



Weatherford®

Evaluation, Drilling & Intervention
10000 West County Rd. 116
P.O. Box 61028
Midland, TX USA 79711
Tel. (432) 561-8892 Fax (432) 561-8895

Devon Energy
333 W. Sheridan Ave
Oklahoma City, OK, 73102

Date: September 28, 2015

Attention: Garrett Glaze

Re: Devon Energy
Well: Hadar 10 Fed Com 21H
Eddy County, New Mexico

HOBBS OCD
MAR 01 2016
RECEIVED

Enclosed, please find the original survey performed on the referenced well by Precision Energy Services, Inc. (P-5 No. 676004), a Weatherford company. Other information required by your office is as follows:

Name & Title Of Surveyor	Well Number	Surveyed Depths	Dates Performed	Type of Survey
Justin Nguyen MWD Supervisor	21H	7952 MD 13815 MD	9/15/2015 9/22/2015	Measurement While Drilling

A notarized plan vs. actual is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

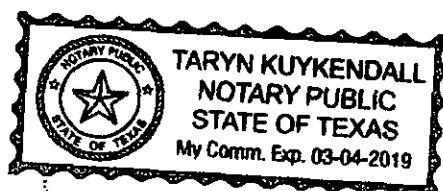
Jonathan Leger

Jonathan Leger
MWD Ops Coordinator

On this, the 30th day of October, 2015, before me a notary public, the undersigned officer, personally appeared Jonathan Leger, known to me (or satisfactorily proven) to be the person whose name is subscribed to the within instrument, and acknowledged that he executed the same for the purposes therein contained.

In witness hereof, I hereunto set my hand and official seal.

Taryn Kuykendall
Notary Public



5D Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Kelly Bushing)										
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N.Offset (US ft)	E.Offset (US ft)	VS (US ft)	DLS (°/100US ft)	Northing (US ft)	Easting (US ft)	Comment
5571.00	1.40	353.00	5570.44	33.06	12.45	-12.63	0.22	610933.14	690611.87	
5665.00	1.50	335.00	5664.41	35.32	11.79	-11.98	0.49	610935.40	690611.21	
5759.00	1.20	352.00	5758.39	37.41	11.14	-11.34	0.53	610937.49	690610.56	
5854.00	1.20	354.00	5853.36	39.38	10.89	-11.11	0.04	610939.46	690610.31	
5950.00	1.50	340.00	5949.34	41.56	10.36	-10.58	0.46	610941.64	690609.78	
6045.00	1.50	342.00	6044.31	43.91	9.55	-9.79	0.06	610943.99	690608.97	
6138.00	1.10	340.00	6137.28	45.91	8.87	-9.12	0.43	610945.99	690608.29	
6233.00	1.50	336.00	6232.26	47.90	8.05	-8.31	0.43	610947.98	690607.47	
6328.00	1.10	340.00	6327.23	49.89	7.23	-7.50	0.43	610949.97	690606.65	
6424.00	1.70	345.00	6423.20	52.13	6.55	-6.83	0.64	610952.21	690605.97	
6519.00	1.20	354.00	6518.17	54.48	6.08	-6.38	0.58	610954.56	690605.50	
6614.00	1.20	348.00	6613.15	56.45	5.77	-6.08	0.13	610956.53	690605.19	
6709.00	1.80	356.00	6708.12	58.91	5.46	-5.78	0.67	610958.99	690604.88	
6803.00	1.60	351.00	6802.08	61.68	5.15	-5.48	0.26	610961.76	690604.57	
6899.00	2.00	351.00	6898.03	64.66	4.68	-5.03	0.42	610964.74	690604.10	
6994.00	2.20	352.00	6992.97	68.10	4.17	-4.53	0.21	610968.18	690603.59	
7089.00	2.10	348.00	7087.90	71.61	3.55	-3.94	0.19	610971.69	690602.97	
7184.00	2.10	348.00	7182.84	75.01	2.83	-3.23	0.00	610975.09	690602.25	
7279.00	1.70	352.00	7277.78	78.11	2.27	-2.69	0.44	610978.19	690601.69	
7374.00	1.90	310.00	7372.74	80.52	0.87	-1.30	1.37	610980.60	690600.29	
7470.00	2.00	301.00	7468.68	82.40	-1.79	1.34	0.34	610982.48	690597.63	
7565.00	1.80	295.00	7563.63	83.89	-4.56	4.11	0.30	610983.97	690594.86	
7660.00	1.70	314.00	7658.59	85.50	-6.93	6.47	0.62	610985.58	690592.49	
7755.00	1.30	318.00	7753.56	87.28	-8.66	8.19	0.43	610987.36	690590.76	
7851.00	1.80	295.00	7849.52	88.72	-10.76	10.28	0.82	610988.80	690588.66	
7897.00	1.70	283.00	7895.50	89.18	-12.08	11.59	0.82	610989.26	690587.34	Tie-on Rig
7952.00	1.96	261.44	7950.47	89.23	-13.80	13.32	1.33	610989.31	690585.62	First Wft Svy
8046.00	0.66	233.07	8044.45	88.66	-15.83	15.35	1.50	610988.74	690583.59	
8141.00	0.75	222.05	8139.44	87.87	-16.68	16.20	0.17	610987.95	690582.74	
8236.00	0.78	216.42	8234.43	86.89	-17.48	17.01	0.09	610986.97	690581.94	
8332.00	0.84	222.78	8330.42	85.85	-18.35	17.88	0.11	610985.93	690581.07	
8427.00	1.69	237.79	8425.40	84.59	-20.00	19.55	0.95	610984.67	690579.42	
8459.00	4.28	236.05	8457.35	83.67	-21.39	20.94	8.10	610983.75	690578.03	
8491.00	7.29	240.55	8489.19	82.00	-24.15	23.71	9.51	610982.08	690575.27	
8523.00	9.96	243.61	8520.82	79.78	-28.40	27.97	8.46	610979.86	690571.02	
8554.00	12.79	245.34	8551.21	77.15	-33.92	33.50	9.19	610977.23	690565.50	
8586.00	16.11	246.66	8582.19	73.91	-41.22	40.82	10.43	610973.99	690558.20	
8618.00	19.49	248.54	8612.66	70.20	-50.27	49.89	10.71	610970.28	690549.15	
8649.00	22.51	250.15	8641.59	66.29	-60.66	60.30	9.92	610966.37	690538.76	
8682.00	25.65	251.59	8671.72	61.89	-73.38	73.05	9.68	610961.97	690526.04	
8713.00	28.31	252.19	8699.34	57.52	-86.75	86.44	8.63	610957.60	690512.67	
8745.00	31.10	253.03	8727.13	52.79	-101.88	101.60	8.82	610952.87	690497.54	
8777.00	34.15	253.65	8754.08	47.85	-118.41	118.15	9.59	610947.73	690481.01	
8809.00	37.06	254.21	8780.10	42.69	-136.31	136.08	9.15	610942.77	690463.11	
8840.00	40.11	254.55	8804.33	37.49	-154.93	154.73	9.86	610937.57	690444.49	
8872.00	43.01	254.34	8828.27	31.80	-175.38	175.20	9.07	610931.88	690424.04	
8903.00	45.66	254.46	8850.44	25.97	-196.24	196.10	8.55	610926.05	690403.18	
8935.00	47.25	255.91	8872.49	20.05	-218.67	218.55	5.96	610920.13	690380.75	
8967.00	48.31	257.37	8893.99	14.57	-241.72	241.64	4.73	610914.65	690357.70	
8998.00	50.17	259.52	8914.23	9.88	-264.73	264.67	7.97	610909.96	690334.69	
9030.00	52.47	260.86	8934.23	5.63	-289.34	289.30	7.90	610905.71	690310.08	
9062.00	55.14	262.11	8953.12	1.81	-314.88	314.86	8.92	610901.89	690284.54	
9094.00	58.69	263.41	8970.59	-1.57	-341.47	341.47	11.60	610898.51	690257.95	
9126.00	62.28	264.97	8986.35	-4.38	-369.17	369.19	11.99	610895.70	690230.25	
9158.00	64.91	266.56	9000.58	-6.49	-397.75	397.78	9.35	610893.59	690201.67	
9190.00	68.20	268.08	9013.31	-7.86	-427.07	427.11	11.17	610892.22	690172.35	
9221.00	70.68	268.48	9024.20	-8.73	-456.08	456.12	8.09	610891.35	690143.34	
9253.00	73.97	269.04	9033.91	-9.38	-486.56	486.60	10.42	610890.70	690112.86	
9285.00	77.74	270.14	9041.73	-9.60	-517.58	517.62	12.24	610890.48	690081.84	

5D Survey Report

Survey Points: (Relative to Slot centre)(TVD relative to Kelly Bushing)										Comment
MD (US ft)	Inc (°)	Az (°)	TVD (US ft)	N. Offset (US ft)	E. Offset (US ft)	VS (US ft)	DLS (°/100US ft)	Northing (US ft)	Easting (US ft)	
9307.00	80.36	270.95	9045.91	-9.40	-539.18	539.22	12.45	610890.68	690060.24	
9392.00	85.86	272.75	9056.11	-6.67	-623.48	623.51	6.80	610893.41	689975.94	
9487.00	87.55	272.85	9061.57	-2.03	-718.21	718.21	1.78	610898.05	689881.21	
9583.00	90.91	272.32	9062.86	2.29	-814.09	814.06	3.54	610902.37	689785.33	
9677.00	91.26	272.73	9061.08	6.43	-907.98	907.93	0.57	610906.51	689691.44	
9772.00	90.07	272.99	9059.97	11.17	-1002.85	1002.78	1.28	610911.25	689596.57	
9868.00	88.60	270.53	9061.09	14.12	-1098.79	1098.70	2.98	610914.20	689500.63	
9963.00	87.90	270.77	9063.99	15.20	-1193.74	1193.64	0.78	610915.28	689405.68	
10059.00	90.70	270.25	9065.16	16.05	-1289.72	1289.61	2.97	610916.13	689309.70	
10153.00	91.54	268.69	9063.32	15.18	-1383.69	1383.59	1.88	610915.26	689215.73	
10249.00	90.42	268.87	9061.68	13.14	-1479.66	1479.56	1.18	610913.22	689119.76	
10344.00	91.26	269.22	9060.29	11.56	-1574.63	1574.55	0.96	610911.64	689024.79	
10440.00	91.26	267.61	9058.18	8.90	-1670.57	1670.50	1.68	610908.98	688928.85	
10535.00	90.00	267.75	9057.13	5.06	-1765.48	1765.43	1.33	610905.14	688833.94	
10630.00	91.47	267.82	9055.91	1.39	-1860.40	1860.37	1.55	610901.47	688739.02	
10724.00	91.26	268.71	9053.68	-1.46	-1954.33	1954.31	0.97	610898.62	688645.09	
10819.00	90.91	269.54	9051.88	-2.91	-2049.30	2049.29	0.95	610897.17	688550.12	
10914.00	92.03	268.73	9049.44	-4.34	-2144.26	2144.25	1.45	610895.74	688455.16	
11009.00	92.38	268.51	9045.78	-6.63	-2239.16	2239.16	0.44	610893.45	688360.26	
11104.00	92.10	268.86	9042.07	-8.81	-2334.06	2334.08	0.47	610891.27	688265.36	
11197.00	91.95	268.58	9038.78	-10.88	-2426.98	2427.00	0.34	610889.20	688172.44	
11292.00	90.28	269.17	9036.94	-12.75	-2521.94	2521.97	1.86	610887.33	688077.48	
11388.00	90.07	269.30	9036.64	-14.03	-2617.93	2617.97	0.26	610886.05	687981.49	
11483.00	89.44	269.19	9037.05	-15.28	-2712.92	2712.97	0.67	610884.80	687886.50	
11576.00	91.05	269.85	9036.65	-16.06	-2805.91	2805.96	1.87	610884.02	687793.51	
11671.00	91.68	270.63	9034.39	-15.66	-2900.89	2900.93	1.06	610884.42	687698.53	
11767.00	90.84	271.50	9032.28	-13.88	-2996.84	2996.88	1.26	610886.20	687602.58	
11862.00	89.72	269.77	9031.81	-12.83	-3091.83	3091.86	2.17	610887.25	687507.59	
11957.00	90.84	270.77	9031.35	-12.38	-3186.83	3186.85	1.58	610887.70	687412.59	
12052.00	90.56	270.99	9030.19	-10.92	-3281.81	3281.82	0.37	610889.16	687317.61	
12148.00	90.35	269.74	9029.43	-10.31	-3377.80	3377.81	1.32	610889.77	687221.62	
12242.00	92.03	268.58	9027.47	-11.69	-3471.77	3471.78	2.17	610888.39	687127.65	
12337.00	91.82	268.45	9024.28	-14.15	-3566.68	3566.70	0.26	610885.93	687032.74	
12432.00	91.26	268.73	9021.73	-16.48	-3661.62	3661.65	0.66	610883.60	686937.80	
12527.00	90.07	269.29	9020.63	-18.12	-3756.59	3756.64	1.38	610881.96	686842.83	
12622.00	90.91	269.62	9019.81	-19.03	-3851.59	3851.63	0.95	610881.05	686747.83	
12717.00	90.56	269.49	9018.60	-19.77	-3946.57	3946.62	0.39	610880.31	686652.85	
12812.00	91.68	268.79	9016.74	-21.19	-4041.54	4041.60	1.39	610878.89	686557.88	
12908.00	91.05	268.63	9014.45	-23.35	-4137.49	4137.56	0.68	610876.73	686461.93	
13003.00	90.42	268.90	9013.23	-25.40	-4232.46	4232.54	0.72	610874.68	686366.96	
13099.00	91.54	268.37	9011.59	-27.69	-4328.42	4328.50	1.29	610872.39	686271.00	
13194.00	90.91	268.28	9009.56	-30.46	-4423.36	4423.46	0.67	610869.62	686176.06	
13289.00	90.77	268.51	9008.17	-33.12	-4518.31	4518.42	0.28	610866.96	686081.11	
13383.00	90.42	268.38	9007.19	-35.67	-4612.27	4612.39	0.40	610864.41	685987.15	
13478.00	91.05	268.68	9005.97	-38.11	-4707.23	4707.37	0.73	610861.97	685892.19	
13574.00	91.12	268.66	9004.16	-40.34	-4803.19	4803.33	0.08	610859.74	685796.23	
13670.00	90.98	268.88	9002.40	-42.40	-4899.15	4899.30	0.27	610857.68	685700.27	
13765.00	90.98	268.99	9000.77	-44.16	-4994.12	4994.28	0.12	610855.92	685605.30	
13815.00	91.12	269.22	8999.85	-44.94	-5044.10	5044.27	0.54	610855.14	685555.32	Last Wlt Svy
13877.67	91.12	269.22	8998.63	-45.80	-5106.75	5106.93	0.00	610854.28	685492.67	Cross Prod Box
13887.00	91.12	269.22	8998.45	-45.92	-5116.08	5116.26	0.00	610854.16	685483.34	Proj to Bit



Well Name: HADAR 10 FED COM 21H

Sub-Division DELAWARE BASIN WEST		Region SLOPE EAST		Field Name HACKBERRY NORTH		County EDDY		State/Province NM					
Surface Legal Location SEC11 T19S R31E		API/UWI 3001543276		Latitude (") 32° 40' 42.496" N		Longitude (") 103° 50' 53.596" W		Orig KB Elevation (ft) 3,612.20		Ground Elev MSL (ft) 3,587.20		KB - GL (ft) 25.00	
Wellbores													
Wellbore Name OH		Parent Wellbore OH				SAP Well ID 38892				Vertical Section Direction (*)			
Kick Offs & Key Depths													
Date 9/17/2015				Type CURVE				Top Depth (ftKB) 8,433.0		HOBBES			
Actual Deviation Survey TELEDRIFF, Proposed? No				Definitive? No		Proposed? No		Proposed Deviation Survey					
Deviation Survey													
Date 9/7/2015		Description TELEDRIFF											
MD Tie In (ftKB)		TVD Tie In (ftKB)		Inclination Tie In (")		Azimuth Tie In (")		NSTie In (ft)		EWTie 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			
9/7/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	MS	TELEDRIFF			
9/7/2015	157.00	0.80	222.10	156.99	0.74	-0.81	-0.73	0.51	MS	TELEDRIFF			
9/7/2015	217.00	0.90	242.10	216.99	1.44	-1.34	-1.43	0.52	MS	TELEDRIFF			
9/7/2015	371.00	0.70	216.10	370.97	3.08	-2.67	-3.06	0.27	MS	TELEDRIFF			
9/7/2015	431.00	0.80	243.00	430.97	3.67	-3.16	-3.64	0.60	MS	TELEDRIFF			
9/7/2015	553.00	0.80	219.00	552.96	4.98	-4.21	-4.94	0.27	MS	TELEDRIFF			
9/7/2015	646.00	0.50	231.10	645.95	5.71	-4.96	-5.66	0.35	MS	TELEDRIFF			
9/7/2015	738.00	0.40	292.00	737.95	6.32	-5.10	-6.27	0.50	MS	TELEDRIFF			
9/7/2015	888.00	0.20	230.00	887.95	7.00	-5.07	-6.96	0.24	MS	TELEDRIFF			
9/7/2015	980.00	0.10	242.00	979.95	7.20	-5.21	-7.15	0.11	MS	TELEDRIFF			
9/7/2015	1,072.00	0.10	210.00	1,071.95	7.31	-5.32	-7.26	0.06	MS	TELEDRIFF			
9/7/2015	1,164.00	0.10	199.00	1,163.95	7.38	-5.46	-7.33	0.02	MS	TELEDRIFF			
9/7/2015	1,257.00	0.30	179.00	1,256.95	7.40	-5.78	-7.35	0.22	MS	TELEDRIFF			
9/7/2015	1,349.00	0.10	177.00	1,348.95	7.40	-6.10	-7.34	0.22	MS	TELEDRIFF			
9/7/2015	1,491.00	0.20	111.00	1,490.94	7.16	-6.32	-7.11	0.13	MS	TELEDRIFF			
9/7/2015	1,536.00	0.30	83.00	1,535.94	6.97	-6.33	-6.92	0.34	MS	TELEDRIFF			
9/7/2015	1,630.00	0.60	61.00	1,629.94	6.30	-6.06	-6.24	0.36	MS	TELEDRIFF			
9/7/2015	1,725.00	0.80	0.52	1,724.94	5.85	-5.16	-5.80	0.76	MS	TELEDRIFF			
9/7/2015	1,820.00	1.30	59.00	1,819.92	4.91	-3.94	-4.87	1.17	MS	TELEDRIFF			
9/7/2015	1,916.00	1.40	55.00	1,915.90	3.00	-2.71	-2.98	0.14	MS	TELEDRIFF			
9/7/2015	2,011.00	1.60	52.00	2,010.86	0.99	-1.22	-0.98	0.23	MS	TELEDRIFF			
9/7/2015	2,106.00	1.50	54.00	2,105.83	-1.07	0.32	1.07	0.12	MS	TELEDRIFF			
9/7/2015	2,200.00	1.30	53.00	2,199.80	-2.93	1.69	2.92	0.21	MS	TELEDRIFF			
9/7/2015	2,296.00	1.50	46.10	2,295.77	-4.72	3.22	4.69	0.27	MS	TELEDRIFF			
9/7/2015	2,391.00	1.30	61.10	2,390.74	-6.57	4.60	6.53	0.44	MS	TELEDRIFF			
9/7/2015	2,486.00	0.80	42.10	2,485.73	-7.97	5.61	7.92	0.63	MS	TELEDRIFF			
9/7/2015	2,582.00	0.70	69.10	2,581.72	-8.97	6.32	8.92	0.38	MS	TELEDRIFF			
9/7/2015	2,623.00	0.20	61.00	2,622.72	-9.27	6.44	9.21	1.23	MS	TELEDRIFF			
9/7/2015	2,677.00	0.70	73.10	2,676.72	-9.67	6.58	9.61	0.94	MS	TELEDRIFF			
9/7/2015	2,772.00	0.40	82.00	2,771.71	-10.55	6.80	10.49	0.33	MS	TELEDRIFF			
9/7/2015	2,868.00	0.30	86.10	2,867.71	-11.14	6.86	11.08	0.11	MS	TELEDRIFF			
9/7/2015	2,962.00	0.40	43.10	2,961.71	-11.61	7.12	11.55	0.29	MS	TELEDRIFF			
9/7/2015	3,057.00	0.30	14.10	3,056.71	-11.90	7.60	11.83	0.21	MS	TELEDRIFF			
9/7/2015	3,151.00	0.30	354.00	3,150.70	-11.94	8.09	11.87	0.11	MS	TELEDRIFF			
9/7/2015	3,246.00	0.20	79.00	3,245.70	-12.08	8.36	12.01	0.36	MS	TELEDRIFF			
9/7/2015	3,342.00	0.10	92.00	3,341.70	-12.33	8.39	12.25	0.11	MS	TELEDRIFF			
9/7/2015	3,436.00	0.10	75.00	3,435.70	-12.49	8.41	12.41	0.03	MS	TELEDRIFF			
9/7/2015	3,531.00	0.30	63.00	3,530.70	-12.79	8.55	12.72	0.21	MS	TELEDRIFF			
9/7/2015	3,626.00	0.20	61.00	3,625.70	-13.16	8.74	13.08	0.11	MS	TELEDRIFF			
9/7/2015	3,721.00	0.50	36.10	3,720.70	-13.55	9.16	13.47	0.35	MS	TELEDRIFF			
9/7/2015	3,817.00	0.20	5.10	3,816.70	-13.82	9.66	13.73	0.36	MS	TELEDRIFF			
9/7/2015	3,911.00	0.10	97.00	3,910.70	-13.92	9.81	13.83	0.24	MS	TELEDRIFF			
9/7/2015	4,006.00	0.30	8.10	4,005.70	-14.04	10.05	13.95	0.33	MS	TELEDRIFF			
9/7/2015	4,101.00	0.30	24.10	4,100.70	-14.18	10.52	14.08	0.09	MS	TELEDRIFF			
9/7/2015	4,197.00	0.30	54.00	4,196.70	-14.49	10.90	14.39	0.16	MS	TELEDRIFF			
9/7/2015	4,293.00	0.00	327.00	4,292.69	-14.69	11.05	14.59	0.31	MS	TELEDRIFF			
9/7/2015	4,388.00	0.30	359.00	4,387.69	-14.69	11.30	14.59	0.32	MS	TELEDRIFF			
9/7/2015	4,482.00	0.20	338.00	4,481.69	-14.63	11.69	14.52	0.14	MS	TELEDRIFF			
9/7/2015	4,620.00	0.60	3.00	4,619.69	-14.58	12.64	14.47	0.31	MS	TELEDRIFF			
9/7/2015	4,715.00	1.10	2.00	4,714.68	-14.65	14.05	14.53	0.53	MS	TELEDRIFF			
9/7/2015	4,811.00	1.30	348.00	4,810.66	-14.48	16.03	14.33	0.37	MS	TELEDRIFF			
9/7/2015	4,906.00	1.10	340.00	4,905.64	-13.96	17.94	13.80	0.27	MS	TELEDRIFF			
9/7/2015	5,002.00	1.40	348.00	5,001.61	-13.42	19.96	13.24	0.36	MS	TELEDRIFF			
9/7/2015	5,097.00	1.20	334.00	5,096.59	-12.76	21.99	12.56	0.39	MS	TELEDRIFF			
9/7/2015	5,191.00	1.40	354.00	5,190.57	-12.22	24.01	12.01	0.52	MS	TELEDRIFF			
9/7/2015	5,285.00	1.60	350.00	5,284.53	-11.90	26.45	11.66	0.24	MS	TELEDRIFF			
9/7/2015	5,381.00	1.50	356.00	5,380.50	-11.60	29.02	11.34	0.20	MS	TELEDRIFF			
9/7/2015	5,476.00	1.20	355.10	5,475.47	-11.45	31.25	11.17	0.32	MS	TELEDRIFF			
9/7/2015	5,571.00	1.40	353.00	5,570.45	-11.24	33.40	10.94	0.22	MS	TELEDRIFF			
9/7/2015	5,665.00	1.50	335.10	5,664.42	-10.60	35.65	10.29	0.49	MS	TELEDRIFF			
9/7/2015	5,759.00	1.20	352.00	5,758.39	-9.97	37.74	9.63	0.53	MS	TELEDRIFF			
9/7/2015	5,854.00	1.20	354.00	5,853.37	-9.74	39.72	9.39	0.04	MS	TELEDRIFF			
9/7/2015	5,950.00	1.50	340.00	5,949.35	-9.23	41.90	8.85	0.46	MS	TELEDRIFF			
9/7/2015	6,045.00	1.50	342.00	6,044.31	-8.44	44.25	8.04	0.06	MS	TELEDRIFF			
9/7/2015	6,138.00	1.10	340.00	6,137.29	-7.77	46.24	7.36	0.43	MS	TELEDRIFF			
9/7/2015	6,233.00	1.50	336.00	6,232.26	-6.97	48.24	6.55	0.43	MS	TELEDRIFF			



Well Name: HADAR 10 FED COM 21H

Sub-Division		Region		Field Name			County		State/Province		
DELAWARE BASIN WEST		SLOPE EAST		HACKBERRY NORTH			EDDY		NM		
Surface Legal Location		API/UWI		Latitude (")		Longitude (")		Orig KB Elevation (ft)		Ground Elev MSL (ft)	
SEC11 T19S R31E		3001543276		32° 40' 42.496" N		103° 50' 53.596" W		3,612.20		3,587.20	
KB - GL (ft)		25.00									
Survey Data											
Date	MD (ftKB)	Incl (")	Azm (")	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS (*/100ft)	Survey Tool	Survey Company	
9/7/2015	6,328.00	1.10	340.00	6,327.24	-6.17	50.23	5.73	0.43	MS	TELEDRIIFT	
9/7/2015	6,424.00	1.70	345.00	6,423.21	-5.51	52.47	5.04	0.64	MS	TELEDRIIFT	
9/7/2015	6,519.00	1.20	354.00	6,518.18	-5.06	54.82	4.58	0.58	MS	TELEDRIIFT	
9/7/2015	6,614.00	1.20	348.00	6,613.16	-4.77	56.78	4.26	0.13	MS	TELEDRIIFT	
9/7/2015	6,709.00	1.80	356.00	6,708.13	-4.48	59.25	3.95	0.67	MS	TELEDRIIFT	
9/7/2015	6,803.00	1.60	351.00	6,802.08	-4.20	62.01	3.65	0.26	MS	TELEDRIIFT	
9/7/2015	6,899.00	2.00	351.00	6,898.04	-3.75	64.99	3.17	0.42	MS	TELEDRIIFT	
9/7/2015	6,994.00	2.20	352.00	6,992.97	-3.27	68.44	2.66	0.21	MS	TELEDRIIFT	
9/7/2015	7,089.00	2.10	348.00	7,087.91	-2.69	71.94	2.04	0.19	MS	TELEDRIIFT	
9/7/2015	7,184.00	2.10	348.00	7,182.84	-1.99	75.35	1.32	0.00	MS	TELEDRIIFT	
9/7/2015	7,279.00	1.70	352.00	7,277.79	-1.46	78.45	0.76	0.44	MS	TELEDRIIFT	
9/7/2015	7,374.00	1.90	310.10	7,372.75	-0.08	80.86	-0.64	1.37	MS	TELEDRIIFT	
9/7/2015	7,470.00	2.00	301.00	7,468.69	2.55	82.75	-3.29	0.34	MS	TELEDRIIFT	
9/7/2015	7,565.00	1.80	295.00	7,563.64	5.31	84.23	-6.06	0.30	MS	TELEDRIIFT	
9/7/2015	7,660.00	1.70	314.00	7,658.60	7.67	85.84	-8.43	0.62	MS	TELEDRIIFT	
9/7/2015	7,755.00	1.30	318.00	7,753.56	9.38	87.62	-10.17	0.43	MS	TELEDRIIFT	
9/7/2015	7,851.00	1.80	295.00	7,849.53	11.47	89.07	-12.26	0.82	MS	TELEDRIIFT	
9/7/2015	7,897.00	1.70	283.00	7,895.51	12.78	89.52	-13.58	0.82	MS	TELEDRIIFT	
9/7/2015	7,952.00	1.96	261.44	7,950.48	14.51	89.57	-15.30	1.33	MWD	WEATHERFORD	
9/7/2015	8,046.00	0.66	233.07	8,044.45	16.53	89.00	-17.33	1.50	MWD	WEATHERFORD	
9/7/2015	8,141.00	0.75	222.05	8,139.45	17.39	88.21	-18.18	0.17	MWD	WEATHERFORD	
9/7/2015	8,236.00	0.78	216.42	8,234.44	18.20	87.23	-18.98	0.09	MWD	WEATHERFORD	
9/7/2015	8,332.00	0.84	222.78	8,330.43	19.08	86.19	-19.85	-0.11	MWD	WEATHERFORD	
9/7/2015	8,427.00	1.69	237.79	8,425.41	20.75	84.93	-21.51	0.95	MWD	WEATHERFORD	
9/7/2015	8,459.00	4.28	236.05	8,457.36	22.15	84.01	-22.90	8.10	MWD	WEATHERFORD	
9/7/2015	8,491.00	7.29	240.55	8,489.19	24.92	82.35	-25.65	9.51	MWD	WEATHERFORD	
9/7/2015	8,523.00	9.96	243.61	8,520.83	29.19	80.12	-29.90	8.46	MWD	WEATHERFORD	
9/7/2015	8,554.00	12.79	245.34	8,551.22	34.73	77.49	-35.42	9.19	MWD	WEATHERFORD	
9/7/2015	8,586.00	16.11	246.66	8,582.20	42.06	74.26	-42.72	10.43	MWD	WEATHERFORD	
9/7/2015	8,618.00	19.49	248.54	8,612.66	51.14	70.54	-51.77	10.71	MWD	WEATHERFORD	
9/7/2015	8,649.00	22.51	250.15	8,641.60	61.57	66.64	-62.17	9.92	MWD	WEATHERFORD	
9/7/2015	8,682.00	25.65	251.59	8,671.73	74.33	62.23	-74.89	9.68	MWD	WEATHERFORD	
9/7/2015	8,713.00	28.31	252.19	8,699.35	87.74	57.87	-88.25	8.63	MWD	WEATHERFORD	
9/7/2015	8,745.00	31.10	253.03	8,727.14	102.91	53.13	-103.39	8.82	MWD	WEATHERFORD	
9/7/2015	8,777.00	34.15	253.65	8,754.09	119.48	48.19	-119.91	9.59	MWD	WEATHERFORD	
9/7/2015	8,809.00	37.06	254.21	8,780.11	137.43	43.04	-137.81	9.15	MWD	WEATHERFORD	
9/7/2015	8,840.00	40.11	254.55	8,804.33	156.09	37.83	-156.43	9.86	MWD	WEATHERFORD	
9/7/2015	8,872.00	43.01	254.34	8,828.28	176.59	32.14	-176.88	9.07	MWD	WEATHERFORD	
9/7/2015	8,903.00	45.66	254.46	8,850.45	197.50	26.31	-197.75	8.55	MWD	WEATHERFORD	
9/7/2015	8,935.00	47.25	255.91	8,872.49	219.98	20.39	-220.17	5.96	MWD	WEATHERFORD	
9/7/2015	8,967.00	48.31	257.37	8,894.00	243.08	14.92	-243.22	4.73	MWD	WEATHERFORD	
9/7/2015	8,998.00	50.17	259.52	8,914.24	266.13	10.22	-266.23	7.97	MWD	WEATHERFORD	
9/7/2015	9,030.00	52.47	260.86	8,934.24	290.78	5.97	-290.84	7.90	MWD	WEATHERFORD	
9/7/2015	9,062.00	55.14	262.11	8,953.13	316.35	2.15	-316.38	8.92	MWD	WEATHERFORD	
9/7/2015	9,094.00	58.69	263.41	8,970.60	342.97	-1.22	-342.97	11.60	MWD	WEATHERFORD	
9/7/2015	9,126.00	62.28	264.97	8,986.36	370.69	-4.04	-370.67	11.99	MWD	WEATHERFORD	
9/7/2015	9,158.00	64.91	266.56	9,000.59	399.29	-6.15	-399.25	9.35	MWD	WEATHERFORD	
9/7/2015	9,190.00	68.20	268.08	9,013.32	428.62	-7.51	-428.57	11.17	MWD	WEATHERFORD	
9/7/2015	9,221.00	70.68	268.48	9,024.21	457.64	-8.38	-457.58	8.09	MWD	WEATHERFORD	
9/7/2015	9,253.00	73.97	269.04	9,033.92	488.12	-9.04	-488.06	10.42	MWD	WEATHERFORD	
9/7/2015	9,285.00	77.74	270.14	9,041.74	519.14	-9.26	-519.08	12.24	MWD	WEATHERFORD	
9/7/2015	9,307.00	80.36	270.95	9,045.92	540.74	-9.06	-540.68	12.45	MWD	WEATHERFORD	
9/7/2015	9,392.00	85.86	272.75	9,056.11	625.02	-6.33	-624.98	6.80	MWD	WEATHERFORD	
9/7/2015	9,487.00	87.55	272.85	9,061.57	719.70	-1.69	-719.71	1.78	MWD	WEATHERFORD	
9/7/2015	9,583.00	90.91	272.32	9,062.86	815.53	2.64	-815.59	3.54	MWD	WEATHERFORD	
9/7/2015	9,677.00	91.26	272.73	9,061.08	909.39	6.78	-909.48	0.57	MWD	WEATHERFORD	
9/7/2015	9,772.00	90.07	272.99	9,059.98	1,004.21	11.52	-1,004.36	1.28	MWD	WEATHERFORD	
9/7/2015	9,868.00	88.60	270.53	9,061.09	1,100.12	14.46	-1,100.29	2.98	MWD	WEATHERFORD	
9/7/2015	9,963.00	87.90	270.77	9,064.00	1,195.06	15.54	-1,195.24	0.78	MWD	WEATHERFORD	
9/7/2015	10,059.00	90.70	270.25	9,065.17	1,291.02	16.40	-1,291.22	2.97	MWD	WEATHERFORD	
9/7/2015	10,153.00	91.54	268.69	9,063.33	1,385.00	15.53	-1,385.20	1.88	MWD	WEATHERFORD	
9/7/2015	10,249.00	90.42	268.87	9,061.69	1,480.98	13.48	-1,481.16	1.18	MWD	WEATHERFORD	
9/7/2015	10,344.00	91.26	269.22	9,060.30	1,575.97	11.90	-1,576.13	0.96	MWD	WEATHERFORD	
9/7/2015	10,440.00	91.26	267.61	9,058.19	1,671.92	9.24	-1,672.07	1.68	MWD	WEATHERFORD	
9/7/2015	10,535.00	90.00	267.75	9,057.14	1,766.87	5.40	-1,766.99	1.33	MWD	WEATHERFORD	
9/7/2015	10,630.00	91.47	267.82	9,055.92	1,861.82	1.73	-1,861.90	1.55	MWD	WEATHERFORD	
9/7/2015	10,724.00	91.26	268.71	9,053.68	1,955.77	-1.12	-1,955.83	0.97	MWD	WEATHERFORD	
9/7/2015	10,819.00	90.91	269.54	9,051.88	2,050.75	-2.57	-2,050.80	0.95	MWD	WEATHERFORD	
9/7/2015	10,914.00	92.03	268.73	9,049.45	2,145.71	-4.00	-2,145.76	1.45	MWD	WEATHERFORD	
9/7/2015	11,009.00	92.38	268.51	9,045.79	2,240.63	-6.29	-2,240.66	0.44	MWD	WEATHERFORD	
9/7/2015	11,104.00	92.10	268.86	9,042.08	2,335.55	-8.47	-2,335.56	0.47	MWD	WEATHERFORD	
9/7/2015	11,197.00	91.95	268.58	9,038.79	2,428.48	-10.54	-2,428.48	0.34	MWD	WEATHERFORD	
9/7/2015	11,292.00	90.28	269.17	9,036.94	2,523.45	-12.41	-2,523.44	1.86	MWD	WEATHERFORD	
9/7/2015	11,388.00	90.07	269.30	9,036.65	2,619.45	-13.69	-2,619.43	0.26	MWD	WEATHERFORD	
9/7/2015	11,483.00	89.44	269.19	9,037.06	2,714.45	-14.94	-2,714.42	0.67	MWD	WEATHERFORD	
9/7/2015	11,576.00	91.05	269.85	9,036.66	2,807.45	-15.72	-2,807.42	1.87	MWD	WEATHERFORD	
9/7/2015	11,671.00	91.68	270.63	9,034.40	2,902.41	-15.32	-2,902.39	1.06	MWD	WEATHERFORD	

Page 2/3

Report Printed: 2/25/2016



Well Name: HADAR 10 FED COM 21H

Sub-Division DELAWARE BASIN WEST		Region SLOPE EAST		Field Name HACKBERRY NORTH		County EDDY		State/Province NM					
Surface Legal Location SEC11 T19S R31E		API/Well 3001543276		Latitude (") 32° 40' 42.496" N		Longitude (") 103° 50' 53.596" W		Orig KB Elevation (ft) 3,612.20		Ground Elev MSL (ft) 3,587.20		KB - GL (ft) 25.00	
Survey Data													
Date	MD (ftKB)	Ind (")	Azm (")	TVD (ftKB)	VS (ft)	N/S (ft)	E/W (ft)	DLS ("/100ft)	Survey Tool	Survey Company			
9/7/2015	11,767.00	90.84	271.50	9,032.29	2,998.35	-13.54	-2,998.35	1.26	MWD	WEATHERFORD			
9/7/2015	11,862.00	89.72	269.77	9,031.82	3,093.32	-12.48	-3,093.33	2.17	MWD	WEATHERFORD			
9/7/2015	11,957.00	90.84	270.77	9,031.36	3,188.31	-12.04	-3,188.33	1.58	MWD	WEATHERFORD			
9/7/2015	12,052.00	90.56	270.99	9,030.20	3,283.27	-10.58	-3,283.31	0.37	MWD	WEATHERFORD			
9/7/2015	12,148.00	90.35	269.74	9,029.43	3,379.26	-9.97	-3,379.30	1.32	MWD	WEATHERFORD			
9/7/2015	12,242.00	92.03	268.58	9,027.48	3,473.23	-11.34	-3,473.27	2.17	MWD	WEATHERFORD			
9/7/2015	12,337.00	91.82	268.45	9,024.29	3,568.16	-13.80	-3,568.18	0.26	MWD	WEATHERFORD			
9/7/2015	12,432.00	91.26	268.73	9,021.74	3,663.12	-16.14	-3,663.12	0.66	MWD	WEATHERFORD			
9/7/2015	12,527.00	90.07	269.29	9,020.63	3,758.11	-17.78	-3,758.10	1.38	MWD	WEATHERFORD			
9/7/2015	12,622.00	90.91	269.62	9,019.82	3,853.10	-18.69	-3,853.09	0.95	MWD	WEATHERFORD			
9/7/2015	12,717.00	90.56	269.49	9,018.60	3,948.09	-19.42	-3,948.08	0.39	MWD	WEATHERFORD			
9/7/2015	12,812.00	91.68	268.79	9,016.75	4,043.07	-20.85	-4,043.05	1.39	MWD	WEATHERFORD			
9/7/2015	12,908.00	91.05	268.63	9,014.46	4,139.03	-23.01	-4,138.99	0.68	MWD	WEATHERFORD			
9/7/2015	13,003.00	90.42	268.90	9,013.24	4,234.02	-25.06	-4,233.96	0.72	MWD	WEATHERFORD			
9/7/2015	13,099.00	91.54	268.37	9,011.60	4,329.99	-27.34	-4,329.92	1.29	MWD	WEATHERFORD			
9/7/2015	13,194.00	90.91	268.28	9,009.57	4,424.95	-30.12	-4,424.86	0.67	MWD	WEATHERFORD			
9/7/2015	13,289.00	90.77	268.51	9,008.18	4,519.92	-32.78	-4,519.81	0.28	MWD	WEATHERFORD			
9/7/2015	13,383.00	90.42	268.38	9,007.20	4,613.90	-35.33	-4,613.77	0.40	MWD	WEATHERFORD			
9/7/2015	13,478.00	91.05	268.68	9,005.98	4,708.88	-37.77	-4,708.73	0.73	MWD	WEATHERFORD			
9/7/2015	13,574.00	91.12	268.66	9,004.16	4,804.85	-40.00	-4,804.69	0.08	MWD	WEATHERFORD			
9/7/2015	13,670.00	90.98	268.88	9,002.40	4,900.83	-42.06	-4,900.65	0.27	MWD	WEATHERFORD			
9/7/2015	13,765.00	90.98	268.99	9,000.78	4,995.81	-43.82	-4,995.62	0.12	MWD	WEATHERFORD			
9/7/2015	13,815.00	91.12	269.22	8,999.86	5,045.80	-44.60	-5,045.60	0.54	MWD	WEATHERFORD			
9/7/2015	13,887.00	91.12	269.22	8,998.46	5,117.79	-45.58	-5,117.58	0.00	BIT	WEATHERFORD			