65	2,134.57	1.68	MWD	VAUHG N ENERGY SERVICES
5/22/2014	9,968.00	89.23	90.25	7,987.41	2,228.33	-32.80	2,228.55	0.62	MWD	VAUHG N ENERGY SERVICES
5/22/2014	10,062.00	89.44	89.86	7,988.50	2,322.32	-32.89	2,322.54	0.47	MWD	VAUHG N ENERGY SERVICES
5/22/2014	10,156.00	89.65	89.82	7,989.24	2,416.31	-32.63	2,416.54	0.23	MWD	VAUHG N ENERGY SERVICES
5/26/2014	10,251.00	87.97	89.96	7,991.22	2,511.29	-32.45	2,511.52	1.77	MWD	VAUHG N ENERGY SERVICES
5/26/2014	10,345.00	88.04	89.48	7,994.49	2,605.23	-31.99	2,605.46	0.52	MWD	VAUHG N ENERGY SERVICES
5/26/2014	10,440.00	88.53	89.65	7,997.33	2,700.19	-31.27	2,700.41	0.55	MWD	VAUHG N ENERGY SERVICES
5/26/2014	10,534.00	88.95	89.73	7,999.40	2,794.17	-30.76	2,794.39	0.45	MWD	VAUHG N ENERGY SERVICES
5/26/2014	10,629.00	89.16	89.53	8,000.97	2,889.15	-30.14	2,889.37	0.31	MWD	VAUHG N ENERGY SERVICES
5/26/2014	10,723.00	89.30	89.28	8,002.23	2,983.14	-29.17	2,983.36	0.30	MWD	VAUHG N ENERGY SERVICES
5/26/2014	10,818.00	89.51	89.06	8,003.21	3,078.13	-27.79	3,078.34	0.32	MWD	VAUHG N ENERGY SERVICES
5/26/2014	10,912.00	89.30	90.27	8,004.19	3,172.13	-27.24	3,172.34	1.31	MWD	VAUHG N ENERGY SERVICES
5/27/2014	11,007.00	89.65	90.16	8,005.06	3,267.12	-27.60	3,267.33	0.39	MWD	VAUHG N ENERGY SERVICES
5/27/2014	11,101.00	89.79	89.56	8,005.52	3,361.12	-27.37	3,361.33	0.66	MWD	VAUHG N ENERGY SERVICES
5/27/2014	11,195.00	87.97	90.11	8,007.36	3,455.09	-27.10	3,455.31	2.02	MWD	VAUHG N ENERGY SERVICES
5/27/2014	11,290.00	88.11	90.20	8,010.61	3,550.03	-27.36	3,550.25	0.18	MWD	VAUHG N ENERGY SERVICES
5/27/2014	11,384.00	88.46	90.41	8,013.42	3,643.99	-27.86	3,644.21	0.43	MWD	VAUHG N ENERGY SERVICES
5/27/2014	11,478.00	89.09	90.66	8,015.43	3,737.95	-28.73	3,738.18	0.72	MWD	VAUHG N ENERGY SERVICES



Directional Survey

District	County	Field Name		Project Group		State/Province	
DELAWARE BASIN	EDDY	HACKBERRY		DELAWARE BASIN REG		NM	
Surface Legal Location	API/UWI	Latitude (°)	Longitude (°)	Ground Elev...	KB - GL (ft)	Orig KB Elev (ft)	Tubing Head Elevation (ft)
SEC20 T19S R31E	3001541513	32° 38' 54.524" N	103° 53' 56.336" W	3,415.70	26.00	3,441.70	

Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS (7/100ft)	Survey Tool	Survey Company
5/27/2014	11,573.00	89.44	90.53	8,016.65	3,832.93	-29.72	3,833.17	0.39	MWD	VAUHGN ENERGY SERVICES
5/27/2014	11,667.00	90.28	90.55	8,016.88	3,926.92	-30.61	3,927.16	0.89	MWD	VAUHGN ENERGY SERVICES
5/27/2014	11,761.00	89.79	90.24	8,016.82	4,020.91	-31.25	4,021.16	0.62	MWD	VAUHGN ENERGY SERVICES
5/27/2014	11,856.00	90.84	89.89	8,016.30	4,115.91	-31.36	4,116.16	1.17	MWD	VAUHGN ENERGY SERVICES
5/27/2014	11,950.00	89.79	90.10	8,015.78	4,209.90	-31.35	4,210.15	1.14	MWD	VAUHGN ENERGY SERVICES
5/27/2014	12,044.00	90.63	88.77	8,015.44	4,303.90	-30.43	4,304.15	1.67	MWD	VAUHGN ENERGY SERVICES
5/27/2014	12,139.00	89.23	89.92	8,015.55	4,398.89	-29.34	4,399.14	1.91	MWD	VAUHGN ENERGY SERVICES
5/27/2014	12,233.00	89.93	89.99	8,016.24	4,492.89	-29.27	4,493.13	0.75	MWD	VAUHGN ENERGY SERVICES
5/27/2014	12,291.00	90.21	90.32	8,016.17	4,550.89	-29.42	4,551.13	0.75	MWD	VAUHGN ENERGY SERVICES
5/27/2014	12,366.00	90.21	90.32	8,015.90	4,625.88	-29.84	4,626.13	0.00	BIT	VAUHGN ENERGY SERVICES