

Results of Directional Survey

API number:	30-025-40280		
OGRID:		Operator:	OCCIDENTAL PERMIAN LTD
		Property:	FECTA 33 FEDERAL # 2H

surface	ULSTR:	C	33	T 19S	R 33E
				141 FNL	2347 FWL

BH Loc	ULSTR:	N	33	T 19S	R 33E
13803	MD	9410.9	TVD	331 FSL	2296 FWL
				4949 FNL	

Top Perf/OH	ULSTR:	C	33	T 19S	R 33E
9924	MD	9421.1	TVD	1071 FNL	2248 FWL

Bot Perf/OH	ULSTR:	N	33	T 19S	R 33E
13652	MD	9410.2	TVD	482 FSL	2288 FWL
				4798 FNL	

	MD	N/S	E/W	VD
	9876	-881.98	-100.16	9421.84
TOP PERFS/OH	9924	-929.96	-99.25	9421.09
	9939	-944.96	-98.96	9420.85
	13630	-4634.80	-59.49	9409.96
BOT PERFS/OH	13652	-4656.78	-58.55	9410.19
	13724	-4728.71	-55.47	9410.95

NEXT TO LAST	13751	-4755.67	-54.13	9410.97
LAST READING	13803	-4807.59	-51.22	9410.88
TD	13803	-4807.59	-51.22	9410.88

Surface Location	141	FN	2347	FW
Projected BHL	4949	FN	2296	FW
Location of				
Top Perfs/OH	1071	FN	2248	FW
Bottom Perfs/OH	4798	FN	2288	FW

SUMMARY of Subsurface Locations

Surface Location	C-33-19S-33E	141	FN	2347	FW	Vert. Depth
Top Perfs/OH	C-33-19S-33E	1071	FN	2248	FW	9421.09
Bottom Perfs/OH	N-33-19S-33E	4798	FN	2288	FW	9410.19
Projected TD	N-33-19S-33E	4949	FN	2296	FW	9410.88

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

STATE OF NEW MEXICO

COUNTY OF Lea County

I, Shawn Cook, Directional Driller certify that I am employed by Baker Hughes INTEQ; did conduct
or supervise on the day(s) of July 25, 2012 through August 19, 2012 the
taking of MWD surveys from a depth of 4,184 to a depth of 13,803 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

for the Fecta 33 Fed Com No. 2H in Lea

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

the principles and procedures as set forth by INTEQ.

SUR: C-33-19s-33e, 141/N & 2347/W
BHL: N-33-19s-33e, 4949/N & 2296/W
API # 30-025-40280

Penny Hise Ops. Coordinator

Field Service Engineer: Shawn Cook



OXY Permian

Location: Lea County, NM
Field: (Fecta) Sec 33, T19S, R32E
Facility: Fecta 33 Fed Com No. 2H

Slot: No. 2H SHL
Well: No. 2H
Wellbore: No. 2H PWB



SUR: C-33-19s-33e, 141/N & 2347/W
BHL: N-33-19s-33e, 4949/N & 2296/W
API # 30-025-40280

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (ft/100ft)	VS (ft)
Tie On	9183.00	25.10	201.600	9142.01	300.77	60.71	0.00	301.62
Proj to Bit	9226.00	28.70	201.600	9180.35	318.85	67.87	8.37	319.80
EOC	9715.13	90.00	179.386	9420.00	714.05	113.24	13.00	715.61
TL	9729.15	90.28	179.386	9419.97	728.07	113.09	2.00	729.62
No. 2H PBHL	13809.08	90.28	179.386	9400.00	-4807.72	-68.36	0.00	4808.22

Plot reference wellbore is Rev-F.0

True vertical depths are referenced to H&P 4.74 (KB)

Measured depths are referenced to H&P 4.74 (KB)

H&P 4.74 (KB) to Mean Sea Level: 3580.4 feet

Mean Sea Level to Mud line (At Slot: No. 2H SHL): 3565.4 feet

Coordinates are in feet referenced to Slot

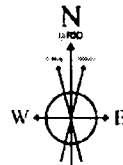
Grid System: NAD27 / TM New Mexico SP, Eastern Zone (3000 ft) US foot

North Reference: Grid north

Scale: True distance

Curves are in feet

Created by: jerry on 09/09/2012



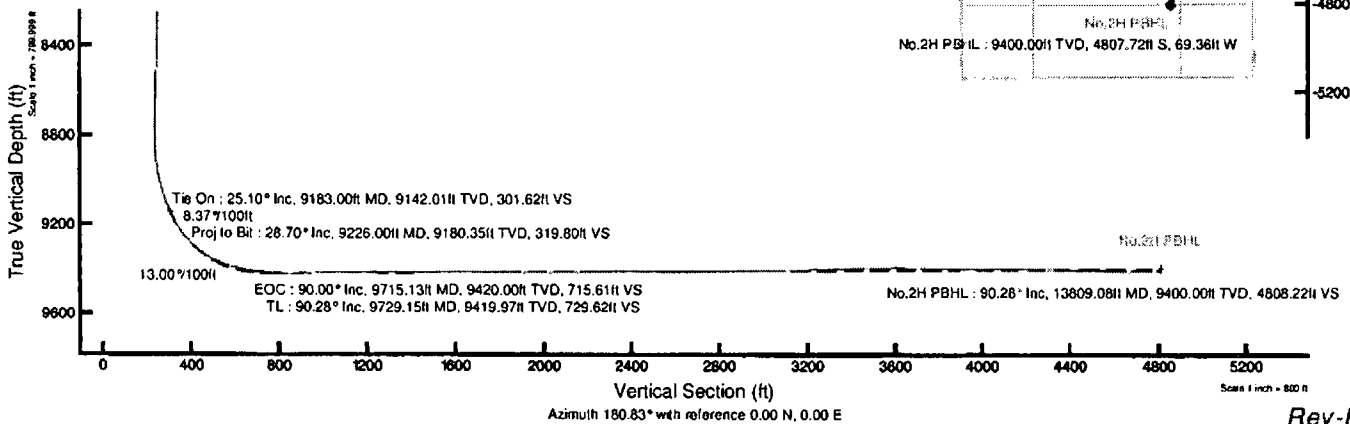
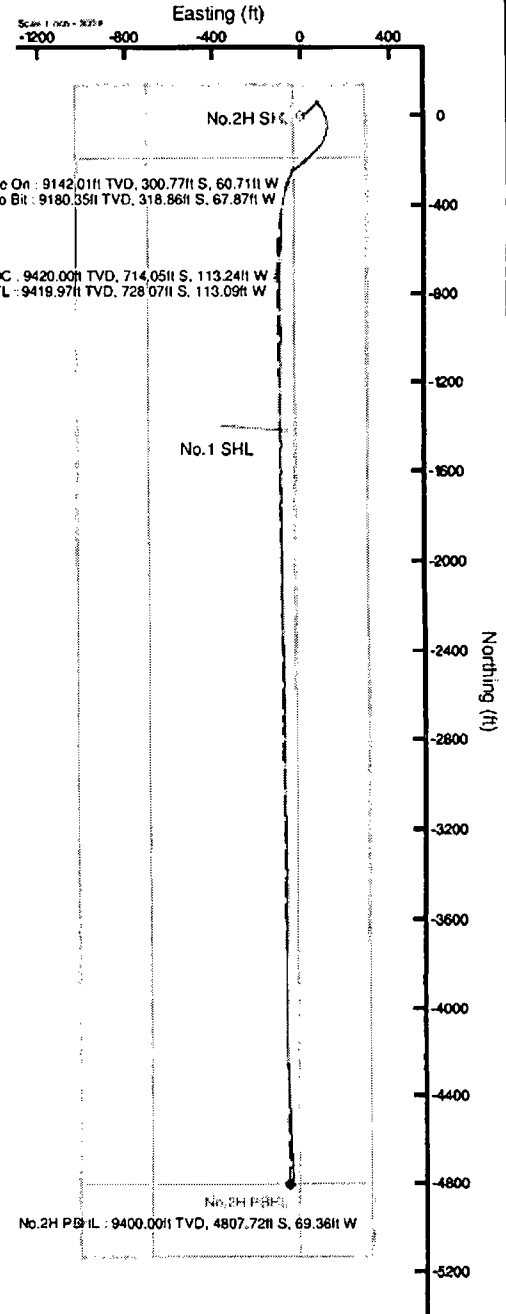
BGCM (1945.0 to 2014.0) Dip: 68.46° Field: 48725 x nT
Magnetic North is 7.68 degrees East of True North (at 07/03/2012)

Grid North is 0.30 degrees East of True North

To correct azimuth from True to Grid subtract 0.30 degrees

To correct azimuth from Magnetic to Grid add 7.38 degrees

For example: If the Magnetic North Azimuth = 90 degrees, then the Grid North Azimuth = 90 + 7.38 = 97.38



Rev-F.0



Actual Wellpath Report

No.2H AWP

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REFERENCE WELL PATH IDENTIFICATION

Operator	OXY Permian	Slot	No.2H SHL
Area	Lea County, NM	Well	No.2H
Field	(Fecta) Sec 33, T19S, R32E	Wellbore	No.2H AWB
Facility	Fecta 33 Fed Com No.2H		

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	0.999943	Report Generated	08/20/2012 at 7:57:03 AM
Convergence at slot	0.30° East	Database/Source file	WA Midland/No.2H A WB.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	672945.70	591045.50	32°37'25.072"N	103°46'17.771"W
Facility Reference Pt			672945.70	591045.50	32°37'25.072"N	103°46'17.771"W
Field Reference Pt			672945.70	591045.50	32°37'25.072"N	103°46'17.771"W

WELL PATH DATUM

Calculation method	Minimum curvature	H&P 474 (KB) to Facility Vertical Datum	25.00ft
Horizontal Reference Pt	Slot	H&P 474 (KB) to Mean Sea Level	3580.40ft
Vertical Reference Pt	H&P 474 (KB)	H&P 474 (KB) to Mud Line at Slot (No.2H SHL)	25.00ft
MD Reference Pt	H&P 474 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	180.83°



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Field	(Fecta) Sec 33, T19S, R32E	Wellbore	No.2H AWB
Facility	Fecta 33 Fed Com No.2H		

WELLPATH DATA (203 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
0.00	0.000	89.280	0.00	0.00	0.00	0.00	672945.70	591045.50	32°37'25.072"N	103°46'17.771"W	0.00	
68.69	0.400	89.280	68.69	-0.01	0.00	0.24	672945.94	591045.50	32°37'25.072"N	103°46'17.768"W	0.58	
163.04	0.700	78.830	163.04	-0.14	0.12	1.13	672946.83	591045.62	32°37'25.073"N	103°46'17.758"W	0.33	
256.36	0.740	83.320	256.35	-0.33	0.30	2.29	672947.99	591045.80	32°37'25.075"N	103°46'17.744"W	0.07	
352.41	0.680	87.880	352.39	-0.44	0.39	3.48	672949.18	591045.89	32°37'25.076"N	103°46'17.730"W	0.09	
444.86	0.580	90.960	444.83	-0.47	0.41	4.49	672950.19	591045.90	32°37'25.076"N	103°46'17.718"W	0.11	
537.31	0.450	93.240	537.28	-0.45	0.38	5.32	672951.02	591045.88	32°37'25.076"N	103°46'17.709"W	0.14	
629.70	0.410	104.400	629.67	-0.36	0.27	6.01	672951.71	591045.77	32°37'25.075"N	103°46'17.701"W	0.10	
724.34	0.310	100.940	724.31	-0.24	0.14	6.59	672952.29	591045.64	32°37'25.073"N	103°46'17.694"W	0.11	
819.07	0.300	99.260	819.04	-0.15	0.05	7.08	672952.78	591045.55	32°37'25.072"N	103°46'17.688"W	0.01	
861.00	0.290	96.310	860.96	-0.13	0.02	7.30	672953.00	591045.52	32°37'25.072"N	103°46'17.686"W	0.04	
899.00	0.400	38.380	898.96	-0.22	0.12	7.47	672953.17	591045.62	32°37'25.073"N	103°46'17.684"W	0.92	
991.00	0.400	58.600	990.96	-0.65	0.54	7.95	672953.65	591046.04	32°37'25.077"N	103°46'17.678"W	0.15	
1079.00	0.700	40.660	1078.96	-1.23	1.10	8.56	672954.26	591046.60	32°37'25.083"N	103°46'17.671"W	0.39	
1194.00	0.700	50.700	1193.95	-2.22	2.08	9.56	672955.26	591047.58	32°37'25.092"N	103°46'17.659"W	0.11	
1270.00	0.790	43.870	1269.94	-2.90	2.75	10.28	672955.98	591048.25	32°37'25.099"N	103°46'17.651"W	0.17	
1366.00	0.880	67.380	1365.93	-3.68	3.51	11.42	672957.12	591049.01	32°37'25.107"N	103°46'17.637"W	0.37	
1459.00	1.010	63.650	1458.92	-4.34	4.15	12.82	672958.52	591049.65	32°37'25.113"N	103°46'17.621"W	0.15	
1555.00	1.190	66.850	1554.90	-5.13	4.92	14.49	672960.19	591050.42	32°37'25.120"N	103°46'17.601"W	0.20	
1648.00	1.320	64.860	1647.88	-5.99	5.75	16.35	672962.05	591051.25	32°37'25.128"N	103°46'17.580"W	0.15	
1743.00	1.490	59.250	1742.85	-7.12	6.85	18.40	672964.10	591052.35	32°37'25.139"N	103°46'17.555"W	0.23	
1837.00	1.410	61.360	1836.82	-8.32	8.03	20.47	672966.17	591053.53	32°37'25.151"N	103°46'17.531"W	0.10	
1933.00	1.800	58.240	1932.78	-9.72	9.39	22.78	672968.48	591054.89	32°37'25.164"N	103°46'17.504"W	0.42	
2028.00	1.800	52.040	2027.74	-11.46	11.09	25.23	672970.93	591056.59	32°37'25.181"N	103°46'17.475"W	0.20	
2123.00	1.890	55.080	2122.69	-13.31	12.91	27.69	672973.39	591058.41	32°37'25.199"N	103°46'17.446"W	0.14	
2312.00	1.880	46.070	2311.59	-17.31	16.84	32.48	672978.18	591062.34	32°37'25.237"N	103°46'17.390"W	0.16	
2405.00	1.480	45.280	2404.55	-19.24	18.75	34.43	672980.13	591064.24	32°37'25.256"N	103°46'17.367"W	0.43	
2530.00	1.890	55.650	2529.49	-21.58	21.04	37.28	672982.98	591066.54	32°37'25.279"N	103°46'17.334"W	0.41	
2641.00	2.810	49.540	2640.40	-24.43	23.84	40.86	672986.56	591069.34	32°37'25.306"N	103°46'17.292"W	0.86	
2763.00	3.910	46.770	2762.19	-29.30	28.63	46.17	672991.86	591074.13	32°37'25.353"N	103°46'17.229"W	0.91	
2860.00	4.090	47.250	2858.95	-33.98	33.25	51.12	672996.81	591078.74	32°37'25.399"N	103°46'17.171"W	0.19	
2959.00	4.090	45.670	2957.70	-38.92	38.11	56.24	673001.93	591083.61	32°37'25.446"N	103°46'17.111"W	0.11	
3048.00	4.000	46.950	3046.48	-43.32	42.45	60.77	673006.47	591087.94	32°37'25.489"N	103°46'17.058"W	0.14	
3142.00	3.000	35.500	3140.30	-47.61	46.69	64.60	673010.29	591092.18	32°37'25.531"N	103°46'17.013"W	1.29	
3237.00	2.500	34.600	3235.19	-51.38	50.42	67.22	673012.91	591095.91	32°37'25.568"N	103°46'16.982"W	0.53	
3330.00	2.020	25.370	3328.12	-54.56	53.57	69.07	673014.77	591099.06	32°37'25.599"N	103°46'16.960"W	0.65	
3427.00	1.580	16.840	3425.07	-57.40	56.39	70.19	673015.89	591101.89	32°37'25.627"N	103°46'16.947"W	0.53	
3522.00	1.190	348.000	3520.04	-59.62	58.61	70.37	673016.06	591104.11	32°37'25.649"N	103°46'16.945"W	0.83	
3616.00	0.880	329.650	3614.03	-61.19	60.19	69.80	673015.50	591105.68	32°37'25.664"N	103°46'16.951"W	0.48	
3710.00	0.700	45.500	3708.02	-62.21	61.21	69.84	673015.54	591106.71	32°37'25.674"N	103°46'16.951"W	1.04	
3805.00	1.000	73.800	3803.01	-62.87	61.85	71.05	673016.75	591107.35	32°37'25.681"N	103°46'16.936"W	0.53	
3901.00	1.300	58.100	3898.99	-63.70	62.66	72.78	673018.48	591108.16	32°37'25.689"N	103°46'16.916"W	0.45	
3994.00	1.000	25.500	3991.97	-65.01	63.95	74.03	673019.72	591109.45	32°37'25.701"N	103°46'16.902"W	0.76	
4089.00	0.880	29.500	4086.96	-66.41	65.33	74.74	673020.44	591110.83	32°37'25.715"N	103°46'16.893"W	0.14	
4184.00	0.880	30.600	4181.95	-67.68	66.60	75.47	673021.17	591112.09	32°37'25.727"N	103°46'16.884"W	0.02	



Actual Wellpath Report

No.2H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	OXY Permian	Slot	No.2H SHL
Area	Lea County, NM	Well	No.2H
Field	(Fecta) Sec 33, T19S, R32E	Wellbore	No.2H AWB
Facility	Fecta 33 Fed Com No.2H		

WELLPATH DATA (203 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
4408.00	0.100	353.200	4405.94	-69.37	68.27	76.33	673022.02	591113.77	32°37'25.744"N	103°46'16.874"W	0.36	
4439.00	0.600	193.500	4436.94	-69.23	68.14	76.29	673021.98	591113.64	32°37'25.743"N	103°46'16.875"W	2.24	
4471.00	1.100	190.900	4468.94	-68.77	67.68	76.19	673021.88	591113.17	32°37'25.738"N	103°46'16.876"W	1.57	
4502.00	1.400	194.200	4499.93	-68.11	67.02	76.04	673021.74	591112.51	32°37'25.731"N	103°46'16.878"W	0.99	
4534.00	1.500	189.700	4531.92	-67.31	66.22	75.87	673021.57	591111.72	32°37'25.724"N	103°46'16.880"W	0.47	
4565.00	1.500	188.300	4562.91	-66.51	65.42	75.75	673021.44	591110.92	32°37'25.716"N	103°46'16.881"W	0.12	
4597.00	2.100	184.400	4594.89	-65.51	64.42	75.64	673021.34	591109.92	32°37'25.706"N	103°46'16.883"W	1.91	
4629.00	2.900	181.500	4626.86	-64.11	63.03	75.57	673021.27	591108.53	32°37'25.692"N	103°46'16.884"W	2.53	
4660.00	3.600	175.400	4657.81	-62.36	61.28	75.63	673021.33	591106.77	32°37'25.675"N	103°46'16.883"W	2.52	
4692.00	4.100	174.200	4689.74	-60.22	59.14	75.83	673021.52	591104.63	32°37'25.654"N	103°46'16.881"W	1.58	
4723.00	4.200	169.200	4720.66	-58.01	56.92	76.15	673021.85	591102.42	32°37'25.632"N	103°46'16.877"W	1.21	
4755.00	4.000	160.900	4752.58	-55.81	54.71	76.74	673022.43	591100.21	32°37'25.610"N	103°46'16.870"W	1.95	
4786.00	4.100	155.200	4783.50	-53.80	52.69	77.56	673023.25	591098.18	32°37'25.590"N	103°46'16.861"W	1.34	
4818.00	4.800	150.600	4815.40	-51.61	50.48	78.69	673024.39	591095.98	32°37'25.568"N	103°46'16.848"W	2.45	
4849.00	5.900	147.600	4846.27	-49.16	48.01	80.18	673025.88	591093.50	32°37'25.543"N	103°46'16.831"W	3.66	
4881.00	6.700	144.100	4878.07	-46.29	45.10	82.16	673027.86	591090.60	32°37'25.514"N	103°46'16.808"W	2.77	
4912.00	7.100	143.600	4908.85	-43.31	42.10	84.36	673030.05	591087.60	32°37'25.484"N	103°46'16.782"W	1.30	
4944.00	7.300	144.100	4940.60	-40.11	38.86	86.72	673032.42	591084.36	32°37'25.452"N	103°46'16.755"W	0.65	
4975.00	7.200	144.100	4971.35	-36.97	35.69	89.02	673034.71	591081.19	32°37'25.421"N	103°46'16.728"W	0.32	
5007.00	7.200	144.100	5003.10	-33.76	32.44	91.37	673037.06	591077.94	32°37'25.389"N	103°46'16.701"W	0.00	
5068.00	8.400	146.500	5063.53	-27.01	25.63	96.07	673041.76	591071.13	32°37'25.321"N	103°46'16.646"W	2.04	
5133.00	9.000	149.500	5127.78	-18.75	17.29	101.27	673046.96	591062.79	32°37'25.238"N	103°46'16.586"W	1.16	
5196.00	9.100	151.900	5190.00	-10.18	8.65	106.12	673051.81	591054.15	32°37'25.152"N	103°46'16.530"W	0.62	
5259.00	10.500	158.900	5252.08	-0.49	-1.10	110.53	673056.23	591044.40	32°37'25.056"N	103°46'16.479"W	2.91	
5322.00	11.700	163.500	5313.90	10.93	-12.58	114.41	673060.11	591032.92	32°37'24.942"N	103°46'16.434"W	2.37	
5385.00	11.300	169.900	5375.64	23.09	-24.79	117.31	673063.00	591020.72	32°37'24.821"N	103°46'16.401"W	2.12	
5448.00	10.900	175.200	5437.46	35.08	-36.80	118.89	673064.58	591008.70	32°37'24.702"N	103°46'16.383"W	1.74	
5512.00	10.700	180.600	5500.33	47.04	-48.77	119.33	673065.03	590996.73	32°37'24.584"N	103°46'16.379"W	1.61	
5575.00	11.500	186.900	5562.15	59.14	-60.85	118.52	673064.21	590984.65	32°37'24.464"N	103°46'16.389"W	2.30	
5638.00	11.900	191.100	5623.85	71.77	-73.46	116.51	673062.21	590972.04	32°37'24.339"N	103°46'16.413"W	1.49	
5701.00	12.800	198.300	5685.39	84.82	-86.46	113.07	673058.76	590959.04	32°37'24.211"N	103°46'16.454"W	2.83	
5764.00	12.800	205.200	5746.83	97.84	-99.40	107.91	673053.60	590946.10	32°37'24.083"N	103°46'16.516"W	2.43	
5827.00	12.500	210.000	5808.30	110.15	-111.62	101.53	673047.22	590933.88	32°37'23.963"N	103°46'16.591"W	1.73	
5890.00	12.200	215.300	5869.85	121.59	-122.96	94.27	673039.97	590922.55	32°37'23.851"N	103°46'16.676"W	1.86	
5953.00	11.500	217.300	5931.50	132.13	-133.39	86.62	673032.31	590912.12	32°37'23.748"N	103°46'16.767"W	1.29	
6016.00	11.100	220.500	5993.28	141.84	-143.00	78.88	673024.57	590902.51	32°37'23.653"N	103°46'16.858"W	1.18	
6079.00	9.900	221.500	6055.23	150.62	-151.66	71.35	673017.04	590893.84	32°37'23.568"N	103°46'16.946"W	1.93	
6142.00	9.000	225.800	6117.37	158.21	-159.16	64.23	673009.92	590886.35	32°37'23.494"N	103°46'17.030"W	1.81	
6205.00	8.600	225.500	6179.63	165.05	-165.89	57.33	673003.03	590879.62	32°37'23.428"N	103°46'17.111"W	0.64	
6268.00	8.100	229.500	6241.96	171.33	-172.08	50.60	672996.30	590873.43	32°37'23.367"N	103°46'17.190"W	1.22	
6332.00	7.300	234.100	6305.39	176.74	-177.39	43.88	672989.57	590868.12	32°37'23.315"N	103°46'17.269"W	1.58	
6395.00	6.000	232.100	6367.96	181.19	-181.76	38.04	672983.73	590863.75	32°37'23.272"N	103°46'17.338"W	2.10	
6458.00	5.000	230.200	6430.67	185.04	-185.54	33.33	672979.03	590859.97	32°37'23.235"N	103°46'17.393"W	1.61	
6521.00	4.900	227.400	6493.43	188.68	-189.12	29.24	672974.94	590856.39	32°37'23.200"N	103°46'17.441"W	0.41	
6584.00	4.900	224.900	6556.20	192.46	-192.85	25.36	672971.06	590852.67	32°37'23.163"N	103°46'17.486"W	0.34	



Actual Wellpath Report

No.2H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	OXY Permian	Slot	No.2H SHL
Area	Lea County, NM	Well	No.2H
Field	(Fecta) Sec 33, T19S, R32E	Wellbore	No.2H AWB
Facility	Fecta 33 Fed Com No.2H		

WELLPATH DATA (203 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
6647.00	4.600	223.300	6618.99	196.26	-196.59	21.73	672967.43	590848.92	32°37'23.126"N	103°46'17.529"W	0.52	
6710.00	4.400	222.200	6681.79	199.93	-200.22	18.37	672964.07	590845.29	32°37'23.090"N	103°46'17.569"W	0.35	
6773.00	4.100	222.200	6744.62	203.44	-203.68	15.24	672960.93	590841.83	32°37'23.056"N	103°46'17.605"W	0.48	
6837.00	4.100	220.900	6808.46	206.90	-207.10	12.20	672957.90	590838.41	32°37'23.023"N	103°46'17.641"W	0.15	
6900.00	3.900	223.200	6871.30	210.21	-210.37	9.26	672954.96	590835.15	32°37'22.990"N	103°46'17.676"W	0.41	
6963.00	3.900	222.500	6934.16	213.39	-213.51	6.35	672952.04	590832.01	32°37'22.959"N	103°46'17.710"W	0.08	
7026.00	3.900	226.400	6997.01	216.49	-216.56	3.35	672949.05	590828.95	32°37'22.929"N	103°46'17.745"W	0.42	
7089.00	3.800	225.400	7059.87	219.48	-219.51	0.31	672946.01	590826.01	32°37'22.900"N	103°46'17.781"W	0.19	
7152.00	3.800	229.800	7122.73	222.34	-222.32	-2.77	672942.93	590823.19	32°37'22.873"N	103°46'17.817"W	0.46	
7215.00	3.500	231.200	7185.60	224.93	-224.87	-5.87	672939.83	590820.64	32°37'22.848"N	103°46'17.853"W	0.50	
7278.00	3.300	235.900	7248.49	227.20	-227.09	-8.87	672936.83	590818.42	32°37'22.826"N	103°46'17.889"W	0.54	
7341.00	3.300	238.000	7311.39	229.22	-229.07	-11.91	672933.80	590816.44	32°37'22.806"N	103°46'17.924"W	0.19	
7404.00	3.300	240.900	7374.28	231.11	-230.91	-15.03	672930.67	590814.60	32°37'22.788"N	103°46'17.961"W	0.26	
7468.00	4.100	242.500	7438.15	233.11	-232.87	-18.67	672927.03	590812.65	32°37'22.769"N	103°46'18.004"W	1.26	
7531.00	3.900	247.600	7501.00	235.03	-234.72	-22.65	672923.06	590810.79	32°37'22.751"N	103°46'18.050"W	0.65	
7594.00	3.200	243.500	7563.88	236.68	-236.32	-26.20	672919.50	590809.19	32°37'22.735"N	103°46'18.092"W	1.18	
7657.00	2.900	247.300	7626.79	238.12	-237.72	-29.24	672916.46	590807.79	32°37'22.722"N	103°46'18.128"W	0.57	
7720.00	2.400	230.100	7689.72	239.62	-239.19	-31.73	672913.98	590806.33	32°37'22.707"N	103°46'18.157"W	1.48	
7783.00	2.500	208.200	7752.66	241.70	-241.24	-33.39	672912.32	590804.27	32°37'22.687"N	103°46'18.176"W	1.49	
7846.00	2.100	224.500	7815.61	243.75	-243.28	-34.85	672910.86	590802.24	32°37'22.667"N	103°46'18.193"W	1.21	
7909.00	1.700	242.700	7878.58	245.03	-244.53	-36.48	672909.22	590800.99	32°37'22.655"N	103°46'18.213"W	1.14	
7972.00	1.300	235.600	7941.56	245.88	-245.36	-37.90	672907.80	590800.15	32°37'22.647"N	103°46'18.229"W	0.70	
8035.00	1.500	207.800	8004.54	247.03	-246.49	-38.88	672906.82	590799.02	32°37'22.635"N	103°46'18.241"W	1.11	
8099.00	1.000	217.900	8068.52	248.22	-247.68	-39.61	672906.09	590797.84	32°37'22.624"N	103°46'18.249"W	0.85	
8162.00	0.500	290.400	8131.52	248.57	-248.01	-40.21	672905.49	590797.50	32°37'22.620"N	103°46'18.256"W	1.55	
8225.00	1.000	335.200	8194.51	247.98	-247.42	-40.70	672905.01	590798.10	32°37'22.626"N	103°46'18.262"W	1.17	
8288.00	1.700	7.400	8257.50	246.56	-245.99	-40.81	672904.90	590799.52	32°37'22.640"N	103°46'18.263"W	1.60	
8351.00	1.400	4.400	8320.47	244.86	-244.30	-40.63	672905.08	590801.22	32°37'22.657"N	103°46'18.261"W	0.49	
8414.00	1.400	17.600	8383.46	243.35	-242.80	-40.34	672905.37	590802.72	32°37'22.672"N	103°46'18.258"W	0.51	
8477.00	1.700	32.400	8446.43	241.82	-241.28	-39.60	672906.10	590804.24	32°37'22.687"N	103°46'18.249"W	0.79	
8540.00	1.700	36.100	8509.40	240.26	-239.73	-38.55	672907.15	590805.78	32°37'22.702"N	103°46'18.237"W	0.17	
8604.00	1.500	38.200	8573.38	238.82	-238.31	-37.47	672908.23	590807.21	32°37'22.716"N	103°46'18.224"W	0.33	
8644.00	1.200	35.900	8613.37	238.06	-237.56	-36.90	672908.80	590807.96	32°37'22.724"N	103°46'18.217"W	0.76	
8709.00	1.100	12.800	8678.36	236.90	-236.40	-36.37	672909.34	590809.12	32°37'22.735"N	103°46'18.211"W	0.72	
8741.00	1.000	11.500	8710.35	236.32	-235.82	-36.24	672909.46	590809.69	32°37'22.741"N	103°46'18.209"W	0.32	
8804.00	2.100	299.700	8773.33	235.22	-234.71	-37.14	672908.57	590810.80	32°37'22.752"N	103°46'18.220"W	3.21	
8835.00	0.400	1.500	8804.32	234.84	-234.32	-37.63	672908.08	590811.19	32°37'22.756"N	103°46'18.225"W	6.27	
8867.00	1.200	206.600	8836.32	235.03	-234.51	-37.77	672907.93	590811.00	32°37'22.754"N	103°46'18.227"W	4.91	
8899.00	2.900	191.300	8868.30	236.13	-235.60	-38.08	672907.62	590809.91	32°37'22.743"N	103°46'18.231"W	5.53	
8930.00	5.300	194.000	8899.22	238.29	-237.76	-38.58	672907.12	590807.75	32°37'22.722"N	103°46'18.237"W	7.76	
8962.00	7.800	193.400	8931.01	241.85	-241.31	-39.44	672906.26	590804.21	32°37'22.687"N	103°46'18.247"W	7.82	
8993.00	10.700	195.400	8961.60	246.69	-246.13	-40.70	672905.01	590799.38	32°37'22.639"N	103°46'18.262"W	9.41	
9025.00	13.500	194.000	8992.89	253.21	-252.62	-42.39	672903.31	590792.89	32°37'22.575"N	103°46'18.282"W	8.80	
9056.00	15.700	199.600	9022.89	260.70	-260.08	-44.67	672901.03	590785.43	32°37'22.501"N	103°46'18.309"W	8.42	
9088.00	17.500	200.000	9053.55	269.35	-268.68	-47.77	672897.93	590776.83	32°37'22.416"N	103°46'18.346"W	5.64	



Actual Wellpath Report

No.2H AWP

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REFERENCE WELL PATH IDENTIFICATION			
Operator	OXY Permian	Slot	No.2H SHL
Area	Lea County, NM	Well	No.2H
Field	(Fecta) Sec 33, T19S, R32E	Wellbore	No.2H AWP
Facility	Fecta 33 Fed Com No.2H		

WELLPATH DATA (203 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 [1/100ft]	Comments
9119.00	19.800	201.700	9082.92	278.66	-277.94	-51.31	672894.40	590767.57	32°37'22.325"N	103°46'18.388"W	7.62	
9151.00	22.500	202.700	9112.76	289.40	-288.63	-55.67	672890.03	590756.89	32°37'22.219"N	103°46'18.440"W	8.51	
9183.00	25.100	201.600	9142.04	301.43	-300.59	-60.54	672885.17	590744.93	32°37'22.101"N	103°46'18.497"W	8.24	
9214.00	27.800	200.300	9169.79	314.40	-313.49	-65.46	672880.24	590732.03	32°37'21.974"N	103°46'18.556"W	8.91	
9246.00	31.500	198.200	9197.60	329.42	-328.43	-70.67	672875.04	590717.09	32°37'21.826"N	103°46'18.618"W	12.01	
9277.00	36.000	196.500	9223.37	345.93	-344.87	-75.79	672869.92	590700.65	32°37'21.664"N	103°46'18.678"W	14.83	
9309.00	41.100	194.300	9248.39	365.23	-364.09	-81.06	672864.65	590681.43	32°37'21.474"N	103°46'18.741"W	16.50	
9340.00	45.200	191.900	9271.00	385.94	-384.74	-85.85	672859.86	590660.78	32°37'21.270"N	103°46'18.798"W	14.24	
9372.00	47.800	188.800	9293.03	408.83	-407.57	-90.00	672855.70	590637.95	32°37'21.044"N	103°46'18.848"W	10.74	
9404.00	51.200	183.600	9313.81	433.04	-431.74	-92.60	672853.11	590613.78	32°37'20.805"N	103°46'18.880"W	16.29	
9435.00	55.300	182.400	9332.36	457.85	-456.54	-93.89	672851.81	590588.98	32°37'20.560"N	103°46'18.897"W	13.58	
9467.00	59.900	181.300	9349.50	484.86	-483.54	-94.76	672850.95	590561.99	32°37'20.293"N	103°46'18.909"W	14.66	
9498.00	65.300	181.400	9363.76	512.37	-511.04	-95.41	672850.30	590534.49	32°37'20.021"N	103°46'18.918"W	17.42	
9529.00	69.800	181.100	9375.60	541.01	-539.68	-96.03	672849.68	590505.85	32°37'19.737"N	103°46'18.927"W	14.54	
9561.00	73.800	181.600	9385.59	571.40	-570.07	-96.75	672848.96	590475.47	32°37'19.437"N	103°46'18.937"W	12.59	
9592.00	77.500	182.000	9393.27	601.42	-600.08	-97.69	672848.01	590445.46	32°37'19.140"N	103°46'18.950"W	12.00	
9624.00	79.500	182.100	9399.65	632.77	-631.41	-98.81	672846.89	590414.12	32°37'18.830"N	103°46'18.965"W	6.26	
9655.00	81.700	181.700	9404.71	663.35	-661.98	-99.83	672845.88	590383.56	32°37'18.527"N	103°46'18.979"W	7.21	
9687.00	81.800	181.600	9409.31	695.02	-693.63	-100.74	672844.97	590351.91	32°37'18.214"N	103°46'18.992"W	0.44	
9718.00	83.000	181.000	9413.41	725.74	-724.35	-101.44	672844.27	590321.19	32°37'17.910"N	103°46'19.002"W	4.32	
9750.00	84.200	180.700	9416.97	757.54	-756.15	-101.91	672843.80	590289.39	32°37'17.596"N	103°46'19.009"W	3.86	
9781.00	86.700	180.000	9419.43	788.44	-787.05	-102.10	672843.61	590258.50	32°37'17.290"N	103°46'19.013"W	8.37	
9813.00	88.400	179.000	9420.80	820.40	-819.02	-101.82	672843.89	590226.53	32°37'16.974"N	103°46'19.012"W	6.16	
9844.00	88.900	178.400	9421.53	851.37	-850.00	-101.11	672844.59	590195.55	32°37'16.667"N	103°46'19.006"W	2.52	
9876.00	90.000	178.200	9421.84	883.34	-881.98	-100.16	672845.54	590163.57	32°37'16.351"N	103°46'18.997"W	3.49	
9939.00	91.800	179.600	9420.85	946.29	-944.96	-98.96	672846.75	590100.59	32°37'15.727"N	103°46'18.986"W	3.62	
10034.00	92.600	179.800	9417.20	1041.20	-1039.89	-98.46	672847.25	590005.67	32°37'14.788"N	103°46'18.986"W	0.87	
10128.00	90.400	180.400	9414.74	1135.15	-1133.85	-98.62	672847.08	589911.72	32°37'13.858"N	103°46'18.994"W	2.43	
10223.00	91.000	180.800	9413.58	1230.15	-1228.84	-99.62	672846.09	589816.73	32°37'12.919"N	103°46'19.012"W	0.76	
10318.00	89.400	179.800	9413.25	1325.14	-1323.83	-100.11	672845.59	589721.75	32°37'11.979"N	103°46'19.023"W	1.99	
10412.00	89.500	179.400	9414.15	1419.11	-1417.82	-99.46	672846.25	589627.76	32°37'11.049"N	103°46'19.021"W	0.44	
10507.00	89.800	179.700	9414.73	1514.09	-1512.82	-98.71	672846.99	589532.77	32°37'10.109"N	103°46'19.019"W	0.45	
10601.00	89.700	179.600	9415.14	1608.07	-1606.82	-98.14	672847.57	589438.78	32°37'09.179"N	103°46'19.018"W	0.15	
10696.00	89.700	180.000	9415.64	1703.05	-1701.81	-97.81	672847.90	589343.79	32°37'08.239"N	103°46'19.020"W	0.42	
10791.00	89.700	179.800	9416.14	1798.03	-1796.81	-97.64	672848.07	589248.79	32°37'07.299"N	103°46'19.024"W	0.21	
10885.00	89.900	179.300	9416.46	1892.01	-1890.81	-96.90	672848.80	589154.80	32°37'06.368"N	103°46'19.021"W	0.57	
10980.00	89.700	179.200	9416.80	1986.97	-1985.80	-95.66	672850.05	589059.82	32°37'05.428"N	103°46'19.012"W	0.24	
11074.00	90.000	179.600	9417.04	2080.94	-2079.79	-94.67	672851.03	588965.83	32°37'04.498"N	103°46'19.006"W	0.53	
11169.00	90.700	179.200	9416.46	2175.91	-2174.79	-93.68	672852.03	588870.84	32°37'03.558"N	103°46'19.001"W	0.85	
11264.00	91.100	178.800	9414.97	2270.85	-2269.76	-92.02	672853.68	588775.87	32°37'02.619"N	103°46'18.987"W	0.60	
11358.00	91.500	178.600	9412.84	2364.76	-2363.71	-89.89	672855.82	588681.93	32°37'01.689"N	103°46'18.968"W	0.48	
11453.00	89.500	179.200	9412.01	2459.70	-2458.69	-88.07	672857.64	588586.96	32°37'00.749"N	103°46'18.953"W	2.20	
11548.00	89.600	179.000	9412.75	2554.65	-2553.67	-86.57	672859.13	588491.98	32°36'59.809"N	103°46'18.941"W	0.24	
11642.00	90.300	178.800	9412.84	2648.60	-2647.65	-84.77	672860.94	588398.00	32°36'58.879"N	103°46'18.926"W	0.77	
11737.00	90.200	179.800	9412.42	2743.56	-2742.64	-83.61	672862.10	588303.02	32°36'57.939"N	103°46'18.918"W	1.06	



Actual Wellpath Report

No.2H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	OXY Permian	Slot	No.2H SHL
Area	Lea County, NM	Well	No.2H
Field	(Fecta) Sec 33, T19S, R32E	Wellbore	No.2H AWP
Facility	Fecta 33 Fed Com No.2H		

WELLPATH DATA (203 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
11832.00	90.800	179.800	9411.59	2838.54	-2837.64	-83.28	672862.43	588208.03	32°36'56.999"N	103°46'18.920"W	0.63	
11926.00	91.000	179.700	9410.12	2932.52	-2931.63	-82.87	672862.84	588114.05	32°36'56.069"N	103°46'18.921"W	0.24	
12021.00	91.400	179.800	9408.13	3027.48	-3026.60	-82.45	672863.25	588019.07	32°36'55.129"N	103°46'18.922"W	0.43	
12116.00	91.500	179.400	9405.72	3122.43	-3121.57	-81.79	672863.91	587924.11	32°36'54.190"N	103°46'18.920"W	0.43	
12210.00	91.700	178.400	9403.10	3216.34	-3215.52	-79.99	672865.72	587830.17	32°36'53.260"N	103°46'18.905"W	1.08	
12305.00	92.400	178.500	9399.70	3311.19	-3310.42	-77.42	672868.29	587735.27	32°36'52.321"N	103°46'18.881"W	0.74	
12399.00	91.500	180.200	9396.50	3405.10	-3404.36	-76.35	672869.35	587641.34	32°36'51.391"N	103°46'18.874"W	2.05	
12494.00	89.900	180.100	9395.34	3500.09	-3499.34	-76.60	672869.10	587546.36	32°36'50.451"N	103°46'18.883"W	1.69	
12589.00	90.600	179.800	9394.93	3595.07	-3594.34	-76.52	672869.19	587451.37	32°36'49.511"N	103°46'18.888"W	0.80	
12683.00	88.200	180.500	9395.91	3689.05	-3688.33	-76.76	672868.94	587357.39	32°36'48.581"N	103°46'18.896"W	2.66	
12778.00	88.600	180.700	9398.56	3784.02	-3783.29	-77.76	672867.95	587262.43	32°36'47.642"N	103°46'18.914"W	0.47	
12872.00	89.200	180.200	9400.37	3878.00	-3877.27	-78.50	672867.21	587168.46	32°36'46.712"N	103°46'18.928"W	0.83	
12967.00	90.100	179.800	9400.95	3972.98	-3972.26	-78.50	672867.21	587073.47	32°36'45.772"N	103°46'18.934"W	1.04	
13062.00	90.800	180.100	9400.20	4067.97	-4067.26	-78.41	672867.29	586978.48	32°36'44.832"N	103°46'18.939"W	0.80	
13156.00	89.100	178.600	9400.28	4161.93	-4161.25	-77.35	672868.36	586884.50	32°36'43.902"N	103°46'18.932"W	2.41	
13251.00	88.700	177.500	9402.11	4256.80	-4256.17	-74.12	672871.59	586789.58	32°36'42.963"N	103°46'18.900"W	1.23	
13346.00	89.300	177.100	9403.77	4351.60	-4351.05	-69.64	672876.06	586694.70	32°36'42.024"N	103°46'18.854"W	0.76	
13440.00	88.500	178.500	9405.57	4445.45	-4444.96	-66.03	672879.67	586600.80	32°36'41.094"N	103°46'18.818"W	1.72	
13535.00	88.600	178.000	9407.97	4540.33	-4539.89	-63.13	672882.57	586505.88	32°36'40.155"N	103°46'18.790"W	0.54	
13630.00	89.000	177.600	9409.96	4635.17	-4634.80	-59.49	672886.22	586410.97	32°36'39.216"N	103°46'18.753"W	0.60	
13724.00	89.800	177.500	9410.95	4729.01	-4728.71	-55.47	672890.23	586317.07	32°36'38.286"N	103°46'18.712"W	0.86	
13751.00	90.100	176.800	9410.97	4755.96	-4755.67	-54.13	672891.58	586290.11	32°36'38.019"N	103°46'18.698"W	2.82	
13803.00	90.100	176.800	9410.88	4807.83	-4807.59	-51.22	672894.48	586238.19	32°36'37.505"N	103°46'18.667"W	0.00	Proj to Bit



Actual Wellpath Report

No.2H AWP

Page 7 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	OXY Permian	Slot	No.2H SHL
Area	Lea County, NM	Well	No.2H
Field	(Fecta) Sec 33, T19S, R32E	Wellbore	No.2H AWB
Facility	Fecta 33 Fed Com No.2H		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
No.2H PBHL		9400.00	-4807.72	-69.36	672876.34	586238.06	32°36'37.505"N	103°46'18.879"W	point
PP		9400.00	-560.33	-146.01	672799.70	590485.20	32°37'19.536"N	103°46'19.513"W	point

WELLPATH COMPOSITION - Ref Wellbore: No.2H AWB Ref Wellpath: No.2H AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	861.00	Generic gyro - northseeking (Standard)	Scientific Gyro <68.69-861>	No.2H AWB
861.00	4184.00	ISCWSA MWD, Rev. 2 (Standard)	Extreme Eng MWD <899-4184>	No.2H AWB
4184.00	13751.00	NaviTrak (Standard)	BHI MWD NaviTrak<4184 xxx>	No.2H AWB
13751.00	13803.00	Blind Drilling (std)	Projection to bit	No.2H AWB



Reservoir Development

Drilling & Measurements (Extreme Engineering)

6724 Corporation Pkwy Suite 100

Fort Worth, TX 76126

Phone: (817) 717-1820

Fax: (817) 546-7551

I, Adrian Cardenas certify that; I am employed by Drilling & Measurements (formerly Extreme), a division of Schlumberger Technology Corporation; that I did on the day(s) of July 25, 2012 through July 28, 2012, conduct or supervise the taking of the SlimPulse surveys from a depth of 899.00 feet to a depth of 4184.00 feet; that the data is true, correct, complete and within the limitations of the tool as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I am authorized and qualified to make this report; that this survey was conducted at the request of Occidental Permian Ltd for the Fecta 33 Federal 2H Well (Original Hole) API No. 30-025-40280 in New Mexico; and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation.

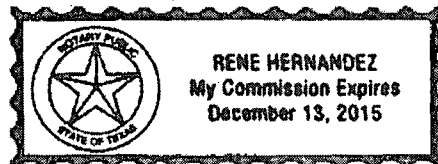
Adrian Cardenas
FST-2

SUR: C-33-19s-33e, 141/N & 2347/W
BHL: N-33-19s-33e, 4949/N & 2296/W
API # 30-025-40280

Before me, Rene Hernandez on this day personally appeared Adrian Cardenas, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that he/she executed the same for the purposes and consideration therein expressed.

Given under my hand and seal of office this 30th day of July, 2012 (year).

Notary Public



Fecta 33 Federal 2H MWD 899' to 4184' Survey Report

(Def Survey)

Report Date: July 29, 2012 - 08:37 AM
 Client: Oxy Permian
 Field: NM, Lea (NAD27) 2011
 Structure / Slot: Oxy Permian (Fecta 33 Federal 2H) H&P 474 / Fecta 33 Federal 2H
 Well: Fecta 33 Federal 2H
 Borehole: Original Hole
 UWI / API: NM-OXY-0008 / 30-025-40280
 Survey Name: Fecta 33 Federal 2H MWD 899' to 4184'
 Survey Date: July 28, 2012
 Tool / AHD / DDI / ERD Ratio: 14.776 * / 108.128 % / 3.196 / 0.025
 Coordinate Reference System: NAD27 New Mexico State Plane, Central Zone, US Feet
 Location Lat / Long: N 32° 37' 25.07196", W 103° 46' 17.77118"
 Location Grid N/E Y/X: N 599484.681 NUS, E 1263137.973 NUS
 CRS Grid Convergence Angle: 1.33674884 *
 Grid Scale Factor: 1.00056702
 Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 180.830 * (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB
 TVD Reference Elevation: 3580.400 ft above Unknown
 Seabed / Ground Elevation: 3555.400 ft above Unknown
 Magnetic Declination: 7.660 *
 Total Field Strength: 48716.547 nT
 Magnetic Dip Angle: 60.462 *
 Declination Date: July 28, 2012
 Magnetic Declination Model: BGGM 2012
 North Reference: Grid North
 Grid Convergence Used: 0.300 *
 Total Corr Mag North->Grid North: 7.360 *
 Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
Tie In	861.00	0.29	96.31	860.97	-0.12	0.02	7.21	0.04	599484.70	1263145.19	N 32 37 25.07	W 103 46 17.96
Begin MWD Survey	899.00	0.40	38.38	898.97	-0.22	0.11	7.39	0.92	599484.79	1263145.37	N 32 37 25.07	W 103 46 17.88
	991.00	0.40	58.60	990.96	-0.64	0.53	7.86	0.15	599485.21	1263145.84	N 32 37 25.08	W 103 46 17.68
	1079.00	0.70	40.66	1078.96	-1.22	1.10	8.47	0.39	599485.78	1263146.45	N 32 37 25.08	W 103 46 17.87
	1194.00	0.70	50.70	1193.95	-2.21	2.07	9.48	0.11	599486.78	1263147.45	N 32 37 25.09	W 103 46 17.96
	1270.00	0.79	43.87	1269.94	-2.89	2.75	10.20	0.17	599487.43	1263148.18	N 32 37 25.10	W 103 46 17.65
	1368.00	0.88	67.36	1365.93	-3.67	3.51	11.34	0.37	599488.19	1263148.32	N 32 37 25.10	W 103 46 17.84
	1459.00	1.01	63.65	1458.92	-4.33	4.14	12.73	0.15	599488.83	1263150.71	N 32 37 25.11	W 103 46 17.62
	1555.00	1.19	66.85	1554.90	-5.12	4.91	14.41	0.20	599489.60	1263152.39	N 32 37 25.12	W 103 46 17.80
	1648.00	1.32	64.86	1647.88	-5.98	5.75	16.26	0.15	599490.43	1263154.25	N 32 37 25.13	W 103 46 17.58
	1743.00	1.49	59.25	1742.85	-7.11	6.84	18.32	0.23	599491.53	1263158.30	N 32 37 25.14	W 103 46 17.58
	1837.00	1.41	61.36	1836.82	-8.32	8.02	20.38	0.10	599492.71	1263158.37	N 32 37 25.15	W 103 46 17.53
	1933.00	1.80	58.24	1932.78	-9.71	9.38	22.70	0.42	599494.07	1263160.89	N 32 37 25.16	W 103 46 17.50
	2028.00	1.80	52.04	2027.74	-11.45	11.08	25.14	0.20	599495.77	1263163.13	N 32 37 25.18	W 103 46 17.47
	2123.00	1.89	55.08	2122.69	-13.30	12.90	27.61	0.14	599497.59	1263165.59	N 32 37 25.19	W 103 46 17.44
	2312.00	1.88	46.07	2311.59	-17.30	16.83	32.39	0.18	599501.53	1263170.39	N 32 37 25.23	W 103 46 17.39
	2405.00	1.48	45.28	2404.55	-19.23	18.74	34.35	0.43	599503.43	1263172.34	N 32 37 25.25	W 103 46 17.36
	2530.00	1.89	55.85	2529.49	-21.57	21.04	37.19	0.41	599505.73	1263175.19	N 32 37 25.27	W 103 46 17.33
	2641.00	2.81	49.54	2640.40	-24.42	23.84	40.78	0.86	599508.53	1263178.77	N 32 37 25.30	W 103 46 17.29
	2763.00	3.91	46.77	2762.19	-29.29	28.62	46.08	0.91	599513.32	1263184.08	N 32 37 25.34	W 103 46 17.22
	2860.00	4.09	47.25	2858.95	-33.97	33.24	51.03	0.19	599517.94	1263189.03	N 32 37 25.39	W 103 46 17.17
	2958.00	4.09	45.87	2957.70	-38.91	38.10	56.15	0.11	599522.80	1263194.15	N 32 37 25.44	W 103 46 17.10
	3048.00	4.00	46.95	3046.48	-43.31	42.44	60.69	0.14	599527.14	1263198.70	N 32 37 25.48	W 103 46 17.05
	3142.00	3.90	35.50	3140.30	-47.61	46.68	64.51	1.29	599531.39	1263202.52	N 32 37 25.52	W 103 46 17.00
	3237.00	2.50	34.60	3235.19	-51.38	50.41	67.13	0.53	599535.12	1263205.14	N 32 37 25.56	W 103 46 16.97
	3330.00	2.02	25.37	3328.12	-54.55	53.58	68.99	0.85	599538.27	1263207.00	N 32 37 25.59	W 103 46 16.95
	3427.00	1.58	16.84	3425.07	-57.39	56.38	70.11	0.53	599541.10	1263208.12	N 32 37 25.61	W 103 46 16.94
	3522.00	1.19	348.00	3520.04	-59.81	58.60	70.28	0.83	599543.32	1263208.29	N 32 37 25.64	W 103 46 16.93
	3616.00	0.88	329.65	3614.03	-61.18	60.18	69.71	0.48	599544.90	1263207.73	N 32 37 25.65	W 103 46 16.94
	3710.00	0.70	45.50	3708.02	-62.21	61.21	69.76	1.04	599545.92	1263207.77	N 32 37 25.66	W 103 46 16.94
	3805.00	1.00	73.80	3803.01	-62.87	61.84	70.07	0.53	599546.56	1263208.98	N 32 37 25.67	W 103 46 16.92
	3901.00	1.30	58.10	3898.99	-63.70	62.85	72.70	0.45	599547.37	1263210.71	N 32 37 25.67	W 103 46 16.90
	3994.00	1.00	25.50	3991.98	-65.01	63.94	73.94	0.76	599548.66	1263211.96	N 32 37 25.69	W 103 46 16.89
	4089.00	0.88	29.50	4086.96	-66.40	65.33	74.66	0.14	599550.04	1263212.67	N 32 37 25.70	W 103 46 16.88
End MWD Survey	4184.00	0.88	30.60	4181.95	-67.67	66.59	75.39	0.02	599551.31	1263213.41	N 32 37 25.71	W 103 46 16.87

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma

Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Survey Tool Type	Borehole / Survey
	0.000	25.000	Act Stns	SLB_NSG+SSHOT-Depth Only	Original Hole / Fecta 33 Federal 2H MWD 0' to 861'
	25.000	25.000	Act Stns	SLB_NSG+SSHOT-Depth Only	Original Hole / Fecta 33 Federal 2H MWD 0' to 861'
	25.000	861.000	Act Stns	SLB_NSG+SSHOT	Original Hole / Fecta 33 Federal 2H MWD 0' to 861'
	861.000	4184.000	Act Stns	SLB_MWD-STO	Original Hole / Fecta 33 Federal 2H MWD 899' to 4184'

OCCIDENTAL PERMIAN LTD.

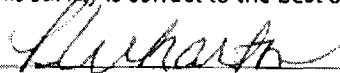
Lusk Bone Spring
Lea County, NM
Fecta "33" Federal #2H
VH - Job #32K0712871

SUR: C-33-19s-33e, 141/N & 2347/W
BHL: N-33-19s-33e, 4949/N & 2296/W
API # 30-025-40280

Survey: Gyro

SDI Standard Survey Report

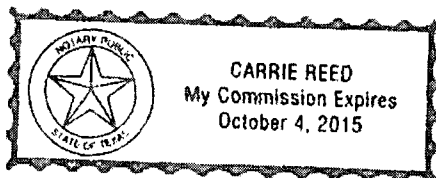
This survey is correct to the best of my knowledge and is supported by actual field data.



Notarized this date 1st of August, 2012.



Notary Signature
County of Midland
State of Texas



Scientific Drilling International, Inc.
SDI Standard Survey Report



Company: OCCIDENTAL PERMIAN LTD.
Project: Lusk Bone Spring
Site: Lea County, NM
Well: Fecta "33" Federal #2H
Wellbore: VH - Job #32K0712871
Design: VH - Job #32K0712871

Local Co-ordinate Reference: Well Fecta "33" Federal #2H
TVD Reference: WELL @ 0.00usft (Original Well Elev)
MD Reference: WELL @ 0.00usft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM-Regulatory

Project	Lusk Bone Spring		
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	Lea County, NM		
Site Position:		Northing:	590,853.87 usft
From:	Lat/Long	Easting:	671,588.95 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"
		Latitude:	32° 37' 23.247 N
		Longitude:	103° 46' 33.646 W
		Grid Convergence:	0.30 "

Well	Fecta "33" Federal #2H, Directional (Weatherford)		
Well Position	+N/-S	0.00 usft	Northing: 591,045.46 usft
	+E/-W	0.00 usft	Easting: 672,945.69 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	usft
		Latitude:	32° 37' 25.072 N
		Longitude:	103° 46' 17.771 W
		Ground Level:	0.00 usft

Wellbore	VH - Job #32K0712871		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010	07/14/12	(°) 7.58
			Dip Angle
			(°) 60.50
			Field Strength
			(nT) 48,753

Design	VH - Job #32K0712871		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
		Direction	
		(°)	108.83

Survey Program	Date	08/19/12	
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
68.69	861.00	Gyro (VH - Job #32K0712871)	Keeper
			Description
			Keeper Surface Readout

Survey	Measured Depth	Inclination	Azimuth	True Vertical	North/South	East/West	Closure Azimuth	Closure Distance
	(usft)	(°)	(°)	Depth	(usft)	(usft)	(°)	(usft)
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	68.69	0.40	89.28	68.69	0.00	0.24	89.28	0.24
	163.04	0.70	78.83	163.04	0.12	1.13	84.02	1.14
	256.36	0.74	83.32	256.35	0.30	2.29	82.56	2.31
	352.41	0.68	87.88	352.39	0.39	3.48	83.56	3.50
	444.86	0.58	90.96	444.83	0.41	4.49	84.85	4.51
	537.31	0.45	93.24	537.28	0.38	5.32	85.95	5.34
	629.70	0.41	104.40	629.67	0.27	6.01	87.39	6.01
	724.34	0.31	100.94	724.31	0.14	6.59	88.77	6.59
	819.07	0.30	99.26	819.04	0.05	7.08	89.57	7.08
	861.00	0.29	96.31	860.96	0.02	7.30	89.82	7.30



Scientific Drilling

Project: Lusk Bone Spring

Lea County, NM

Well: Fecta "33" Federal #2H

Wellbore: VH - Job #32K0712871

Design: VH - Job #32K0712871

WELL DETAILS: Fecta "33" Federal #2H
WELL @ 0.00usft (Original Well Elev)

Ground Level: 0.00

+N/-S
0.00

+E/-W
0.00

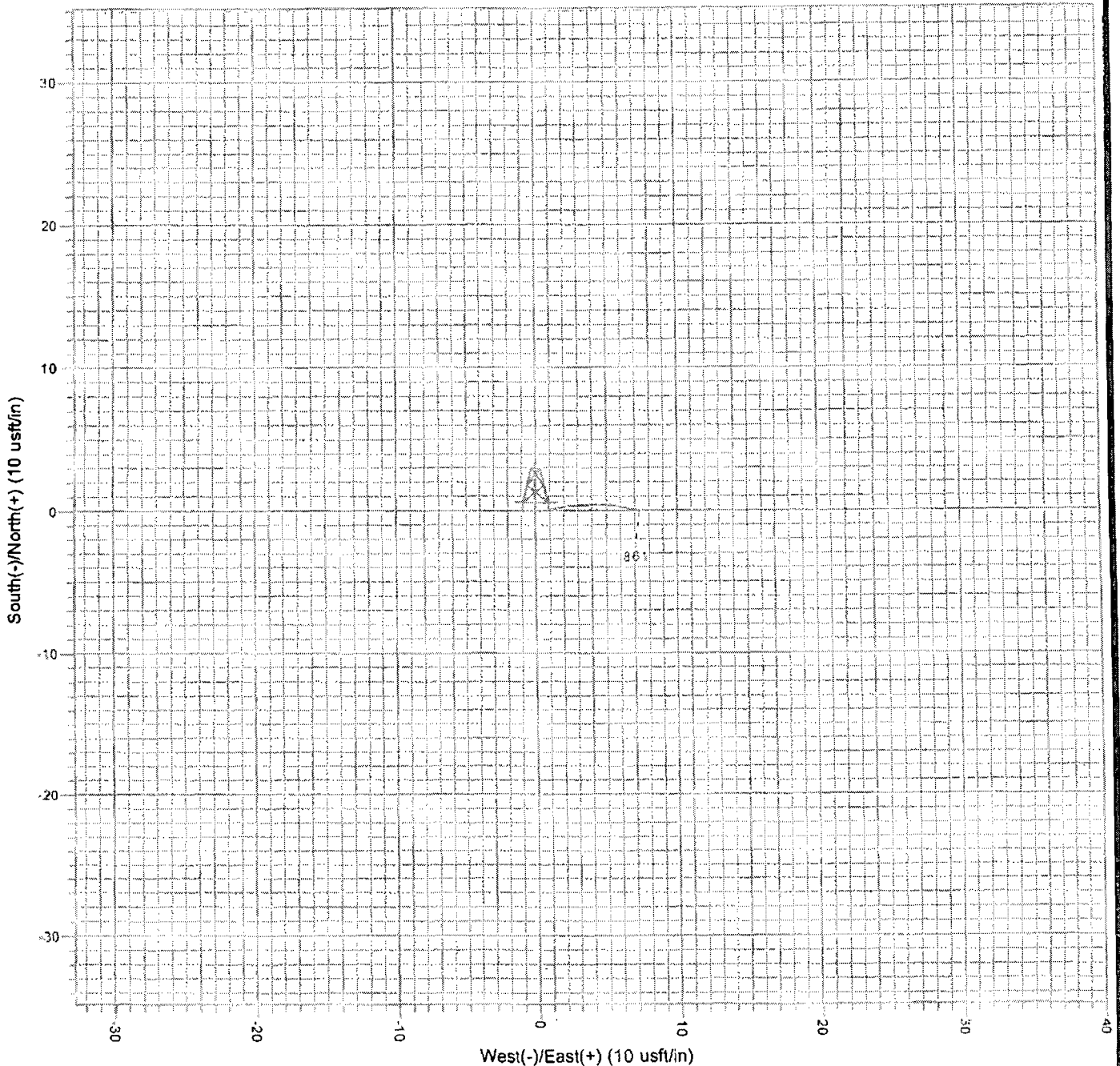
Northing
591045.46

Easting
672945.69

Latitude
32° 37' 25.072 N

Longitude
103° 46' 17.771 W

Slot



PROJECT DETAILS: Lusk Bone Spring

SITE DETAILS: Lea County, NM

Geodetic System: US State Plane 1927 (Exact solution) Site Centre Latitude: 32° 37' 23.247 N

Datum: NAD 1927 (NADCON CONUS)

Longitude: 103° 46' 33.646 W

Ellipsoid: Clarke 1866

Positional Uncertainty: 0.00

Zone: New Mexico East 3001

Convergence: 0.30

System Datum: Mean Sea Level

Local North: Grid