

30-015-39857

OCCIDENTAL PERMIAN LTD.

Cedar Canyon
Eddy County, NM
Cedar Canyon 15 #1H
VH - Job #32K0612736

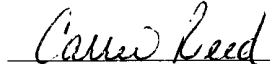
Survey: Gyro

SDI Standard Survey Report

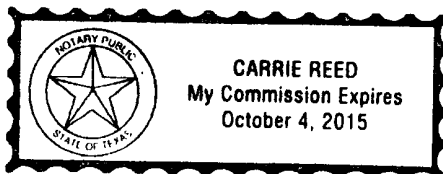
This survey is correct to the best of my knowledge and is supported by actual field data.



Notarized this date 18th of July, 2012.



Notary Signature
County of Midland
State of Texas



Scientific Drilling

Scientific Drilling International, Inc.

SDI Standard Survey Report



Company:	OCCIDENTAL PERMIAN LTD	Local Co-ordinate Reference:	Well Cedar Canyon 15 #1H
Project:	Cedar Canyon	TVD Reference:	WELL @ 0 00usft (Original Well Elev)
Site:	Eddy County, NM	MD Reference:	WELL @ 0 00usft (Original Well Elev)
Well:	Cedar Canyon 15 #1H	North Reference:	True
Wellbore:	VH - Job #32K0612736	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K0612736	Database:	EDM-Regulatory

Project	Cedar Canyon		
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:	442,496 34 usft	Latitude:	32° 12' 57 600 N
From:	Lat/Long	Easting:	614,222 51 usft	Longitude:	103° 57' 50 400 W
Position Uncertainty:	0 00 usft	Slot Radius:	0"	Grid Convergence:	0 20 °

Well	Cedar Canyon 15 #1H, Directional (Baker)					
Well Position	+N/-S	0 00 usft	Northing:	441,015 85 usft	Latitude:	32° 12' 43 096 N
	+E/-W	0 00 usft	Easting:	609,819 34 usft	Longitude:	103° 58' 41 711 W
Position Uncertainty		0 00 usft	Wellhead Elevation:	usft	Ground Level:	0 00 usft

Wellbore	VH - Job #32K0612736				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	06/17/12	7 65	60 08	48,489

Design		VH - Job #32K0612736		
Audit Notes:				
Version:	1 0	Phase:	ACTUAL	Tie On Depth:
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0 00	0 00	0 00	356 47

Survey Program		Date	07/22/12		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
99 80	602 00	Gyro (VH - Job #32K0612736)	Keeper	Keeper Surface Readout	

Survey							
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
0 00	0 00	0 00	0 00	0 00	0 00	0 00	0 00
99 80	0 41	140 31	99 80	-0 27	0 23	140 31	0 36
192 02	0 43	151 50	192 02	-0 83	0 60	144 05	1 03
289 24	0 77	199 45	289 23	-1 77	0 56	162 42	1 86
382 46	0 77	200 04	382 44	-2 95	0 14	177 34	2 95
479 01	0 62	195 97	478 99	-4 06	-0 23	183 23	4 07
571 56	0 46	189 48	571 53	-4 91	-0 43	184 98	4 93
602 00	0 38	190 47	601 97	-5 13	-0 47	185 20	5 15

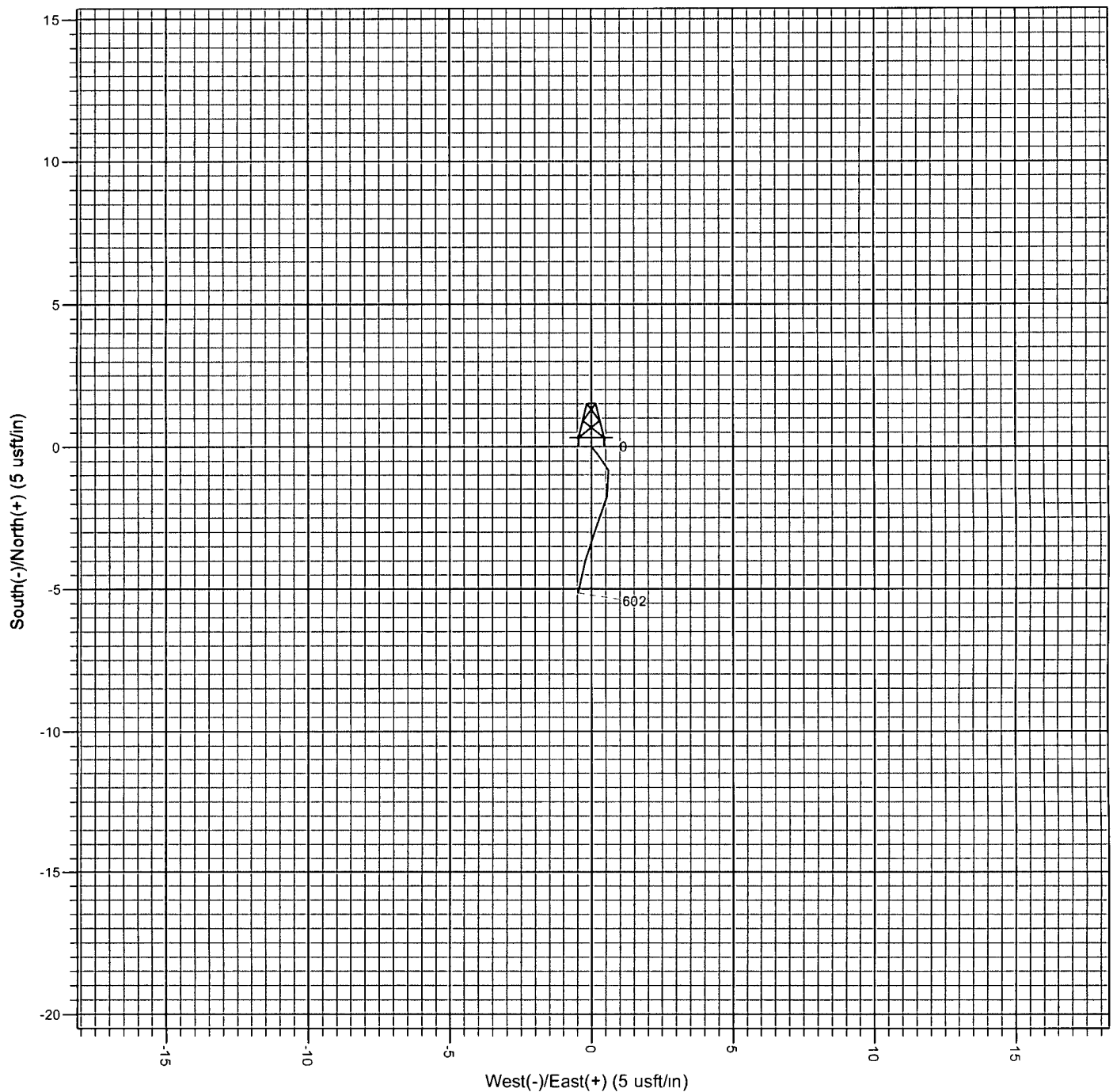


Scientific Drilling

Project: Cedar Canyon
Eddy County, NM
Well: Cedar Canyon 15 #1H
Wellbore: VH - Job #32K0612736
Design: VH - Job #32K0612736

WELL DETAILS: Cedar Canyon 15 #1H
WELL @ 0.00usft (Original Well Elev)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	441015.85	609819.34	32° 12' 43.096 N	103° 58' 41.711 W	



PROJECT DETAILS: Cedar Canyon	SITE DETAILS: Eddy County, NM
Geodetic System: US State Plane 1927 (Exact solution)	Site Centre Latitude: 32° 12' 57.600 N
Datum: NAD 1927 (NADCON CONUS)	Longitude: 103° 57' 50.400 W
Ellipsoid: Clarke 1866	Positional Uncertainty: 0.00
Zone: New Mexico East 3001	Convergence: 0.20
System Datum: Mean Sea Level	Local North: True

2105 MARKET STREET
MIDLAND, TX 79703
24 HR (432) 694-9517

STATE OF NEW MEXICO

COUNTY OF Eddy

I, John Hall, Directional Driller certify that I am employed by Baker Hughes INTEQ; did conduct

or supervise on the day(s) of Jun 17, 2012 through Jul 5, 2012 the

taking of MWD surveys from a depth of 685 to a depth of 10,336 that

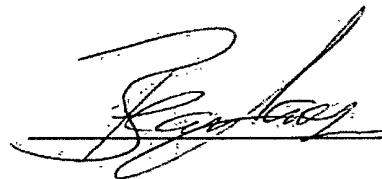
the data is true, correct, complete and within the limitations of the tool as set forth by Baker Hughes INTEQ; that I am

authorized and qualified to make this report; that this survey was conducted at the request of Oxy Permian

for the Cedar Canyon 15 #1H in Eddy

County, NM; and that I have reviewed this report and find that it conforms to

the principles and procedures as set forth by INTEQ.



Field Service Engineer: John Hall



OXY Permian

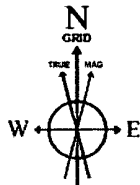
Location: Eddy County, NM
Field: (Cedar)
Facility: Cedar Canyon 15 No.1H

Slot: No.1H SHL
Well: No.1H
Wellbore: No.1H PWB

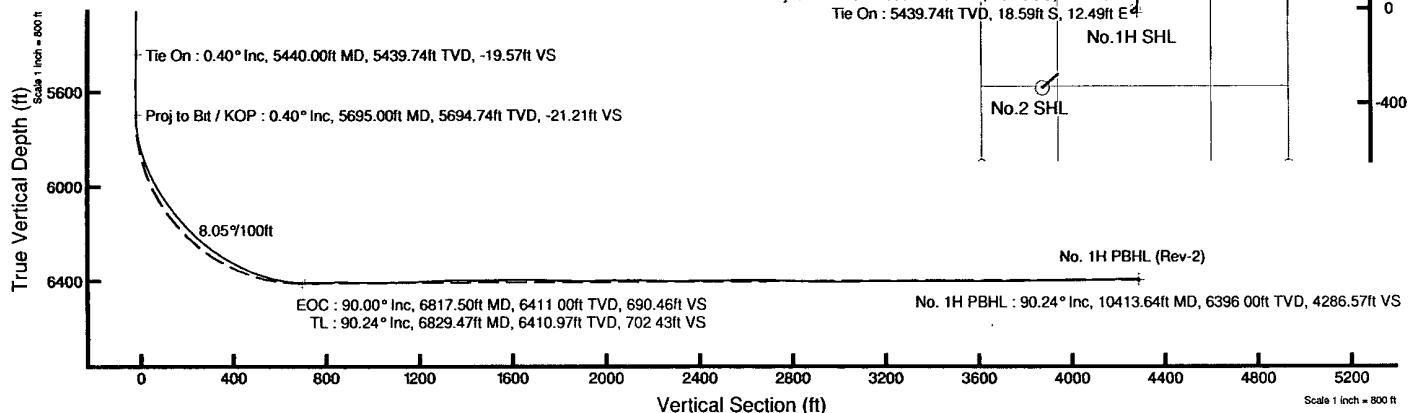
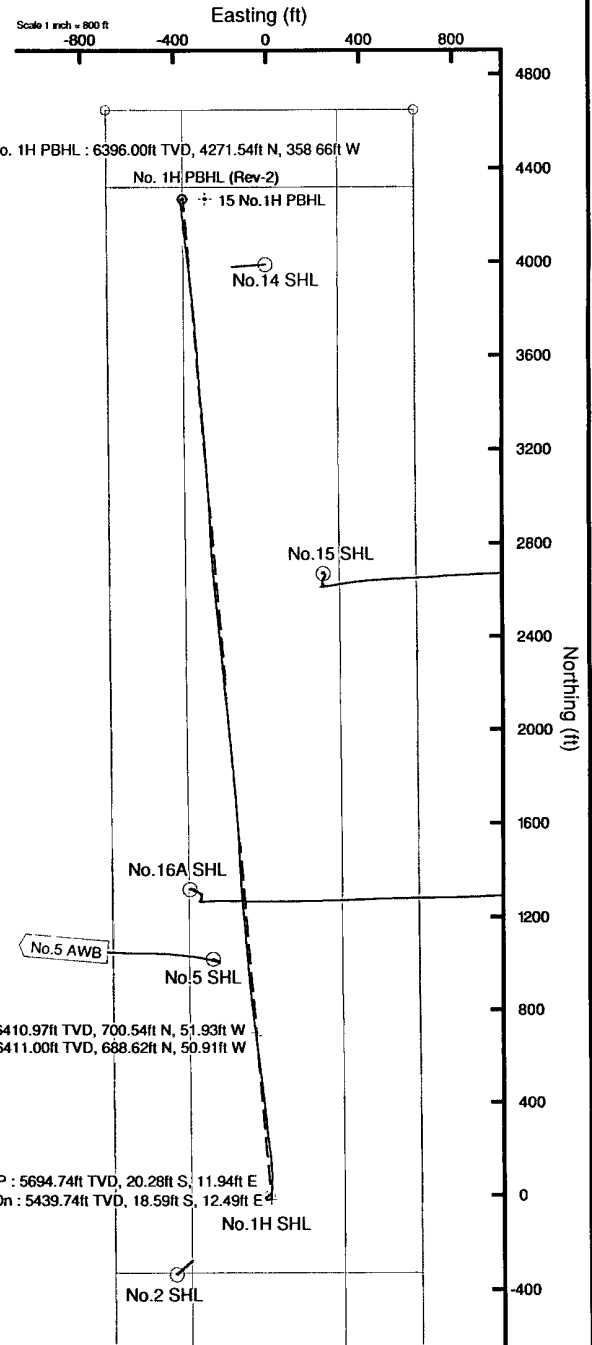


Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	5440.00	0.400	198.100	5439.74	-18.59	12.49	0.00	-19.57
Proj to Bit / KOP	5695.00	0.400	198.100	5694.74	-20.28	11.94	0.00	-21.21
EOC	6817.50	90.000	355.091	6411.00	688.62	-50.91	8.05	690.46
TL	6829.47	90.239	355.091	6410.97	700.54	-51.93	2.00	702.43
No. 1H PBHL	10413.64	90.239	355.091	6396.00	4271.54	-358.66	0.00	4286.57

Plot reference wellpath is Rev-D.0	
True vertical depths are referenced to Rig on No. 1H SHL (KB)	Grid System: NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No. 1H SHL (KB)	North Reference: Grid north
Rig on No. 1H SHL (KB) to Mean Sea Level: 2952 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot, No. 1H SHL): -2927 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: gentry on 6/25/2012



BGGM (1945.0 to 2013.0) Dip: 60.04° Field: 48462.5 nT
Magnetic North is 7.73 degrees East of True North (at 6/14/2012)
Grid North is 0.19 degrees East of True North
To correct azimuth from True to Grid subtract 0.19 degrees
To correct azimuth from Magnetic to Grid add 7.55 degrees
For example, if the Magnetic North Azimuth = 90 degrees, then the Grid North Azimuth = 90 + 7.55 = 97.55





Actual Wellpath Report

No.1H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	OXY Permian	Slot	No.1H SHL
Area	Eddy County, NM	Well	No.1H
Field	(Cedar)	Wellbore	No.1H AWB
Facility	Cedar Canyon 15 No.1H		

REPORT SETUP INFORMATION			
Projection System	NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 3.0.0
North Reference	Grid	User	Gentbry
Scale	0.999923	Report Generated	7/5/2012 at 10:47:03 AM
Convergence at slot	0.19° East	Database/Source file	WA Midland/No.1H_AWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	609819.50	441015.80	32°12'43.095"N	103°58'41.709"W
Facility Reference Pt			609819.50	441015.80	32°12'43.095"N	103°58'41.709"W
Field Reference Pt			604499.40	445260.40	32°13'25.270"N	103°59'43.478"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on No.1H SHL (KB) to Facility Vertical Datum	25.00ft
Horizontal Reference Pt	Slot	Rig on No.1H SHL (KB) to Mean Sea Level	2952.00ft
Vertical Reference Pt	Rig on No.1H SHL (KB)	Rig on No.1H SHL (KB) to Mud Line at Slot (No.1H SHL)	25.00ft
MD Reference Pt	Rig on No.1H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	355.20°



Actual Wellpath Report

No.1H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	OXY Permian	Slot	No.1H SHL
Area	Eddy County, NM	Well	No.1H
Field	(Cedar)	Wellbore	No.1H AWP
Facility	Cedar Canyon 15 No.1H		

WELLPATH DATA (133 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	140.310	0.00	0.00	0.00	0.00	609819.50	441015.80	32°12'43.095"N	103°58'41.709"W	0.00	
25.00	0.000	140.310	25.00	0.00	0.00	0.00	609819.50	441015.80	32°12'43.095"N	103°58'41.709"W	0.00	
99.80	0.410	140.310	99.80	-0.22	-0.21	0.17	609819.67	441015.59	32°12'43.093"N	103°58'41.707"W	0.55	
192.02	0.430	151.500	192.02	-0.81	-0.76	0.55	609820.05	441015.04	32°12'43.088"N	103°58'41.703"W	0.09	
289.24	0.770	199.450	289.23	-1.74	-1.70	0.50	609820.00	441014.10	32°12'43.078"N	103°58'41.703"W	0.59	
382.46	0.770	200.040	382.44	-2.88	-2.88	0.08	609819.58	441012.92	32°12'43.067"N	103°58'41.708"W	0.01	
479.01	0.620	195.970	478.99	-3.95	-3.99	-0.29	609819.21	441011.81	32°12'43.056"N	103°58'41.712"W	0.16	
571.56	0.460	189.480	571.53	-4.78	-4.84	-0.48	609819.02	441010.96	32°12'43.047"N	103°58'41.715"W	0.18	
602.00	0.380	190.470	601.97	-5.00	-5.06	-0.52	609818.98	441010.74	32°12'43.045"N	103°58'41.715"W	0.26	
685.00	0.300	233.400	684.97	-5.38	-5.46	-0.75	609818.75	441010.34	32°12'43.041"N	103°58'41.718"W	0.31	
870.00	0.500	193.800	869.97	-6.40	-6.53	-1.33	609818.17	441009.27	32°12'43.031"N	103°58'41.725"W	0.18	
1055.00	0.600	242.100	1054.96	-7.54	-7.77	-2.38	609817.12	441008.03	32°12'43.018"N	103°58'41.737"W	0.25	
1241.00	0.700	229.700	1240.95	-8.58	-8.96	-4.11	609815.40	441006.84	32°12'43.007"N	103°58'41.757"W	0.09	
1429.00	0.600	260.500	1428.93	-9.33	-9.86	-5.95	609813.55	441005.94	32°12'42.998"N	103°58'41.779"W	0.19	
1617.00	0.600	219.100	1616.93	-10.12	-10.79	-7.54	609811.96	441005.01	32°12'42.989"N	103°58'41.797"W	0.23	
1805.00	0.600	213.300	1804.92	-11.61	-12.38	-8.70	609810.80	441003.42	32°12'42.973"N	103°58'41.811"W	0.03	
1994.00	0.500	233.100	1993.91	-12.82	-13.70	-9.91	609809.59	441002.10	32°12'42.960"N	103°58'41.825"W	0.11	
2184.00	0.300	238.100	2183.90	-13.49	-14.46	-10.99	609808.51	441001.34	32°12'42.952"N	103°58'41.837"W	0.11	
2373.00	0.600	161.800	2372.90	-14.68	-15.66	-11.10	609808.40	441000.14	32°12'42.941"N	103°58'41.839"W	0.32	
2562.00	0.900	120.600	2561.88	-16.50	-17.36	-9.52	609809.98	440998.44	32°12'42.924"N	103°58'41.820"W	0.32	
2752.00	1.000	145.700	2751.86	-18.81	-19.49	-7.30	609812.20	440996.31	32°12'42.903"N	103°58'41.795"W	0.22	
2941.00	0.700	108.500	2940.84	-20.70	-21.22	-5.27	609814.23	440994.59	32°12'42.885"N	103°58'41.771"W	0.32	
2975.00	0.500	116.000	2974.84	-20.86	-21.35	-4.94	609814.56	440994.45	32°12'42.884"N	103°58'41.767"W	0.63	
3167.00	0.500	76.300	3166.83	-21.16	-21.52	-3.38	609816.12	440994.29	32°12'42.882"N	103°58'41.749"W	0.18	
3356.00	0.400	82.300	3355.82	-21.00	-21.23	-1.92	609817.58	440994.57	32°12'42.885"N	103°58'41.732"W	0.06	
3546.00	0.700	61.400	3545.81	-20.49	-20.59	-0.25	609819.25	440995.21	32°12'42.891"N	103°58'41.713"W	0.19	
3735.00	0.600	81.800	3734.80	-19.97	-19.89	1.75	609821.25	440995.91	32°12'42.898"N	103°58'41.689"W	0.13	
3926.00	0.700	73.300	3925.79	-19.67	-19.42	3.85	609823.35	440996.39	32°12'42.903"N	103°58'41.665"W	0.07	
4115.00	0.700	59.300	4114.78	-18.93	-18.49	5.95	609825.45	440997.31	32°12'42.912"N	103°58'41.640"W	0.09	
4305.00	0.600	66.500	4304.76	-18.10	-17.51	7.86	609827.36	440998.30	32°12'42.922"N	103°58'41.618"W	0.07	
4494.00	0.400	63.600	4493.76	-17.54	-16.82	9.36	609828.86	440998.98	32°12'42.928"N	103°58'41.601"W	0.11	
4683.00	0.400	96.100	4682.75	-17.42	-16.59	10.61	609830.11	440999.21	32°12'42.931"N	103°58'41.586"W	0.12	
4872.00	0.200	82.900	4871.75	-17.54	-16.62	11.59	609831.09	440999.18	32°12'42.930"N	103°58'41.575"W	0.11	
5062.00	0.200	130.200	5061.75	-17.76	-16.80	12.17	609831.67	440999.00	32°12'42.929"N	103°58'41.568"W	0.08	
5251.00	0.300	164.200	5250.75	-18.48	-17.49	12.56	609832.06	440998.32	32°12'42.922"N	103°58'41.563"W	0.09	
5440.00	0.400	198.100	5439.74	-19.57	-18.59	12.49	609831.99	440997.21	32°12'42.911"N	103°58'41.564"W	0.12	
5681.00	0.300	334.200	5680.74	-19.75	-18.82	11.96	609831.45	440996.98	32°12'42.909"N	103°58'41.571"W	0.27	
5712.00	2.300	4.400	5711.73	-19.06	-18.13	11.97	609831.47	440997.67	32°12'42.915"N	103°58'41.570"W	6.60	
5744.00	5.900	8.500	5743.64	-16.83	-15.86	12.26	609831.76	440999.94	32°12'42.938"N	103°58'41.567"W	11.28	
5775.00	9.300	6.200	5774.37	-12.82	-11.79	12.77	609832.27	441004.01	32°12'42.978"N	103°58'41.561"W	11.01	
5807.00	12.700	5.300	5805.78	-6.82	-5.72	13.37	609832.87	441010.08	32°12'43.038"N	103°58'41.554"W	10.64	
5839.00	15.600	4.600	5836.80	0.89	2.08	14.04	609833.54	441017.88	32°12'43.115"N	103°58'41.545"W	9.08	
5870.00	17.700	4.600	5866.50	9.66	10.93	14.75	609834.25	441026.73	32°12'43.203"N	103°58'41.537"W	6.77	
5902.00	20.300	3.600	5896.75	19.95	21.32	15.49	609834.99	441037.12	32°12'43.306"N	103°58'41.528"W	8.19	
5933.00	23.200	2.100	5925.54	31.33	32.79	16.05	609835.55	441048.59	32°12'43.419"N	103°58'41.521"W	9.52	



Actual Wellpath Report

No.1H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	OXY Permian	Slot	No.1H SHL
Area	Eddy County, NM	Well	No.1H
Field	(Cedar)	Wellbore	No.1H AWB
Facility	Cedar Canyon 15 No.1H		

WELLPATH DATA (133 stations)												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5965.00	25.700	0.500	5954.67	44.50	46.03	16.34	609835.84	441061.83	32°12'43.550"N	103°58'41.517"W	8.08	
5996.00	28.600	359.300	5982.25	58.60	60.17	16.31	609835.81	441075.97	32°12'43.690"N	103°58'41.517"W	9.52	
6028.00	31.000	358.900	6010.02	74.46	76.07	16.06	609835.56	441091.87	32°12'43.847"N	103°58'41.519"W	7.53	
6059.00	32.600	358.500	6036.37	90.77	92.40	15.69	609835.19	441108.20	32°12'44.009"N	103°58'41.523"W	5.21	
6091.00	34.600	356.900	6063.02	108.46	110.10	14.97	609834.47	441125.89	32°12'44.184"N	103°58'41.531"W	6.83	
6123.00	36.700	355.500	6089.02	127.10	128.70	13.73	609833.23	441144.49	32°12'44.368"N	103°58'41.544"W	7.04	
6154.00	38.500	354.400	6113.58	146.02	147.54	12.06	609831.56	441163.33	32°12'44.555"N	103°58'41.563"W	6.20	
6186.00	40.800	353.700	6138.22	166.43	167.85	9.94	609829.44	441183.64	32°12'44.756"N	103°58'41.587"W	7.32	
6217.00	42.600	353.500	6161.36	187.04	188.34	7.64	609827.14	441204.13	32°12'44.959"N	103°58'41.613"W	5.82	
6249.00	44.500	352.900	6184.55	209.08	210.23	5.03	609824.53	441226.02	32°12'45.175"N	103°58'41.642"W	6.08	
6281.00	46.800	353.600	6206.92	231.94	232.96	2.34	609821.84	441248.74	32°12'45.400"N	103°58'41.673"W	7.36	
6312.00	49.100	354.200	6227.68	254.95	255.84	-0.10	609819.40	441271.62	32°12'45.627"N	103°58'41.700"W	7.56	
6344.00	51.800	354.300	6248.06	279.62	280.39	-2.57	609816.93	441296.17	32°12'45.870"N	103°58'41.728"W	8.44	
6375.00	54.300	354.600	6266.69	304.39	305.05	-4.97	609814.53	441320.82	32°12'46.114"N	103°58'41.755"W	8.10	
6407.00	56.300	354.000	6284.91	330.70	331.22	-7.58	609811.92	441347.00	32°12'46.373"N	103°58'41.784"W	6.44	
6438.00	58.200	353.800	6301.68	356.76	357.15	-10.35	609809.15	441372.92	32°12'46.630"N	103°58'41.816"W	6.15	
6470.00	60.800	353.700	6317.92	384.32	384.55	-13.35	609806.15	441400.32	32°12'46.901"N	103°58'41.850"W	8.13	
6501.00	63.100	353.400	6332.49	411.67	411.74	-16.43	609803.07	441427.50	32°12'47.170"N	103°58'41.884"W	7.47	
6533.00	65.100	353.300	6346.47	440.44	440.33	-19.76	609799.74	441456.09	32°12'47.453"N	103°58'41.922"W	6.26	
6564.00	67.400	353.100	6358.95	468.79	468.50	-23.12	609796.38	441484.26	32°12'47.732"N	103°58'41.960"W	7.44	
6596.00	70.200	352.900	6370.53	498.60	498.11	-26.76	609792.75	441513.87	32°12'48.025"N	103°58'42.001"W	8.77	
6627.00	72.900	352.700	6380.34	527.98	527.28	-30.44	609789.06	441543.04	32°12'48.314"N	103°58'42.043"W	8.73	
6659.00	75.900	353.000	6388.94	558.77	557.86	-34.28	609785.23	441573.62	32°12'48.617"N	103°58'42.086"W	9.42	
6690.00	79.000	352.800	6395.68	589.00	587.88	-38.02	609781.49	441603.64	32°12'48.914"N	103°58'42.129"W	10.02	
6722.00	81.700	352.900	6401.04	620.52	619.18	-41.94	609777.56	441634.93	32°12'49.224"N	103°58'42.173"W	8.44	
6753.00	84.100	352.500	6404.87	651.25	649.69	-45.85	609773.63	441665.44	32°12'49.526"N	103°58'42.218"W	7.85	
6785.00	86.700	353.000	6407.44	683.12	681.33	-49.88	609769.63	441697.08	32°12'49.839"N	103°58'42.263"W	8.27	
6816.00	88.600	353.000	6408.71	714.07	712.07	-53.65	609765.85	441727.82	32°12'50.143"N	103°58'42.306"W	6.13	
6847.00	90.400	353.000	6408.98	745.04	742.84	-57.43	609762.08	441758.58	32°12'50.448"N	103°58'42.349"W	5.81	
6879.00	92.000	353.000	6408.31	777.01	774.59	-61.33	609758.18	441790.33	32°12'50.762"N	103°58'42.393"W	5.00	
6910.00	91.900	352.900	6407.25	807.97	805.34	-65.13	609754.37	441821.08	32°12'51.066"N	103°58'42.436"W	0.46	
6942.00	91.000	353.100	6406.44	839.93	837.09	-69.03	609750.48	441852.83	32°12'51.381"N	103°58'42.480"W	2.88	
6973.00	89.200	354.600	6406.39	870.92	867.91	-72.35	609747.16	441883.64	32°12'51.686"N	103°58'42.518"W	7.56	
7005.00	89.100	355.000	6406.86	902.92	899.78	-75.25	609744.26	441915.51	32°12'52.001"N	103°58'42.550"W	1.29	
7036.00	89.300	354.300	6407.30	933.91	930.64	-78.14	609741.37	441946.36	32°12'52.307"N	103°58'42.583"W	2.35	
7099.00	89.900	355.200	6407.74	996.91	993.37	-83.90	609735.60	442009.09	32°12'52.928"N	103°58'42.647"W	1.72	
7194.00	90.700	355.000	6407.24	1091.91	1088.02	-92.02	609727.49	442103.74	32°12'53.865"N	103°58'42.738"W	0.87	
7289.00	92.700	354.900	6404.42	1186.86	1182.61	-100.38	609719.13	442198.31	32°12'54.801"N	103°58'42.832"W	2.11	
7352.00	92.100	354.800	6401.78	1249.80	1245.30	-106.03	609713.48	442261.00	32°12'55.421"N	103°58'42.895"W	0.97	
7415.00	91.100	355.600	6400.02	1312.78	1308.05	-111.30	609708.21	442323.75	32°12'56.043"N	103°58'42.954"W	2.03	
7478.00	90.600	356.100	6399.09	1375.76	1370.88	-115.85	609703.65	442386.57	32°12'56.664"N	103°58'43.005"W	1.12	
7541.00	89.900	357.100	6398.81	1438.74	1433.77	-119.59	609699.92	442449.45	32°12'57.287"N	103°58'43.046"W	1.94	
7604.00	90.800	357.400	6398.43	1501.70	1496.69	-122.61	609696.90	442512.37	32°12'57.910"N	103°58'43.079"W	1.51	
7667.00	91.000	356.600	6397.44	1564.66	1559.60	-125.91	609693.60	442575.27	32°12'58.532"N	103°58'43.115"W	1.31	
7730.00	90.400	355.800	6396.67	1627.65	1622.45	-130.09	609689.42	442638.12	32°12'59.154"N	103°58'43.161"W	1.59	



Actual Wellpath Report

No.1H AWP

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BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION			
Operator	OXY Permian	Slot	No.1H SHL
Area	Eddy County, NM	Well	No.1H
Field	(Cedar)	Wellbore	No.1H AWP
Facility	Cedar Canyon 15 No.1H		

WELLPATH DATA (133 stations)												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7793.00	88.700	355.900	6397.17	1690.64	1685.28	-134.64	609684.87	442700.95	32°12'59.776"N	103°58'43.211"W	2.70	
7857.00	88.300	355.100	6398.84	1754.62	1749.06	-139.66	609679.85	442764.72	32°13'00.407"N	103°58'43.267"W	1.40	
7920.00	88.600	354.600	6400.54	1817.59	1811.79	-145.32	609674.19	442827.44	32°13'01.028"N	103°58'43.331"W	0.93	
7983.00	89.100	354.900	6401.81	1880.58	1874.51	-151.08	609668.43	442890.16	32°13'01.649"N	103°58'43.395"W	0.93	
8046.00	91.100	354.700	6401.70	1943.57	1937.25	-156.79	609662.72	442952.89	32°13'02.270"N	103°58'43.459"W	3.19	
8109.00	92.000	354.900	6399.99	2006.55	1999.96	-162.50	609657.02	443015.60	32°13'02.891"N	103°58'43.523"W	1.46	
8172.00	90.200	354.400	6398.79	2069.53	2062.67	-168.37	609651.14	443078.31	32°13'03.512"N	103°58'43.589"W	2.97	
8235.00	88.600	353.800	6399.45	2132.51	2125.33	-174.85	609644.67	443140.97	32°13'04.132"N	103°58'43.662"W	2.71	
8298.00	88.400	354.600	6401.09	2195.48	2187.99	-181.21	609638.30	443203.62	32°13'04.752"N	103°58'43.734"W	1.31	
8361.00	88.600	353.800	6402.74	2258.45	2250.65	-187.57	609631.94	443266.27	32°13'05.372"N	103°58'43.806"W	1.31	
8424.00	90.800	354.600	6403.07	2321.43	2313.32	-193.94	609625.58	443328.93	32°13'05.993"N	103°58'43.877"W	3.72	
8487.00	90.900	354.300	6402.14	2384.42	2376.02	-200.03	609619.48	443391.63	32°13'06.613"N	103°58'43.946"W	0.50	
8550.00	89.800	353.600	6401.75	2447.40	2438.66	-206.67	609612.84	443454.27	32°13'07.233"N	103°58'44.021"W	2.07	
8613.00	92.000	354.300	6400.76	2510.38	2501.30	-213.31	609606.21	443516.90	32°13'07.854"N	103°58'44.096"W	3.66	
8677.00	91.000	354.600	6399.09	2574.35	2564.98	-219.50	609600.02	443580.57	32°13'08.484"N	103°58'44.165"W	1.63	
8740.00	89.400	354.700	6398.87	2637.34	2627.70	-225.37	609594.15	443643.29	32°13'09.105"N	103°58'44.231"W	2.54	
8803.00	89.500	354.900	6399.47	2700.34	2690.44	-231.08	609588.44	443706.02	32°13'09.726"N	103°58'44.295"W	0.35	
8866.00	88.600	356.500	6400.52	2763.32	2753.25	-235.80	609583.71	443768.83	32°13'10.347"N	103°58'44.348"W	2.91	
8929.00	88.200	357.200	6402.28	2826.27	2816.13	-239.27	609580.25	443831.71	32°13'10.970"N	103°58'44.386"W	1.28	
8992.00	89.000	357.100	6403.82	2889.22	2879.03	-242.40	609577.12	443894.60	32°13'11.592"N	103°58'44.420"W	1.28	
9055.00	89.900	356.900	6404.42	2952.18	2941.94	-245.69	609573.83	443957.51	32°13'12.215"N	103°58'44.456"W	1.46	
9118.00	90.500	356.600	6404.20	3015.16	3004.84	-249.27	609570.25	444020.40	32°13'12.837"N	103°58'44.495"W	1.06	
9181.00	91.400	356.100	6403.16	3078.14	3067.70	-253.28	609566.24	444083.26	32°13'13.460"N	103°58'44.539"W	1.63	
9244.00	90.300	356.300	6402.22	3141.12	3130.56	-257.45	609562.07	444146.11	32°13'14.082"N	103°58'44.585"W	1.77	
9307.00	89.600	355.300	6402.28	3204.11	3193.39	-262.06	609557.46	444208.93	32°13'14.704"N	103°58'44.637"W	1.94	
9370.00	89.900	355.600	6402.55	3267.11	3256.19	-267.06	609552.46	444271.73	32°13'15.325"N	103°58'44.692"W	0.67	
9433.00	90.800	354.900	6402.17	3330.11	3318.97	-272.28	609547.24	444334.50	32°13'15.947"N	103°58'44.751"W	1.81	
9496.00	90.600	354.400	6401.40	3393.10	3381.69	-278.15	609541.37	444397.22	32°13'16.567"N	103°58'44.817"W	0.85	
9559.00	90.000	355.300	6401.07	3456.10	3444.43	-283.81	609535.72	444459.96	32°13'17.189"N	103°58'44.880"W	1.72	
9623.00	89.100	355.600	6401.57	3520.10	3508.23	-288.88	609530.64	444523.75	32°13'17.820"N	103°58'44.937"W	1.48	
9686.00	89.300	355.300	6402.45	3583.09	3571.02	-293.88	609525.64	444586.54	32°13'18.442"N	103°58'44.992"W	0.57	
9749.00	90.300	354.900	6402.67	3646.09	3633.79	-299.26	609520.26	444649.30	32°13'19.063"N	103°58'45.053"W	1.71	
9812.00	91.700	355.400	6401.57	3709.08	3696.55	-304.59	609514.94	444712.06	32°13'19.684"N	103°58'45.112"W	2.36	
9875.00	90.700	354.600	6400.25	3772.06	3759.30	-310.08	609509.45	444774.80	32°13'20.305"N	103°58'45.174"W	2.03	
9938.00	90.600	353.600	6399.54	3835.05	3821.96	-316.55	609502.97	444837.46	32°13'20.925"N	103°58'45.247"W	1.60	
10001.00	90.400	353.800	6398.99	3898.02	3884.58	-323.47	609496.06	444900.07	32°13'21.545"N	103°58'45.325"W	0.45	
10064.00	90.200	353.600	6398.66	3961.00	3947.20	-330.38	609489.15	444962.68	32°13'22.165"N	103°58'45.403"W	0.45	
10127.00	90.900	353.000	6398.05	4023.96	4009.76	-337.73	609481.80	445025.25	32°13'22.784"N	103°58'45.486"W	1.46	
10190.00	91.100	353.200	6396.95	4086.91	4072.30	-345.30	609474.23	445087.77	32°13'23.404"N	103°58'45.572"W	0.45	
10253.00	91.400	353.900	6395.58	4149.87	4134.88	-352.37	609467.16	445150.36	32°13'24.023"N	103°58'45.652"W	1.21	
10316.00	91.500	353.600	6393.98	4212.83	4197.49	-359.23	609460.30	445212.96	32°13'24.643"N	103°58'45.729"W	0.50	
10336.00	91.600	354.400	6393.44	4232.81	4217.37	-361.32	609458.21	445232.84	32°13'24.840"N	103°58'45.753"W	4.03	
10389.00	91.600	354.400	6391.96	4285.79	4270.10	-366.49	609453.04	445285.56	32°13'25.362"N	103°58'45.811"W	0.00	Proj to Bit

TARGETS									
Name	MD	TVD	North	East	Grid East	Grid North	Latitude	Longitude	Shape

	[ft]	[ft]	[ft]	[ft]	[US ft]	[US ft]			
15 No.1H PBHL		6396.00	4271.54	-263.82	609555.70	445287.00	32°13'25.372"N	103°58'44.616"W	point
No. 1H PBHL (Rev-1)		6396.00	4271.54	-604.42	609215.13	445287.00	32°13'25.384"N	103°58'48.580"W	point
No. 1H PBHL (Rev-2)		6396.00	4271.54	-358.66	609460.86	445287.00	32°13'25.376"N	103°58'45.720"W	point

WELLPATH COMPOSITION - Ref Wellbore: No.1H AWB Ref Wellpath: No.1H AWP						
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore		
25.00	602.00	Generic gyro - northseeking (Standard)	Scientific Drilling Gyro <99.8-602>	No.1H AWB		
602.00	10336.00	NaviTrak (Standard)	BHI MWD NaviTrak <685-XXXX>	No.1H AWB		
10336.00	10389.00	Blind Drilling (std)	Projection to bit	No.1H AWB		