



Directional Survey

DELAWARE BASIN UNRESTRICTED
30-025-42455

Well Name: CHILES 28 STATE 1H

Sub-Division DELAWARE BASIN		Region LEA COUNTY CORE		Field Name OJO CHISO		County LEA		State/Province NM					
Surface Legal Location SEC 28 21S 34E		API/UVI 3002542455		Latitude (°) 32° 27' 21.896" N		Longitude (°) 103° 28' 50.823" W		Orig KB Elevation (ft) 3,737.00		Ground Elev MSL (ft) 3,712.00		KB - GL (ft) 25.00	
Wellbores													
Wellbore Name OH				Parent Wellbore OH				Vertical Section Direction (°) 179.50					
Kick Offs & Key Depths													
Date				Type				Top Depth (ftKB)					
Actual Deviation Survey MWD, Proposed? No				Definitive? Yes		Proposed? No		Proposed Deviation Survey MWD, Proposed? No					
Deviation Survey													
Date 5/21/2015				Description MWD									
MD Tie In (ftKB)		TVD Tie In (ftKB)		Inclination Tie In (°)		Azimuth Tie In (°)		NS Tie In (ft)		EW Tie In (ft)			
Survey Data													
Date	MD (ftKB)	Ind (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Survey Tool	Survey Company			
5/21/2015	190.00	0.22	75.79	190.00	-0.09	0.09	0.35	0.12	MWD	EXTREME			
5/21/2015	377.00	0.40	44.81	377.00	-0.63	0.64	1.16	0.13	MWD	EXTREME			
5/21/2015	467.00	0.48	43.58	466.99	-1.12	1.14	1.64	0.09	MWD	EXTREME			
5/21/2015	559.00	0.09	355.51	558.99	-1.47	1.49	1.90	0.46	MWD	EXTREME			
5/21/2015	648.00	0.31	56.59	647.99	-1.67	1.69	2.10	0.31	MWD	EXTREME			
5/21/2015	743.00	0.09	73.90	742.99	-1.83	1.85	2.38	0.24	MWD	EXTREME			
5/21/2015	842.00	0.31	201.61	841.99	-1.60	1.62	2.36	0.38	MWD	EXTREME			
5/21/2015	936.00	0.09	104.49	935.99	-1.35	1.37	2.34	0.35	MWD	EXTREME			
5/21/2015	1,029.00	0.22	65.38	1,028.99	-1.40	1.43	2.57	0.17	MWD	EXTREME			
5/21/2015	1,126.00	0.09	104.49	1,125.99	-1.46	1.48	2.81	0.17	MWD	EXTREME			
5/21/2015	1,270.00	0.89	321.01	1,269.98	-2.31	2.33	2.22	0.67	MWD	EXTREME			
5/21/2015	1,314.00	0.09	56.59	1,313.98	-2.59	2.61	2.03	2.05	MWD	EXTREME			
5/21/2015	1,408.00	0.31	47.71	1,407.98	-2.80	2.82	2.28	0.24	MWD	EXTREME			
5/21/2015	1,502.00	0.40	53.82	1,501.98	-3.16	3.19	2.74	0.10	MWD	EXTREME			
5/21/2015	1,597.00	0.62	26.71	1,596.98	-3.81	3.84	3.24	0.34	MWD	EXTREME			
5/21/2015	1,691.00	0.40	0.91	1,690.97	-4.59	4.62	3.47	0.33	MWD	EXTREME			
5/21/2015	1,785.00	0.48	311.69	1,784.97	-5.19	5.21	3.18	0.40	MWD	EXTREME			
5/21/2015	1,803.00	0.48	293.30	1,802.97	-5.27	5.29	3.06	0.85	MWD	EXTREME			
5/21/2015	1,910.00	0.09	78.08	1,909.97	-5.46	5.49	2.73	0.52	MWD	EXTREME			
5/21/2015	2,099.00	1.10	89.29	2,098.96	-5.50	5.54	4.69	0.54	MWD	EXTREME			
5/21/2015	2,194.00	1.41	85.59	2,193.93	-5.58	5.64	6.76	0.34	MWD	EXTREME			
5/21/2015	2,288.00	1.58	69.82	2,287.90	-6.10	6.18	9.13	0.47	MWD	EXTREME			
5/21/2015	2,382.00	1.10	62.30	2,381.88	-6.95	7.05	11.15	0.54	MWD	EXTREME			
5/21/2015	2,476.00	1.32	72.41	2,475.86	-7.68	7.79	12.98	0.33	MWD	EXTREME			
5/21/2015	2,571.00	0.88	72.98	2,570.84	-8.21	8.34	14.72	0.46	MWD	EXTREME			
5/21/2015	2,665.00	0.88	72.98	2,664.83	-8.62	8.76	16.10	0.00	MWD	EXTREME			
5/21/2015	2,757.00	1.10	72.01	2,756.81	-9.08	9.24	17.61	0.24	MWD	EXTREME			
5/21/2015	2,852.00	1.01	87.31	2,851.80	-9.39	9.56	19.32	0.31	MWD	EXTREME			
5/21/2015	2,946.00	1.19	82.30	2,945.78	-9.54	9.73	21.11	0.22	MWD	EXTREME			
5/21/2015	3,041.00	1.41	94.78	3,040.75	-9.56	9.76	23.26	0.38	MWD	EXTREME			
5/21/2015	3,136.00	1.89	80.50	3,135.72	-9.70	9.92	25.97	0.66	MWD	EXTREME			
5/21/2015	3,229.00	2.81	78.91	3,228.64	-10.36	10.62	29.71	0.99	MWD	EXTREME			
5/21/2015	3,325.00	2.99	84.41	3,324.51	-11.01	11.31	34.52	0.35	MWD	EXTREME			
5/21/2015	3,419.00	3.52	75.09	3,418.36	-11.95	12.29	39.74	0.80	MWD	EXTREME			
5/21/2015	3,514.00	3.69	72.89	3,513.17	-13.55	13.94	45.48	0.23	MWD	EXTREME			
5/21/2015	3,608.00	4.22	75.62	3,606.95	-15.24	15.69	51.73	0.60	MWD	EXTREME			
5/21/2015	3,703.00	4.48	72.98	3,701.68	-17.13	17.65	58.66	0.35	MWD	EXTREME			
5/21/2015	3,798.00	4.09	80.32	3,796.41	-18.73	19.30	65.55	0.71	MWD	EXTREME			
5/21/2015	3,827.00	4.09	76.98	3,825.34	-19.12	19.71	67.57	0.82	MWD	EXTREME			
5/21/2015	3,939.00	4.00	82.69	3,937.06	-20.45	21.11	75.34	0.37	MWD	EXTREME			
5/21/2015	4,034.00	4.09	84.10	4,031.82	-21.16	21.88	82.00	0.14	MWD	EXTREME			
5/21/2015	4,128.00	4.39	84.58	4,125.57	-21.78	22.56	88.91	0.32	MWD	EXTREME			
5/21/2015	4,223.00	4.61	85.42	4,220.27	-22.37	23.21	96.34	0.24	MWD	EXTREME			

OCD - HOBBS
08/17/2016
RECEIVED