

30-015-40397

NM OIL CONSERVATION
ARTESIA DISTRICT
SEP 29 2014
RECEIVED

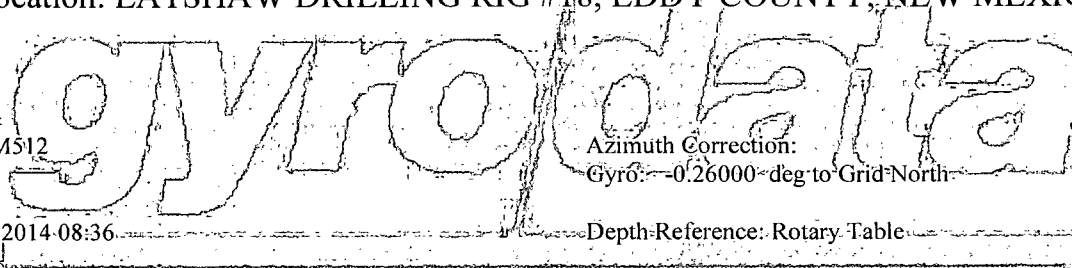
A Gyrodata Directional Survey

FINAL DEFINITIVE COPY

for

BOPCO, LP

Lease: BIG EDDY UNIT DI5 Well: 4H, 5 INCH DRILLPIPE
Location: LATSHAW DRILLING RIG #18, EDDY COUNTY, NEW MEXICO



Job Number: MD0514GBM512

Run Date: 17 May 2014

Report Generated: 23 May 2014 08:36

Surveyor: Jase Rister

Calculation Method: MINIMUM CURVATURE

Survey surface coordinates obtained from: Well Plan/Plot

Survey Latitude: 32.545969 deg. N Longitude: 103.853942 deg. W

Azimuth Correction:

Gyro: -0.26000 deg to Grid North

Depth Reference: Rotary Table

Air Gap (RKB to Ground / RKB to MSL): 30.00

Vertical Section Calculated from Well Head Location

Closure Calculated from Well Head Location

Horizontal Coordinates Calculated from Well Head Location

A Gyrodata Directional Survey

BOPCO, LP

Lease: BIG EDDY UNIT DI5 Well: 4H, 5 INCH DRILLPIPE

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

Job Number: MD0514GBM512

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

0 - 750 FT. RATE GYROSCOPIC MULTISHOT SURVEY RUN INSIDE 5 INCH DRILLPIPE

ALL MEASURED DEPTHS AND COORDINATES REFERENCED TO LATSHAW DRILLING RIG #18 R.K.B. HEIGHT OF 30 FT.

96.81	0.15	210.42	0.16	96.81	0.1 210.4	0.11 S 0.07 W
189.34	0.08	240.06	0.10	189.34	0.3 216.5	0.25 S 0.19 W
286.05	0.13	227.23	0.05	286.05	0.5 222.2	0.36 S 0.33 W
377.94	0.13	248.85	0.05	377.94	0.7 226.8	0.47 S 0.50 W
469.23	0.22	254.94	0.11	469.23	0.9 234.2	0.55 S 0.76 W
560.32	0.28	258.13	0.06	560.32	1.3 240.9	0.64 S 1.15 W
653.43	0.26	245.69	0.06	653.43	1.7 243.6	0.77 S 1.56 W
747.25	0.20	255.39	0.08	747.25	2.1 244.8	0.90 S 1.92 W

Final Station Closure: Distance: 2.12 ft Az: 244.76 deg.

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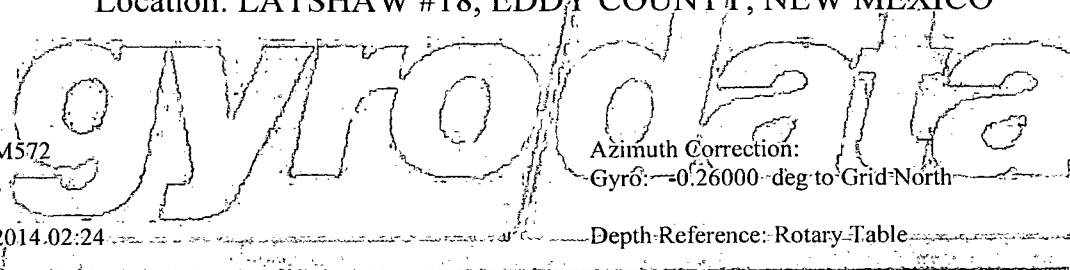
A Gyrodata Directional Survey

FINAL DEFINITIVE COPY

for

BOPCO, LP

Lease: BIG EDDY UNIT DI5 Well: #4H, 5" DRILLPIPE
Location: LATSHAW #18, EDDY COUNTY, NEW MEXICO



Job Number: MD0614GDM572

Run Date: 03 Jun 2014

Report Generated: 09 Jun 2014.02:24

Azimuth Correction:

Gyro: -0.26000 deg to Grid North

Depth Reference: Rotary Table

Surveyor: Jason Solomon

Air Gap (RKB to Ground / RKB to MSL): 29.60

Calculation Method: MINIMUM CURVATURE

Vertical Section Calculated from Well Head Location

Survey surface coordinates obtained from: Well Plan/Plot

Closure Calculated from Well Head Location

Survey Latitude: 32.545969 deg. N Longitude: 103.853942 deg. W

Horizontal Coordinates Calculated from Well Head Location

A Gyrodata Directional Survey

BOPCO, LP

Lease: BIG EDDY UNIT DI5 Well: #4H, 5" DRILLPIPE

Location: LATSHAW #18, EDDY COUNTY, NEW MEXICO

Job Number: MD0614GDM572

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 TO 6618 FT. RATE GYROSCOPIC MULTISHOT DROP RUN INSIDE 5" DRILLPIPE							
ALL MEASURED DEPTHS AND COORDINATES REFERENCED TO LATSHAW RIG #18 RKB 29.6 FT.							
100.00	0.11	118.01	0.11	100.00	0.1	118.0	0.05 S 0.08 E
200.00	0.15	221.13	0.21	200.00	0.2	156.2	0.19 S 0.08 E
300.00	0.05	53.25	0.20	300.00	0.3	173.0	0.26 S 0.03 E
400.00	0.25	293.14	0.28	400.00	0.2	221.8	0.15 S 0.13 W
464.89	0.23	251.91	0.26	464.89	0.4	250.9	0.13 S 0.39 W
553.34	0.35	257.39	0.14	553.34	0.9	253.1	0.25 S 0.82 W
642.71	0.39	244.66	0.10	642.71	1.4	252.2	0.44 S 1.36 W
731.77	0.27	239.48	0.14	731.76	1.9	249.6	0.67 S 1.82 W
826.18	0.38	233.32	0.12	826.17	2.5	246.7	0.97 S 2.26 W
920.59	0.62	174.07	0.57	920.58	3.0	235.8	1.67 S 2.46 W
1015.00	0.53	350.06	1.22	1014.99	3.0	234.8	1.75 S 2.48 W
1109.41	1.15	332.48	0.70	1109.39	3.0	260.9	0.48 S 2.99 W
1203.82	0.95	330.95	0.21	1203.78	4.0	285.4	1.05 N 3.81 W
1298.23	0.93	330.89	0.02	1298.18	5.2	297.8	2.40 N 4.56 W
1392.64	0.66	331.72	0.29	1392.58	6.3	304.3	3.55 N 5.19 W
1487.05	0.36	221.85	0.90	1486.99	6.8	304.0	3.81 N 5.65 W
1581.46	0.43	194.18	0.21	1581.40	6.8	298.7	3.24 N 5.93 W
1675.87	0.26	163.15	0.26	1675.80	6.5	294.3	2.69 N 5.96 W
1770.28	0.34	90.42	0.38	1770.21	6.1	293.9	2.49 N 5.62 W

A Gyrodata Directional Survey

BOPCO, LP

Lease: BIG EDDY UNIT D15 Well: #4H, 5" DRILLPIPE

Location: LATSHAW #18, EDDY COUNTY, NEW MEXICO

Job Number: MD0614GDM572

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. feet	AZIMUTH deg.	HORIZONTAL COORDINATES feet
1864.69	0.61	72.61	0.32	1864.62	5.5	298.5	2.64 N 4.86 W
1959.10	0.89	69.64	0.30	1959.02	4.8	309.5	3.04 N 3.69 W
2053.51	1.03	70.29	0.15	2053.42	4.2	328.4	3.58 N 2.20 W
2147.92	1.07	73.46	0.07	2147.81	4.2	352.3	4.12 N 0.56 W
2242.33	0.66	118.29	0.81	2242.21	4.2	10.5	4.11 N 0.76 E
2336.74	0.73	137.52	0.26	2336.62	3.8	25.8	3.41 N 1.65 E
2431.15	1.24	191.72	1.07	2431.01	2.7	43.2	1.97 N 1.85 E
2525.56	1.25	188.27	0.08	2525.40	1.5	92.0	0.05 S 1.49 E
2619.97	0.21	2:08	1:55	2619:80	1.6	123.6	0.90 S 1.35 E
2714.38	0.53	355.32	0.34	2714:21	1.4	102.4	0.29 S 1.32 E
2808.79	0.48	340:75	0.15	2808.62	1.3	65.8	0.52 N 1.16 E
2903.20	0.41	345.09	0.08	2903.03	1.5	37.6	1.22 N 0.94 E
2997.61	0.21	12.81	0.26	2997.43	1.9	27.4	1.71 N 0.89 E
3092.02	0.26	35.52	0.11	3091.84	2.3	27.1	2.06 N 1.05 E
3186.43	0.50	34.63	0.25	3186.25	2.9	28.8	2.57 N 1.41 E
3280.84	0.64	29:15	0:16	3280.66	3.9	29.4	3.37 N 1.90 E
3375.25	0.62	19.28	0.12	3375.06	4.9	28.4	4.31 N 2.33 E
3469.66	0.50	18.51	0.13	3469.47	5.8	26.9	5.18 N 2.63 E
3564.07	0.40	11.78	0.12	3563.87	6.5	25.6	5.90 N 2.82 E
3658.48	0.26	40.75	0.23	3658.28	7.1	25.4	6.38 N 3.03 E
3752.89	0.25	76.34	0.17	3752.69	7.4	27.1	6.59 N 3.37 E

A Gyrodata Directional Survey

BOPCO, LP

Lease: BIG EDDY UNIT D15 Well: #4H, 5" DRILLPIPE

Location: LATSHAW #18, EDDY COUNTY, NEW MEXICO

Job Number: MD0614GDM572

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. feet	AZIMUTH deg.	HORIZONTAL COORDINATES feet
3847.30	0.22	63.96	0.06	3847.10	7.7	29.1	6.72 N 3.73 E
3941.71	0.16	66.52	0.06	3941.51	7.9	30.4	6.85 N 4.02 E
4036.12	0.15	50.97	0.05	4035.92	8.2	31.2	6.98 N 4.24 E
4130.53	0.18	59.15	0.04	4130.33	8.4	32.0	7.14 N 4.46 E
4224.94	0.22	59.58	0.04	4224.74	8.7	33.0	7.31 N 4.74 E
4319.35	0.21	72.68	0.05	4319.15	9.0	34.2	7.45 N 5.06 E
4413.76	0.23	81.35	0.04	4413.56	9.3	35.7	7.53 N 5.42 E
4508.17	0.25	94.07	0.06	4507.97	9.5	37.6	7.54 N 5.81 E
4602.58	0.36	125.99	0.21	4602.37	9.7	40.4	7.35 N 6.25 E
4696.99	0.59	126.58	0.24	4696.78	9.7	45.0	6.89 N 6.89 E
4791.40	0.78	122.04	0.21	4791.18	10.0	51.3	6.26 N 7.82 E
4885.81	0.78	128.22	0.09	4885.59	10.4	58.1	5.52 N 8.87 E
4980.22	0.81	128.80	0.03	4979.99	11.0	64.6	4.71 N 9.89 E
5074.63	0.83	124.38	0.07	5074.39	11.7	70.4	3.90 N 10.98 E
5169.04	0.88	120.67	0.08	5168.79	12.6	75.5	3.15 N 12.17 E
5263.45	0.84	118.45	0.06	5263.19	13.6	79.7	2.45 N 13.40 E
5357.86	0.86	117.40	0.03	5357.59	14.7	83.0	1.79 N 14.64 E
5452.27	0.91	117.14	0.05	5451.98	16.0	86.0	1.12 N 15.93 E
5546.68	0.95	119.08	0.05	5546.38	17.3	88.7	0.40 N 17.28 E
5641.09	0.93	121.51	0.05	5640.78	18.6	91.2	0.38 S 18.62 E
5735.50	0.85	130.80	0.17	5735.18	19.8	93.6	1.24 S 19.80 E
5829.91	0.83	145.47	0.23	5829.58	20.8	96.2	2.26 S 20.72 E

A Gyrodata Directional Survey

BOPCO, LP

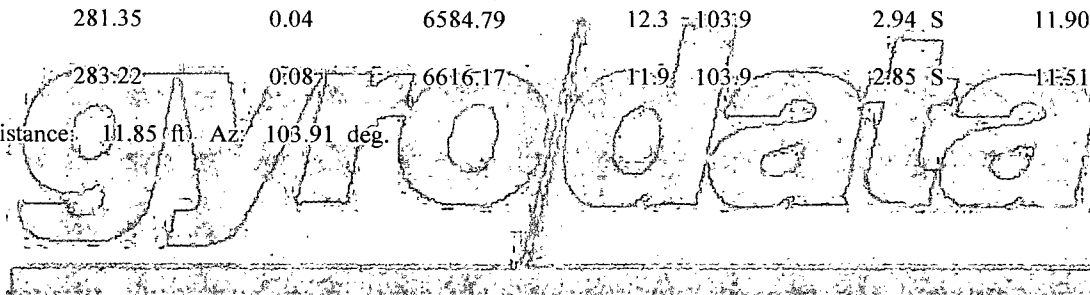
Lease: BIG EDDY UNIT DI5 Well: #4H, 5" DRILLPIPE

Location: LATSHAW #18, EDDY COUNTY, NEW MEXICO

Job Number: MD0614GDM572

MEASURED DEPTH feet	INCL deg.	AZIMUTH deg.	DOGLEG SEVERITY deg./ 100 ft.	VERTICAL DEPTH feet	CLOSURE DIST. AZIMUTH feet deg.	HORIZONTAL COORDINATES feet
5924.32	0.54	250.17	1.16	5923.98	20.9 98.2	2.97 S 20.69 E
6018.73	0.75	261.64	0.26	6018.39	19.9 99.3	3.22 S 19.66 E
6113.14	0.85	264.07	0.11	6112.79	18.7 100.4	3.38 S 18.35 E
6207.55	0.83	268.16	0.07	6207.19	17.3 101.6	3.47 S 16.97 E
6301.96	0.81	274.82	0.10	6301.59	16.0 102.4	3.44 S 15.63 E
6396.37	0.76	276.52	0.06	6395.99	14.7 103.0	3.31 S 14.34 E
6490.78	0.74	278.61	0.04	6490.39	13.5 103.5	3.15 S 13.11 E
6585.19	0.75	281.35	0.04	6584.79	12.3 103.9	2.94 S 11.90 E
6616.57	0.74	283.22	0.08	6616.17	11.9 103.9	2.85 S 11.51 E

Final Station Closure: Distance: 11.85 ft Az: 103.91 deg.



ARTESIA DISTRICT

~~SEP 29 2014~~



BOPCO, LP

Location: Eddy County, NM

Field: Eddy County, NM (NAD 27 / Grid)

Facility: Big Eddy Unit DI 5 Sec. 27-20S-31E

Slot: Big Eddy Unit DI 5 No.04H

Well: No.04H (SL 1980 FNL, 1848 FEL)

Wellbore: No.04H Planned

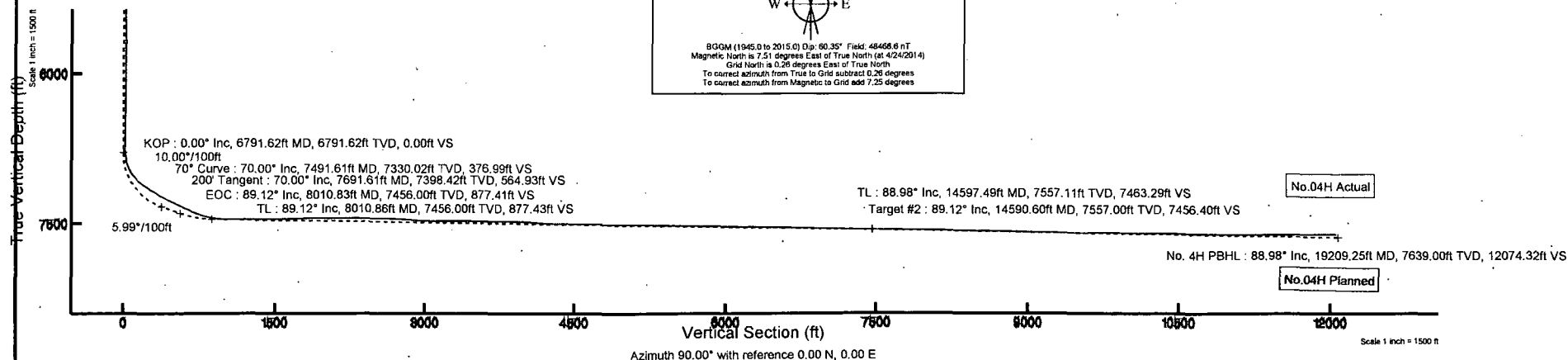
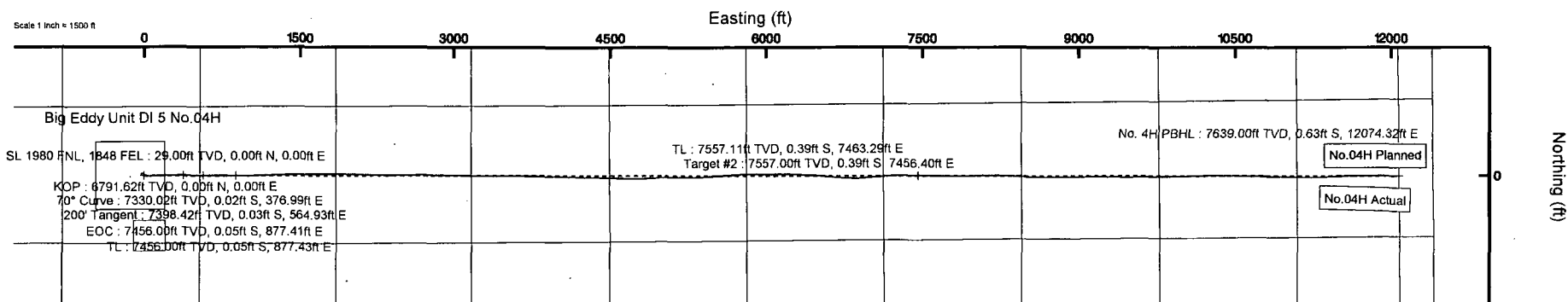


Plot reference indicated in Plate 5	
True vertical depths are referenced to Latane #18 (R/R)	Grid System: NAD27 / TM New Mexico B, Endemic Zone (D007), US feet
Measured depths are referenced to Latane #18 (R/R)	North: Berberis Grid north
Latane #18 (R/R) to Mean Sea Level: 3652 feet	Scale: True distance
Mean Sea Level to Mud line (At Stop - Big Eddy Land CR 6 No. 644) - 3523 feet	Depths are in feet
Coordinates are in feet as indicated in this	
Covered by: NOAA on 7/24/2014	

Location Information						
Facility Name		Grid East (N 100)	Grid North (N 100)	Latitude	Longitude	
Big Empty Unit D 5 Sec. 27-025-31E		647722.358	589684.470	37°32'45.492"N	103°51'14.189"W	
Grid East (N 100)	Local (N 100)	Local (E 0)	Local (N 0)	Local (E 0)	Local (N 0)	
Big Empty Unit D 5 Sec 0411	0.00	0.00	647722.358	589684.470	37°32'45.497"N 103°51'14.189"W	
Lathrop #18 (PHD) to Mead Line (N 100)				Big Empty Unit D 5 Sec 0412	309'	
Mead See Level to Mud line (N 100)				Big Empty Unit D 5 Sec 0413	352.26'	
Lathrop #18 (PHD) to Mead Line (N 100)					355.26'	

Targets								
	WAD 05	WAD 07	Local (N 100)	Local (E 0)	Grid East (N 100)	Grid North (N 100)	Latitude	Longitude
Target 2	1440.00	750.00	-0.53	7496.49	4359.000	589684.470	37°32'45.492"N	103°51'14.189"W
Ne. 64.291H	1430.05	7639.00	-0.53	7895.32	45974.05	582661.85	37°32'47.92"N	103°49'51.34"W

Well Profile Data									
Design Comment	MD (ft)	Inc (°)	Xz (ft)	TVD (ft)	Local E (ft)	Local E (ft)	DLS (1/1000)	VIS (ft)	VIS (ft)
S1 1980 F145 FEL	29.90	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ICP	870.62	0.000	0.003	871.52	0.00	0.00	0.00	0.00	0.00
72° Curve	7491.61	70.000	60.003	7330.02	-0.02	378.99	0.00	378.99	0.00
200° Tangent	7681.61	70.000	60.003	7358.42	-0.03	564.83	0.00	564.83	0.00
EOC	8010.83	89.120	80.003	7455.06	-0.05	877.41	5.99	877.41	5.99
Tangent #2	8101.86	89.120	80.003	7456.00	-0.05	877.43	0.00	877.43	0.00
Tangent #2	14390.00	89.120	80.003	7557.00	-0.39	7434.37	0.00	7434.37	0.00
	15823.00	88.983	80.003	7711.45	-0.34	7433.29	0.00	7433.29	0.00
No. of Holes	1222.99	88.983	80.003	7635.00	-0.29	7404.30	2.00	7404.30	2.00





Actual Wellpath Report

No.04H AWP

Page 1 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	Big Eddy Unit DI 5 No.04H
Area	Eddy County, NM	Well	No.04H (SL 1980 FNL, 1848 FEL)
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	No.04H Actual
Facility	Big Eddy Unit DI 5 Sec. 27-20S-31E		

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	Janotho
Scale	0.999934	Report Generated	7/14/2014 at 10:38:51 AM
Convergence at slot	0.26° East	Database/Source file	WA_Midland/No.04H_Actual.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	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W
Facility Reference Pt			647722.36	562668.48	32°32'45.492"N	103°51'14.189"W
Field Reference Pt			510280.10	534700.83	32°28'12.000"N	104°18'00.000"W

WELLPATH DATUM

Calculation method	Minimum curvature	Latshaw #18 (RKB) to Facility Vertical Datum	29.00ft
Horizontal Reference Pt	Slot	Latshaw #18 (RKB) to Mean Sea Level	3552.00ft
Vertical Reference Pt	Latshaw #18 (RKB)	Latshaw #18 (RKB) to Mud Line at Slot (Big Eddy Unit DI 5 No.04H)	29.00ft
MD Reference Pt	Latshaw #18 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	90.00°



Actual Wellpath Report

No.04H AWP

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**BAKER
HUGHES**

REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	Big Eddy Unit DI 5 No.04H
Area	Eddy County, NM	Well	No.04H (SL 1980 FNL, 1848 FEL)
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	No.04H Actual
Facility	Big Eddy Unit DI 5 Sec. 27-20S-31E		

WELLPATH DATA (236 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	118.010	0.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
29.00	0.000	118.010	29.00	0.00	0.00	0.00	647722.36	562668.48	32°32'45.492"N	103°51'14.189"W	0.00	
100.00	0.110	118.010	100.00	0.06	-0.03	0.06	647722.42	562668.44	32°32'45.491"N	103°51'14.189"W	0.15	
200.00	0.150	221.130	200.00	0.06	-0.18	0.06	647722.41	562668.30	32°32'45.490"N	103°51'14.189"W	0.21	
300.00	0.050	53.250	300.00	0.01	-0.25	-0.01	647722.36	562668.23	32°32'45.489"N	103°51'14.189"W	0.20	
400.00	0.250	293.140	400.00	-0.16	-0.14	-0.16	647722.20	562668.34	32°32'45.490"N	103°51'14.191"W	0.28	
464.90	0.230	251.910	464.90	-0.41	-0.12	-0.41	647721.94	562668.35	32°32'45.490"N	103°51'14.194"W	0.26	
553.30	0.350	257.390	553.30	-0.84	-0.24	-0.84	647721.51	562668.24	32°32'45.489"N	103°51'14.199"W	0.14	
642.70	0.390	244.660	642.70	-1.39	-0.43	-1.39	647720.97	562668.05	32°32'45.488"N	103°51'14.206"W	0.10	
731.80	0.270	239.480	731.79	-1.84	-0.66	-1.84	647720.52	562667.81	32°32'45.485"N	103°51'14.211"W	0.14	
826.20	0.380	233.320	826.19	-2.28	-0.96	-2.28	647720.07	562667.51	32°32'45.482"N	103°51'14.216"W	0.12	
920.60	0.620	174.070	920.59	-2.48	-1.66	-2.48	647719.87	562666.82	32°32'45.475"N	103°51'14.218"W	0.57	
1015.00	0.530	350.060	1014.99	-2.50	-1.73	-2.50	647719.85	562666.74	32°32'45.475"N	103°51'14.219"W	1.22	
1109.40	1.150	332.480	1109.38	-3.02	-0.46	-3.02	647719.34	562668.01	32°32'45.487"N	103°51'14.225"W	0.70	
1203.80	0.950	330.950	1203.76	-3.83	1.06	-3.83	647718.52	562669.54	32°32'45.502"N	103°51'14.234"W	0.21	
1298.20	0.930	330.890	1298.15	-4.59	2.41	-4.59	647717.77	562670.89	32°32'45.516"N	103°51'14.243"W	0.02	
1392.60	0.660	331.720	1392.54	-5.22	3.56	-5.22	647717.14	562672.04	32°32'45.527"N	103°51'14.250"W	0.29	
1487.10	0.360	221.850	1487.04	-5.67	3.82	-5.67	647716.68	562672.30	32°32'45.530"N	103°51'14.255"W	0.90	
1581.50	0.430	194.180	1581.44	-5.96	3.26	-5.96	647716.40	562671.73	32°32'45.524"N	103°51'14.259"W	0.21	
1675.90	0.260	163.150	1675.83	-5.98	2.71	-5.98	647716.37	562671.18	32°32'45.519"N	103°51'14.259"W	0.26	
1770.30	0.340	90.420	1770.23	-5.64	2.50	-5.64	647716.72	562670.98	32°32'45.517"N	103°51'14.255"W	0.38	
1864.70	0.610	72.610	1864.63	-4.88	2.65	-4.88	647717.48	562671.12	32°32'45.518"N	103°51'14.246"W	0.32	
1959.10	0.890	69.640	1959.02	-3.71	3.05	-3.71	647718.64	562671.53	32°32'45.522"N	103°51'14.233"W	0.30	
2053.50	1.030	70.290	2053.41	-2.23	3.59	-2.23	647720.13	562672.07	32°32'45.527"N	103°51'14.215"W	0.15	
2147.90	1.070	73.460	2147.79	-0.58	4.13	-0.58	647721.77	562672.61	32°32'45.533"N	103°51'14.196"W	0.07	
2242.30	0.660	118.290	2242.18	0.74	4.12	0.74	647723.10	562672.60	32°32'45.532"N	103°51'14.181"W	0.81	
2336.70	0.730	137.520	2336.58	1.62	3.42	1.62	647723.98	562671.90	32°32'45.525"N	103°51'14.170"W	0.26	
2431.20	1.240	191.720	2431.06	1.82	1.98	1.82	647724.18	562670.45	32°32'45.511"N	103°51'14.168"W	1.06	
2525.60	1.250	188.270	2525.44	1.47	-0.04	1.47	647723.82	562668.44	32°32'45.491"N	103°51'14.172"W	0.08	
2620.00	0.210	2.080	2619.83	1.33	-0.89	1.33	647723.68	562667.59	32°32'45.483"N	103°51'14.174"W	1.55	
2714.40	0.530	355.320	2714.23	1.30	-0.28	1.30	647723.65	562668.20	32°32'45.489"N	103°51'14.174"W	0.34	
2808.80	0.480	340.750	2808.63	1.13	0.53	1.13	647723.49	562669.01	32°32'45.497"N	103°51'14.176"W	0.15	
2903.20	0.410	345.090	2903.03	0.91	1.23	0.91	647723.27	562669.71	32°32'45.504"N	103°51'14.179"W	0.08	
2997.60	0.210	12.810	2997.42	0.86	1.72	0.86	647723.22	562670.20	32°32'45.509"N	103°51'14.179"W	0.26	
3092.00	0.260	35.520	3091.82	1.03	2.07	1.03	647723.38	562670.54	32°32'45.512"N	103°51'14.177"W	0.11	
3186.40	0.500	34.630	3186.22	1.39	2.58	1.39	647723.74	562671.06	32°32'45.517"N	103°51'14.173"W	0.25	
3280.80	0.640	29.150	3280.62	1.88	3.38	1.88	647724.23	562671.86	32°32'45.525"N	103°51'14.167"W	0.16	
3375.30	0.620	19.280	3375.11	2.30	4.32	2.30	647724.66	562672.80	32°32'45.534"N	103°51'14.162"W	0.12	
3469.70	0.500	18.510	3469.51	2.60	5.20	2.60	647724.96	562673.67	32°32'45.543"N	103°51'14.159"W	0.13	
3564.10	0.400	11.780	3563.90	2.80	5.91	2.80	647725.16	562674.39	32°32'45.550"N	103°51'14.156"W	0.12	
3658.50	0.260	40.750	3658.30	3.01	6.39	3.01	647725.36	562674.87	32°32'45.555"N	103°51'14.154"W	0.23	
3752.90	0.250	76.340	3752.70	3.35	6.61	3.35	647725.70	562675.08	32°32'45.557"N	103°51'14.150"W	0.17	
3847.30	0.220	63.960	3847.10	3.71	6.73	3.71	647726.07	562675.21	32°32'45.558"N	103°51'14.146"W	0.06	
3941.70	0.160	66.520	3941.50	3.99	6.87	3.99	647726.35	562675.34	32°32'45.559"N	103°51'14.142"W	0.06	
4036.10	0.150	50.970	4035.90	4.21	7.00	4.21	647726.57	562675.47	32°32'45.561"N	103°51'14.140"W	0.05	



Actual Wellpath Report

No.04H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	Big Eddy Unit DI 5 No.04H
Area	Eddy County, NM	Well	No.04H (SL 1980 FNL, 1848 FEL)
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	No.04H Actual
Facility	Big Eddy Unit DI 5 Sec. 27-20S-31E		

WELLPATH DATA (236 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
4130.50	0.180	59.150	4130.30	4.43	7.15	4.43	647726.79	562675.63	32°32'45.562"N	103°51'14.137"W	0.04	
4224.90	0.220	59.580	4224.70	4.72	7.32	4.72	647727.07	562675.79	32°32'45.564"N	103°51'14.134"W	0.04	
4319.40	0.210	72.680	4319.20	5.04	7.46	5.04	647727.39	562675.94	32°32'45.565"N	103°51'14.130"W	0.05	
4413.80	0.230	81.350	4413.60	5.39	7.54	5.39	647727.75	562676.02	32°32'45.566"N	103°51'14.126"W	0.04	
4508.20	0.250	94.070	4508.00	5.78	7.55	5.78	647728.14	562676.03	32°32'45.566"N	103°51'14.121"W	0.06	
4602.60	0.360	125.990	4602.39	6.23	7.37	6.23	647728.59	562675.84	32°32'45.564"N	103°51'14.116"W	0.21	
4697.00	0.590	126.580	4696.79	6.86	6.90	6.86	647729.22	562675.38	32°32'45.560"N	103°51'14.109"W	0.24	
4791.40	0.780	122.040	4791.18	7.79	6.27	7.79	647730.15	562674.75	32°32'45.553"N	103°51'14.098"W	0.21	
4885.80	0.780	128.220	4885.58	8.84	5.53	8.84	647731.20	562674.01	32°32'45.546"N	103°51'14.086"W	0.09	
4980.20	0.810	128.800	4979.97	9.87	4.72	9.87	647732.22	562673.19	32°32'45.538"N	103°51'14.074"W	0.03	
5074.60	0.830	124.380	5074.36	10.95	3.91	10.95	647733.31	562672.39	32°32'45.530"N	103°51'14.061"W	0.07	
5169.00	0.880	120.670	5168.75	12.14	3.16	12.14	647734.50	562671.63	32°32'45.522"N	103°51'14.047"W	0.08	
5263.50	0.840	118.450	5263.24	13.37	2.46	13.37	647735.73	562670.93	32°32'45.515"N	103°51'14.033"W	0.06	
5357.90	0.860	117.400	5357.63	14.61	1.80	14.61	647736.97	562670.28	32°32'45.509"N	103°51'14.019"W	0.03	
5452.30	0.910	117.140	5452.01	15.91	1.13	15.91	647738.26	562669.61	32°32'45.502"N	103°51'14.003"W	0.05	
5546.70	0.950	119.080	5546.40	17.26	0.41	17.26	647739.61	562668.89	32°32'45.495"N	103°51'13.988"W	0.05	
5641.10	0.930	121.510	5640.79	18.60	-0.37	18.60	647740.95	562668.11	32°32'45.487"N	103°51'13.972"W	0.05	
5735.50	0.850	130.800	5735.18	19.78	-1.23	19.78	647742.13	562667.25	32°32'45.479"N	103°51'13.958"W	0.17	
5829.90	0.830	145.470	5829.57	20.70	-2.25	20.70	647743.05	562666.23	32°32'45.469"N	103°51'13.948"W	0.23	
5924.30	0.540	250.170	5923.96	20.67	-2.96	20.67	647743.02	562665.51	32°32'45.461"N	103°51'13.948"W	1.16	
6018.70	0.750	261.640	6018.36	19.64	-3.20	19.64	647741.99	562665.27	32°32'45.459"N	103°51'13.960"W	0.26	
6113.10	0.850	264.070	6112.75	18.33	-3.37	18.33	647740.68	562665.11	32°32'45.458"N	103°51'13.975"W	0.11	
6207.60	0.830	268.160	6207.24	16.95	-3.46	16.95	647739.30	562665.02	32°32'45.457"N	103°51'13.992"W	0.07	
6302.00	0.810	274.820	6301.63	15.60	-3.43	15.60	647737.95	562665.05	32°32'45.457"N	103°51'14.007"W	0.10	
6396.40	0.760	276.520	6396.02	14.31	-3.30	14.31	647736.67	562665.18	32°32'45.458"N	103°51'14.022"W	0.06	
6490.80	0.740	278.610	6490.41	13.09	-3.14	13.09	647735.44	562665.34	32°32'45.460"N	103°51'14.037"W	0.04	
6585.20	0.750	281.350	6584.80	11.88	-2.92	11.88	647734.23	562665.55	32°32'45.462"N	103°51'14.051"W	0.04	
6616.60	0.740	283.220	6616.20	11.48	-2.84	11.48	647733.83	562665.64	32°32'45.463"N	103°51'14.055"W	0.08	Tie to Gyro
6658.00	0.600	275.100	6657.60	11.00	-2.76	11.00	647733.36	562665.72	32°32'45.464"N	103°51'14.061"W	0.41	
6690.00	0.700	292.200	6689.60	10.66	-2.67	10.66	647733.01	562665.81	32°32'45.465"N	103°51'14.065"W	0.68	
6724.00	1.400	286.800	6723.59	10.07	-2.47	10.07	647732.42	562666.01	32°32'45.467"N	103°51'14.072"W	2.08	
6756.00	0.900	86.100	6755.59	9.94	-2.34	9.94	647732.30	562666.14	32°32'45.468"N	103°51'14.073"W	7.08	
6787.00	3.900	94.600	6786.56	11.24	-2.41	11.24	647733.59	562666.07	32°32'45.467"N	103°51'14.058"W	9.72	
6818.00	7.600	92.100	6817.40	14.34	-2.57	14.34	647736.69	562665.91	32°32'45.466"N	103°51'14.022"W	11.96	
6850.00	10.900	92.800	6848.98	19.48	-2.79	19.47	647741.83	562665.68	32°32'45.463"N	103°51'13.962"W	10.32	
6881.00	14.600	92.000	6879.21	26.31	-3.07	26.31	647748.66	562665.40	32°32'45.460"N	103°51'13.882"W	11.95	
6913.00	18.600	89.900	6909.87	35.45	-3.20	35.45	647757.80	562665.27	32°32'45.458"N	103°51'13.775"W	12.64	
6944.00	23.100	87.900	6938.83	46.47	-2.97	46.47	647768.83	562665.50	32°32'45.460"N	103°51'13.647"W	14.69	
6976.00	27.500	86.500	6967.75	60.13	-2.29	60.13	647782.48	562666.19	32°32'45.466"N	103°51'13.487"W	13.88	
7007.00	32.500	85.800	6994.59	75.59	-1.24	75.59	647797.94	562667.23	32°32'45.476"N	103°51'13.306"W	16.17	
7039.00	37.200	87.200	7020.85	93.83	-0.14	93.83	647816.18	562668.34	32°32'45.486"N	103°51'13.093"W	14.90	
7070.00	42.200	87.600	7044.69	113.61	0.75	113.61	647835.96	562669.23	32°32'45.494"N	103°51'12.862"W	16.15	
7102.00	46.300	88.000	7067.61	135.92	1.61	135.92	647858.26	562670.08	32°32'45.502"N	103°51'12.602"W	12.84	
7133.00	49.900	88.500	7088.31	158.98	2.31	158.98	647881.32	562670.79	32°32'45.507"N	103°51'12.332"W	11.67	
7164.00	52.800	88.700	7107.66	183.18	2.90	183.18	647905.52	562671.38	32°32'45.512"N	103°51'12.049"W	9.37	



Actual Wellpath Report

No.04H AWP

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BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	Big Eddy Unit DI 5 No.04H
Area	Eddy County, NM	Well	No.04H (SL 1980 FNL, 1848 FEL)
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	No.04H Actual
Facility	Big Eddy Unit DI 5 Sec. 27-20S-31E		

WELLPATH DATA (236 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
7196.00	54.400	88.400	7126.65	208.92	3.55	208.92	647931.27	562672.03	32°32'45.518"N	103°51'11.749"W	5.06	
7227.00	56.500	88.800	7144.23	234.45	4.18	234.45	647956.79	562672.65	32°32'45.523"N	103°51'11.450"W	6.86	
7259.00	57.100	88.900	7161.76	261.22	4.71	261.22	647983.56	562673.19	32°32'45.527"N	103°51'11.138"W	1.89	
7290.00	57.900	88.800	7178.41	287.36	5.24	287.36	648009.69	562673.71	32°32'45.531"N	103°51'10.832"W	2.59	
7321.00	58.200	89.000	7194.82	313.66	5.74	313.66	648035.99	562674.22	32°32'45.535"N	103°51'10.525"W	1.11	
7353.00	58.800	88.900	7211.54	340.94	6.24	340.94	648063.27	562674.72	32°32'45.538"N	103°51'10.206"W	1.89	
7384.00	59.800	89.900	7227.36	367.59	6.52	367.59	648089.92	562675.00	32°32'45.540"N	103°51'09.895"W	4.25	
7415.00	60.900	90.500	7242.70	394.53	6.43	394.53	648116.86	562674.90	32°32'45.538"N	103°51'09.580"W	3.93	
7447.00	62.500	90.800	7257.87	422.70	6.11	422.70	648145.03	562674.58	32°32'45.533"N	103°51'09.251"W	5.07	
7478.00	64.200	90.500	7271.77	450.41	5.79	450.41	648172.73	562674.27	32°32'45.529"N	103°51'08.928"W	5.55	
7509.00	64.400	90.200	7285.22	478.34	5.62	478.34	648200.66	562674.10	32°32'45.526"N	103°51'08.601"W	1.08	
7541.00	64.300	90.400	7299.07	507.19	5.47	507.19	648229.51	562673.95	32°32'45.523"N	103°51'08.264"W	0.64	
7572.00	64.300	90.300	7312.51	535.12	5.30	535.12	648257.44	562673.78	32°32'45.520"N	103°51'07.938"W	0.29	
7603.00	64.500	90.500	7325.91	563.07	5.10	563.07	648285.39	562673.58	32°32'45.517"N	103°51'07.611"W	0.87	
7635.00	64.300	90.200	7339.73	591.93	4.93	591.93	648314.25	562673.40	32°32'45.514"N	103°51'07.274"W	1.05	
7709.00	64.100	89.100	7371.94	658.55	5.33	658.55	648380.86	562673.81	32°32'45.515"N	103°51'06.496"W	1.37	
7740.00	65.400	90.800	7385.17	686.59	5.36	686.59	648408.90	562673.83	32°32'45.514"N	103°51'06.169"W	6.49	
7772.00	67.800	91.400	7397.87	715.95	4.79	715.95	648438.26	562673.27	32°32'45.507"N	103°51'05.826"W	7.69	
7803.00	70.400	91.100	7408.93	744.90	4.16	744.90	648467.21	562672.64	32°32'45.500"N	103°51'05.487"W	8.44	
7834.00	72.300	91.300	7418.84	774.27	3.55	774.27	648496.57	562672.02	32°32'45.492"N	103°51'05.144"W	6.16	
7865.00	74.100	91.400	7427.80	803.93	2.85	803.93	648526.23	562671.32	32°32'45.484"N	103°51'04.798"W	5.81	
7897.00	76.200	91.200	7436.00	834.85	2.14	834.85	648557.15	562670.62	32°32'45.476"N	103°51'04.437"W	6.59	
7927.00	79.300	90.800	7442.37	864.16	1.63	864.16	648586.46	562670.11	32°32'45.469"N	103°51'04.094"W	10.42	
7959.00	81.500	90.700	7447.71	895.71	1.22	895.71	648618.01	562669.70	32°32'45.464"N	103°51'03.726"W	6.88	
7991.00	83.800	89.900	7451.80	927.44	1.06	927.44	648649.74	562669.53	32°32'45.461"N	103°51'03.355"W	7.60	
8022.00	85.800	89.900	7454.61	958.32	1.11	958.32	648680.61	562669.59	32°32'45.460"N	103°51'02.995"W	6.45	
8053.00	88.200	89.200	7456.23	989.27	1.35	989.27	648711.56	562669.83	32°32'45.461"N	103°51'02.633"W	8.06	
8083.00	89.900	88.500	7456.73	1019.26	1.95	1019.26	648741.54	562670.43	32°32'45.465"N	103°51'02.283"W	6.13	
8115.00	88.700	87.500	7457.12	1051.23	3.07	1051.24	648773.52	562671.55	32°32'45.475"N	103°51'01.909"W	4.88	
8211.00	90.600	88.900	7457.71	1147.18	6.09	1147.18	648869.46	562674.56	32°32'45.501"N	103°51'00.788"W	2.46	
8305.00	90.900	88.800	7456.48	1241.15	7.97	1241.15	648963.42	562676.45	32°32'45.515"N	103°50'59.690"W	0.34	
8400.00	91.500	88.500	7454.49	1336.10	10.21	1336.10	649058.37	562678.69	32°32'45.533"N	103°50'58.581"W	0.71	
8496.00	88.900	87.600	7454.15	1432.04	13.48	1432.04	649154.30	562681.95	32°32'45.561"N	103°50'57.460"W	2.87	
8591.00	91.600	89.600	7453.74	1527.00	15.80	1527.00	649249.25	562684.27	32°32'45.580"N	103°50'56.351"W	3.54	
8686.00	91.400	89.600	7451.25	1621.96	16.46	1621.96	649344.21	562684.94	32°32'45.582"N	103°50'55.241"W	0.21	
8781.00	91.500	89.200	7448.85	1716.92	17.46	1716.93	649439.16	562685.93	32°32'45.587"N	103°50'54.132"W	0.43	
8877.00	91.100	90.800	7446.67	1812.90	17.45	1812.90	649535.13	562685.93	32°32'45.583"N	103°50'53.011"W	1.72	
8971.00	91.100	90.600	7444.86	1906.87	16.31	1906.87	649629.10	562684.78	32°32'45.568"N	103°50'51.913"W	0.21	
9066.00	88.700	91.900	7445.03	2001.84	14.23	2001.84	649724.06	562682.71	32°32'45.543"N	103°50'50.804"W	2.87	
9162.00	89.600	91.800	7446.45	2097.78	11.14	2097.78	649819.99	562679.61	32°32'45.508"N	103°50'49.683"W	0.94	
9255.00	89.900	92.200	7446.86	2190.72	7.89	2190.72	649912.93	562676.37	32°32'45.471"N	103°50'48.598"W	0.54	
9350.00	90.000	90.100	7446.94	2285.70	5.98	2285.70	650007.90	562674.46	32°32'45.448"N	103°50'47.488"W	2.21	
9446.00	89.200	90.500	7447.61	2381.69	5.48	2381.69	650103.89	562673.96	32°32'45.439"N	103°50'46.367"W	0.93	
9541.00	89.900	89.600	7448.36	2476.69	5.40	2476.69	650198.88	562673.87	32°32'45.434"N	103°50'45.257"W	1.20	
9635.00	89.700	88.300	7448.69	2570.67	7.12	2570.67	650292.85	562675.60	32°32'45.447"N	103°50'44.159"W	1.40	



Actual Wellpath Report

No.04H AWP

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BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	Big Eddy Unit DI 5 No.04H
Area	Eddy County, NM	Well	No.04H (SL 1980 FNL, 1848 FEL)
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	No.04H Actual
Facility	Big Eddy Unit DI 5 Sec. 27-20S-31E		

WELLPATH DATA (236 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
9731.00	87.900	89.400	7450.70	2666.62	9.05	2666.62	650388.80	562677.52	32°32'45.461"N	103°50'43.038"W	2.20	
9825.00	86.200	91.100	7455.53	2760.49	8.64	2760.49	650482.66	562677.11	32°32'45.453"N	103°50'41.942"W	2.56	
9916.00	85.500	91.100	7462.12	2851.24	6.90	2851.24	650573.40	562675.37	32°32'45.432"N	103°50'40.882"W	0.77	
10015.00	86.700	90.800	7468.85	2949.99	5.26	2949.99	650672.15	562673.73	32°32'45.411"N	103°50'39.728"W	1.25	
10110.00	88.800	91.200	7472.58	3044.90	3.60	3044.90	650767.05	562672.08	32°32'45.390"N	103°50'38.620"W	2.25	
10206.00	89.300	91.100	7474.17	3140.86	1.68	3140.86	650863.01	562670.15	32°32'45.367"N	103°50'37.499"W	0.53	
10300.00	91.400	90.800	7473.60	3234.84	0.12	3234.84	650956.98	562668.59	32°32'45.347"N	103°50'36.401"W	2.26	
10393.00	89.900	90.800	7472.54	3327.83	-1.18	3327.83	651049.96	562667.29	32°32'45.330"N	103°50'35.315"W	1.61	
10488.00	88.500	90.500	7473.87	3422.81	-2.26	3422.81	651144.93	562666.22	32°32'45.315"N	103°50'34.205"W	1.51	
10583.00	88.600	90.400	7476.28	3517.78	-3.00	3517.78	651239.89	562665.47	32°32'45.303"N	103°50'33.096"W	0.15	
10678.00	89.200	90.300	7478.10	3612.76	-3.58	3612.76	651334.87	562664.89	32°32'45.293"N	103°50'31.987"W	0.64	
10772.00	89.800	90.500	7478.92	3706.75	-4.24	3706.75	651428.85	562664.24	32°32'45.283"N	103°50'30.889"W	0.67	
10875.00	89.800	91.000	7479.28	3809.74	-5.59	3809.74	651531.84	562662.89	32°32'45.264"N	103°50'29.686"W	0.49	
10970.00	87.900	91.100	7481.19	3904.70	-7.33	3904.70	651626.79	562661.15	32°32'45.243"N	103°50'28.576"W	2.00	
11065.00	87.500	91.500	7485.00	3999.60	-9.48	3999.60	651721.68	562658.99	32°32'45.217"N	103°50'27.468"W	0.60	
11160.00	86.200	91.800	7490.22	4094.41	-12.21	4094.41	651816.49	562656.26	32°32'45.186"N	103°50'26.361"W	1.40	
11253.00	84.800	92.100	7497.51	4187.07	-15.37	4187.07	651909.14	562653.11	32°32'45.150"N	103°50'25.278"W	1.54	
11347.00	88.900	91.100	7502.68	4280.87	-17.99	4280.87	652002.94	562650.49	32°32'45.120"N	103°50'24.183"W	4.49	
11440.00	89.400	90.000	7504.06	4373.86	-18.88	4373.86	652095.91	562649.60	32°32'45.107"N	103°50'23.097"W	1.30	
11533.00	89.200	92.200	7505.19	4466.83	-20.66	4466.83	652188.88	562647.81	32°32'45.085"N	103°50'22.011"W	2.38	
11626.00	89.100	92.500	7506.57	4559.74	-24.48	4559.74	652281.78	562644.00	32°32'45.043"N	103°50'20.926"W	0.34	
11720.00	89.200	90.700	7507.97	4653.69	-27.10	4653.69	652375.73	562641.38	32°32'45.013"N	103°50'19.828"W	1.92	
11813.00	89.100	90.000	7509.35	4746.67	-27.67	4746.67	652468.71	562640.81	32°32'45.003"N	103°50'18.742"W	0.76	
11905.00	88.600	87.000	7511.20	4838.61	-25.26	4838.61	652560.64	562643.21	32°32'45.023"N	103°50'17.668"W	3.31	
11997.00	89.100	85.800	7513.04	4930.41	-19.49	4930.41	652652.43	562648.99	32°32'45.076"N	103°50'16.595"W	1.41	
12091.00	89.600	87.500	7514.11	5024.24	-13.99	5024.24	652746.25	562654.48	32°32'45.126"N	103°50'15.499"W	1.88	
12186.00	89.200	92.000	7515.10	5119.21	-13.58	5119.21	652841.22	562654.90	32°32'45.125"N	103°50'14.389"W	4.76	
12280.00	89.200	90.200	7516.42	5213.18	-15.38	5213.18	652935.18	562653.09	32°32'45.103"N	103°50'13.292"W	1.91	
12374.00	89.200	89.000	7517.73	5307.17	-14.73	5307.17	653029.16	562653.75	32°32'45.105"N	103°50'12.194"W	1.28	
12467.00	89.100	86.000	7519.11	5400.06	-10.67	5400.06	653122.05	562657.80	32°32'45.141"N	103°50'11.108"W	3.23	
12562.00	89.100	85.500	7520.60	5494.78	-3.63	5494.78	653216.77	562664.84	32°32'45.206"N	103°50'10.002"W	0.53	
12656.00	89.000	85.800	7522.16	5588.50	3.50	5588.50	653310.48	562671.97	32°32'45.273"N	103°50'08.906"W	0.34	
12752.00	88.700	87.000	7524.09	5684.29	9.52	5684.29	653406.26	562678.00	32°32'45.328"N	103°50'07.787"W	1.29	
12846.00	89.100	86.800	7525.89	5778.13	14.60	5778.13	653500.10	562683.08	32°32'45.374"N	103°50'06.691"W	0.48	
12941.00	89.900	90.700	7526.72	5873.09	16.68	5873.09	653595.05	562685.15	32°32'45.390"N	103°50'05.581"W	4.19	
13036.00	89.100	90.800	7527.55	5968.08	15.43	5968.08	653690.03	562683.91	32°32'45.373"N	103°50'04.472"W	0.85	
13131.00	89.100	88.900	7529.04	6063.06	15.68	6063.06	653785.00	562684.16	32°32'45.371"N	103°50'03.362"W	2.00	
13226.00	89.300	89.900	7530.37	6158.04	16.68	6158.04	653879.98	562685.15	32°32'45.377"N	103°50'02.252"W	1.07	
13321.00	89.100	92.100	7531.69	6253.01	15.02	6253.01	653974.95	562683.49	32°32'45.356"N	103°50'01.143"W	2.33	
13416.00	88.700	93.300	7533.52	6347.89	10.54	6347.89	654069.81	562679.02	32°32'45.307"N	103°50'00.035"W	1.33	
13511.00	88.800	91.400	7535.59	6442.78	6.65	6442.78	654164.70	562675.13	32°32'45.264"N	103°49'58.927"W	2.00	
13606.00	89.200	96.100	7537.25	6537.54	0.44	6537.54	654259.45	562668.92	32°32'45.198"N	103°49'57.820"W	4.96	
13701.00	88.600	95.600	7539.07	6632.03	-9.24	6632.03	654353.93	562659.23	32°32'45.098"N	103°49'56.717"W	0.82	
13796.00	88.600	94.300	7541.39	6726.64	-17.44	6726.64	654448.54	562651.04	32°32'45.013"N	103°49'55.612"W	1.37	
13891.00	88.700	91.300	7543.63	6821.49	-22.08	6821.49	654543.38	562646.40	32°32'44.962"N	103°49'54.504"W	3.16	



Actual Wellpath Report

No.04H AWP

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**BAKER
HUGHES**

REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, LP	Slot	Big Eddy Unit DI 5 No.04H
Area	Eddy County, NM	Well	No.04H (SL 1980 FNL, 1848 FEL)
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	No.04H Actual
Facility	Big Eddy Unit DI 5 Sec. 27-20S-31E		

WELLPATH DATA (236 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
13986.00	87.400	86.000	7546.87	6916.37	-19.84	6916.37	654638.26	562648.64	32°32'44.980"N	103°49'53.396"W	5.74	
14079.00	89.300	84.100	7549.55	7008.98	-11.82	7008.98	654730.86	562656.66	32°32'45.055"N	103°49'52.314"W	2.89	
14173.00	89.100	86.100	7550.86	7102.62	-3.79	7102.62	654824.49	562664.68	32°32'45.130"N	103°49'51.219"W	2.14	
14268.00	89.100	86.100	7552.35	7197.39	2.67	7197.39	654919.26	562671.14	32°32'45.190"N	103°49'50.112"W	0.00	
14362.00	89.200	88.700	7553.75	7291.27	6.93	7291.27	655013.14	562675.41	32°32'45.228"N	103°49'49.015"W	2.77	
14457.00	89.100	90.100	7555.16	7386.26	7.93	7386.26	655108.11	562676.40	32°32'45.233"N	103°49'47.905"W	1.48	
14551.00	89.100	91.100	7556.63	7480.24	6.94	7480.24	655202.09	562675.42	32°32'45.219"N	103°49'46.808"W	1.06	
14646.00	89.100	91.700	7558.12	7575.20	4.62	7575.20	655297.04	562673.10	32°32'45.191"N	103°49'45.698"W	0.63	
14741.00	89.600	91.400	7559.20	7670.16	2.05	7670.16	655391.99	562670.53	32°32'45.161"N	103°49'44.589"W	0.61	
14837.00	89.600	90.400	7559.87	7766.14	-0.54	7766.14	655487.97	562669.02	32°32'45.142"N	103°49'43.468"W	1.04	
14932.00	89.700	90.900	7560.45	7861.13	-0.53	7861.13	655582.96	562667.94	32°32'45.127"N	103°49'42.359"W	0.54	
15027.00	89.100	88.700	7561.45	7956.12	-0.20	7956.12	655677.94	562668.27	32°32'45.126"N	103°49'41.249"W	2.40	
15122.00	89.100	87.600	7562.94	8051.06	2.86	8051.06	655772.87	562671.34	32°32'45.152"N	103°49'40.140"W	1.16	
15217.00	89.100	90.000	7564.43	8146.02	4.85	8146.02	655867.82	562673.33	32°32'45.167"N	103°49'39.030"W	2.53	
15312.00	89.000	92.000	7566.01	8240.99	3.20	8240.99	655962.78	562671.67	32°32'45.146"N	103°49'37.921"W	2.11	
15408.00	89.000	92.300	7567.68	8336.90	-0.40	8336.90	656058.69	562668.07	32°32'45.106"N	103°49'36.801"W	0.31	
15503.00	89.100	93.100	7569.26	8431.79	-4.88	8431.78	656153.57	562663.60	32°32'45.057"N	103°49'35.693"W	0.85	
15598.00	88.900	92.200	7570.92	8526.67	-9.27	8526.67	656248.44	562659.21	32°32'45.009"N	103°49'34.585"W	0.97	
15693.00	89.100	90.800	7572.57	8621.62	-11.76	8621.62	656343.39	562656.72	32°32'44.980"N	103°49'33.476"W	1.49	
15789.00	89.000	90.600	7574.17	8717.60	-12.93	8717.60	656439.36	562655.55	32°32'44.964"N	103°49'32.354"W	0.23	
15884.00	88.200	90.300	7576.49	8812.57	-13.68	8812.57	656534.32	562654.80	32°32'44.952"N	103°49'31.245"W	0.90	
15979.00	87.500	88.700	7580.05	8907.49	-12.85	8907.49	656629.24	562655.63	32°32'44.956"N	103°49'30.136"W	1.84	
16074.00	88.600	88.400	7583.28	9002.41	-10.44	9002.40	656724.15	562658.03	32°32'44.975"N	103°49'29.027"W	1.20	
16170.00	88.700	89.400	7585.54	9098.36	-8.60	9098.36	656820.10	562659.87	32°32'44.989"N	103°49'27.906"W	1.05	
16265.00	88.700	90.500	7587.70	9193.33	-8.52	9193.33	656915.06	562659.96	32°32'44.985"N	103°49'26.797"W	1.16	
16360.00	88.600	90.900	7589.94	9288.30	-9.68	9288.30	657010.02	562658.80	32°32'44.969"N	103°49'25.688"W	0.43	
16455.00	89.200	91.100	7591.76	9383.27	-11.34	9383.27	657104.99	562657.14	32°32'44.948"N	103°49'24.578"W	0.67	
16550.00	90.000	89.800	7592.43	9478.26	-12.08	9478.26	657199.97	562656.39	32°32'44.936"N	103°49'23.469"W	1.61	
16646.00	90.100	88.600	7592.34	9574.25	-10.74	9574.25	657295.95	562657.73	32°32'44.945"N	103°49'22.347"W	1.25	
16741.00	90.700	88.900	7591.68	9669.22	-8.67	9669.22	657390.92	562659.81	32°32'44.961"N	103°49'21.238"W	0.71	
16836.00	89.500	89.200	7591.51	9764.21	-7.10	9764.21	657485.90	562661.38	32°32'44.972"N	103°49'20.128"W	1.30	
16931.00	88.600	89.600	7593.09	9859.19	-6.10	9859.19	657580.87	562662.38	32°32'44.978"N	103°49'19.018"W	1.04	
17026.00	88.600	88.800	7595.41	9954.15	-4.78	9954.15	657675.83	562663.70	32°32'44.986"N	103°49'17.909"W	0.84	
17122.00	88.600	87.200	7597.75	10050.06	-1.43	10050.06	657771.73	562667.05	32°32'45.015"N	103°49'16.789"W	1.67	
17217.00	89.100	88.500	7599.66	10144.97	2.14	10144.97	657866.64	562670.61	32°32'45.045"N	103°49'15.680"W	1.47	
17312.00	90.600	89.500	7599.91	10239.95	3.80	10239.95	657961.61	562672.27	32°32'45.057"N	103°49'14.570"W	1.90	
17407.00	89.200	90.400	7600.08	10334.95	3.88	10334.95	658056.60	562672.35	32°32'45.054"N	103°49'13.460"W	1.75	
17502.00	89.100	91.200	7601.48	10429.93	2.55	10429.93	658151.58	562671.03	32°32'45.036"N	103°49'12.351"W	0.85	
17597.00	89.200	92.100	7602.89	10524.88	-0.18	10524.88	658246.52	562668.29	32°32'45.004"N	103°49'11.242"W	0.95	
17692.00	89.100	91.000	7604.30	10619.83	-2.75	10619.83	658341.47	562665.72	32°32'44.974"N	103°49'10.133"W	1.16	
17787.00	88.600	90.400	7606.21	10714.80	-3.91	10714.80	658436.43	562664.56	32°32'44.958"N	103°49'09.023"W	0.82	
17883.00	88.600	91.100	7608.56	10810.77	-5.17	10810.77	658532.39	562663.31	32°32'44.941"N	103°49'07.902"W	0.73	
17978.00	89.200	91.900	7610.38	10905.72	-7.66	10905.71	658627.33	562660.82	32°32'44.912"N	103°49'06.793"W	1.05	
18073.00	90.000	91.100	7611.04	11000.68	-10.14	11000.68	658722.29	562658.33	32°32'44.883"N	103°49'05.684"W	1.19	
18168.00	90.100	90.700	7610.96	11095.67	-11.63	11095.67	658817.27	562656.84	32°32'44.864"N	103°49'04.575"W	0.43	



Actual Wellpath Report

No.04H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	Big Eddy Unit DI 5 No.04H
Area	Eddy County, NM	Well	No.04H (SL 1980 FNL, 1848 FEL)
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	No.04H Actual
Facility	Big Eddy Unit DI 5 Sec. 27-20S-31E		

WELLPATH DATA (236 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
18263.00	89.600	90.500	7611.21	11190.66	-12.63	11190.66	658912.26	562655.85	32°32'44.849"N	103°49'03.465"W	0.57	
18358.00	89.700	89.200	7611.79	11285.66	-12.38	11285.66	659007.25	562656.10	32°32'44.847"N	103°49'02.355"W	1.37	
18454.00	90.600	86.900	7611.54	11381.59	-9.11	11381.59	659103.18	562659.36	32°32'44.875"N	103°49'01.235"W	2.57	
18549.00	89.600	86.600	7611.37	11476.44	-3.73	11476.44	659198.02	562664.75	32°32'44.924"N	103°49'00.126"W	1.10	
18644.00	90.700	88.200	7611.12	11571.34	-0.58	11571.34	659292.91	562669.06	32°32'44.962"N	103°48'59.017"W	2.04	
18739.00	91.200	89.300	7609.55	11666.30	2.65	11666.30	659387.86	562671.13	32°32'44.978"N	103°48'57.908"W	1.27	
18834.00	89.600	89.700	7608.88	11761.29	3.48	11761.29	659482.85	562671.96	32°32'44.981"N	103°48'56.798"W	1.74	
18930.00	89.600	89.900	7609.55	11857.29	3.82	11857.29	659578.84	562672.29	32°32'44.980"N	103°48'55.677"W	0.21	
19025.00	90.500	91.200	7609.47	11952.28	2.90	11952.28	659673.82	562671.38	32°32'44.967"N	103°48'54.567"W	1.66	
19053.00	90.700	91.700	7609.18	11980.27	2.20	11980.27	659701.81	562670.67	32°32'44.958"N	103°48'54.240"W	1.92	
19126.00	89.500	91.700	7609.05	12053.23	0.03	12053.23	659774.77	562668.51	32°32'44.933"N	103°48'53.388"W	1.64	Proj. to Bit

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Target 2		7557.00	-0.39	7456.40	655178.25	562668.09	32°32'45.147"N	103°49'47.087"W	point
No. 4H PBHL		7639.00	-0.63	12074.32	659795.86	562667.85	32°32'44.926"N	103°48'53.142"W	point

WELLPATH COMPOSITION - Ref Wellbore: No.04H Actual Ref Wellpath: No.04H AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
29.00	6616.60	Generic gyro - northseeking (Standard)	Gyrodata Surveys <100 - 6616.6>	No.04H Actual
6616.60	19053.00	NaviTrak (Standard)	BHI NaviGamma <6658-19053>	No.04H Actual
19053.00	19126.00	Blind Drilling (std)	Projection to bit	No.04H Actual