



Wellbore Schematic

Well Name: CASS 16 STATE 2H



CONFIDENTIAL

State/Province NEW MEXICO	Prospect Area MALAGA	Field Name PURPLE SAGE	Well Subtype	Lat/Long Datum NAD27	Latitude (°) 32.307503	Longitude (°) -104.204004
Well Configuration Type HORIZONTAL	Well Objective EXPLOITATION	Well Status COMPLETION	Ground Elevation (ft) 3,164.00		KB-Ground Distance (ft) 25.00	

HORIZONTAL - CASS 16 STATE 2H, 11/28/2017 10:04:39 AM			
MD (ftKB)	TVD (ftKB)	Incl (°)	Vertical schematic (actual)
430.8	430.5	3.6	Conductor Cement; 25.0-145.0; 7/1/2017 1; Conductor 1; 20.000; 19.124; 25.0-145.0; 120.00 Surface Casing Cement; 25.0-445.0; 7/24/2017 2; Surface; 13.375; 12.615; 25.0-432.5; 407.50 Intermediate Casing Cement; 25.0-1,974.0; 7/26/2017 3; Intermediate 1; 9.625; 8.835; 25.0-1,963.3; 1,938.30 Intermediate Casing Cement; 25.0-9,133.0; 8/3/2017 4; Intermediate 2; 7.000; 6.184; 25.0-9,133.0; 9,108.00 Liner Cement; 8,300.0-14,080.0; 8/14/2017
8,299.9	8,264.6	2.1	
9,346.1	8,999.8	75.3	
9,522.0	9,041.2	84.5	
9,673.9	9,039.5	93.2	
9,850.1	9,034.5	90.2	
10,002.0	9,036.5	86.3	
10,180.1	9,052.8	84.2	
10,330.1	9,065.3	86.4	
10,516.1	9,071.3	89.1	
10,669.0	9,083.5	83.6	
10,844.2	9,095.9	89.6	
10,996.1	9,095.9	90.4	
11,171.9	9,098.8	88.2	
11,347.1	9,099.1	90.8	
11,503.0	9,098.8	90.1	
11,651.9	9,098.0	88.8	
11,828.1	9,105.0	88.0	
11,980.0	9,106.6	91.6	
12,166.0	9,097.2	91.3	
12,346.1	9,096.0	91.2	
12,522.0	9,095.2	89.9	
12,673.9	9,095.5	89.8	
12,850.1	9,097.5	90.2	
13,002.0	9,098.8	88.3	
13,178.1	9,101.6	90.5	
13,330.1	9,102.1	89.3	
13,516.1	9,104.9	88.9	
13,668.0	9,109.8	87.4	
13,857.9	9,118.6	87.9	

Directions to Well: From intersection of U.S. Highway 62/West Greene St & U.S. 180 W./U.S. 62 W./S. Canal St. in Carlsbad, M, Travel South on U.S. 62 W./S. Canal St. for 2.3 Miles to Old Cavern Hwy. on the left. Travel East on Lease Road for 1.0 Mile to Lease Road on the right. Travel South on lease road for 0.2 miles to proposed well 330 feet to the right.