

15- 42058

OCCIDENTAL PERMIAN LTD.

Corral Draw

Eddy County, NM

Cedar Canyon 17 Fee #1H

DH - Job #320514-MPH-621

Survey: MWD

SDI Survey Report

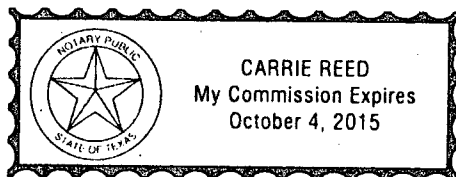
This survey is correct to the best of my knowledge and is supported by actual field data.

Richardson

Notarized this date 30th of June, 2014.

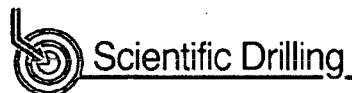
Carrie Reed

Notary Signature
County of Midland
State of Texas





CC 17 F 1H
Eddy County, New Mexico
Northing: 444487.50
Easting: 603694.00
Design #2



Azimuths to Grid North
 True North: -0.18°
 Magnetic North: 7.25°

Magnetic Field
 Strength: 48285.1snT
 Dip Angle: 60-04°
 Date: 04/29/2014
 Model: IGRF2010

To convert a Magnetic Direction to a Grid Direction, Add 7.25°
 To convert a True Direction to a Grid Direction, Subtract 0.18°



KB @ 2952.0usft
 Gr@ 2928.0

WELL DETAILS CC 17 F 1H					
Ground Level: 2928.0					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	444487.50	603694.00	32° 13' 17.647 N	103° 59' 52.882 W

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
BHL 1H	8520.5	-803.8	-4961.1	443683.72	598732.93
LTP 1H	8523.8	-803.9	-4791.1	443683.60	598902.90

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect
7730.0	6.57	236.00	7728.8	-22.7	-6.2	0.00	0.00	9.8
7758.0	6.57	236.00	7756.6	-24.5	-8.9	0.00	0.00	12.7
9167.4	91.12	239.04	8602.3	-526.7	-835.7	6.00	3.05	909.2
10196.1	91.11	269.91	8581.7	-798.6	-1814.7	3.00	89.70	1919.1
13343.0	91.11	269.91	8520.5	-803.8	-4961.1	0.00	0.00	5025.8

SITE DETAILS:

Cedar Canyon 17 Fee 1H

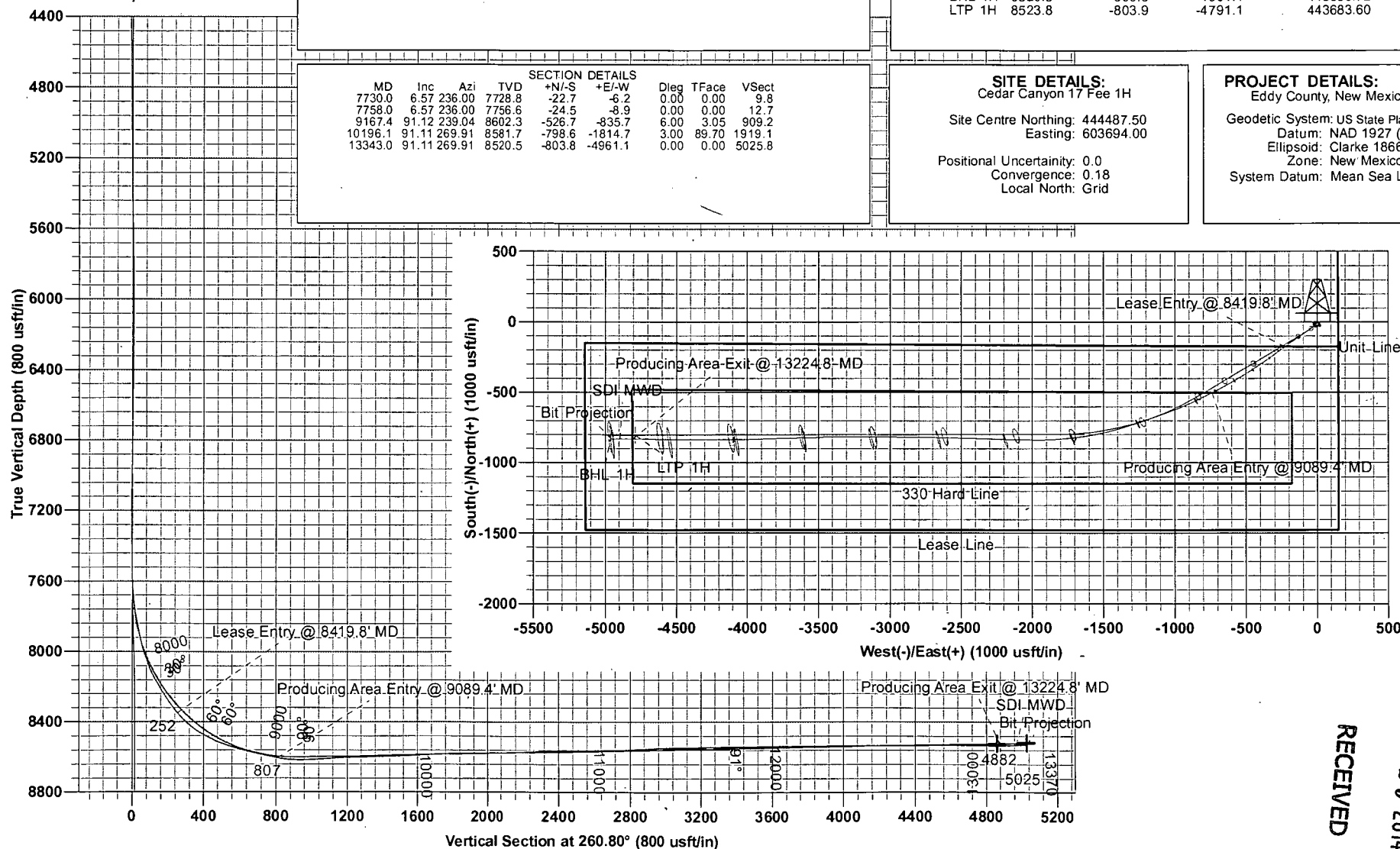
Site Centre Northing: 444487.50
 Easting: 603694.00

Positional Uncertainty: 0.0
 Convergence: 0.18
 Local North: Grid

PROJECT DETAILS:

Eddy County, New Mexico

Geodetic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: New Mexico East 3001
 System Datum: Mean Sea Level



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AUG 29 2014

NM OIL CONSERVATION
 ARTESIA DISTRICT

SDI
SDI Survey Report

Company:	OCCIDENTAL PERMIAN LTD.	Local Co-ordinate Reference:	Well Cedar Canyon 17 Fee #1H
Project:	Corral Draw	TVD Reference:	Mean Sea Level (System)
Site:	Eddy County, NM	MD Reference:	Mean Sea Level (System)
Well:	Cedar Canyon 17 Fee #1H	North Reference:	Grid
Wellbore:	DH - Job #320514-MPH-621	Survey Calculation Method:	Minimum Curvature
Design:	DH - Job #320514-MPH-621	Database:	EDM-Regulatory

Project	Corral Draw		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site		Eddy County, NM			
Site Position:		Northing:	436,202.96 usft	Latitude:	32° 11' 55.644 N
From:	Lat/Long	Easting:	604,237.30 usft	Longitude:	103° 59' 46.860 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	0.18 °

Well	Cedar Canyon 17 Fee #1H, Horizontal					
Well Position	+N/-S	0.0 usft	Northing:	444,487.69 usft	Latitude:	32° 13' 17.648 N
	+E/-W	0.0 usft	Easting:	603,694.02 usft	Longitude:	103° 59' 52.882 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	0.0 usft

Wellbore	DH - Job #320514-MPH-621				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/10/2014	7.43	60.04	48,304

Design		DH - Job #320514-MPH-621		
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	260.80

Survey Program	Date: 7/27/2014			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
419.0	13,370.0	MWD (DH - Job #320514-MPH-621)	MWD	MWD

Survey									
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Azimuth (°)	Closure Distance (usft)		
0.0	0.00	0.00	0.00	0.0	0.0	0.0	0.00	0.0	0.0
419.0	2.02	84.68	418.9	0.7	7.4	84.68	7.4		
511.0	1.06	116.85	510.9	0.5	9.7	87.35	9.7		
604.0	0.97	133.81	603.9	-0.5	11.1	92.50	11.1		
697.0	0.97	131.61	696.9	-1.6	12.2	97.23	12.3		
789.0	0.88	138.20	788.8	-2.6	13.3	101.06	13.5		
882.0	0.88	140.40	881.8	-3.7	14.2	104.51	14.7		
975.0	0.88	141.81	974.8	-4.8	15.1	107.59	15.8		
1,069.0	0.79	144.44	1,068.8	-5.9	15.9	110.28	17.0		
1,163.0	0.62	153.94	1,162.8	-6.9	16.5	112.57	17.9		
1,258.0	0.53	164.13	1,257.8	-7.8	16.9	114.68	18.6		
1,352.0	0.53	166.94	1,351.8	-8.6	17.1	116.70	19.1		

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Site:	Eddy County, NM	MD Reference:	Mean Sea Level (System)
Well:	Cedar Canyon 17 Fee #1H	North Reference:	Grid
Wellbore:	DH - Job #320514-MPH-621	Survey Calculation Method:	Minimum Curvature
Design:	DH - Job #320514-MPH-621	Database:	EDM-Regulatory

Survey								
MD (usft)	Inc. (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Azimuth (°)	Closure Distance (usft)	
1,447.0	0.62	177.40	1,446.8	-9.5	17.2	118.99	19.7	
1,541.0	0.79	167.65	1,540.8	-10.7	17.4	121.57	20.4	
1,636.0	0.70	179.69	1,635.8	-11.9	17.5	124.18	21.2	
1,730.0	0.70	184.08	1,729.8	-13.0	17.5	126.73	21.8	
1,824.0	0.44	225.74	1,823.8	-13.9	17.2	128.91	22.1	
1,919.0	0.53	258.88	1,918.8	-14.2	16.5	130.75	21.8	
2,013.0	0.88	269.16	2,012.8	-14.3	15.3	133.00	21.0	
2,108.0	0.88	275.22	2,107.7	-14.2	13.9	135.74	19.9	
2,202.0	0.35	237.43	2,201.7	-14.3	12.9	137.97	19.3	
2,296.0	0.52	182.76	2,295.7	-14.9	12.7	139.68	19.6	
2,391.0	0.70	163.78	2,390.7	-15.9	12.8	141.17	20.4	
2,485.0	1.23	157.28	2,484.7	-17.4	13.3	142.48	21.9	
2,580.0	1.32	158.33	2,579.7	-19.3	14.1	143.82	24.0	
2,674.0	1.23	152.27	2,673.7	-21.2	15.0	144.74	26.0	
2,769.0	1.06	154.29	2,768.6	-22.9	15.9	145.32	27.9	
2,864.0	0.97	145.67	2,863.6	-24.4	16.7	145.59	29.6	
2,954.0	0.79	152.35	2,953.6	-25.6	17.4	145.73	30.9	
3,048.0	0.53	153.58	3,047.6	-26.5	17.9	145.97	32.0	
3,143.0	0.35	150.07	3,142.6	-27.2	18.3	146.11	32.7	
3,237.0	0.35	130.64	3,236.6	-27.6	18.6	146.01	33.3	
3,332.0	0.62	129.68	3,331.6	-28.1	19.2	145.64	34.1	
3,426.0	0.35	85.91	3,425.6	-28.4	19.9	145.00	34.7	
3,521.0	0.35	94.87	3,520.6	-28.4	20.5	144.23	35.1	
3,615.0	0.79	338.94	3,614.6	-27.9	20.5	143.59	34.6	
3,710.0	0.79	351.60	3,709.6	-26.6	20.2	142.77	33.4	
3,804.0	0.88	324.62	3,803.6	-25.4	19.7	142.17	32.1	
3,899.0	0.79	316.18	3,898.6	-24.3	18.8	142.24	30.7	
3,993.0	0.88	319.17	3,992.6	-23.3	17.9	142.45	29.4	
4,088.0	0.97	324.36	4,087.5	-22.1	17.0	142.48	27.8	
4,182.0	0.88	317.15	4,181.5	-20.9	16.0	142.57	26.3	
4,277.0	0.88	313.28	4,276.5	-19.9	15.0	143.00	24.9	
4,371.0	0.88	325.94	4,370.5	-18.8	14.0	143.20	23.5	
4,466.0	0.97	323.65	4,465.5	-17.5	13.2	143.10	21.9	
4,560.0	0.79	323.56	4,559.5	-16.4	12.3	143.06	20.5	
4,655.0	0.62	315.04	4,654.5	-15.5	11.6	143.26	19.3	
4,749.0	0.97	316.01	4,748.5	-14.5	10.6	143.81	18.0	
4,843.0	0.79	302.21	4,842.5	-13.6	9.5	145.00	16.6	
4,938.0	0.88	300.19	4,937.5	-12.9	8.4	147.09	15.4	
5,032.0	0.62	287.70	5,031.4	-12.4	7.2	149.68	14.4	
5,127.0	0.88	275.75	5,126.4	-12.2	6.0	153.62	13.6	
5,221.0	0.53	268.81	5,220.4	-12.1	4.9	158.04	13.0	
5,316.0	0.97	262.57	5,315.4	-12.2	3.6	163.39	12.7	
5,410.0	0.88	279.79	5,409.4	-12.2	2.1	170.03	12.4	
5,504.0	0.70	271.62	5,503.4	-12.1	0.9	175.93	12.1	

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Wellbore:	DH - Job #320514-MPH-621	Survey Calculation Method:	Minimum Curvature
Design:	DH - Job #320514-MPH-621	Database:	EDM-Regulatory

Survey								
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Azimuth (°)	Closure Distance (usft)	
5,599.0	0.97	270.92	5,598.4	-12.0	-0.5	182.51	12.0	
5,693.0	0.79	261.51	5,692.4	-12.1	-2.0	189.21	12.3	
5,788.0	0.62	251.41	5,787.4	-12.4	-3.1	194.07	12.7	
5,882.0	0.53	247.36	5,881.4	-12.7	-4.0	197.41	13.3	
5,977.0	0.26	295.79	5,976.4	-12.8	-4.6	199.73	13.6	
6,071.0	0.09	97.33	6,070.4	-12.7	-4.7	200.33	13.5	
6,166.0	0.35	100.58	6,165.4	-12.8	-4.3	198.80	13.5	
6,260.0	0.53	96.98	6,259.4	-12.9	-3.6	195.75	13.4	
6,355.0	0.79	104.19	6,354.4	-13.1	-2.6	191.06	13.3	
6,449.0	0.70	124.93	6,448.3	-13.6	-1.5	186.13	13.6	
6,544.0	0.97	134.16	6,543.3	-14.5	-0.4	181.60	14.5	
6,638.0	0.79	152.88	6,637.3	-15.6	0.5	178.30	15.6	
6,733.0	1.06	111.92	6,732.3	-16.5	1.6	174.54	16.6	
6,827.0	0.62	89.49	6,826.3	-16.8	2.9	170.24	17.1	
6,921.0	1.06	42.93	6,920.3	-16.2	4.0	166.14	16.7	
7,016.0	1.41	27.11	7,015.3	-14.5	5.1	160.53	15.4	
7,110.0	1.32	7.16	7,109.2	-12.4	5.8	154.96	13.7	
7,205.0	0.18	320.49	7,204.2	-11.2	5.8	152.48	12.6	
7,299.0	0.70	222.84	7,298.2	-11.5	5.3	155.07	12.7	
7,393.0	1.76	206.67	7,392.2	-13.2	4.3	161.95	13.9	
7,488.0	1.58	218.36	7,487.2	-15.5	2.8	169.65	15.8	
7,582.0	0.70	235.06	7,581.2	-16.9	1.6	174.72	16.9	
7,671.0	4.48	231.37	7,670.0	-19.4	-1.6	184.73	19.4	
7,714.0	6.07	235.53	7,712.9	-21.7	-4.8	192.45	22.2	
7,745.0	7.03	236.38	7,743.7	-23.7	-7.7	198.06	24.9	
7,777.0	9.94	236.20	7,775.3	-26.3	-11.6	203.89	28.8	
7,808.0	11.75	237.69	7,805.8	-29.5	-16.5	209.30	33.8	
7,839.0	11.78	238.75	7,836.1	-32.8	-21.9	213.74	39.4	
7,871.0	11.61	235.41	7,867.4	-36.3	-27.4	216.98	45.5	
7,902.0	12.16	235.02	7,897.8	-40.0	-32.6	219.20	51.6	
7,934.0	14.16	233.39	7,928.9	-44.2	-38.5	221.04	58.6	
7,965.0	15.39	233.30	7,958.9	-49.0	-44.8	222.49	66.4	
7,997.0	17.23	233.92	7,989.6	-54.3	-52.1	223.81	75.2	
8,028.0	19.17	232.16	8,019.1	-60.1	-59.8	224.86	84.8	
8,060.0	21.28	234.18	8,049.1	-66.7	-68.7	225.82	95.7	
8,091.0	23.39	234.27	8,077.8	-73.6	-78.2	226.74	107.4	
8,123.0	26.12	235.15	8,106.8	-81.4	-89.2	227.62	120.7	
8,154.0	28.93	236.03	8,134.3	-89.4	-101.0	228.47	134.9	
8,186.0	31.13	237.61	8,162.0	-98.2	-114.4	229.36	150.8	
8,217.0	32.18	236.90	8,188.4	-107.0	-128.1	230.12	166.9	
8,249.0	32.45	236.20	8,215.4	-116.4	-142.3	230.72	183.9	
8,280.0	33.33	235.23	8,241.5	-125.9	-156.3	231.14	200.7	
8,312.0	35.53	235.41	8,267.9	-136.2	-171.1	231.48	218.7	
8,343.0	37.28	235.06	8,292.8	-146.7	-186.2	231.77	237.1	

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Project:	Corral Draw	TVD Reference:	Mean Sea Level (System)
Site:	Eddy County, NM	MD Reference:	Mean Sea Level (System)
Well:	Cedar Canyon 17 Fee #1H	North Reference:	Grid
Wellbore:	DH - Job #320514-MPH-621	Survey Calculation Method:	Minimum Curvature
Design:	DH - Job #320514-MPH-621	Database:	EDM-Regulatory

Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Azimuth (°)	Closure Distance (usft)
8,375.0	40.36	234.18	8,317.7	-158.3	-202.6	231.99	257.1
8,406.0	42.38	233.21	8,341.0	-170.4	-219.1	232.12	277.6
8,438.0	44.49	233.30	8,364.2	-183.6	-236.7	232.20	299.6
8,469.0	47.04	233.12	8,385.9	-196.9	-254.5	232.27	321.8
8,501.0	49.51	232.42	8,407.2	-211.4	-273.5	232.31	345.7
8,532.0	52.58	233.39	8,426.7	-225.9	-292.8	232.35	369.8
8,564.0	57.33	234.09	8,445.0	-241.4	-313.9	232.44	396.0
8,595.0	61.29	234.09	8,460.8	-257.0	-335.5	232.54	422.6
8,627.0	64.10	234.00	8,475.5	-273.7	-358.5	232.64	451.0
8,658.0	65.42	234.53	8,488.7	-290.1	-381.2	232.73	479.1
8,689.0	67.09	235.23	8,501.2	-306.4	-404.5	232.85	507.4
8,721.0	68.94	235.41	8,513.2	-323.3	-428.9	232.99	537.1
8,752.0	70.70	236.46	8,523.9	-339.6	-453.0	233.14	566.1
8,784.0	71.93	237.52	8,534.1	-356.1	-478.4	233.34	596.4
8,815.0	73.34	238.40	8,543.4	-371.8	-503.5	233.55	625.9
8,847.0	74.30	239.19	8,552.3	-387.7	-529.7	233.80	656.5
8,878.0	75.62	239.89	8,560.4	-402.9	-555.5	234.05	686.3
8,910.0	76.77	240.24	8,568.0	-418.4	-582.5	234.31	717.2
8,941.0	77.65	240.16	8,574.9	-433.4	-608.7	234.55	747.2
8,973.0	77.73	240.33	8,581.7	-448.9	-635.9	234.78	778.4
9,004.0	77.38	241.12	8,588.4	-463.7	-662.3	235.00	808.5
9,036.0	77.03	241.47	8,595.4	-478.7	-689.6	235.23	839.5
9,067.0	77.82	241.74	8,602.2	-493.1	-716.2	235.45	869.6
9,099.0	79.76	242.44	8,608.4	-507.8	-744.0	235.68	900.8
9,130.0	82.04	243.32	8,613.3	-521.8	-771.2	235.92	931.1
9,158.0	84.42	243.67	8,616.6	-534.2	-796.1	236.14	958.7
9,190.0	87.49	244.20	8,618.9	-548.2	-824.8	236.39	990.3
9,221.0	90.31	244.73	8,619.5	-561.5	-852.7	236.63	1,021.0
9,284.0	94.62	247.01	8,616.8	-587.3	-910.2	237.17	1,083.2
9,379.0	93.56	248.68	8,610.0	-623.0	-997.9	238.02	1,176.4
9,473.0	92.42	248.86	8,605.1	-657.0	-1,085.4	238.81	1,268.8
9,567.0	91.01	250.18	8,602.3	-689.9	-1,173.4	239.55	1,361.2
9,662.0	91.10	251.85	8,600.5	-720.8	-1,263.2	240.29	1,454.4
9,756.0	92.24	253.16	8,597.8	-749.0	-1,352.9	241.03	1,546.4
9,851.0	92.95	255.10	8,593.5	-775.0	-1,444.1	241.78	1,638.9
9,945.0	92.86	258.09	8,588.7	-796.7	-1,535.4	242.58	1,729.8
10,039.0	92.33	260.99	8,584.5	-813.8	-1,627.8	243.44	1,819.9
10,134.0	90.92	263.71	8,581.8	-826.4	-1,721.9	244.36	1,909.9
10,228.0	90.66	266.00	8,580.5	-834.8	-1,815.5	245.31	1,998.2
10,323.0	91.01	268.54	8,579.1	-839.4	-1,910.4	246.28	2,086.6
10,417.0	90.75	271.27	8,577.6	-839.5	-2,004.3	247.27	2,173.1
10,512.0	92.15	271.80	8,575.2	-837.0	-2,099.3	248.26	2,260.0
10,606.0	93.91	270.92	8,570.3	-834.7	-2,193.1	249.16	2,346.6
10,701.0	90.75	271.80	8,566.4	-832.5	-2,288.0	250.01	2,434.7
10,795.0	91.36	272.24	8,564.7	-829.2	-2,381.9	250.81	2,522.1

SDI
SDI Survey Report

Company:	OCCIDENTAL PERMIAN LTD.	Local Co-ordinate Reference:	Well Cedar Canyon 17 Fee #1H
Project:	Corral Draw	TVD Reference:	Mean Sea Level (System)
Site:	Eddy County, NM	MD Reference:	Mean Sea Level (System)
Well:	Cedar Canyon 17 Fee #1H	North Reference:	Grid
Wellbore:	DH - Job #320514-MPH-621	Survey Calculation Method:	Minimum Curvature
Design:	DH - Job #320514-MPH-621	Database:	EDM-Regulatory

Survey							
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	N/S (usft)	E/W (usft)	Closure Azimuth (°)	Closure Distance (usft)
10,890.0	89.78	271.27	8,563.7	-826.3	-2,476.9	251.55	2,611.1
10,984.0	90.31	270.83	8,563.7	-824.6	-2,570.9	252.22	2,699.8
11,078.0	91.63	271.44	8,562.1	-822.7	-2,664.8	252.84	2,788.9
11,173.0	92.86	270.92	8,558.3	-820.7	-2,759.7	253.44	2,879.2
11,267.0	92.77	271.09	8,553.7	-819.1	-2,853.6	253.98	2,968.8
11,361.0	91.10	270.83	8,550.5	-817.5	-2,947.5	254.50	3,058.8
11,456.0	91.01	270.13	8,548.8	-816.7	-3,042.5	254.97	3,150.2
11,550.0	91.80	269.34	8,546.5	-817.2	-3,136.5	255.40	3,241.2
11,645.0	90.92	269.69	8,544.2	-818.0	-3,231.4	255.80	3,333.4
11,739.0	89.60	270.30	8,543.8	-818.0	-3,325.4	256.18	3,424.6
11,833.0	90.48	269.34	8,543.7	-818.3	-3,419.4	256.54	3,516.0
11,928.0	91.54	268.02	8,542.1	-820.4	-3,514.4	256.86	3,608.9
12,022.0	90.92	267.75	8,540.1	-823.9	-3,608.3	257.14	3,701.2
12,117.0	90.31	269.16	8,539.0	-826.5	-3,703.3	257.42	3,794.4
12,211.0	90.66	268.54	8,538.2	-828.4	-3,797.2	257.69	3,886.5
12,305.0	90.75	267.58	8,537.1	-831.5	-3,891.2	257.94	3,979.0
12,400.0	90.48	268.28	8,536.1	-835.0	-3,986.1	258.17	4,072.6
12,494.0	89.78	270.13	8,535.9	-836.3	-4,080.1	258.42	4,164.9
12,589.0	90.22	269.86	8,535.9	-836.3	-4,175.1	258.67	4,258.0
12,683.0	90.84	269.69	8,535.0	-836.7	-4,269.1	258.91	4,350.3
12,777.0	90.40	270.48	8,534.0	-836.5	-4,363.1	259.15	4,442.6
12,872.0	90.92	270.21	8,532.9	-835.9	-4,458.1	259.38	4,535.8
12,966.0	90.22	270.30	8,531.9	-835.5	-4,552.1	259.60	4,628.1
13,061.0	88.90	271.18	8,532.7	-834.3	-4,647.1	259.82	4,721.4
13,155.0	88.81	271.01	8,534.5	-832.5	-4,741.0	260.04	4,813.6
13,250.0	91.19	270.39	8,534.5	-831.3	-4,836.0	260.25	4,906.9
13,311.0	91.98	270.39	8,532.9	-830.9	-4,897.0	260.37	4,967.0
Last MWD Survey							
13,370.0	91.98	270.39	8,530.8	-830.5	-4,955.9	260.49	5,025.1
Projection to Bit							

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
13,311.0	8,532.9	-830.9	-4,897.0	Last MWD Survey
13,370.0	8,530.8	-830.5	-4,955.9	Projection to Bit



Scientific Drilling

Survey Report

Pilot hole



Company:	OXY	Local Co-ordinate Reference:	Well CC 17 F 1H
Project:	Eddy County, New Mexico	TVD Reference:	KB @ 2952.00usft
Site:	Cedar Canyon 17 Fee 1H	MD Reference:	KB @ 2952.00usft
Well:	CC 17 F 1H	North Reference:	Grid
Wellbore:	Pilot Wellpath	Survey Calculation Method:	Minimum Curvature
Design:	Pilot Wellpath	Database:	CompassC

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,410.00	0.88	279.79	5,409.41	-12.21	2.14	-0.16	0.31	-0.10	18.32
5,504.00	0.70	271.62	5,503.40	-12.07	0.86	1.09	0.23	-0.19	-8.69
5,599.00	0.97	270.92	5,598.39	-12.04	-0.53	2.45	0.28	0.28	-0.74
5,693.00	0.79	261.51	5,692.38	-12.12	-1.96	3.88	0.24	-0.19	-10.01
5,788.00	0.62	251.41	5,787.37	-12.38	-3.10	5.04	0.22	-0.18	-10.63
5,882.00	0.53	247.36	5,881.37	-12.71	-3.98	5.96	0.10	-0.10	-4.31
5,977.00	0.26	295.79	5,976.37	-12.79	-4.58	6.57	0.43	-0.28	50.98
6,071.00	0.09	97.33	6,070.36	-12.71	-4.70	6.67	0.37	-0.18	171.85
6,166.00	0.35	100.58	6,165.36	-12.77	-4.34	6.33	0.27	0.27	3.42
6,260.00	0.53	96.98	6,259.36	-12.87	-3.63	5.64	0.19	0.19	-3.83
6,355.00	0.79	104.19	6,354.35	-13.09	-2.56	4.62	0.29	0.27	7.59
6,449.00	0.70	124.93	6,448.35	-13.58	-1.46	3.61	0.30	-0.10	22.06
6,544.00	0.97	134.16	6,543.34	-14.47	-0.41	2.71	0.32	0.28	9.72
6,638.00	0.79	152.88	6,637.33	-15.60	0.46	2.04	0.36	-0.19	19.91
6,733.00	1.06	111.92	6,732.31	-16.51	1.57	1.09	0.73	0.28	-43.12
6,827.00	0.62	89.49	6,826.30	-16.83	2.89	-0.16	0.58	-0.47	-23.86
6,921.00	1.06	42.93	6,920.30	-16.19	3.99	-1.35	0.83	0.47	-49.53
7,016.00	1.41	27.11	7,015.27	-14.50	5.12	-2.74	0.51	0.37	-16.65
7,110.00	1.32	7.16	7,109.25	-12.40	5.78	-3.73	0.51	-0.10	-21.22
7,205.00	0.18	320.49	7,204.24	-11.20	5.83	-3.96	1.27	-1.20	-49.13
7,299.00	0.70	222.84	7,298.24	-11.51	5.34	-3.43	0.79	0.55	-103.88
7,393.00	1.76	206.67	7,392.21	-13.22	4.30	-2.13	1.18	1.13	-17.20
7,488.00	1.58	218.36	7,487.17	-15.55	2.83	-0.31	0.40	-0.19	12.31
7,582.00	0.70	235.06	7,581.15	-16.89	1.56	1.16	0.99	-0.94	17.77
7,677.00	0.88	231.89	7,676.14	-17.68	0.51	2.32	0.19	0.19	-3.34
7,771.00	1.06	238.75	7,770.13	-18.57	-0.80	3.76	0.23	0.19	7.30
7,866.00	1.23	237.47	7,865.11	-19.58	-2.41	5.51	0.18	0.18	-1.35
7,960.00	2.46	256.15	7,959.06	-20.60	-5.22	8.45	1.44	1.31	19.87
8,055.00	1.14	279.97	8,054.01	-20.93	-8.13	11.37	1.57	-1.39	25.07
8,150.00	1.49	270.57	8,148.99	-20.75	-10.30	13.48	0.43	0.37	-9.89
8,244.00	0.18	128.97	8,242.98	-20.83	-11.41	14.59	1.74	-1.39	-150.64
8,338.00	0.62	265.82	8,336.98	-20.96	-11.80	15.00	0.81	0.47	145.59
8,433.00	0.97	55.06	8,431.97	-20.54	-11.65	14.79	1.62	0.37	157.09
8,466.06	0.82	35.63	8,465.03	-20.19	-11.28	14.37	1.02	-0.45	-58.78
BHL 1H									
8,486.30	0.79	21.12	8,485.27	-19.94	-11.15	14.19	1.02	-0.16	-71.65
LTP 1H									
8,527.00	0.88	353.10	8,525.96	-19.37	-11.09	14.04	1.02	0.22	-68.86
8,622.00	1.23	352.66	8,620.95	-17.63	-11.30	13.98	0.37	0.37	-0.46
8,716.00	0.97	342.81	8,714.93	-15.87	-11.67	14.06	0.34	-0.28	-10.48
8,784.00	0.62	11.20	8,782.92	-14.96	-11.77	14.01	0.76	-0.51	41.75
SDI MWD									
8,841.00	0.62	11.20	8,839.92	-14.35	-11.65	13.79	0.00	0.00	0.00
Bit Projection									

Pilot hole