

A Gyrodata Directional Survey

FINAL DEFINITIVE COPY

for

30-015-42478

BOPCO LP

Lease: BIG EDDY Well: #264H, 5" DRILL PIPE

Location: LATSHAW DRILLING RIG #18, EDDY COUNTY, NEW MEXICO

Job Number: MD0814GDM866

Run Date: 31 Aug 2014

Report Generated: 02 Sep 2014 03:04

Azimuth Correction:

Gyro: -0.24000 deg to Grid North

Proposed Well Direction: 269.580 deg

Surveyor: John Macer

Depth Reference: Rotary Table

Calculation Method: MINIMUM CURVATURE

Air Gap (RKB to Ground / RKB to MSL): 29.96

Survey surface coordinates obtained from: Well Plan/Plot

Vertical Section Calculated from Well Head Location

Survey Latitude: 32.607672 deg. N Longitude: 103.889580 deg. W

Closure Calculated from Well Head Location

Horizontal Coordinates Calculated from Well Head Location

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MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. feet	AZIMUTH deg.	HORIZONTAL COORDINATES feet
0.00	0.00	0.00	0.00	0.00	0.0	0.0	0.00 N 0.00 E

0 - 7139.09 FT. RATE GYROSCOPIC MULTISHOT SURVEY RUN INSIDE 5" DRILL PIPE							
ALL MEASURED DEPTHS AND COORDINATES REFERENCED TO LATSHAW DRILLING RIG #18 R.K.B. HEIGHT OF 29.96 FT.							

75.00	1.04	72.98	1.39	75.00	0.7	73.0	0.20 N 0.65 E
167.00	0.29	81.62	0.82	166.99	1.7	74.1	0.48 N 1.68 E
260.00	0.02	63.96	0.29	259.99	2.0	74.9	0.52 N 1.93 E
352.00	0.07	330.16	0.08	351.99	2.0	73.3	0.57 N 1.91 E
445.00	0.07	342.21	0.02	444.99	2.0	70.0	0.68 N 1.87 E
538.14	0.11	40.69	0.10	538.13	2.1	67.3	0.80 N 1.91 E
724.84	0.13	44.22	0.01	724.83	2.4	63.4	1.09 N 2.17 E
818.40	0.26	80.21	0.18	818.39	2.7	64.0	1.20 N 2.46 E
912.49	0.38	77.73	0.13	912.48	3.2	66.3	1.30 N 2.97 E
1006.47	0.53	80.05	0.16	1006.45	4.0	68.7	1.44 N 3.70 E
1100.74	0.69	80.99	0.17	1100.72	5.0	71.1	1.61 N 4.69 E
1194.00	0.69	80.68	0.00	1193.97	6.1	72.9	1.79 N 5.80 E
1288.10	0.35	65.99	0.39	1288.07	6.9	73.2	2.00 N 6.62 E
1381.30	0.38	54.41	0.09	1381.26	7.5	72.2	2.29 N 7.14 E
1475.35	0.49	75.83	0.21	1475.31	8.2	71.7	2.57 N 7.78 E
1568.68	0.52	82.99	0.07	1568.64	9.0	72.4	2.72 N 8.59 E
1662.83	0.52	100.66	0.17	1662.78	9.8	74.1	2.69 N 9.43 E

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MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. feet	AZIMUTH deg.	HORIZONTAL COORDINATES feet
1756.93	0.55	108.18	0.08	1756.88	10.6	76.5	2.47 N 10.28 E
1850.01	0.67	97.35	0.18	1849.96	11.5	78.6	2.26 N 11.24 E
1943.90	0.45	43.22	0.58	1943.84	12.3	78.4	2.46 N 12.04 E
2038.22	0.53	26.95	0.17	2038.16	12.9	76.0	3.12 N 12.49 E
2133.48	0.55	23.63	0.04	2133.41	13.5	73.0	3.93 N 12.88 E
2228.45	0.52	26.73	0.04	2228.38	14.1	70.3	4.74 N 13.25 E
2323.11	0.64	38.77	0.18	2323.03	14.8	68.1	5.53 N 13.78 E
2417.91	0.72	50.28	0.17	2417.83	15.9	66.5	6.33 N 14.57 E
2512.92	0.53	87.09	0.46	2512.83	16.9	66.5	6.73 N 15.46 E
2607.39	0.54	94.69	0.08	2607.30	17.7	67.7	6.72 N 16.34 E
2701.87	0.58	118.23	0.25	2701.77	18.4	69.4	6.45 N 17.21 E
2796.07	0.70	118.96	0.13	2795.97	19.1	71.8	5.95 N 18.13 E
2890.37	0.57	127.37	0.17	2890.26	19.8	74.2	5.38 N 19.01 E
2984.35	0.33	119.89	0.26	2984.24	20.2	75.8	4.97 N 19.62 E
3078.81	0.26	110.80	0.09	3078.70	20.6	76.7	4.75 N 20.05 E
3172.70	1.03	177.61	1.02	3172.58	20.6	79.3	3.84 N 20.29 E
3266.76	1.41	207.97	0.78	3266.62	19.9	84.3	1.97 N 19.78 E
3362.28	1.72	222.70	0.53	3362.11	18.3	90.4	0.12 S 18.25 E
3455.85	1.32	239.08	0.63	3455.64	16.5	96.0	1.71 S 16.38 E
3547.65	1.12	239.13	0.22	3547.42	14.9	100.5	2.71 S 14.70 E
3642.85	0.97	237.32	0.16	3642.61	13.7	105.3	3.62 S 13.22 E
3737.42	0.90	220.79	0.29	3737.16	12.9	110.9	4.62 S 12.06 E

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MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
3832.34	0.58	204.24	0.40	3832.08	12.7 116.3	5.62 S 11.38 E
3926.80	0.76	213.32	0.22	3926.53	12.7 121.3	6.58 S 10.84 E
4020.93	0.70	241.01	0.38	4020.65	12.4 126.4	7.38 S 9.99 E
4116.59	0.60	245.07	0.12	4116.31	12.0 131.1	7.88 S 9.03 E
4211.13	0.61	246.36	0.02	4210.84	11.6 135.6	8.29 S 8.12 E
4305.68	0.74	259.67	0.21	4305.39	11.1 140.6	8.60 S 7.06 E
4400.27	1.19	312.78	1.01	4399.96	9.9 144.5	8.04 S 5.74 E
4495.61	1.29	313.82	0.11	4495.28	7.9 147.4	6.62 S 4.23 E
4590.79	1.36	313.83	0.07	4590.44	5.7 152.6	5.10 S 2.65 E
4685.33	1.39	314.43	0.04	4684.95	3.7 163.9	3.52 S 1.02 E
4779.97	1.35	314.04	0.04	4779.56	2.0 197.2	1.94 S 0.60 W
4874.58	1.33	312.84	0.04	4874.15	2.2 259.2	0.42 S 2.21 W
4969.38	1.36	311.80	0.04	4968.92	4.0 285.6	1.08 N 3.85 W
5063.29	1.17	309.68	0.21	5062.81	5.9 294.2	2.43 N 5.42 W
5157.31	0.34	281.92	0.94	5156.82	7.1 295.7	3.10 N 6.43 W
5251.39	0.25	276.69	0.10	5250.90	7.6 294.7	3.18 N 6.91 W
5345.41	0.07	299.73	0.20	5344.92	7.9 294.3	3.24 N 7.17 W
5439.21	0.05	342.69	0.05	5438.72	7.9 294.6	3.30 N 7.23 W
5533.47	0.13	18.31	0.10	5532.98	8.0 295.6	3.44 N 7.21 W
5627.43	0.18	6.01	0.06	5626.94	8.1 297.3	3.69 N 7.16 W
5721.39	0.21	353.22	0.06	5720.89	8.2 299.2	4.01 N 7.16 W

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5815.48	0.28	12.97	0.12	5814.98	8.4 301.7	4.41 N 7.13 W
5909.58	0.46	55.67	0.34	5909.08	8.3 305.6	4.84 N 6.77 W
6004.46	0.54	54.77	0.08	6003.96	8.1 311.1	5.32 N 6.09 W
6099.66	0.56	42.39	0.13	6099.15	8.0 317.6	5.92 N 5.41 W
6194.46	0.53	36.30	0.07	6193.95	8.2 323.8	6.61 N 4.84 W
6288.98	0.58	29.45	0.09	6288.47	8.6 329.5	7.38 N 4.34 W
6384.30	0.61	21.23	0.09	6383.78	9.2 334.7	8.28 N 3.92 W
6479.43	0.67	18.46	0.07	6478.90	9.9 339.0	9.28 N 3.56 W
6573.50	0.64	23.40	0.07	6572.97	10.8 342.8	10.28 N 3.18 W
6666.04	0.62	66.23	0.50	6665.50	11.2 347.1	10.96 N 2.51 W
6761.66	0.64	62.53	0.05	6761.12	11.5 352.2	11.41 N 1.57 W
6855.76	0.70	48.27	0.19	6855.21	12.1 356.8	12.04 N 0.67 W
6950.53	0.83	47.81	0.14	6949.97	12.9 1.2	12.88 N 0.27 E
7045.19	0.86	73.63	0.40	7044.62	13.6 6.1	13.54 N 1.46 E
7139.09	1.07	51.36	0.45	7138.51	14.6 11.2	14.29 N 2.82 E

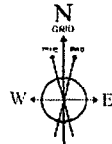
Final Station Closure: Distance: 14.56 ft Az: 11.16 deg.



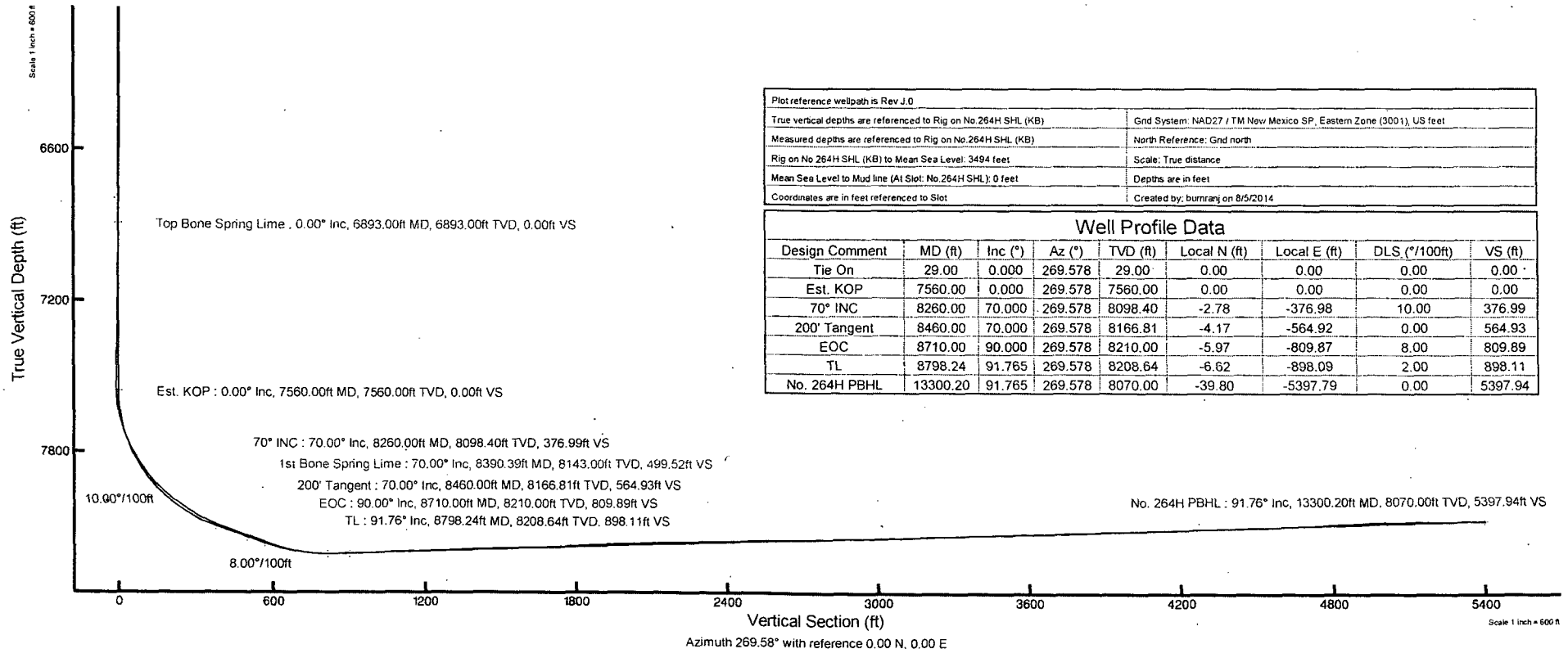
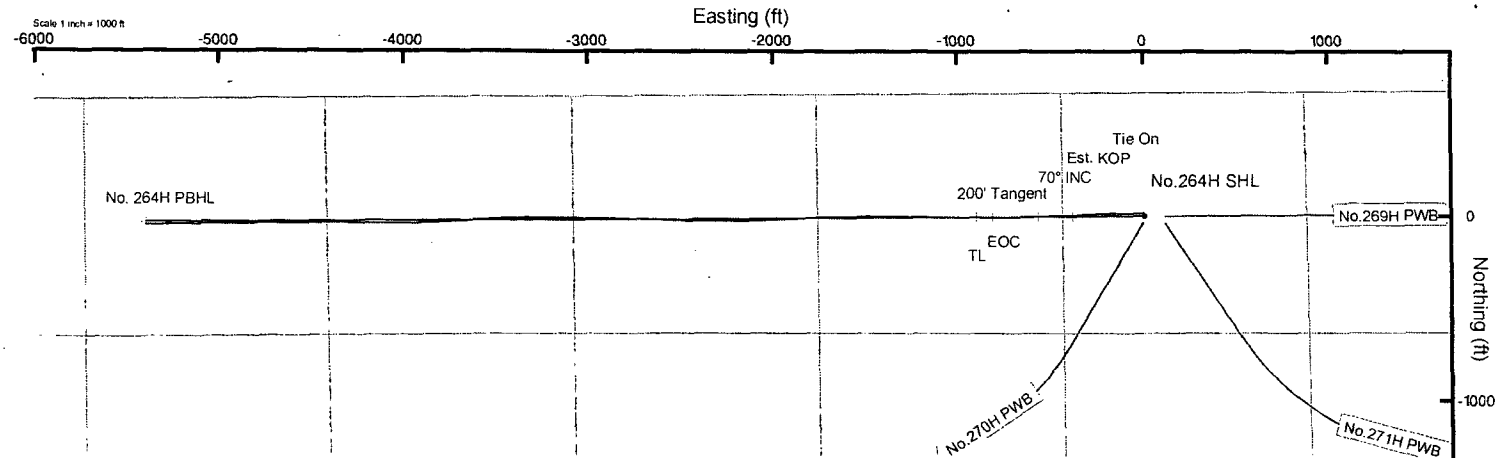
BOPCO, LP

Location: Eddy County, NM
Field: Big Eddy
Facility: Big Eddy Unit DI-4

Slot: No.264H SHL
Well: No.264H
Wellbore: No.264H PWB



BGGM (1945 to 2016.0) Dip: 60.41° Field: 48464.9 nT
Magnetic North is 7.55 degrees East of True North (at 7/17/2014)
Grid North is 0.24 degrees East of True North
To correct azimuth from True to Grid subtract 0.24 degrees
To correct azimuth from Magnetic to Grid add 7.31 degrees





Actual Wellpath Report

AWP - Final

Page n of nn



REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	No.264H SHL
Area	Eddy County, NM	Well	No.264H
Field	Big Eddy	Wellbore	No.264H AWP
Facility	Big Eddy Unit DI-4		

REPORT SETUP INFORMATION			
Projection System	NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 4.0.0
North Reference	Grid	User	Burnranj
Scale	0.99993	Report Generated	10/14/2014 at 10:07:25 AM
Convergence at slot	0.24° East	Database/Source file	WA_MIDLAND/C:\Users\burnranj\AppData\Roaming\Well Explorer\temp\BOPCO, LP No.264H SHL_Final Surveys.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-7.40	-617.24	636646.70	585067.70	32°36'27.619"N	103°53'22.489"W
Facility Reference Pt			637263.90	585075.10	32°36'27.666"N	103°53'15.274"W
Field Reference Pt			610823.03	524402.80	32°26'28.262"N	103°58'26.774"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Rig on No.264H SHL (KB) to Facility Vertical Datum	3494.00ft
Horizontal Reference Pt	Slot	Rig on No.264H SHL (KB) to Mean Sea Level	3494.00ft
Vertical Reference Pt	Rig on No.264H SHL (KB)	Rig on No.264H SHL (KB) to Mud Line at Slot (No.264H SHL)	3494.00ft
MD Reference Pt	Rig on No.264H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	269.58°



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AWP - Final

Page n of nn



REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	No.264H SHL
Area	Eddy County, NM	Well	No.264H
Field	Big Eddy	Wellbore	No.264H AWP
Facility	Big Eddy Unit D1-4		

WELLPATH DATA (169 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]	DLS [°/100ft]	Comments
0.00†	0.000	72.980	0.00	0.00	0.00	0.00	636646.70	585067.70	0.00	
29.00	0.000	72.980	29.00	0.00	0.00	0.00	636646.70	585067.70	0.00	
75.00	1.040	72.980	75.00	-0.40	0.12	0.40	636647.10	585067.82	2.26	
167.00	0.290	81.620	166.99	-1.43	0.40	1.43	636648.13	585068.10	0.82	
260.00	0.020	63.960	259.99	-1.68	0.44	-1.68	636648.38	585068.14	-0.29	
352.00	0.070	330.160	351.99	-1.67	0.50	1.66	636648.36	585068.20	0.08	
445.00	0.070	342.210	444.99	-1.62	0.60	1.62	636648.32	585068.30	0.02	
538.10	0.110	40.690	538.09	-1.66	0.72	1.66	636648.36	585068.42	0.10	
724.80	0.130	44.220	724.79	-1.93	1.01	1.92	636648.62	585068.71	0.01	
818.40	0.260	80.210	818.39	-2.21	1.12	2.20	636648.90	585068.82	-0.18	
912.50	0.380	77.730	912.49	-2.73	1.23	2.72	636649.42	585068.93	0.13	
1006.50	0.530	80.050	1006.48	-3.46	1.37	3.45	636650.15	585069.07	0.16	
1100.70	0.690	80.990	1100.68	-4.45	1.53	4.44	636651.14	585069.23	0.17	
1194.00	0.690	80.680	1193.97	-5.56	1.71	5.55	636652.25	585069.41	0.00	
1288.10	0.350	65.990	1288.07	-6.39	1.92	-6.37	636653.07	585069.62	-0.39	
1381.30	0.380	54.410	1381.27	-6.90	2.21	6.88	636653.58	585069.91	0.09	
1475.40	0.490	75.830	1475.36	-7.55	2.49	7.53	636654.23	585070.19	0.21	
1568.70	0.520	82.990	1568.66	-8.35	2.64	8.34	636655.03	585070.34	0.07	
1662.80	0.520	100.660	1662.76	-9.20	2.62	9.18	636655.88	585070.32	0.17	
1756.90	0.550	108.180	1756.85	-10.05	2.40	10.03	636656.73	585070.10	-0.08	
1850.00	0.670	97.350	1849.95	-11.01	2.19	10.99	636657.69	585069.89	0.18	
1943.90	0.450	43.220	1943.84	-11.81	2.39	11.79	636658.49	585070.09	0.58	
2038.20	0.530	26.950	2038.14	-12.26	3.05	12.24	636658.94	585070.74	0.17	
2133.50	0.550	23.630	2133.44	-12.65	3.86	12.62	636659.32	585071.56	0.04	
2228.50	0.520	26.730	2228.43	-13.03	4.66	13.00	636659.70	585072.36	-0.04	
2323.10	0.640	38.770	2323.03	-13.56	5.46	13.52	636660.22	585073.15	0.18	
2417.90	0.720	50.280	2417.82	-14.36	6.25	14.31	636661.01	585073.95	0.17	
2512.90	0.530	87.090	2512.81	-15.26	6.65	15.21	636661.91	585074.35	0.46	
2607.40	0.540	94.690	2607.31	-16.14	6.64	16.09	636662.79	585074.34	0.08	
2701.90	0.580	118.230	2701.81	-17.00	6.38	16.96	636663.66	585074.07	-0.25	
2796.10	0.700	118.960	2796.00	-17.92	5.87	17.88	636664.58	585073.57	0.13	
2890.40	0.570	127.370	2890.29	-18.80	5.31	18.76	636665.46	585073.01	0.17	
2984.40	0.330	119.890	2984.29	-19.40	4.89	19.36	636666.06	585072.59	0.26	
3078.80	0.260	110.800	3078.69	-19.83	4.68	19.80	636666.50	585072.38	0.09	

3172.70	1.030	177.610	3172.58	-20.06	-3.76	20.03	636666.73	585071.46	1.02	
3266.80	1.410	207.970	3266.66	-19.54	1.89	19.53	636666.23	585069.59	0.78	
3362.30	1.720	222.700	3362.13	-18.00	-0.20	18.00	636664.70	585067.50	0.53	
3455.90	1.320	239.080	3455.70	-16.11	-1.79	16.13	636662.82	585065.91	0.63	
3547.70	1.120	239.130	3547.47	-14.43	-2.79	14.45	636661.15	585064.91	0.22	
3642.90	0.970	237.520	3642.66	-12.94	-3.70	12.97	636659.67	585064.00	0.16	
3737.40	0.900	220.790	3737.15	-11.78	-4.70	11.81	636658.51	585063.00	0.29	
3832.30	0.580	204.240	3832.04	-11.09	-5.70	11.13	636657.83	585062.00	0.40	
3926.80	0.760	213.320	3926.53	-10.54	-6.66	10.59	636657.29	585061.04	0.22	
4020.90	0.700	241.010	4020.62	-9.69	-7.46	9.74	636656.44	585060.24	0.38	
4116.60	0.600	245.070	4116.32	-8.72	-7.95	8.78	636655.48	585059.75	0.11	



Actual Wellpath Report

AWP - Final

Page n of nn



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	No.264H SHL
Area	Eddy County, NM	Well	No.264H
Field	Big Eddy	Wellbore	No.264H AWP
Facility	Big Eddy Unit DI-4		

WELLPATH DATA (169 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	DLS [°/100ft]	Comments
4211.10	0.610	246.360	4210.81	-7.81	-8.36	7.87	636654.57	585059.34	0.02	
4305.70	0.740	259.670	4305.41	-6.74	-8.67	6.81	636653.51	585059.03	0.21	
4400.30	1.190	312.780	4399.99	-5.42	-8.12	5.48	636652.18	585059.58	1.01	
4495.60	1.290	313.820	4495.27	-3.93	-6.70	3.98	636650.68	585061.00	0.11	
4590.80	1.360	313.830	4590.45	-2.36	-5.18	2.40	636649.10	585062.52	0.07	
4685.30	1.390	314.430	4684.92	-0.74	-3.60	0.77	636647.47	585064.10	0.04	
4780.00	1.350	314.040	4779.59	0.87	-2.02	-0.85	636645.85	585065.68	0.04	
4874.60	1.330	312.840	4874.17	2.46	-0.50	-2.46	636644.24	585067.20	0.04	
4969.40	1.360	311.800	4968.94	4.10	1.00	-4.11	636642.59	585068.70	0.04	
5063.30	1.170	309.680	5062.82	5.66	2.35	-5.67	636641.03	585070.05	0.21	
5157.30	0.340	281.920	5156.81	6.66	3.02	-6.69	636640.01	585070.72	0.94	
5251.40	0.250	276.690	5250.91	7.14	3.11	-7.16	636639.54	585070.81	0.10	
5345.40	0.070	299.730	5344.91	7.39	3.16	-7.42	636639.28	585070.86	0.20	
5439.20	0.050	342.690	5438.71	7.45	3.23	-7.48	636639.22	585070.93	0.05	
5533.50	0.130	18.310	5533.01	7.43	3.37	-7.46	636639.24	585071.07	0.10	
5627.40	0.180	6.010	5626.91	7.38	3.62	-7.41	636639.29	585071.31	0.06	
5721.40	0.210	353.220	5720.91	7.38	3.93	-7.41	636639.29	585071.63	0.06	
5815.50	0.280	12.970	5815.01	7.35	4.33	-7.38	636639.32	585072.03	0.12	
5909.60	0.460	55.670	5909.10	6.98	4.77	-7.02	636639.68	585072.47	0.34	
6004.50	0.540	54.770	6004.00	6.30	5.24	-6.34	636640.36	585072.94	0.08	
6099.70	0.560	42.390	6099.20	5.62	5.84	-5.66	636641.04	585073.54	0.13	
6194.50	0.530	36.300	6193.99	5.04	6.54	-5.09	636641.61	585074.24	0.07	
6289.00	0.580	29.450	6288.49	4.54	7.30	-4.59	636642.11	585075.00	0.09	
6384.30	0.610	21.230	6383.78	4.11	8.20	-4.17	636642.53	585075.90	0.09	
6479.40	0.670	18.460	6478.88	3.74	9.20	-3.81	636642.89	585076.90	0.07	
6573.50	0.640	23.400	6572.97	3.35	10.20	-3.43	636643.27	585077.90	0.07	
6666.00	0.620	66.230	6665.46	2.69	10.88	-2.77	636643.93	585078.58	0.50	
6761.70	0.640	62.530	6761.16	1.73	11.33	-1.82	636644.88	585079.03	0.05	
6855.80	0.700	48.270	6855.25	0.83	11.96	-0.92	636645.78	585079.66	0.19	
6950.50	0.830	47.810	6949.94	-0.11	12.80	0.02	636646.72	585080.50	0.14	
7045.20	0.860	73.630	7044.63	-1.31	13.46	1.21	636647.91	585081.16	0.40	
7139.10	1.070	51.360	7138.52	-2.67	14.21	2.57	636649.27	585081.91	0.45	
7221.00	0.970	51.270	7220.41	-3.82	15.12	3.71	636650.41	585082.82	0.12	
7341.00	1.120	77.060	7340.39	-5.76	16.02	5.64	636652.34	585083.72	0.41	

7435.00	1.140	76640	7434.37	-7.57	16.44	-7.45	636654.15	585084.14	0.02	
7531.00	0.610	56.920	7530.36	-8.93	16.94	8.80	636655.50	585084.64	0.63	
7563.00	1.760	258.980	7562.36	-8.59	16.94	8.46	636655.16	585084.64	7.30	
7594.00	5.110	261.040	7593.30	-6.76	16.63	6.63	636653.33	585084.33	10.81	
7625.00	8.420	262.230	7624.08	-3.14	16.11	3.02	636649.72	585083.81	10.69	
7657.00	11.620	262.830	7655.58	-2.39	15.39	-2.50	636644.20	585083.09	10.01	
7688.00	15.510	266.770	7685.71	9.63	14.77	-9.74	636636.96	585082.47	12.89	
7719.00	18.660	268.400	7715.34	18.73	14.40	-18.84	636627.86	585082.10	10.28	
7751.00	23.200	269.030	7745.22	30.16	14.15	-30.26	636616.44	585081.85	14.20	
7782.00	26.160	268.300	7773.39	43.10	13.84	-43.20	636603.50	585081.54	9.60	
7814.00	28.470	268.800	7801.82	57.78	13.47	-57.88	636588.82	585081.17	7.25	



Actual Wellpath Report

AWP - Final

Page n of nn



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	No.264H SHL
Area	Eddy County, NM	Well	No.264H
Field	Big Eddy	Wellbore	No.264H AWP
Facility	Big Eddy Unit DI-4		

WELLPATH DATA (169 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	DLS [°/100ft]	Comments
7845.00	30.050	269.240	7828.86	72.93	13.21	-73.03	636573.68	585080.91	5.14	
7877.00	32.600	269.700	7856.19	89.56	13.06	-89.66	636557.04	585080.76	8.00	
7908.00	36.070	269.960	7881.79	107.05	13.01	-107.15	636539.56	585080.71	11.20	
7939.00	39.450	270.110	7906.29	126.03	13.03	-126.13	636520.58	585080.72	10.91	
7971.00	42.880	268.860	7930.38	147.09	12.83	-147.18	636499.53	585080.53	11.02	
8002.00	46.290	268.590	7952.46	168.84	12.34	-168.94	636477.78	585080.04	11.02	
8034.00	49.250	267.980	7973.96	192.53	11.63	-192.62	636454.10	585079.33	9.36	
8065.00	51.920	267.490	7993.64	216.46	10.68	-216.55	636430.17	585078.38	8.70	
8096.00	53.600	267.140	8012.40	241.12	9.53	-241.20	636405.52	585077.22	5.49	
8127.00	56.170	267.550	8030.23	266.46	8.35	-266.53	636380.19	585076.05	8.36	
8159.00	57.940	267.350	8047.63	293.29	7.16	-293.35	636353.37	585074.86	5.56	
8190.00	61.220	267.280	8063.33	320.00	5.90	-320.05	636326.67	585073.60	10.58	
8221.00	63.550	267.680	8077.70	347.45	4.70	-347.49	636299.23	585072.40	7.60	
8253.00	66.550	267.740	8091.19	376.44	3.54	-376.48	636270.25	585071.24	9.38	
8284.00	69.940	267.810	8102.68	405.22	2.42	-405.25	636241.48	585070.12	10.94	
8317.00	70.760	267.820	8113.78	436.28	1.24	-436.30	636210.43	585068.94	2.49	
8348.00	69.990	267.820	8124.19	465.47	0.13	-465.48	636181.25	585067.83	2.48	
8379.00	69.180	267.710	8135.00	494.50	-1.01	-494.51	636152.23	585066.69	2.63	
8410.00	69.110	267.690	8146.04	523.46	-2.17	-523.45	636123.28	585065.53	0.23	
8442.00	68.820	267.460	8157.53	553.31	-3.43	-553.30	636093.44	585064.27	1.13	
8473.00	69.090	267.450	8168.66	582.22	-4.72	-582.20	636064.54	585062.98	0.87	
8505.00	71.060	267.310	8179.56	612.28	-6.09	-612.25	636034.49	585061.61	6.17	
8536.00	74.420	267.600	8188.76	641.86	-7.41	-641.82	636004.92	585060.29	10.88	
8568.00	77.600	268.340	8196.49	672.89	-8.51	-672.85	635973.90	585059.20	10.19	
8599.00	80.990	269.350	8202.25	703.35	-9.12	-703.30	635943.45	585058.58	11.39	
8631.00	84.260	269.890	8206.36	735.08	-9.33	-735.03	635911.72	585058.37	10.35	
8662.00	87.380	270.560	8208.62	765.99	-9.21	-765.94	635880.81	585058.49	10.29	
8692.00	89.540	270.550	8209.42	795.97	-8.92	-795.93	635850.83	585058.79	7.20	
8724.00	90.710	270.630	8209.35	827.97	-8.59	-827.93	635818.83	585059.11	3.66	
8755.00	90.740	270.550	8208.96	858.96	-8.27	-858.92	635787.84	585059.43	0.28	
8850.00	92.310	270.060	8206.43	953.91	-7.76	-953.88	635692.89	585059.94	1.73	
8944.00	91.570	271.070	8203.25	1047.84	-6.83	-1047.82	635598.95	585060.87	1.33	
9038.00	92.030	271.030	8200.30	1141.77	-5.11	-1141.76	635505.02	585062.59	0.49	
9133.00	91.760	270.570	8197.16	1236.69	-3.79	-1236.70	635410.09	585063.91	0.56	

9227.00	92.440	270.100	8193.71	1330.62	-3.24	1330.63	635316.16	585064.46	0.88	
9322.00	92.160	269.610	8189.90	1425.54	-3.48	-1425.56	635221.25	585064.22	0.59	
9416.00	91.110	269.050	8187.22	1519.50	-4.58	-1519.51	635127.30	585063.12	1.27	
9511.00	91.510	268.690	8185.05	1614.47	-6.45	-1614.47	635032.35	585061.25	0.57	
9605.00	92.560	268.370	8181.71	1708.39	-8.86	-1708.37	634938.45	585058.84	1.17	
9699.00	92.960	267.460	8177.18	1802.24	-12.28	-1802.20	634844.63	585055.43	1.06	
9794.00	92.430	266.630	8172.72	1897.04	-17.17	-1896.97	634749.87	585050.53	1.04	
9888.00	91.970	267.390	8169.11	1990.88	-22.07	-1990.77	634656.07	585045.63	0.94	
9982.00	91.260	269.030	8166.46	2084.81	-25.00	-2084.68	634562.16	585042.70	1.90	
10076.00	91.790	269.040	8163.96	2178.77	-26.58	-2178.64	634468.22	585041.12	0.56	
10171.00	91.480	269.630	8161.25	2273.73	-27.69	-2273.59	634373.27	585040.02	0.70	



Actual Wellpath Report

AWP - Final

Page n of nn



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	No.264H SHL
Area	Eddy County, NM	Well	No.264H
Field	Big Eddy	Wellbore	No.264H AWP
Facility	Big Eddy Unit DI-4		

WELLPATH DATA (169 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	DLS [°/100ft]	Comments
10263.00	90.830	270.930	8159.39	2365.71	-27.24	-2365.57	634281.30	585040.47	1.58	
10359.00	91.790	271.450	8157.20	2461.64	-25.24	-2461.52	634185.35	585042.46	1.14	
10452.00	91.390	271.570	8154.62	2554.55	-22.79	-2554.45	634092.43	585044.91	0.45	
10546.00	90.740	271.140	8152.87	2648.49	-20.57	-2648.41	633998.48	585047.13	0.83	
10641.00	91.540	271.060	8150.98	2743.44	-18.75	-2743.37	633903.52	585048.95	0.85	
10734.00	91.360	270.930	8148.63	2836.38	-17.13	-2836.33	633810.57	585050.57	0.24	
10828.00	90.550	270.630	8147.06	2930.34	-15.85	-2930.31	633716.60	585051.85	0.92	
10923.00	91.360	270.660	8145.48	3025.31	-14.79	-3025.29	633621.63	585052.92	0.85	
11018.00	92.590	270.840	8142.20	3120.24	-13.54	-3120.22	633526.70	585054.16	1.31	
11111.00	91.910	270.190	8138.55	3213.15	-12.71	-3213.14	633433.79	585054.99	1.01	
11205.00	92.070	269.230	8135.29	3307.09	-13.18	-3307.09	633339.85	585054.52	1.03	
11299.00	91.450	268.360	8132.40	3401.04	-15.16	-3401.02	633245.92	585052.54	1.14	
11393.00	91.570	267.080	8129.92	3494.95	-18.90	-3494.91	633152.04	585048.80	1.37	
11488.00	91.230	265.810	8127.60	3589.78	-24.79	-3589.70	633057.26	585042.92	1.38	
11582.00	91.670	266.690	8125.22	3683.59	-30.93	-3683.46	632963.50	585036.77	1.05	
11676.00	92.100	267.040	8122.13	3777.44	-36.07	-3777.27	632869.70	585031.63	0.59	
11771.00	92.010	268.250	8118.72	3872.32	-39.97	-3872.13	632774.85	585027.73	1.28	
11865.00	91.790	269.020	8115.61	3966.25	-42.21	-3966.05	632680.93	585025.49	0.85	
11960.00	91.570	269.680	8112.82	4061.21	-43.29	-4061.00	632585.99	585024.42	0.73	
12055.00	91.760	270.570	8110.06	4156.17	-43.08	-4155.96	632491.04	585024.62	0.96	
12150.00	93.300	270.800	8105.87	4251.05	-41.94	-4250.86	632396.15	585025.76	1.64	
12245.00	90.490	270.180	8102.73	4345.98	-41.13	-4345.79	632301.22	585026.57	3.03	
12340.00	91.510	269.550	8101.07	4440.96	-41.36	-4440.78	632206.24	585026.35	1.26	
12434.00	91.790	269.560	8098.36	4534.92	-42.09	-4534.73	632112.29	585025.62	0.30	
12530.00	93.020	269.550	8094.33	4630.84	-42.83	-4630.65	632016.39	585024.87	1.28	
12624.00	92.900	269.400	8089.48	4724.71	-43.69	-4724.52	631922.52	585024.01	0.20	
12717.00	93.390	269.230	8084.38	4817.57	-44.80	-4817.37	631829.68	585022.90	0.56	
12810.00	92.500	269.220	8079.60	4910.44	-46.06	-4910.24	631736.81	585021.65	0.96	
12903.00	91.480	269.400	8076.37	5003.38	-47.18	-5003.17	631643.88	585020.53	1.11	
12998.00	90.710	268.950	8074.55	5098.36	-48.54	-5098.14	631548.92	585019.16	0.94	
13093.00	90.000	269.160	8073.97	5193.36	-50.11	-5193.13	631453.94	585017.59	0.78	
13187.00	90.680	268.850	8073.41	5287.35	-51.74	-5287.11	631359.97	585015.96	0.80	
13224.00	90.920	268.720	8072.89	5324.34	-52.53	-5324.10	631322.98	585015.18	0.74	
13300.00	90.920	268.720	8071.67	5400.33	-54.23	-5400.07	631247.01	585013.48	0.00	



Actual Wellpath Report

AWP - Final

Page n of nn



REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	No.264H SHL
Area	Eddy County, NM	Well	No.264H
Field	Big Eddy	Wellbore	No.264H AWP
Facility	Big Eddy Unit DI-4		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
No 264H Rev 1		8070.00	-39.80	-5397.79	631249.30	585027.90	32°36'27.443"N	103°54'25.590"W	point

WELLPATH COMPOSITION					Ref Wellbore	No.264H AWP	Ref Wellpath	AWP - Final
Start MD [ft]	End MD [ft]	Positional Uncertainty Model			Log Name/Comment		Wellbore	
29.00	7139.10	Generic gyro - northseeking (Standard)			MS Surveys <75 - 7139.1>		No.264H AWP	
7139.10	13224.00	NaviTrak (Standard)			BHI MWD NaviTrak <7221 - 13224>		No.264H AWP	
13224.00	13300.00	Blind Drilling (std)			Projection to bit		No.264H AWP	