

Results of Directional Survey

API number:	30-025-41696		
OGRID:		Operator:	DEVON ENERGY PRODUCTION COMPANY, LP
		Property:	IRONHOUSE 24 STATE COM # 4H

surface	ULSTR:	M	24	T 18S	R 34E
				200 FSL	660 FWL

BH Loc	ULSTR:	D	24	T 18S	R 34E
14245	MD	9634.6	TVD	315 FNL	593 FWL
4965 FSL					

Top Perf/OH	ULSTR:	M	24	T 18S	R 34E
10036	MD	9854.4	TVD	769 FSL	588 FWL

Bot Perf/OH	ULSTR:	D	24	T 18S	R 34E
14121	MD	9641.1	TVD	438 FNL	595 FWL
4842 FSL					

	MD	N/S	E/W	VD
	10008	543.06	-73.74	9845.03
TOP PERFS/OH	10036	569.41	-72.11	9854.35
	10039	572.23	-71.93	9855.35
	14108	4628.59	-64.97	9641.85
BOT PERFS/OH	14121	4641.56	-65.33	9641.12
	14176	4696.45	-66.83	9638.04

NEXT TO LAST	14176	4696.45	-66.83	9638.04
LAST READING	14235.00	4755.37	-67.27	9635.10
TD	14245	4765.36	-67.34	9634.60

Surface Location	200	FS	660	FW
Projected BHL	4965	FS	593	FW
Location of				
Top Perfs/OH	769	FS	588	FW
Bottom Perfs/OH	4842	FS	595	FW

SUMMARY of Subsurface Locations

Surface Location	M-24-18S-34E	200	FS	660	FW	Vert. Depth
Top Perfs/OH	M-24-18S-34E	769	FS	588	FW	9854.35
Bottom Perfs/OH	D-24-18S-34E	4842	FS	595	FW	9641.12
Projected TD	D-24-18S-34E	4965	FS	593	FW	9634.60

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District DELAWARE BASIN	County LEA	Field Name MESCALERO ESCARPE	Project Group DELAWARE BASIN REG	State/Province NM			
Surface Legal Location Sec. 24 T18S R34E	API/UWI 3002541696	Latitude (°) 32° 43' 35.622" N	Longitude (°) 103° 31' 12.879" W	Ground Elev... 3,980.70	KB - GL (ft) 26.50	Orig KB Elev (ft) 4,007.20	Tubing Head Elevation (ft)

Wellbores

Wellbore Name OH	Parent Wellbore	SAP Well ID 35986	Kick Off Depth (ftKB)	Vertical Section Direction (°)
Actual Deviation Survey MWD, Proposed? No	Definitive? Yes	Proposed? No	Proposed Deviation Survey	

Deviation Survey

Date 7/13/2014		Description MWD			
MD Tie In (ftKB)	TVD Tie In (ftKB)	Inclination Tie In (°)	Azimuth Tie In (°)	NSTie In (ft)	EW Tie In (ft)

Survey Data

Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS (°/100ft)	Survey Tool	Survey Company
7/13/2014	206.00	0.40	238.50	206.00	-0.37	-0.38	-0.61	0.19	MWD	EXTRIME
7/14/2014	338.00	0.62	224.52	337.99	-1.11	-1.13	-1.51	0.19	MWD	EXTRIME
7/14/2014	371.00	0.40	237.09	370.99	-1.29	-1.32	-1.73	0.74	MWD	EXTRIME
7/14/2014	463.00	0.48	270.62	462.99	-1.46	-1.49	-2.38	0.29	MWD	EXTRIME
7/14/2014	555.00	0.62	280.82	554.98	-1.35	-1.39	-3.26	0.19	MWD	EXTRIME
7/14/2014	648.00	0.70	288.90	647.98	-1.06	-1.11	-4.29	0.13	MWD	EXTRIME
7/14/2014	740.00	0.70	297.60	739.97	-0.60	-0.67	-5.32	0.12	MWD	EXTRIME
7/14/2014	832.00	0.79	294.09	831.96	-0.07	-0.15	-6.40	0.11	MWD	EXTRIME
7/14/2014	924.00	0.62	310.30	923.96	0.53	0.43	-7.35	0.28	MWD	EXTRIME
7/14/2014	1,017.00	0.62	282.31	1,016.95	0.97	0.87	-8.23	0.32	MWD	EXTRIME
7/14/2014	1,109.00	0.62	303.01	1,108.95	1.36	1.24	-9.13	0.24	MWD	EXTRIME
7/14/2014	1,201.00	0.62	270.62	1,200.94	1.65	1.52	-10.05	0.38	MWD	EXTRIME
7/14/2014	1,293.00	0.48	287.63	1,292.94	1.78	1.64	-10.91	0.23	MWD	EXTRIME
7/14/2014	1,387.00	0.70	293.43	1,386.93	2.14	1.99	-11.82	0.24	MWD	EXTRIME
7/14/2014	1,482.00	0.31	300.20	1,481.93	2.51	2.35	-12.57	0.41	MWD	EXTRIME
7/14/2014	1,544.00	0.22	343.31	1,543.93	2.71	2.55	-12.75	0.34	MWD	EXTRIME
7/14/2014	1,639.00	0.48	353.41	1,638.93	3.28	3.12	-12.85	0.28	MWD	EXTRIME
7/14/2014	1,734.00	0.70	351.61	1,733.92	4.25	4.09	-12.98	0.23	MWD	EXTRIME
7/14/2014	1,786.00	0.48	330.83	1,785.92	4.76	4.59	-13.13	0.58	MWD	EXTRIME
7/14/2014	1,898.00	0.62	339.00	1,897.91	5.74	5.57	-13.58	0.14	MWD	EXTRIME
7/14/2014	2,087.00	1.01	337.20	2,086.89	8.24	8.06	-14.59	0.21	MWD	EXTRIME
7/14/2014	2,276.00	1.01	347.31	2,275.86	11.41	11.22	-15.60	0.09	MWD	EXTRIME
7/14/2014	2,466.00	1.10	357.41	2,465.83	14.87	14.67	-16.05	0.11	MWD	EXTRIME
7/14/2014	2,655.00	1.49	1.41	2,654.78	19.14	18.94	-16.07	0.21	MWD	EXTRIME
7/14/2014	2,845.00	2.11	16.31	2,844.69	24.96	24.77	-15.03	0.41	MWD	EXTRIME
7/14/2014	3,034.00	2.42	29.89	3,033.54	31.72	31.57	-12.06	0.33	MWD	EXTRIME
7/14/2014	3,223.00	2.90	31.08	3,222.34	39.21	39.12	-7.61	0.26	MWD	EXTRIME
7/14/2014	3,379.00	2.99	27.91	3,378.13	46.14	46.10	-3.66	0.12	MWD	EXTRIME
7/22/2014	3,477.00	2.81	165.19	3,476.08	46.05	46.03	-1.85	5.51	MWD	EXTRIME
7/22/2014	3,569.00	2.68	19.97	3,568.04	45.88	45.87	-0.54	5.69	MWD	EXTRIME
7/22/2014	3,663.00	2.42	14.03	3,661.95	49.85	49.86	0.69	0.39	MWD	EXTRIME
7/22/2014	3,759.00	2.42	13.64	3,757.86	53.78	53.80	1.66	0.02	MWD	EXTRIME
7/22/2014	3,853.00	2.29	10.43	3,851.78	57.54	57.58	2.47	0.20	MWD	EXTRIME
7/22/2014	3,947.00	2.11	9.95	3,945.71	61.08	61.13	3.11	0.19	MWD	EXTRIME
7/22/2014	4,043.00	2.02	6.87	4,041.65	64.50	64.55	3.61	0.15	MWD	EXTRIME
7/22/2014	4,137.00	2.02	0.15	4,135.59	67.80	67.85	3.82	0.25	MWD	EXTRIME
7/22/2014	4,231.00	1.80	0.85	4,229.54	70.93	70.98	3.84	0.24	MWD	EXTRIME
7/22/2014	4,336.00	1.71	354.43	4,334.49	74.14	74.19	3.72	0.21	MWD	EXTRIME
7/22/2014	4,421.00	1.80	350.17	4,419.45	76.72	76.77	3.36	0.19	MWD	EXTRIME
7/22/2014	4,515.00	1.58	348.15	4,513.41	79.45	79.49	2.85	0.24	MWD	EXTRIME
7/22/2014	4,611.00	1.80	343.27	4,609.37	82.20	82.23	2.14	0.27	MWD	EXTRIME
7/22/2014	4,704.00	1.49	340.55	4,702.33	84.75	84.77	1.32	0.34	MWD	EXTRIME
7/22/2014	4,799.00	1.58	340.46	4,797.29	87.16	87.17	0.47	0.09	MWD	EXTRIME
7/22/2014	4,893.00	1.49	331.76	4,891.26	89.47	89.47	-0.54	0.27	MWD	EXTRIME
7/22/2014	4,988.00	1.41	331.54	4,986.23	91.60	91.58	-1.68	0.08	MWD	EXTRIME
7/22/2014	5,082.00	1.32	329.34	5,080.20	93.56	93.53	-2.79	0.11	MWD	EXTRIME
7/22/2014	5,177.00	1.41	330.97	5,175.18	95.53	95.49	-3.91	0.10	MWD	EXTRIME

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			KB - GL (ft) 26.50	Orig KB Elev (ft) 4,007.20
				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
7/22/2014	5,272.00	1.19	330.83	5,270.15	97.43	97.38	-4.96	0.23	MWD	EXTRIME
7/22/2014	5,366.00	1.19	333.34	5,364.13	99.17	99.10	-5.87	0.06	MWD	EXTRIME
7/22/2014	5,461.00	1.10	324.64	5,459.11	100.80	100.73	-6.85	0.21	MWD	EXTRIME
7/22/2014	5,556.00	1.01	322.35	5,554.10	102.22	102.13	-7.88	0.10	MWD	EXTRIME
7/22/2014	5,650.00	1.01	326.26	5,648.08	103.58	103.48	-8.85	0.07	MWD	EXTRIME
7/22/2014	5,745.00	0.88	329.16	5,743.07	104.91	104.80	-9.69	0.15	MWD	EXTRIME
7/22/2014	5,840.00	0.79	319.76	5,838.06	106.05	105.93	-10.49	0.17	MWD	EXTRIME
7/22/2014	5,935.00	0.70	327.85	5,933.05	107.05	106.92	-11.22	0.15	MWD	EXTRIME
7/23/2014	6,030.00	0.79	326.26	6,028.04	108.09	107.95	-11.89	0.10	MWD	EXTRIME
7/23/2014	6,124.00	0.88	330.75	6,122.03	109.27	109.12	-12.60	0.12	MWD	EXTRIME
7/24/2014	6,219.00	0.79	318.53	6,217.02	110.41	110.25	-13.39	0.21	MWD	EXTRIME
7/24/2014	6,316.00	0.88	322.44	6,314.01	111.51	111.34	-14.29	0.11	MWD	EXTRIME
7/24/2014	6,410.00	0.88	339.76	6,408.00	112.77	112.59	-14.98	0.28	MWD	EXTRIME
7/24/2014	6,506.00	1.10	346.65	6,503.99	114.36	114.18	-15.45	0.26	MWD	EXTRIME
7/24/2014	6,694.00	1.01	337.95	6,691.96	117.67	117.47	-16.49	0.10	MWD	EXTRIME
7/25/2014	6,788.00	0.88	340.63	6,785.94	119.12	118.92	-17.04	0.15	MWD	EXTRIME
7/25/2014	6,883.00	1.01	342.83	6,880.93	120.62	120.41	-17.53	0.14	MWD	EXTRIME
7/25/2014	6,977.00	1.01	343.27	6,974.92	122.21	121.99	-18.01	0.01	MWD	EXTRIME
7/25/2014	7,072.00	1.19	349.34	7,069.90	123.99	123.76	-18.43	0.23	MWD	EXTRIME
7/25/2014	7,166.00	1.10	348.24	7,163.88	125.83	125.61	-18.80	0.10	MWD	EXTRIME
7/26/2014	7,260.00	1.19	348.76	7,257.86	127.68	127.45	-19.17	0.10	MWD	EXTRIME
7/26/2014	7,355.00	1.32	354.04	7,352.84	129.74	129.50	-19.48	0.18	MWD	EXTRIME
7/26/2014	7,449.00	1.32	0.23	7,446.81	131.90	131.66	-19.59	0.15	MWD	EXTRIME
7/26/2014	7,544.00	1.19	12.93	7,541.79	133.95	133.72	-19.36	0.32	MWD	EXTRIME
7/26/2014	7,639.00	1.10	28.05	7,636.77	135.71	135.48	-18.71	0.33	MWD	EXTRIME
7/26/2014	7,733.00	1.10	27.26	7,730.75	137.30	137.08	-17.87	0.02	MWD	EXTRIME
7/26/2014	7,828.00	1.32	30.56	7,825.73	139.04	138.84	-16.90	0.24	MWD	EXTRIME
7/26/2014	7,923.00	1.19	35.96	7,920.71	140.76	140.58	-15.76	0.18	MWD	EXTRIME
7/26/2014	8,017.00	1.49	27.26	8,014.68	142.63	142.45	-14.63	0.38	MWD	EXTRIME
7/26/2014	8,111.00	1.32	33.85	8,108.66	144.60	144.44	-13.47	0.25	MWD	EXTRIME
7/27/2014	8,205.00	1.10	14.34	8,202.64	146.36	146.21	-12.64	0.49	MWD	EXTRIME
7/27/2014	8,300.00	1.32	1.73	8,297.61	148.33	148.19	-12.38	0.36	MWD	EXTRIME
7/27/2014	8,395.00	0.88	0.45	8,392.60	150.16	150.01	-12.34	0.46	MWD	EXTRIME
7/28/2014	8,488.00	0.62	333.16	8,485.59	151.32	151.17	-12.57	0.47	MWD	EXTRIME
7/29/2014	8,582.00	0.70	326.57	8,579.58	152.26	152.11	-13.11	0.12	MWD	EXTRIME
7/29/2014	8,676.00	0.62	318.13	8,673.58	153.13	152.97	-13.77	0.13	MWD	EXTRIME
7/29/2014	8,771.00	0.88	305.17	8,768.57	153.94	153.77	-14.71	0.33	MWD	EXTRIME
7/29/2014	8,866.00	1.80	290.93	8,863.54	154.92	154.72	-16.70	1.02	MWD	EXTRIME
7/29/2014	8,961.00	2.20	290.76	8,958.48	156.14	155.90	-19.79	0.42	MWD	EXTRIME
7/29/2014	9,056.00	2.02	297.66	9,053.42	157.60	157.32	-22.98	0.33	MWD	EXTRIME
7/29/2014	9,149.00	2.29	300.03	9,146.35	159.33	159.02	-26.04	0.31	MWD	EXTRIME
7/30/2014	9,253.00	2.73	296.74	9,250.25	161.53	161.17	-30.05	0.45	MWD	PATHFINDER ENERGY SE...
7/30/2014	9,284.00	3.17	297.67	9,281.21	162.28	161.90	-31.47	1.43	MWD	PATHFINDER ENERGY SE...
7/31/2014	9,315.00	3.61	305.36	9,312.16	163.27	162.86	-33.03	2.04	MWD	PATHFINDER ENERGY SE...
7/31/2014	9,347.00	5.72	322.28	9,344.05	165.13	164.71	-34.83	7.80	MWD	PATHFINDER ENERGY SE...
7/31/2014	9,378.00	8.35	332.25	9,374.82	168.37	167.92	-36.82	9.32	MWD	PATHFINDER ENERGY SE...
7/31/2014	9,410.00	11.26	337.04	9,406.35	173.33	172.86	-39.12	9.44	MWD	PATHFINDER ENERGY SE...
7/31/2014	9,440.00	15.04	340.02	9,435.55	179.72	179.21	-41.59	12.80	MWD	PATHFINDER ENERGY SE...
7/31/2014	9,467.00	18.20	341.55	9,461.42	187.05	186.51	-44.13	11.81	MWD	PATHFINDER ENERGY SE...
7/31/2014	9,504.00	20.93	343.42	9,496.28	198.91	198.33	-47.84	7.57	MWD	PATHFINDER ENERGY SE...
7/31/2014	9,536.00	24.53	345.17	9,525.79	210.86	210.23	-51.17	11.45	MWD	PATHFINDER ENERGY SE...
7/31/2014	9,567.00	27.96	347.30	9,553.60	224.21	223.54	-54.42	11.47	MWD	PATHFINDER ENERGY SE...
7/31/2014	9,599.00	30.95	349.86	9,581.46	239.67	238.97	-57.52	10.14	MWD	PATHFINDER ENERGY SE...
8/1/2014	9,630.00	35.00	352.10	9,607.46	256.36	255.63	-60.14	13.64	MWD	PATHFINDER ENERGY SE...
8/1/2014	9,662.00	39.04	352.97	9,633.00	275.49	274.73	-62.64	12.73	MWD	PATHFINDER ENERGY SE...



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8/1/2014	9,693.00	41.50	353.32	9,656.65	295.41	294.62	-65.03	7.97	MWD	PATHFINDER ENERGY SE...
8/1/2014	9,725.00	43.26	354.53	9,680.29	316.89	316.07	-67.31	6.06	MWD	PATHFINDER ENERGY SE...
8/1/2014	9,756.00	44.67	357.00	9,702.61	338.36	337.53	-68.89	7.16	MWD	PATHFINDER ENERGY SE...
8/1/2014	9,788.00	45.99	359.98	9,725.10	361.11	360.27	-69.48	7.80	MWD	PATHFINDER ENERGY SE...
8/1/2014	9,819.00	48.54	0.82	9,746.14	383.88	383.04	-69.32	8.46	MWD	PATHFINDER ENERGY SE...
8/1/2014	9,851.00	51.70	1.20	9,766.66	408.42	407.59	-68.89	9.92	MWD	PATHFINDER ENERGY SE...
8/1/2014	9,882.00	54.69	1.14	9,785.23	433.22	432.40	-68.38	9.65	MWD	PATHFINDER ENERGY SE...
8/1/2014	9,913.00	58.21	0.73	9,802.36	459.04	458.23	-67.96	11.41	MWD	PATHFINDER ENERGY SE...
8/1/2014	9,945.00	61.73	0.52	9,818.37	486.74	485.93	-67.66	11.01	MWD	PATHFINDER ENERGY SE...
8/1/2014	9,976.00	64.90	0.74	9,832.29	514.42	513.62	-67.35	10.25	MWD	PATHFINDER ENERGY SE...
8/1/2014	10,008.00	68.59	2.54	9,844.92	543.79	543.00	-66.51	12.64	MWD	PATHFINDER ENERGY SE...
8/1/2014	10,039.00	72.55	4.35	9,855.23	572.94	572.17	-64.75	13.91	MWD	PATHFINDER ENERGY SE...
8/3/2014	10,070.00	77.38	5.97	9,863.27	602.71	601.98	-62.05	16.38	MWD	PATHFINDER ENERGY SE...
8/3/2014	10,102.00	82.31	5.75	9,868.91	633.99	633.30	-58.83	15.42	MWD	PATHFINDER ENERGY SE...
8/3/2014	10,134.00	86.53	4.06	9,872.02	665.68	665.03	-56.11	14.20	MWD	PATHFINDER ENERGY SE...
8/3/2014	10,232.00	88.46	1.67	9,876.31	763.38	762.80	-51.22	3.13	MWD	PATHFINDER ENERGY SE...
8/3/2014	10,326.00	89.25	2.49	9,878.18	857.25	856.72	-47.81	1.21	MWD	PATHFINDER ENERGY SE...
8/3/2014	10,421.00	90.92	3.45	9,878.04	952.05	951.59	-42.89	2.03	MWD	PATHFINDER ENERGY SE...
8/3/2014	10,516.00	90.92	4.77	9,876.52	1,046.70	1,046.33	-36.08	1.39	MWD	PATHFINDER ENERGY SE...
8/3/2014	10,611.00	92.15	3.82	9,873.97	1,141.30	1,141.02	-28.97	1.64	MWD	PATHFINDER ENERGY SE...
8/5/2014	10,705.00	93.39	3.82	9,869.43	1,234.89	1,234.70	-22.71	1.32	MWD	PATHFINDER ENERGY SE...
8/5/2014	10,800.00	94.44	3.23	9,862.94	1,329.41	1,329.30	-16.89	1.27	MWD	PATHFINDER ENERGY SE...
8/6/2014	10,895.00	93.65	0.59	9,856.24	1,424.06	1,424.00	-13.73	2.89	MWD	PATHFINDER ENERGY SE...
8/6/2014	10,989.00	93.65	1.13	9,850.26	1,517.84	1,517.80	-12.32	0.57	MWD	PATHFINDER ENERGY SE...
8/6/2014	11,084.00	93.21	358.99	9,844.57	1,612.65	1,612.62	-12.22	2.30	MWD	PATHFINDER ENERGY SE...
8/6/2014	11,179.00	92.33	357.78	9,839.98	1,707.53	1,707.47	-14.90	1.57	MWD	PATHFINDER ENERGY SE...
8/6/2014	11,273.00	92.95	358.02	9,835.65	1,801.40	1,801.31	-18.34	0.71	MWD	PATHFINDER ENERGY SE...
8/6/2014	11,367.00	94.09	357.95	9,829.88	1,895.20	1,895.07	-21.64	1.22	MWD	PATHFINDER ENERGY SE...
8/6/2014	11,462.00	94.09	358.69	9,823.11	1,989.94	1,989.79	-24.41	0.78	MWD	PATHFINDER ENERGY SE...
8/6/2014	11,557.00	94.00	359.82	9,816.40	2,084.70	2,084.54	-25.65	1.19	MWD	PATHFINDER ENERGY SE...
8/6/2014	11,651.00	93.91	359.74	9,809.92	2,178.47	2,178.32	-26.01	0.13	MWD	PATHFINDER ENERGY SE...
8/6/2014	11,749.00	92.95	0.37	9,804.06	2,276.29	2,276.14	-25.91	1.17	MWD	PATHFINDER ENERGY SE...
8/6/2014	11,840.00	93.21	1.10	9,799.17	2,367.13	2,367.00	-24.75	0.85	MWD	PATHFINDER ENERGY SE...
8/6/2014	11,934.00	93.91	0.27	9,793.33	2,460.92	2,460.81	-23.63	1.15	MWD	PATHFINDER ENERGY SE...
8/6/2014	12,029.00	94.00	1.05	9,786.78	2,555.66	2,555.58	-22.53	0.82	MWD	PATHFINDER ENERGY SE...
8/6/2014	12,124.00	94.35	359.36	9,779.86	2,650.39	2,650.32	-22.19	1.81	MWD	PATHFINDER ENERGY SE...
8/6/2014	12,218.00	95.23	358.55	9,772.01	2,744.06	2,743.98	-23.90	1.27	MWD	PATHFINDER ENERGY SE...
8/6/2014	12,313.00	95.41	358.00	9,763.20	2,838.64	2,838.53	-26.75	0.61	MWD	PATHFINDER ENERGY SE...
8/6/2014	12,408.00	95.14	359.56	9,754.47	2,933.23	2,933.10	-28.76	1.66	MWD	PATHFINDER ENERGY SE...
8/6/2014	12,505.00	95.41	359.53	9,745.55	3,029.82	3,029.68	-29.53	0.28	MWD	PATHFINDER ENERGY SE...
8/6/2014	12,597.00	95.58	359.85	9,736.74	3,121.39	3,121.26	-30.03	0.39	MWD	PATHFINDER ENERGY SE...
8/6/2014	12,691.00	94.62	0.17	9,728.39	3,215.01	3,214.89	-30.01	1.08	MWD	PATHFINDER ENERGY SE...
8/6/2014	12,785.00	94.53	359.72	9,720.89	3,308.70	3,308.59	-30.10	0.49	MWD	PATHFINDER ENERGY SE...
8/6/2014	12,879.00	92.42	359.39	9,715.19	3,402.52	3,402.41	-30.83	2.27	MWD	PATHFINDER ENERGY SE...
8/6/2014	12,974.00	91.63	357.16	9,711.83	3,497.44	3,497.30	-33.69	2.49	MWD	PATHFINDER ENERGY SE...
8/6/2014	13,069.00	91.36	358.98	9,709.35	3,592.39	3,592.21	-36.88	1.94	MWD	PATHFINDER ENERGY SE...
8/6/2014	13,257.00	93.03	358.97	9,702.15	3,780.24	3,780.03	-40.24	0.89	MWD	PATHFINDER ENERGY SE...
8/6/2014	13,352.00	94.79	359.87	9,695.68	3,875.01	3,874.80	-41.21	2.08	MWD	PATHFINDER ENERGY SE...
8/6/2014	13,446.00	94.35	358.94	9,688.19	3,968.71	3,968.50	-42.18	1.09	MWD	PATHFINDER ENERGY SE...
8/6/2014	13,541.00	93.74	358.70	9,681.49	4,063.47	4,063.24	-44.13	0.69	MWD	PATHFINDER ENERGY SE...
8/6/2014	13,635.00	95.14	359.23	9,674.21	4,157.19	4,156.94	-45.82	1.59	MWD	PATHFINDER ENERGY SE...
8/6/2014	13,730.00	95.06	358.92	9,665.76	4,251.81	4,251.55	-47.35	0.34	MWD	PATHFINDER ENERGY SE...
8/6/2014	13,824.00	94.35	359.02	9,658.05	4,345.49	4,345.22	-49.03	0.76	MWD	PATHFINDER ENERGY SE...
8/6/2014	13,919.00	92.15	356.17	9,652.67	4,440.28	4,439.97	-53.02	3.79	MWD	PATHFINDER ENERGY SE...
8/6/2014	14,014.00	94.00	0.18	9,647.57	4,535.10	4,534.76	-56.04	4.64	MWD	PATHFINDER ENERGY SE...



Directional Survey

District DELAWARE BASIN	County LEA	Field Name MESCALERO ESCARPE	Project Group DELAWARE BASIN REG	State/Province NM			
Surface Legal Location Sec. 24 T18S R34E	API/UWI 3002541696	Latitude (°) 32° 43' 35.622" N	Longitude (°) 103° 31' 12.879" W	Ground Elev... 3,980.70	KB - GL (ft) 26.50	Orig KB Elev (ft) 4,007.20	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
8/6/2014	14,108.00	93.56	357.29	9,641.37	4,628.88	4,628.52	-58.11	3.10	MWD	PATHFINDER ENERGY SE...
8/6/2014	14,176.00	92.86	359.57	9,637.56	4,696.76	4,696.38	-59.97	3.50	MWD	PATHFINDER ENERGY SE...
8/6/2014	14,245.00	92.86	359.57	9,634.12	4,765.68	4,765.29	-60.49	0.00	MWD	PATHFINDER ENERGY SE...

PathFinder

3329 W. Pinhook Rd.
Lafayette, LA 70508-3506, USA
Tel. 337-233-3982
Fax 337-234-2988

PATHFINDER
A Schlumberger Company

HOBBS OCD

NOV 17 2014

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DIRECTIONAL SURVEY REPORT

DEVON ENERGY PRODUCTION CO., L.P.

IRONHOUSE 24 STATE COM #004H

LEA COUNTY, NEW MEXICO

PREPARED BY: MARK TRAHAN

PathFinder

3329 W. Pinhook Rd.
Lafayette, LA 70508-3506, USA
Tel. 337-233-3982
Fax 337-234-2988



September 8, 2014

DEVON ENERGY PRODUCTION CO.
Ms. Judy Barnett
Regulatory Compliance Professional
333 West Sheridan
Oklahoma City, OK 73102

HOBBS OCD

NOV 17 2014

RECEIVED

RE: DEVON ENERGY PRODUCTION CO., L.P.
IRONHOUSE 24 STATE COM #004H
LEA COUNTY, NM
RIG: PATTERSON 228
API NO.: 30-025-41696
PES FILE NO.: 14LAF0178

Dear Ms. Barnett:

We hereby certify that the enclosed Original Field Survey Data contained in this report represents to the best of our knowledge, a true and accurate survey of the well at the time the survey was run.

DIRECTIONAL SURVEY DATA
3 – Original Directional Survey Reports

We appreciate the opportunity to work with you and we look forward to your business support. If you have any questions, I can be reached at (337) 233-3982.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Trahan".

Mark Trahan
M/LWD Service Coordinator
PathFinder, a Schlumberger company

MT:tb

PathFinder

3329 W. Pinhook Rd.
Lafayette, LA 70508-3506, USA
Tel. 337-233-3982
Fax 337-234-2988

HOBBS OCD

NOV 17 2014

PATHFINDER
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DIRECTIONAL SURVEY COMPANY REPORT:

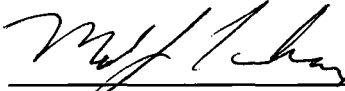
RECEIVED

1. SURVEYING COMPANY: PATHFINDER, A SCHLUMBERGER COMPANY
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) RODI SIBUEA
3. POSITION OF SAID PERSON(S): (A) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 07/30/14 TO 08/11/14
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: LEA COUNTY
7. TYPE OF SURVEY(S) PERFORMED: MWD
8. COMPLETE IDENTIFICATION OF WELL:

DEVON ENERGY PRODUCTION CO., L.P.
IRONHOUSE 24 STATE COM #004H
LEA COUNTY, NM
RIG: PATTERSON 228
API NO.: 30-025-41696

9. SURVEY CERTIFIED FROM: 9,141 TO 14,235 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE DISPLACED AT 4,755.85 FEET ON A BEARING OF 359.19 DEGREES FROM THE CENTER OF THE ROTARY TABLE AT PROJECTED TO BIT DEPTH OF 14,235 FEET, ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.



MARK TRAHAN
M/LWD SERVICE COORDINATOR

PathFinder

3329 W. Pinhook Rd.
Lafayette, LA 70508-3506, USA
Tel. 337-233-3982
Fax 337-234-2988

PATHFINDER
A Schlumberger Company

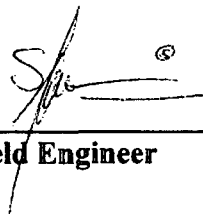
HOBBS OCD

NOV 17 2014

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STATE OF LOUISIANA
PARISH OF LAFAYETTE

I, **Rodi Sibuea**, certify that; I am employed by PathFinder, a Schlumberger company; that I did on the day(s) of **07/30/14** through **08/11/14** conduct or supervise the taking of a **Measurement While Drilling** survey from a depth of **9,141 feet to a depth of 14,235 feet**; that the data is true, correct, complete and within the limitations of the tool as set forth by PathFinder, a Schlumberger company; that I am authorized and qualified to make this report; that this survey was conducted at the request of **DEVON ENERGY PRODUCTION CO., L.P.** for the **Ironhouse 24 State Com #004H** Well API No. **30-025-41696** in **Lea County, New Mexico**; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by PathFinder, a Schlumberger company.



PathFinder Field Engineer

PathFinder – a Schlumberger company

BHL Report

Page 01/01
Tie-in Date: 07/30/2014
Date Completed: 08/11/2014

DEVON ENERGY PRODUCTION COMPANY, LP
IRONHOUSE 24 STATE COM #004H
LEA COUNTY, NM
API#: 30-025-41696 Rig: PATTERSON #228
PathFinder Office Supervisor: MARK TRAHAN
PathFinder Field Engineers: RODI SIBUEA

Survey Horiz. Reference: WELLHEAD
Ref Coordinates: LAT: 32.43.35.6221 N LON: 103.31.12.8790 W
GRID Reference: NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 791381.1500 Y: 629013.9100
North Aligned To: GRID NORTH
Total Magnetic Correction: 6.77° EAST TO GRID
Vertical Section Plane: 0.00
Survey Vert. Reference: 26.60' Rotary Table To Ground
Altitude: 3980.70' Ground To MSL

Measured Depth	14235.00	(feet)
Inclination	92.86	(deg)
Azimuth	359.57	(deg)
True Vertical Depth	9635.10	(feet)
Vertical Section	4755.37	(feet)
Survey X cord	791313.88	(feet)
Survey Y cord	633769.28	(feet)
Survey Lat	32.73963281 N	(deg)
Survey Lon	103.52034426 W	(deg)
Rectangular Corr. N/S	4755.37 N	(feet)
Rectangular Corr. E/W	67.27 W	(feet)
Closure Distance	4755.85	(feet)
Direction of Closure	359.19	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder – a Schlumberger company

Survey Report

DEVON ENERGY PRODUCTION COMPANY, LP
IRONHOUSE 24 STATE COM #004H

LEA COUNTY, NM

API#: 30-025-41696 Rig: PATTERSON #228

PathFinder Office Supervisor: MARK TRAHAN

PathFinder Field Engineers: RODI SIBUEA

Survey Horiz. Reference: WELLHEAD

Ref Coordinates: LAT: 32.43.35.6221 N LON: 103.31.12.8790 W

GRID Reference: NAD83 new mexico east Transverse Mercator

Ref GRID Coord: X: 791381.1500 Y: 629013.9100

North Aligned To: GRID NORTH

Total Magnetic Correction: 6.77° EAST TO GRID

Vertical Section Plane: 0.00

Survey Vert. Reference: 26.60' Rotary Table To Ground

Altitude: 3980.70' Ground To MSL

Survey Calculations by RX5 V6.05B using Minimum Curvature

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Survey Latitude (deg)	Survey Longitude (deg)	Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
THE FOLLOWING ARE EXTREME ENGINEERING GYRO SURVEYS.												
0.00	0.00	0.00	0.00	0.00	-0.00	0.00 S	0.00 E	32.72656168 N	103.52024417 W	0.00@	102.45	0.00
206.00	0.40	238.50	206.00	206.00	-0.38	0.38 S	0.61 W	32.72656066 N	103.52024617 W	0.72@	238.32	0.19
338.00	0.62	224.52	338.00	132.00	-1.13	1.13 S	1.50 W	32.72655862 N	103.52024910 W	1.88@	233.16	0.19
371.00	0.40	237.09	371.00	33.00	-1.32	1.32 S	1.73 W	32.72655810 N	103.52024982 W	2.17@	232.66	0.74
463.00	0.48	270.62	462.99	92.00	-1.49	1.49 S	2.38 W	32.72655765 N	103.52025196 W	2.81@	238.02	0.29
555.00	0.62	280.82	554.99	92.00	-1.39	1.39 S	3.25 W	32.72655794 N	103.52025480 W	3.54@	246.89	0.19
648.00	0.70	288.90	647.98	93.00	-1.11	1.11 S	4.29 W	32.72655872 N	103.52025814 W	4.43@	255.48	0.13
740.00	0.70	297.60	739.98	92.00	-0.67	0.67 S	5.32 W	32.72655996 N	103.52026148 W	5.36@	262.84	0.12
832.00	0.79	294.09	831.97	92.00	-0.15	0.15 S	6.39 W	32.72656141 N	103.52026497 W	6.39@	268.67	0.11
924.00	0.62	310.30	923.96	92.00	0.43	0.43 N	7.35 W	32.72656303 N	103.52026807 W	7.36@	273.36	0.28
1017.00	0.62	282.31	1016.96	93.00	0.86	0.86 N	8.23 W	32.72656423 N	103.52027091 W	8.27@	276.00	0.32
1109.00	0.62	303.01	1108.95	92.00	1.24	1.24 N	9.13 W	32.72656529 N	103.52027384 W	9.21@	277.75	0.24
1201.00	0.62	270.62	1200.95	92.00	1.52	1.52 N	10.05 W	32.72656607 N	103.52027681 W	10.16@	278.60	0.38
1293.00	0.48	287.63	1292.94	92.00	1.64	1.64 N	10.91 W	32.72656642 N	103.52027961 W	11.03@	278.55	0.23
1387.00	0.70	293.43	1386.94	94.00	1.99	1.99 N	11.81 W	32.72656740 N	103.52028254 W	11.98@	279.55	0.24
1482.00	0.31	300.20	1481.93	95.00	2.35	2.35 N	12.57 W	32.72656840 N	103.52028498 W	12.79@	280.58	0.41
1544.00	0.22	343.31	1543.93	62.00	2.55	2.55 N	12.75 W	32.72656895 N	103.52028556 W	13.00@	281.30	0.34
1639.00	0.48	353.41	1638.93	95.00	3.12	3.12 N	12.84 W	32.72657052 N	103.52028587 W	13.22@	283.64	0.28
1734.00	0.70	351.61	1733.93	95.00	4.09	4.09 N	12.98 W	32.72657319 N	103.52028627 W	13.60@	287.48	0.23
1786.00	0.48	330.83	1785.92	52.00	4.59	4.59 N	13.13 W	32.72657458 N	103.52028675 W	13.91@	289.27	0.58
1898.00	0.62	339.00	1897.92	112.00	5.57	5.57 N	13.57 W	32.72657727 N	103.52028817 W	14.67@	292.30	0.14
2087.00	1.01	337.20	2086.90	189.00	8.06	8.06 N	14.59 W	32.72658413 N	103.52029140 W	16.66@	298.91	0.21
2276.00	1.01	347.31	2275.87	189.00	11.22	11.22 N	15.60 W	32.72659284 N	103.52029461 W	19.21@	305.72	0.09

PathFinder – a Schlumberger company

Survey Report

DEVON ENERGY PRODUCTION COMPANY, LP
 IRONHOUSE 24 STATE COM #004H
 LEA COUNTY, NM
 API#: 30-025-41696 Rig: PATTERSON #228

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Survey Latitude (deg)	Survey Longitude (deg)	Closure Dist Dir (ft) (deg)	DLS (dg/100ft)
2466.00	1.10	357.41	2465.84	190.00	14.67	14.67 N	16.05 W	32.72660235 N	103.52029599 W	21.74@ 312.44	0.11
2655.00	1.49	1.41	2654.79	189.00	18.94	18.94 N	16.07 W	32.72661408 N	103.52029595 W	24.84@ 319.69	0.21
2845.00	2.11	16.31	2844.69	190.00	24.77	24.77 N	15.03 W	32.72663007 N	103.52029242 W	28.97@ 328.76	0.41
3034.00	2.42	29.89	3033.55	189.00	31.57	31.57 N	12.06 W	32.72664870 N	103.52028260 W	33.79@ 339.09	0.33
3223.00	2.90	31.08	3222.34	189.00	39.12	39.12 N	7.60 W	32.72666936 N	103.52026793 W	39.85@ 349.00	0.25
3379.00	2.99	27.91	3378.14	156.00	46.10	46.10 N	3.66 W	32.72668845 N	103.52025493 W	46.24@ 355.46	0.12
3466.00	2.68	265.53	3465.09	87.00	47.94	47.94 N	4.63 W	32.72669355 N	103.52025803 W	48.17@ 354.49	5.71
3475.00	0.48	5.65	3474.08	9.00	47.96	47.96 N	4.83 W	32.72669361 N	103.52025870 W	48.21@ 354.24	31.16
3554.00	2.68	218.16	3553.06	79.00	46.84	46.84 N	5.94 W	32.72669055 N	103.52026233 W	47.22@ 352.77	3.92
3569.00	2.68	19.97	3568.05	15.00	46.90	46.90 N	6.04 W	32.72669070 N	103.52026265 W	47.28@ 352.66	35.28
3663.00	2.42	14.03	3661.96	94.00	50.89	50.89 N	4.81 W	32.72670164 N	103.52025854 W	51.11@ 354.60	0.39
3754.00	2.20	13.15	3752.88	91.00	54.45	54.45 N	3.95 W	32.72671142 N	103.52025565 W	54.59@ 355.86	0.24
3759.00	2.42	13.64	3757.88	5.00	54.65	54.65 N	3.90 W	32.72671196 N	103.52025549 W	54.79@ 355.92	4.42
3853.00	2.29	10.43	3851.80	94.00	58.42	58.42 N	3.09 W	32.72672232 N	103.52025277 W	58.50@ 356.97	0.20
3947.00	2.11	9.95	3945.73	94.00	61.97	61.97 N	2.45 W	32.72673207 N	103.52025060 W	62.02@ 357.73	0.19
4043.00	2.02	6.87	4041.67	96.00	65.39	65.39 N	1.94 W	32.72674146 N	103.52024887 W	65.42@ 358.30	0.15
4137.00	2.02	0.15	4135.61	94.00	68.70	68.70 N	1.74 W	32.72675053 N	103.52024813 W	68.72@ 358.55	0.25
4232.00	1.80	0.85	4230.56	95.00	71.86	71.86 N	1.71 W	32.72675923 N	103.52024796 W	71.88@ 358.63	0.23
4326.00	1.71	354.43	4324.51	94.00	74.73	74.73 N	1.83 W	32.72676712 N	103.52024826 W	74.76@ 358.60	0.23
4421.00	1.80	350.17	4419.47	95.00	77.61	77.61 N	2.22 W	32.72677505 N	103.52024946 W	77.65@ 358.36	0.17
4516.00	1.58	348.15	4514.43	95.00	80.37	80.37 N	2.74 W	32.72678262 N	103.52025110 W	80.41@ 358.04	0.24
4611.00	1.80	343.27	4609.39	95.00	83.08	83.08 N	3.44 W	32.72679009 N	103.52025330 W	83.15@ 357.63	0.28
4705.00	1.49	340.55	4703.35	94.00	85.64	85.64 N	4.28 W	32.72679716 N	103.52025594 W	85.75@ 357.14	0.34
4893.00	1.49	331.76	4891.28	188.00	90.10	90.10 N	6.25 W	32.72680945 N	103.52026224 W	90.32@ 356.03	0.12
4989.00	1.41	331.54	4987.25	96.00	92.24	92.24 N	7.40 W	32.72681535 N	103.52026594 W	92.54@ 355.41	0.08
5083.00	1.32	329.34	5081.23	94.00	94.19	94.19 N	8.50 W	32.72682073 N	103.52026947 W	94.57@ 354.84	0.11
5177.00	1.41	330.97	5175.20	94.00	96.13	96.13 N	9.62 W	32.72682609 N	103.52027305 W	96.61@ 354.29	0.10

PathFinder – a Schlumberger company

Survey Report

DEVON ENERGY PRODUCTION COMPANY, LP
 IRONHOUSE 24 STATE COM #004H
 LEA COUNTY, NM
 API#: 30-025-41696 Rig: PATTERSON #228

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Survey Latitude (deg)	Survey Longitude (deg)	Closure Dist Dir (ft) (deg)	DLS (dg/100ft)
5272.00	1.19	330.83	5270.18	95.00	98.01	98.01 N	10.66 W	32.72683129 N	103.52027641 W	98.59@ 353.79	0.23
5366.00	1.19	333.34	5364.16	94.00	99.74	99.74 N	11.58 W	32.72683605 N	103.52027933 W	100.41@ 353.38	0.06
5460.00	1.10	324.64	5458.14	94.00	101.35	101.35 N	12.54 W	32.72684049 N	103.52028242 W	102.12@ 352.95	0.21
5557.00	1.01	322.35	5555.12	97.00	102.78	102.78 N	13.60 W	32.72684446 N	103.52028583 W	103.68@ 352.46	0.10
5651.00	1.01	326.26	5649.11	94.00	104.13	104.13 N	14.56 W	32.72684818 N	103.52028894 W	105.14@ 352.04	0.07
5745.00	0.88	329.16	5743.09	94.00	105.44	105.44 N	15.39 W	32.72685179 N	103.52029161 W	106.55@ 351.69	0.15
5839.00	0.79	319.76	5837.08	94.00	106.55	106.55 N	16.18 W	32.72685487 N	103.52029414 W	107.77@ 351.36	0.17
6031.00	0.79	326.26	6029.06	192.00	108.66	108.66 N	17.77 W	32.72686071 N	103.52029926 W	110.11@ 350.71	0.05
6124.00	0.88	330.75	6122.06	93.00	109.82	109.82 N	18.48 W	32.72686390 N	103.52030152 W	111.36@ 350.45	0.12
6219.00	0.79	318.53	6217.04	95.00	110.95	110.95 N	19.27 W	32.72686701 N	103.52030406 W	112.61@ 350.15	0.21
6313.00	0.88	322.44	6311.03	94.00	112.00	112.00 N	20.14 W	32.72686994 N	103.52030686 W	113.80@ 349.81	0.11
6408.00	0.88	339.76	6406.02	95.00	113.27	113.27 N	20.84 W	32.72687342 N	103.52030910 W	115.17@ 349.58	0.28
6501.00	1.10	346.65	6499.01	93.00	114.80	114.80 N	21.29 W	32.72687766 N	103.52031053 W	116.76@ 349.49	0.27
6597.00	1.01	344.55	6594.99	96.00	116.52	116.52 N	21.73 W	32.72688238 N	103.52031192 W	118.52@ 349.44	0.10
6697.00	1.01	337.95	6694.98	100.00	118.18	118.18 N	22.29 W	32.72688697 N	103.52031371 W	120.27@ 349.32	0.12
6789.00	0.88	340.63	6786.97	92.00	119.60	119.60 N	22.83 W	32.72689088 N	103.52031543 W	121.76@ 349.19	0.15
6884.00	1.01	342.83	6881.95	95.00	121.09	121.09 N	23.32 W	32.72689498 N	103.52031698 W	123.31@ 349.10	0.14
6977.00	1.10	343.27	6974.94	93.00	122.73	122.73 N	23.82 W	32.72689949 N	103.52031857 W	125.02@ 349.02	0.10
7167.00	1.10	348.24	7164.90	190.00	126.26	126.26 N	24.72 W	32.72690922 N	103.52032139 W	128.66@ 348.92	0.05
7261.00	1.19	348.76	7258.88	94.00	128.10	128.10 N	25.09 W	32.72691428 N	103.52032256 W	130.53@ 348.92	0.10
7449.00	1.32	0.23	7446.84	188.00	132.18	132.18 N	25.46 W	32.72692551 N	103.52032367 W	134.61@ 349.10	0.15
7543.00	1.19	12.93	7540.82	94.00	134.21	134.21 N	25.24 W	32.72693109 N	103.52032290 W	136.57@ 349.35	0.33
7641.00	1.10	28.05	7638.80	98.00	136.04	136.04 N	24.57 W	32.72693608 N	103.52032067 W	138.24@ 349.76	0.32
7735.00	1.10	27.26	7732.78	94.00	137.63	137.63 N	23.73 W	32.72694046 N	103.52031791 W	139.67@ 350.22	0.02
7829.00	1.32	30.56	7826.76	94.00	139.37	139.37 N	22.77 W	32.72694521 N	103.52031473 W	141.22@ 350.72	0.24
7924.00	1.19	35.96	7921.74	95.00	141.11	141.11 N	21.63 W	32.72694997 N	103.52031100 W	142.76@ 351.28	0.19
8019.00	1.49	27.26	8016.71	95.00	143.01	143.01 N	20.49 W	32.72695515 N	103.52030723 W	144.47@ 351.85	0.38

PathFinder – a Schlumberger company

Survey Report

DEVON ENERGY PRODUCTION COMPANY, LP
 IRONHOUSE 24 STATE COM #004H
 LEA COUNTY, NM
 API#: 30-025-41696 Rig: PATTERSON #228

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Survey Latitude (deg)	Survey Longitude (deg)	Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
8113.00	1.32	33.85	8110.68	94.00	144.99	144.99 N	19.32 W	32.72696059 N	103.52030339 W	146.27@	352.41	0.25
8202.00	1.10	14.34	8199.66	89.00	146.67	146.67 N	18.54 W	32.72696519 N	103.52030081 W	147.84@	352.80	0.52
8297.00	1.32	358.85	8294.64	95.00	148.65	148.65 N	18.34 W	32.72697062 N	103.52030010 W	149.77@	352.97	0.41
8481.00	0.62	318.85	8478.61	184.00	151.52	151.52 N	19.04 W	32.72697851 N	103.52030229 W	152.71@	352.84	0.51
8518.00	0.70	326.57	8515.61	37.00	151.86	151.86 N	19.29 W	32.72697945 N	103.52030312 W	153.08@	352.76	0.32
8612.00	0.62	318.13	8609.61	94.00	152.71	152.71 N	19.95 W	32.72698182 N	103.52030523 W	154.01@	352.56	0.13
8766.00	0.88	305.17	8763.59	154.00	154.02	154.02 N	21.47 W	32.72698543 N	103.52031015 W	155.50@	352.06	0.20
8860.00	1.80	290.93	8857.57	94.00	154.96	154.96 N	23.44 W	32.72698807 N	103.52031653 W	156.72@	351.40	1.03
8956.00	2.20	290.76	8953.51	96.00	156.15	156.15 N	26.57 W	32.72699141 N	103.52032668 W	158.39@	350.34	0.42
9051.00	2.02	297.66	9048.44	95.00	157.57	157.57 N	29.76 W	32.72699539 N	103.52033701 W	160.36@	349.31	0.33
** TIED INTO EXTREME ENGINEERING GYRO SURVEY AT 9141'MD.												
9141.00	2.29	300.03	9138.38	90.00	159.21	159.21 N	32.72 W	32.72699995 N	103.52034660 W	162.54@	348.39	0.32
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.												
9253.00	2.73	296.74	9250.27	112.00	161.53	161.53 N	37.04 W	32.72700642 N	103.52036058 W	165.72@	347.09	0.41
9284.00	3.17	297.67	9281.23	31.00	162.26	162.26 N	38.46 W	32.72700845 N	103.52036518 W	166.76@	346.67	1.43
9315.00	3.61	305.36	9312.18	31.00	163.22	163.22 N	40.01 W	32.72701113 N	103.52037021 W	168.06@	346.23	2.04
9347.00	5.72	322.28	9344.07	32.00	165.07	165.07 N	41.81 W	32.72701624 N	103.52037601 W	170.28@	345.79	7.80
9378.00	8.35	332.25	9374.84	31.00	168.28	168.28 N	43.80 W	32.72702512 N	103.52038241 W	173.89@	345.41	9.32
9410.00	11.26	337.04	9406.37	32.00	173.22	173.22 N	46.10 W	32.72703873 N	103.52038977 W	179.25@	345.10	9.44
9440.00	15.04	340.02	9435.57	30.00	179.57	179.57 N	48.58 W	32.72705625 N	103.52039765 W	186.03@	344.86	12.80
9473.00	18.20	341.55	9467.19	33.00	188.49	188.49 N	51.67 W	32.72708082 N	103.52040749 W	195.44@	344.67	9.67
9504.00	20.93	343.42	9496.40	31.00	198.39	198.39 N	54.79 W	32.72710810 N	103.52041737 W	205.82@	344.56	9.03
9536.00	24.53	345.17	9525.91	32.00	210.29	210.29 N	58.12 W	32.72714088 N	103.52042791 W	218.18@	344.55	11.45
9567.00	27.96	347.30	9553.71	31.00	223.61	223.61 N	61.36 W	32.72717754 N	103.52043813 W	231.87@	344.65	11.47
9599.00	30.95	349.86	9581.57	32.00	239.03	239.03 N	64.46 W	32.72722000 N	103.52044782 W	247.57@	344.91	10.14
9630.00	35.00	352.10	9607.57	31.00	255.69	255.69 N	67.09 W	32.72726584 N	103.52045594 W	264.35@	345.30	13.64
9662.00	39.04	352.97	9633.12	32.00	274.79	274.79 N	69.59 W	32.72731839 N	103.52046358 W	283.46@	345.79	12.73

PathFinder – a Schlumberger company

Survey Report

DEVON ENERGY PRODUCTION COMPANY, LP
 IRONHOUSE 24 STATE COM #004H
 LEA COUNTY, NM
 API#: 30-025-41696 Rig: PATTERSON #228

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Survey Latitude (deg)	Survey Longitude (deg)	Closure Dist (ft)	Dir (deg)	DLS (dg/100ft)
9693.00	41.50	353.32	9656.77	31.00	294.68	294.68 N	71.98 W	32.72737312 N	103.52047086 W	303.35@	346.27	7.97
9725.00	43.26	354.53	9680.41	32.00	316.13	316.13 N	74.25 W	32.72743211 N	103.52047773 W	324.73@	346.78	6.06
9756.00	44.67	357.00	9702.72	31.00	337.59	337.59 N	75.84 W	32.72749112 N	103.52048234 W	346.00@	347.34	7.16
9788.00	45.99	358.95	9725.22	32.00	360.33	360.33 N	76.64 W	32.72755364 N	103.52048438 W	368.39@	347.99	5.98
9819.00	48.54	0.82	9746.25	31.00	383.10	383.10 N	76.67 W	32.72761621 N	103.52048393 W	390.69@	348.68	9.34
9851.00	51.70	1.20	9766.77	32.00	407.65	407.65 N	76.24 W	32.72768367 N	103.52048191 W	414.71@	349.41	9.92
9882.00	54.69	1.41	9785.34	31.00	432.46	432.46 N	75.67 W	32.72775185 N	103.52047945 W	439.03@	350.07	9.66
9913.00	58.21	0.73	9802.47	31.00	458.28	458.28 N	75.19 W	32.72782282 N	103.52047724 W	464.41@	350.68	11.50
9945.00	61.73	0.52	9818.48	32.00	485.98	485.98 N	74.89 W	32.72789894 N	103.52047557 W	491.72@	351.24	11.01
9976.00	64.90	0.74	9832.40	31.00	513.68	513.68 N	74.59 W	32.72797505 N	103.52047389 W	519.06@	351.74	10.25
10008.00	68.59	2.54	9845.03	32.00	543.06	543.06 N	73.74 W	32.72805578 N	103.52047040 W	548.04@	352.27	12.64
10039.00	72.55	4.55	9855.35	31.00	572.23	572.23 N	71.93 W	32.72813592 N	103.52046378 W	576.73@	352.84	14.16
10070.00	77.38	5.97	9863.38	31.00	602.03	602.03 N	69.18 W	32.72821777 N	103.52045410 W	605.99@	353.44	16.20
10102.00	82.31	5.75	9869.03	32.00	633.35	633.35 N	65.96 W	32.72830379 N	103.52044287 W	636.78@	354.05	15.42
10134.00	86.53	4.06	9872.14	32.00	665.08	665.08 N	63.24 W	32.72839093 N	103.52043323 W	668.08@	354.57	14.20
10232.00	88.46	1.67	9876.42	98.00	762.85	762.85 N	58.35 W	32.72865954 N	103.52041488 W	765.08@	355.63	3.13
10326.00	89.25	2.49	9878.30	94.00	856.77	856.77 N	54.94 W	32.72891759 N	103.52040145 W	858.53@	356.33	1.21
10421.00	90.92	3.45	9878.16	95.00	951.64	951.64 N	50.02 W	32.72917822 N	103.52038308 W	952.95@	356.99	2.03
10516.00	90.92	4.77	9876.63	95.00	1046.38	1046.38 N	43.21 W	32.72943847 N	103.52035858 W	1047.27@	357.64	1.39
10611.00	92.15	3.82	9874.09	95.00	1141.07	1141.07 N	36.10 W	32.72969858 N	103.52033309 W	1141.64@	358.19	1.64
10705.00	93.39	3.82	9869.54	94.00	1234.75	1234.75 N	29.84 W	32.72995592 N	103.52031041 W	1235.11@	358.62	1.32
10800.00	94.44	3.23	9863.06	95.00	1329.35	1329.35 N	24.02 W	32.73021579 N	103.52028911 W	1329.57@	358.96	1.27
10895.00	93.65	0.59	9856.36	95.00	1424.05	1424.05 N	20.86 W	32.73047600 N	103.52027648 W	1424.20@	359.16	2.89
10989.00	93.65	1.13	9850.37	94.00	1517.85	1517.85 N	19.45 W	32.73073377 N	103.52026956 W	1517.98@	359.27	0.57
11084.00	93.21	358.99	9844.69	95.00	1612.67	1612.67 N	19.35 W	32.73099438 N	103.52026687 W	1612.79@	359.31	2.30
11179.00	92.33	357.78	9840.10	95.00	1707.52	1707.52 N	22.03 W	32.73125512 N	103.52027320 W	1707.67@	359.26	1.57
11273.00	92.95	358.02	9835.77	94.00	1801.36	1801.36 N	25.47 W	32.73151309 N	103.52028205 W	1801.54@	359.19	0.71

PathFinder – a Schlumberger company

Survey Report

DEVON ENERGY PRODUCTION COMPANY, LP
 IRONHOUSE 24 STATE COM #004H
 LEA COUNTY, NM
 API#: 30-025-41696 Rig: PATTERSON #228

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Survey Latitude (deg)	Survey Longitude (deg)	Closure Dist Dir (ft) (deg)	DLS (dg/100ft)
11367.00	94.09	357.95	9830.00	94.00	1895.12	1895.12 N	28.77 W	32.73177086 N	103.52029044 W	1895.34@ 359.13	1.22
11462.00	94.09	358.69	9823.22	95.00	1989.84	1989.84 N	31.55 W	32.73203124 N	103.52029711 W	1990.09@ 359.09	0.78
11557.00	94.00	359.82	9816.52	95.00	2084.59	2084.59 N	32.78 W	32.73229169 N	103.52029875 W	2084.85@ 359.10	1.19
11651.00	93.91	359.74	9810.03	94.00	2178.37	2178.37 N	33.14 W	32.73254943 N	103.52029758 W	2178.62@ 359.13	0.13
11745.00	92.95	0.37	9804.41	94.00	2272.20	2272.20 N	33.05 W	32.73280731 N	103.52029494 W	2272.44@ 359.17	1.22
11840.00	93.21	1.10	9799.31	95.00	2367.05	2367.05 N	31.83 W	32.73306798 N	103.52028862 W	2367.27@ 359.23	0.81
11934.00	93.91	0.27	9793.47	94.00	2460.86	2460.86 N	30.71 W	32.73332579 N	103.52028263 W	2461.06@ 359.29	1.15
12029.00	94.00	1.05	9786.92	95.00	2555.63	2555.63 N	29.62 W	32.73358622 N	103.52027672 W	2555.80@ 359.34	0.82
12124.00	94.35	359.36	9780.00	95.00	2650.37	2650.37 N	29.28 W	32.73384661 N	103.52027325 W	2650.54@ 359.37	1.81
12218.00	95.23	358.55	9772.15	94.00	2744.03	2744.03 N	30.99 W	32.73410405 N	103.52027647 W	2744.20@ 359.35	1.27
12313.00	95.41	358.00	9763.34	95.00	2838.58	2838.58 N	33.83 W	32.73436396 N	103.52028337 W	2838.78@ 359.32	0.61
12408.00	95.14	359.56	9754.61	95.00	2933.15	2933.15 N	35.85 W	32.73462393 N	103.52028755 W	2933.37@ 359.30	1.66
12502.00	95.41	359.53	9745.97	94.00	3026.75	3026.75 N	36.59 W	32.73488119 N	103.52028764 W	3026.97@ 359.31	0.29
12597.00	95.58	359.85	9736.87	95.00	3121.31	3121.31 N	37.10 W	32.73514110 N	103.52028694 W	3121.53@ 359.32	0.38
12691.00	94.62	0.17	9728.51	94.00	3214.94	3214.94 N	37.08 W	32.73539842 N	103.52028455 W	3215.15@ 359.34	1.08
12785.00	94.53	359.72	9721.02	94.00	3308.64	3308.64 N	37.17 W	32.73565595 N	103.52028250 W	3308.85@ 359.36	0.49
12879.00	92.42	359.39	9715.32	94.00	3402.46	3402.46 N	37.90 W	32.73591382 N	103.52028253 W	3402.67@ 359.36	2.27
12974.00	91.63	357.16	9711.96	95.00	3497.35	3497.35 N	40.76 W	32.73617468 N	103.52028946 W	3497.58@ 359.33	2.49
13069.00	91.36	358.98	9709.48	95.00	3592.26	3592.26 N	43.96 W	32.73643560 N	103.52029749 W	3592.53@ 359.30	1.94
13163.00	91.98	359.11	9706.74	94.00	3686.20	3686.20 N	45.53 W	32.73669383 N	103.52030024 W	3686.48@ 359.29	0.67
13257.00	93.03	358.97	9702.63	94.00	3780.10	3780.10 N	47.10 W	32.73695193 N	103.52030301 W	3780.39@ 359.29	1.13
13352.00	94.79	359.87	9696.16	95.00	3874.87	3874.87 N	48.06 W	32.73721241 N	103.52030377 W	3875.17@ 359.29	2.08
13446.00	94.35	358.94	9688.67	94.00	3968.56	3968.56 N	49.03 W	32.73746994 N	103.52030460 W	3968.87@ 359.29	1.09
13541.00	93.74	358.70	9681.96	95.00	4063.31	4063.31 N	50.98 W	32.73773038 N	103.52030858 W	4063.63@ 359.28	0.69
13635.00	95.14	359.23	9674.69	94.00	4157.00	4157.00 N	52.68 W	32.73798794 N	103.52031175 W	4157.34@ 359.27	1.59
13730.00	95.06	358.92	9666.24	95.00	4251.62	4251.62 N	54.21 W	32.73824800 N	103.52031435 W	4251.96@ 359.27	0.34
13824.00	94.35	359.02	9658.53	94.00	4345.28	4345.28 N	55.89 W	32.73850547 N	103.52031749 W	4345.64@ 359.26	0.76

PathFinder – a Schlumberger company

Survey Report

DEVON ENERGY PRODUCTION COMPANY, LP
 IRONHOUSE 24 STATE COM #004H
 LEA COUNTY, NM
 API#: 30-025-41696 Rig: PATTERSON #228

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Survey Latitude (deg)	Survey Longitude (deg)	Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
13919.00	92.15	356.17	9653.15	95.00	4440.03	4440.03 N	59.87 W	32.73876596 N	103.52032808 W	4440.44@	359.23	3.79
14014.00	94.00	0.18	9648.05	95.00	4534.82	4534.82 N	62.89 W	32.73902655 N	103.52033554 W	4535.26@	359.21	4.64
14108.00	93.56	357.29	9641.85	94.00	4628.59	4628.59 N	64.97 W	32.73928429 N	103.52033994 W	4629.04@	359.20	3.10
14176.00	92.86	359.57	9638.04	68.00	4696.45	4696.45 N	66.83 W	32.73947085 N	103.52034429 W	4696.92@	359.18	3.50
STRAIGHT LINE PROJECTION TO BIT DEPTH AT 14235'MD.												
14235.00	92.86	359.57	9635.10	59.00	4755.37	4755.37 N	67.27 W	32.73963281 N	103.52034426 W	4755.85@	359.19	0.00

** The survey data at tie-in point was furnished by a recognized survey company and entered as submitted. Survey stations above the tie-in point represent recalculated data by PathFinder – a Schlumberger company and may reflect minor changes due to rounding differences between survey programs. Only survey stations taken by qualified PathFinder personnel are subject to certification.