



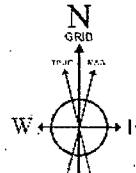
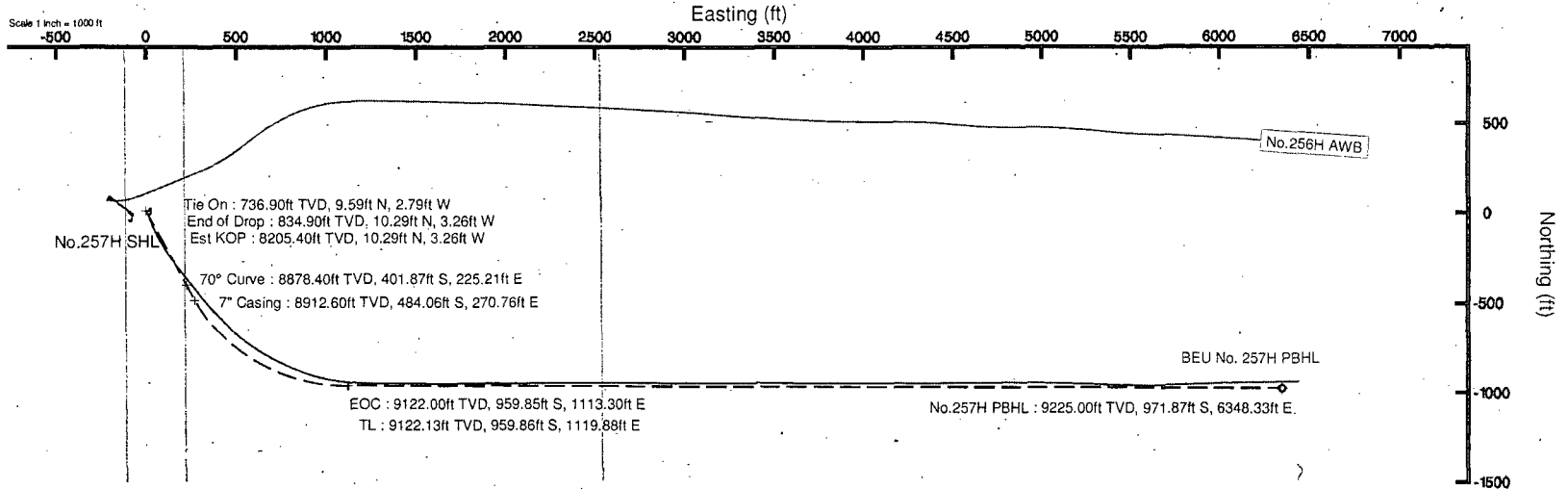
# BOPCO, L.P.

Location: Eddy County, NM  
 Field: Big Eddy  
 Facility: Big Eddy Unit No.256H & No.257H

Slot: No.257H SHL  
 Well: No.257H  
 Wellbore: No.257H PWB



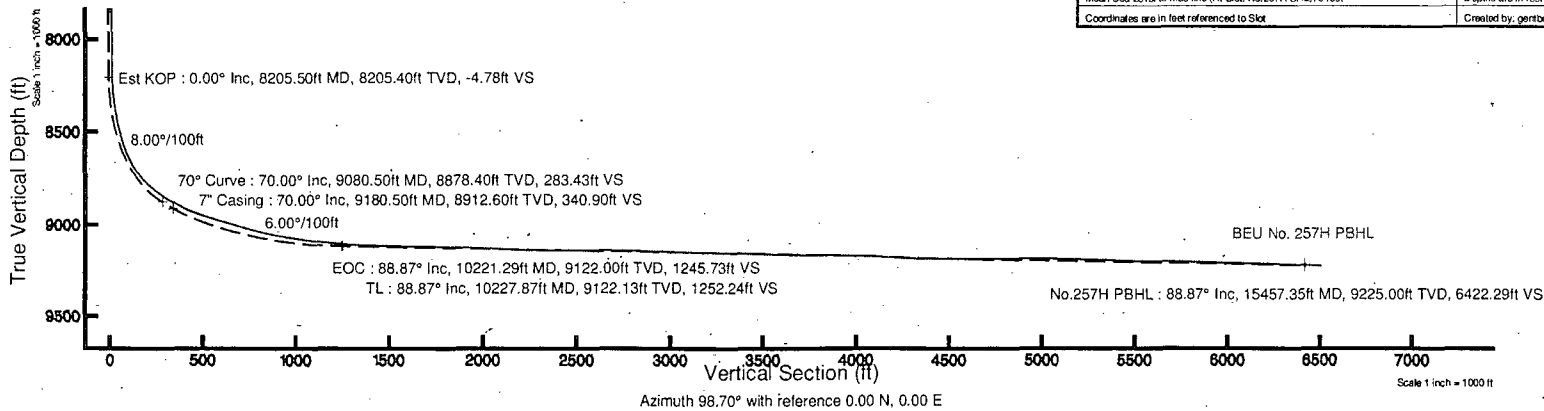
30-015-42006



BGGM (1945.0 to 2015.0) Dip: 60.42° Field: 48556.6 nT  
 Magnetic North is 7.57 degrees East of True North (at 11/22/2013)  
 Grid North is 0.25 degrees East of True North  
 To correct azimuth from True to Grid subtract 0.25 degrees  
 To correct azimuth from Magnetic to Grid add 7.32 degrees

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	737.00	0.980	325.990	736.90	9.59	-2.79	0.29	-4.21
End of Drop	835.00	0.000	151.000	834.90	10.29	-3.26	1.00	-4.78
Est KOP	8205.50	0.000	151.000	8205.40	10.29	-3.26	0.00	-4.78
70° Curve	9080.50	70.000	151.000	8878.40	-401.87	225.21	8.00	283.43
7" Casing	9180.50	70.000	151.000	8912.60	-484.06	270.76	0.00	340.90
EOC	10221.29	88.872	90.000	9122.00	-959.85	1113.30	6.00	1245.73
TL	10227.87	88.873	90.132	9122.13	-959.86	1119.88	2.00	1252.24
No.257H PWBH	15457.35	88.873	90.132	9225.00	-971.87	6348.33	0.00	6422.29

Plot reference wellpath is Rev-C.0	
True vertical depths are referenced to Rig on No.257H SHL (KB)	Grid System: NAD27 / TM New Mexico SP, Easton Zone (3001), US feet
Measured depths are referenced to Rig on No.257H SHL (KB)	North Reference: Grid north
Rig on No.257H SHL (KB) to Mean Sea Level: 3476 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: No.257H SHL): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: gertboy on 2/8/2014



Azimuth 98.70° with reference 0.00 N, 0.00 E

Scale 1 inch = 1000 ft

Rev-C.0



# Actual Wellpath Report

No.257H AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.257H SHL
Area	Eddy County, NM	Well	No.257H
Field	Big Eddy	Wellbore	No.257H AWB
Facility	Big Eddy Unit No.256H & No.257H		

## REPORT SETUP INFORMATION

Projection System	NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 4.0.1
North Reference	Grid	User	Gentbry
Scale	0.999932	Report Generated	3/10/2014 at 8:35:36 AM
Convergence at slot	0.25° East	Database/Source file	MidlandDB/No.257H_AWB.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.86	99.54	641647.40	587433.70	32°36'50.821"N	103°52'23.909"W
Facility Reference Pt			641547.87	587432.84	32°36'50.817"N	103°52'25.073"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.257H SHL (KB) to Facility Vertical Datum	3476.00ft
Horizontal Reference Pt	Slot	Rig on No.257H SHL (KB) to Mean Sea Level	3476.00ft
Vertical Reference Pt	Rig on No.257H SHL (KB)	Rig on No.257H SHL (KB) to Mud Line at Slot (No.257H SHL)	3476.00ft
MD Reference Pt	Rig on No.257H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	98.70°



# Actual Wellpath Report

No.257H AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.257H SHL
Area	Eddy County, NM	Well	No.257H
Field	Big Eddy	Wellbore	No.257H AWB
Facility	Big Eddy Unit No.256H & No.257H		

## WELLPATH DATA (190 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	234.970	0.00	0.00	0.00	0.00	641647.40	587433.70	32°36'50.821"N	103°52'23.909"W	0.00	
154.00	0.690	234.970	154.00	-0.67	-0.53	-0.76	641646.64	587433.17	32°36'50.816"N	103°52'23.918"W	0.45	
249.00	0.820	127.650	248.99	-0.49	-1.28	-0.69	641646.71	587432.42	32°36'50.808"N	103°52'23.917"W	1.28	
344.00	1.310	128.580	343.97	1.05	-2.37	0.70	641648.10	587431.33	32°36'50.797"N	103°52'23.901"W	0.52	
439.00	1.350	113.640	438.95	3.07	-3.49	2.57	641649.97	587430.21	32°36'50.786"N	103°52'23.879"W	0.37	
533.00	1.260	111.980	532.93	5.15	-4.33	4.54	641651.94	587429.38	32°36'50.778"N	103°52'23.856"W	0.10	
628.00	1.140	107.550	627.90	7.10	-5.00	6.41	641653.81	587428.70	32°36'50.771"N	103°52'23.834"W	0.16	
724.00	1.000	108.910	723.89	8.87	-5.56	8.12	641655.52	587428.14	32°36'50.766"N	103°52'23.814"W	0.15	
818.00	1.020	108.120	817.87	10.50	-6.09	9.69	641657.09	587427.61	32°36'50.760"N	103°52'23.796"W	0.03	
913.00	1.030	113.700	912.86	12.16	-6.69	11.27	641658.67	587427.01	32°36'50.754"N	103°52'23.778"W	0.11	
1008.00	1.060	121.260	1007.84	13.79	-7.49	12.81	641660.21	587426.21	32°36'50.746"N	103°52'23.760"W	0.15	
1103.00	1.020	121.800	1102.83	15.38	-8.39	14.28	641661.68	587425.31	32°36'50.737"N	103°52'23.743"W	0.04	
1198.00	0.960	123.350	1197.81	16.88	-9.28	15.66	641663.06	587424.42	32°36'50.728"N	103°52'23.726"W	0.07	
1293.00	0.780	123.230	1292.80	18.20	-10.07	16.87	641664.26	587423.63	32°36'50.721"N	103°52'23.712"W	0.19	
1388.00	0.610	120.090	1387.79	19.25	-10.68	17.84	641665.24	587423.02	32°36'50.715"N	103°52'23.701"W	0.18	
1483.00	0.440	112.170	1482.79	20.08	-11.07	18.62	641666.02	587422.63	32°36'50.711"N	103°52'23.692"W	0.19	
1578.00	0.300	99.340	1577.79	20.68	-11.25	19.20	641666.60	587422.46	32°36'50.709"N	103°52'23.685"W	0.17	
1672.00	0.230	86.370	1671.79	21.11	-11.27	19.63	641667.03	587422.43	32°36'50.709"N	103°52'23.680"W	0.10	
1767.00	0.210	73.090	1766.79	21.46	-11.21	19.99	641667.39	587422.49	32°36'50.709"N	103°52'23.676"W	0.06	
1862.00	0.340	65.160	1861.79	21.85	-11.04	20.41	641667.81	587422.66	32°36'50.711"N	103°52'23.671"W	0.14	
1957.00	0.410	63.820	1956.78	22.36	-10.77	20.97	641668.37	587422.93	32°36'50.713"N	103°52'23.664"W	0.07	
2052.00	0.440	55.720	2051.78	22.91	-10.42	21.58	641668.98	587423.28	32°36'50.717"N	103°52'23.657"W	0.07	
2147.00	0.470	53.150	2146.78	23.45	-9.98	22.19	641669.59	587423.72	32°36'50.721"N	103°52'23.650"W	0.04	
2242.00	0.350	52.020	2241.78	23.92	-9.57	22.73	641670.13	587424.13	32°36'50.725"N	103°52'23.644"W	0.13	
2337.00	0.230	48.880	2336.77	24.24	-9.26	23.11	641670.50	587424.44	32°36'50.728"N	103°52'23.639"W	0.13	
2432.00	0.200	39.770	2431.77	24.45	-9.01	23.36	641670.75	587424.69	32°36'50.731"N	103°52'23.636"W	0.05	
2527.00	0.200	30.500	2526.77	24.60	-8.74	23.55	641670.94	587424.96	32°36'50.733"N	103°52'23.634"W	0.03	
2621.00	0.220	26.420	2620.77	24.71	-8.44	23.71	641671.11	587425.26	32°36'50.736"N	103°52'23.632"W	0.03	
2716.00	0.260	19.790	2715.77	24.81	-8.07	23.86	641671.26	587425.63	32°36'50.740"N	103°52'23.630"W	0.05	
2811.00	0.640	15.050	2810.77	24.91	-7.36	24.07	641671.47	587426.35	32°36'50.747"N	103°52'23.628"W	0.40	
2906.00	0.920	12.700	2905.76	25.02	-6.10	24.38	641671.78	587427.60	32°36'50.760"N	103°52'23.624"W	0.30	
3001.00	0.960	11.120	3000.75	25.11	-4.57	24.70	641672.10	587429.13	32°36'50.775"N	103°52'23.620"W	0.05	
3095.00	0.900	14.460	3094.73	25.22	-3.09	25.04	641672.44	587430.61	32°36'50.789"N	103°52'23.616"W	0.09	
3190.00	1.100	10.610	3189.72	25.32	-1.47	25.39	641672.79	587432.23	32°36'50.805"N	103°52'23.612"W	0.22	
3285.00	1.490	351.770	3284.70	24.99	-0.65	25.38	641672.78	587434.35	32°36'50.826"N	103°52'23.612"W	0.60	
3380.00	1.570	347.020	3379.66	24.15	3.14	24.91	641672.31	587436.84	32°36'50.851"N	103°52'23.618"W	0.16	
3475.00	1.320	347.380	3474.63	23.27	5.48	24.38	641671.78	587439.18	32°36'50.874"N	103°52'23.624"W	0.26	
3570.00	1.250	347.720	3569.61	22.50	7.56	23.92	641671.32	587441.26	32°36'50.895"N	103°52'23.629"W	0.07	
3665.00	1.190	347.620	3664.59	21.78	9.53	23.49	641670.89	587443.23	32°36'50.914"N	103°52'23.634"W	0.06	
3760.00	1.250	346.650	3759.56	21.03	11.51	23.04	641670.44	587445.20	32°36'50.934"N	103°52'23.639"W	0.07	
3855.00	1.260	349.200	3854.54	20.30	13.54	22.61	641670.00	587447.24	32°36'50.954"N	103°52'23.644"W	0.06	
3950.00	1.190	349.040	3949.52	19.62	15.53	22.22	641669.62	587449.23	32°36'50.974"N	103°52'23.648"W	0.07	
4045.00	1.250	348.970	4044.50	18.93	17.52	21.84	641669.23	587451.22	32°36'50.993"N	103°52'23.653"W	0.06	
4140.00	1.140	349.040	4139.48	18.27	19.46	21.46	641668.86	587453.16	32°36'51.013"N	103°52'23.657"W	0.12	
4241.00	1.100	353.500	4240.46	17.67	21.41	21.16	641668.56	587455.11	32°36'51.032"N	103°52'23.661"W	0.09	



# Actual Wellpath Report

No.257H AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, L.P.	Slot	No.257H SHL
Area	Eddy County, NM	Well	No.257H
Field	Big Eddy	Wellbore	No.257H AWB
Facility	Big Eddy Unit No.256H & No.257H		

## WELLPATH DATA (190 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
4337.00	1.300	355.600	4336.44	17.18	23.42	20.97	641668.37	587457.11	32°36'51.052"N	103°52'23.663"W	0.21	
4527.00	0.300	116.300	4526.42	17.17	25.34	21.25	641668.65	587459.04	32°36'51.071"N	103°52'23.659"W	0.78	
4717.00	0.300	109.900	4716.42	18.13	24.95	22.16	641669.56	587458.65	32°36'51.067"N	103°52'23.649"W	0.02	
4907.00	0.200	107.100	4906.42	18.95	24.69	22.95	641670.35	587458.39	32°36'51.064"N	103°52'23.639"W	0.05	
5097.00	0.200	113.700	5096.42	19.60	24.46	23.57	641670.97	587458.16	32°36'51.062"N	103°52'23.632"W	0.01	
5287.00	0.100	228.100	5286.42	19.81	24.21	23.75	641671.15	587457.91	32°36'51.059"N	103°52'23.630"W	0.14	
5478.00	0.000	7.300	5477.42	19.71	24.10	23.63	641671.02	587457.80	32°36'51.058"N	103°52'23.632"W	0.05	
5667.00	0.100	280.000	5666.42	19.54	24.13	23.46	641670.86	587457.83	32°36'51.059"N	103°52'23.633"W	0.05	
5857.00	0.900	227.400	5856.41	18.44	23.15	22.20	641669.60	587456.85	32°36'51.049"N	103°52'23.648"W	0.44	
6048.00	1.000	231.600	6047.38	16.37	21.10	19.79	641667.19	587454.80	32°36'51.029"N	103°52'23.677"W	0.06	
6239.00	1.000	221.800	6238.35	14.33	18.82	17.37	641664.77	587452.52	32°36'51.006"N	103°52'23.705"W	0.09	
6429.00	1.000	224.400	6428.32	12.45	16.40	15.11	641662.51	587450.10	32°36'50.983"N	103°52'23.732"W	0.02	
6619.00	1.000	218.900	6618.29	10.65	13.93	12.91	641660.31	587447.62	32°36'50.958"N	103°52'23.757"W	0.05	
6809.00	1.100	220.300	6808.26	8.86	11.24	10.69	641658.09	587444.94	32°36'50.932"N	103°52'23.783"W	0.05	
6999.00	1.000	208.800	6998.23	7.34	8.40	8.71	641656.11	587442.10	32°36'50.904"N	103°52'23.807"W	0.12	
7189.00	1.100	196.400	7188.20	6.52	5.20	7.39	641654.79	587438.90	32°36'50.872"N	103°52'23.822"W	0.13	
7379.00	1.400	171.700	7378.16	6.96	1.15	7.21	641654.61	587434.85	32°36'50.832"N	103°52'23.825"W	0.32	
7474.00	1.600	156.200	7473.12	8.01	-1.21	7.92	641655.32	587432.49	32°36'50.809"N	103°52'23.816"W	0.47	
7664.00	1.100	158.300	7663.07	10.36	-5.33	9.66	641657.06	587428.37	32°36'50.768"N	103°52'23.796"W	0.26	
7854.00	0.500	160.100	7853.05	11.68	-7.81	10.62	641658.02	587425.89	32°36'50.743"N	103°52'23.785"W	0.32	
8044.00	0.500	212.600	8043.04	11.74	-9.28	10.45	641657.85	587424.42	32°36'50.729"N	103°52'23.787"W	0.23	
8140.00	0.900	213.200	8139.04	11.26	-10.27	9.82	641657.22	587423.43	32°36'50.719"N	103°52'23.795"W	0.42	
8171.00	2.900	175.400	8170.02	11.34	-11.25	9.75	641657.14	587422.45	32°36'50.709"N	103°52'23.796"W	7.28	
8203.00	6.000	168.800	8201.92	12.09	-13.70	10.14	641657.53	587420.00	32°36'50.685"N	103°52'23.791"W	9.80	
8235.00	7.900	164.000	8233.68	13.58	-17.46	11.07	641658.47	587416.25	32°36'50.648"N	103°52'23.780"W	6.20	
8266.00	10.000	161.400	8264.30	15.71	-22.06	12.51	641659.91	587411.65	32°36'50.602"N	103°52'23.764"W	6.90	
8298.00	11.800	158.700	8295.72	18.62	-27.74	14.59	641661.99	587405.96	32°36'50.546"N	103°52'23.740"W	5.85	
8330.00	13.900	157.000	8326.92	22.27	-34.33	17.28	641664.68	587399.38	32°36'50.481"N	103°52'23.709"W	6.67	
8362.00	16.300	158.000	8357.81	26.59	-42.03	20.46	641667.86	587391.68	32°36'50.404"N	103°52'23.672"W	7.54	
8393.00	18.100	157.000	8387.43	31.34	-50.49	23.97	641671.37	587383.21	32°36'50.320"N	103°52'23.631"W	5.88	
8425.00	20.300	156.700	8417.65	36.89	-60.17	28.11	641675.51	587373.53	32°36'50.224"N	103°52'23.583"W	6.88	
8457.00	22.000	155.700	8447.49	43.10	-70.73	32.77	641680.17	587362.97	32°36'50.120"N	103°52'23.529"W	5.43	
8490.00	23.700	155.000	8477.90	50.15	-82.38	38.12	641685.52	587351.33	32°36'50.004"N	103°52'23.467"W	5.22	
8521.00	25.000	154.900	8506.14	57.25	-93.96	43.53	641690.93	587339.75	32°36'49.889"N	103°52'23.405"W	4.20	
8553.00	27.100	155.100	8534.89	65.05	-106.69	49.47	641696.87	587327.02	32°36'49.763"N	103°52'23.336"W	6.57	
8585.00	29.700	154.400	8563.03	73.55	-120.45	55.97	641703.36	587313.25	32°36'49.627"N	103°52'23.261"W	8.19	
8617.00	32.400	153.000	8590.45	83.02	-135.25	63.29	641710.68	587298.46	32°36'49.480"N	103°52'23.176"W	8.73	
8648.00	35.600	151.700	8616.14	93.30	-150.59	71.34	641718.73	587283.12	32°36'49.328"N	103°52'23.083"W	10.59	
8680.00	38.200	149.700	8641.73	105.14	-167.34	80.75	641728.14	587266.37	32°36'49.162"N	103°52'22.973"W	8.95	
8712.00	40.500	148.200	8666.48	118.12	-184.72	91.22	641738.61	587248.99	32°36'48.989"N	103°52'22.852"W	7.78	
8744.00	42.500	147.000	8690.44	132.06	-202.62	102.58	641749.97	587231.10	32°36'48.812"N	103°52'22.720"W	6.73	
8776.00	45.400	145.700	8713.48	147.02	-221.10	114.89	641762.28	587212.62	32°36'48.628"N	103°52'22.577"W	9.49	
8807.00	48.200	144.700	8734.70	162.58	-239.65	127.79	641775.18	587194.07	32°36'48.444"N	103°52'22.427"W	9.33	
8839.00	51.400	143.300	8755.35	179.78	-259.42	142.16	641789.55	587174.30	32°36'48.248"N	103°52'22.260"W	10.54	
8871.00	54.500	142.700	8774.63	198.06	-279.81	157.53	641804.92	587153.91	32°36'48.046"N	103°52'22.082"W	9.80	



# Actual Wellpath Report

No.257H AWP

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REFERENCE WELLPATH IDENTIFICATION				
Operator	BOPCO, L.P.		Slot	No.257H SHL
Area	Eddy County, NM		Well	No.257H
Field	Big Eddy		Wellbore	No.257H AWB
Facility	Big Eddy Unit No.256H & No.257H			

WELLPATH DATA (190 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
8902.00	57.300	142.300	8792.01	216.58	-300.17	173.15	641820.54	587133.55	32°36'47.843"N	103°52'21.900"W	9.10	
8933.00	58.500	141.900	8808.48	235.67	-320.89	189.29	641836.67	587112.83	32°36'47.638"N	103°52'21.712"W	4.02	
8965.00	60.500	141.800	8824.72	255.78	-342.57	206.32	641853.70	587091.15	32°36'47.422"N	103°52'21.514"W	6.26	
8997.00	62.300	141.600	8840.04	276.33	-364.62	223.73	641871.11	587069.10	32°36'47.204"N	103°52'21.312"W	5.65	
9029.00	64.700	141.000	8854.31	297.41	-386.97	241.64	641889.02	587046.76	32°36'46.982"N	103°52'21.104"W	7.69	
9060.00	66.800	141.300	8867.05	318.27	-408.98	259.36	641906.75	587024.75	32°36'46.763"N	103°52'20.898"W	6.83	
9092.00	68.300	140.800	8879.27	340.13	-431.98	277.96	641925.34	587001.75	32°36'46.535"N	103°52'20.681"W	4.90	
9112.00	68.000	141.000	8886.71	353.88	-446.38	289.66	641937.04	586987.35	32°36'46.392"N	103°52'20.545"W	1.76	
9124.00	67.900	140.800	8891.21	362.12	-455.02	296.68	641944.06	586978.72	32°36'46.306"N	103°52'20.464"W	1.76	
9155.00	67.600	140.500	8902.95	383.46	-477.20	314.87	641962.25	586956.53	32°36'46.086"N	103°52'20.252"W	1.32	
9187.00	68.400	140.000	8914.94	405.66	-500.01	333.84	641981.22	586933.72	32°36'45.859"N	103°52'20.032"W	2.89	
9218.00	70.700	139.500	8925.77	427.57	-522.18	352.61	641999.98	586911.56	32°36'45.639"N	103°52'19.813"W	7.57	
9250.00	73.200	138.200	8935.69	450.82	-545.09	372.63	642020.00	586888.65	32°36'45.411"N	103°52'19.580"W	8.72	
9281.00	75.600	137.900	8944.02	473.91	-567.29	392.59	642039.96	586866.45	32°36'45.191"N	103°52'19.348"W	7.80	
9313.00	75.700	136.400	8951.95	498.19	-590.02	413.67	642061.04	586843.72	32°36'44.965"N	103°52'19.103"W	4.55	
9344.00	75.600	136.500	8959.64	521.94	-611.78	434.36	642081.73	586821.96	32°36'44.749"N	103°52'18.862"W	0.45	
9375.00	75.200	136.400	8967.45	545.66	-633.53	455.03	642102.40	586800.22	32°36'44.533"N	103°52'18.622"W	1.33	
9407.00	75.300	133.000	8975.60	570.69	-655.29	477.02	642124.39	586778.46	32°36'44.317"N	103°52'18.366"W	10.28	
9438.00	75.200	130.900	8983.49	595.76	-675.33	499.32	642146.68	586758.42	32°36'44.117"N	103°52'18.106"W	6.56	
9470.00	75.700	129.000	8991.53	622.24	-695.22	523.06	642170.43	586738.53	32°36'43.919"N	103°52'17.829"W	5.96	
9502.00	75.000	127.600	8999.63	649.16	-714.40	547.36	642194.72	586719.35	32°36'43.729"N	103°52'17.546"W	4.76	
9534.00	74.800	125.500	9007.96	676.48	-732.80	572.18	642219.54	586700.95	32°36'43.545"N	103°52'17.257"W	6.37	
9565.00	74.900	124.000	9016.07	703.36	-749.86	596.76	642244.12	586683.90	32°36'43.376"N	103°52'16.971"W	4.68	
9597.00	75.100	122.600	9024.35	731.47	-766.83	622.59	642269.95	586666.93	32°36'43.207"N	103°52'16.670"W	4.27	
9628.00	75.800	120.600	9032.14	759.11	-782.55	648.15	642295.50	586651.21	32°36'43.050"N	103°52'16.372"W	6.64	
9660.00	76.400	119.200	9039.82	788.07	-798.03	675.08	642322.43	586635.72	32°36'42.896"N	103°52'16.058"W	4.64	
9691.00	77.400	117.800	9046.85	816.48	-812.44	701.61	642348.96	586621.32	32°36'42.752"N	103°52'15.748"W	5.45	
9723.00	78.500	116.600	9053.53	846.15	-826.74	729.44	642376.79	586607.02	32°36'42.609"N	103°52'15.423"W	5.03	
9754.00	79.500	115.300	9059.45	875.21	-840.06	756.81	642404.15	586593.70	32°36'42.476"N	103°52'15.104"W	5.23	
9786.00	80.400	114.000	9065.03	905.51	-853.20	785.44	642432.79	586580.56	32°36'42.345"N	103°52'14.770"W	4.89	
9817.00	80.400	112.600	9070.20	935.09	-865.29	813.52	642460.86	586568.47	32°36'42.224"N	103°52'14.443"W	4.45	
9848.00	80.800	110.900	9075.26	964.88	-876.62	841.92	642489.26	586557.14	32°36'42.111"N	103°52'14.111"W	5.56	
9880.00	81.200	109.100	9080.27	995.87	-887.43	871.62	642518.96	586546.33	32°36'42.003"N	103°52'13.764"W	5.69	
9912.00	81.500	107.500	9085.08	1027.07	-897.36	901.65	642548.99	586536.40	32°36'41.903"N	103°52'13.414"W	5.03	
9943.00	82.100	106.200	9089.51	1057.44	-906.25	931.02	642578.35	586527.51	32°36'41.814"N	103°52'13.071"W	4.58	
9975.00	82.800	103.900	9093.71	1088.96	-914.49	961.65	642608.98	586519.27	32°36'41.731"N	103°52'12.713"W	7.45	
10006.00	83.500	101.900	9097.41	1119.66	-921.36	991.65	642638.98	586512.40	32°36'41.662"N	103°52'12.363"W	6.79	
10037.00	83.900	100.300	9100.81	1150.44	-927.29	1021.89	642669.22	586506.47	32°36'41.602"N	103°52'12.010"W	5.29	
10069.00	84.200	98.200	9104.13	1182.27	-932.41	1053.30	642700.63	586501.36	32°36'41.550"N	103°52'11.643"W	6.59	
10101.00	84.300	97.200	9107.33	1214.10	-936.67	1084.85	642732.18	586497.09	32°36'41.506"N	103°52'11.274"W	3.12	
10132.00	84.900	96.200	9110.25	1244.94	-940.27	1115.50	642762.82	586493.49	32°36'41.469"N	103°52'10.916"W	3.75	
10164.00	85.600	95.000	9112.90	1276.79	-943.39	1147.24	642794.56	586490.38	32°36'41.437"N	103°52'10.545"W	4.33	
10196.00	86.500	93.700	9115.11	1308.62	-945.81	1179.07	642826.39	586487.96	32°36'41.412"N	103°52'10.173"W	4.93	
10227.00	87.600	92.200	9116.70	1339.42	-947.40	1209.99	642857.30	586486.37	32°36'41.395"N	103°52'09.812"W	6.00	
10259.00	88.200	91.200	9117.87	1371.16	-948.35	1241.95	642889.26	586485.42	32°36'41.384"N	103°52'09.438"W	3.64	



# Actual Wellpath Report

No.257H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.257H SHL
Area	Eddy County, NM	Well	No.257H
Field	Big Eddy	Wellbore	No.257H AWB
Facility	Big Eddy Unit No.256H & No.257H		

## WELLPATH DATA (190 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
10354.00	88.000	90.200	9121.02	1465.18	-949.51	1336.89	642984.20	586484.26	32°36'41.368"N	103°52'08.329"W	1.07	
10448.00	88.900	89.600	9123.57	1558.04	-949.35	1430.85	643078.15	586484.42	32°36'41.366"N	103°52'07.230"W	1.15	
10542.00	89.200	91.000	9125.13	1651.01	-949.84	1524.84	643172.13	586483.93	32°36'41.357"N	103°52'06.131"W	1.52	
10636.00	88.700	90.300	9126.85	1744.07	-950.90	1618.81	643266.10	586482.86	32°36'41.342"N	103°52'05.033"W	0.92	
10729.00	88.500	89.200	9129.12	1835.91	-950.50	1711.78	643359.07	586483.27	32°36'41.342"N	103°52'03.946"W	1.20	
10823.00	88.300	89.300	9131.74	1928.59	-949.27	1805.74	643453.01	586484.50	32°36'41.350"N	103°52'02.848"W	0.24	
10918.00	88.300	90.900	9134.56	2022.48	-949.43	1900.69	643547.96	586484.33	32°36'41.345"N	103°52'01.738"W	1.68	
11012.00	86.700	90.000	9138.66	2115.41	-950.17	1994.60	643641.86	586483.59	32°36'41.333"N	103°52'00.640"W	1.95	
11107.00	87.800	88.800	9143.22	2209.05	-949.18	2089.48	643736.73	586484.59	32°36'41.339"N	103°51'59.531"W	1.71	
11202.00	89.600	89.100	9145.38	2302.65	-947.44	2184.44	643831.68	586486.33	32°36'41.352"N	103°51'58.421"W	1.92	
11297.00	89.900	89.700	9145.79	2396.40	-946.44	2279.43	643926.67	586487.32	32°36'41.358"N	103°51'57.310"W	0.71	
11391.00	89.900	90.000	9145.96	2489.28	-946.20	2373.43	644020.66	586487.57	32°36'41.356"N	103°51'56.211"W	0.32	
11486.00	89.800	89.100	9146.20	2583.07	-945.45	2468.42	644115.65	586488.32	32°36'41.359"N	103°51'55.101"W	0.95	
11580.00	89.500	90.200	9146.78	2675.90	-944.88	2562.42	644209.64	586488.89	32°36'41.361"N	103°51'54.002"W	1.21	
11675.00	88.700	89.900	9148.27	2769.80	-944.96	2657.41	644304.62	586488.81	32°36'41.356"N	103°51'52.891"W	0.90	
11770.00	88.300	90.800	9150.76	2863.76	-945.54	2752.37	644399.58	586488.23	32°36'41.346"N	103°51'51.781"W	1.04	
11864.00	88.600	90.600	9153.30	2956.81	-946.69	2846.33	644493.53	586487.08	32°36'41.331"N	103°51'50.683"W	0.38	
11957.00	87.800	89.600	9156.22	3048.72	-946.85	2939.28	644586.48	586486.92	32°36'41.325"N	103°51'49.596"W	1.38	
12052.00	88.800	89.100	9159.04	3142.41	-945.77	3034.23	644681.42	586487.99	32°36'41.331"N	103°51'48.486"W	1.18	
12147.00	89.200	90.400	9160.70	3236.24	-945.36	3129.22	644776.40	586488.41	32°36'41.331"N	103°51'47.376"W	1.43	
12242.00	88.600	90.000	9162.52	3330.17	-945.69	3224.20	644871.37	586488.08	32°36'41.324"N	103°51'46.265"W	0.76	
12337.00	87.700	88.600	9165.59	3423.85	-944.53	3319.14	644966.30	586489.24	32°36'41.331"N	103°51'45.156"W	1.75	
12431.00	87.900	90.100	9169.20	3516.52	-943.46	3413.06	645060.22	586490.30	32°36'41.338"N	103°51'44.058"W	1.61	
12526.00	89.200	91.400	9171.60	3610.58	-944.71	3508.02	645155.17	586489.06	32°36'41.321"N	103°51'42.948"W	1.93	
12621.00	88.700	91.000	9173.34	3704.75	-946.70	3602.98	645250.13	586487.07	32°36'41.297"N	103°51'41.838"W	0.67	
12716.00	89.700	89.800	9174.67	3798.74	-947.36	3697.96	645345.11	586486.41	32°36'41.287"N	103°51'40.727"W	1.64	
12811.00	89.400	89.500	9175.41	3892.55	-946.78	3792.96	645440.09	586486.99	32°36'41.288"N	103°51'39.617"W	0.45	
12905.00	88.500	89.300	9177.14	3985.30	-945.80	3886.94	645534.07	586487.97	32°36'41.294"N	103°51'38.518"W	0.98	
13000.00	88.400	90.500	9179.71	4079.14	-945.63	3981.90	645629.02	586488.14	32°36'41.291"N	103°51'37.408"W	1.27	
13094.00	88.000	89.800	9182.66	4172.05	-945.88	4075.85	645722.97	586487.89	32°36'41.285"N	103°51'36.309"W	0.86	
13188.00	88.200	90.600	9185.78	4264.97	-946.20	4169.80	645816.91	586487.56	32°36'41.277"N	103°51'35.211"W	0.88	
13283.00	90.300	90.900	9187.02	4359.04	-947.45	4264.78	645911.88	586486.32	32°36'41.261"N	103°51'34.101"W	2.23	
13378.00	89.800	89.600	9186.94	4453.00	-947.86	4359.77	646006.87	586485.90	32°36'41.253"N	103°51'32.991"W	1.47	
13473.00	89.500	88.600	9187.52	4546.67	-946.37	4454.76	646101.85	586487.40	32°36'41.263"N	103°51'31.880"W	1.10	
13568.00	90.000	89.500	9187.93	4640.32	-944.79	4549.74	646196.83	586488.97	32°36'41.274"N	103°51'30.770"W	1.08	
13663.00	90.400	89.400	9187.60	4734.08	-943.88	4644.74	646291.81	586489.88	32°36'41.279"N	103°51'29.659"W	0.43	
13758.00	91.100	88.800	9186.36	4827.74	-942.39	4739.72	646386.79	586491.38	32°36'41.290"N	103°51'28.549"W	0.97	
13853.00	90.100	89.000	9185.36	4921.35	-940.57	4834.69	646481.76	586493.20	32°36'41.304"N	103°51'27.438"W	1.07	
13947.00	89.100	91.500	9186.02	5014.32	-940.98	4928.68	646575.74	586492.79	32°36'41.295"N	103°51'26.340"W	2.86	
14042.00	87.500	91.600	9188.84	5108.53	-943.55	5023.60	646670.65	586490.22	32°36'41.266"N	103°51'25.230"W	1.69	
14137.00	89.100	91.100	9191.65	5202.71	-945.78	5118.53	646765.57	586487.98	32°36'41.240"N	103°51'24.120"W	1.76	
14232.00	88.600	91.500	9193.56	5296.90	-947.94	5213.49	646860.52	586485.83	32°36'41.214"N	103°51'23.011"W	0.67	
14327.00	87.600	92.000	9196.71	5391.14	-950.84	5308.39	646955.42	586482.93	32°36'41.181"N	103°51'21.901"W	1.18	
14422.00	88.300	92.000	9200.11	5485.43	-954.15	5403.27	647050.29	586479.62	32°36'41.144"N	103°51'20.792"W	0.74	
14516.00	89.700	90.900	9201.75	5578.66	-956.53	5497.22	647144.24	586477.24	32°36'41.116"N	103°51'19.694"W	1.89	



# Actual Wellpath Report

No.257H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	BOPCO, L.P.	Slot	No.257H SHL
Area	Eddy County, NM	Well	No.257H
Field	Big Eddy	Wellbore	No.257H AWB
Facility	Big Eddy Unit No.256H & No.257H		

WELLPATH DATA (190 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
14611.00	89.000	89.900	9202.83	5672.66	-957.19	5592.21	647239.22	586476.58	32°36'41.106"N	103°51'18.584"W	1.28	
14706.00	87.800	88.000	9205.48	5766.24	-955.45	5687.15	647334.16	586478.32	32°36'41.119"N	103°51'17.474"W	2.36	
14801.00	88.700	88.200	9208.38	5859.58	-952.30	5782.06	647429.05	586481.46	32°36'41.146"N	103°51'16.364"W	0.97	
14896.00	88.700	88.500	9210.54	5953.01	-949.57	5876.99	647523.98	586484.20	32°36'41.168"N	103°51'15.254"W	0.32	
14991.00	88.600	86.700	9212.77	6046.20	-945.59	5971.88	647618.86	586488.17	32°36'41.203"N	103°51'14.145"W	1.90	
15086.00	88.700	88.800	9215.01	6139.44	-941.86	6066.77	647713.75	586491.90	32°36'41.236"N	103°51'13.035"W	2.21	
15180.00	88.600	89.000	9217.23	6232.04	-940.06	6160.73	647807.70	586493.71	32°36'41.250"N	103°51'11.937"W	0.24	
15274.00	88.000	88.600	9220.02	6324.60	-938.09	6254.67	647901.63	586495.67	32°36'41.265"N	103°51'10.838"W	0.77	
15380.00	87.700	88.600	9223.99	6428.88	-935.50	6360.56	648007.52	586498.26	32°36'41.286"N	103°51'09.600"W	0.28	
15457.00	87.700	88.600	9227.08	6504.62	-933.62	6437.48	648084.43	586500.14	32°36'41.301"N	103°51'08.701"W	0.00	Proj to Bit

TARGETS										
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape	
BEU No. 257H PBHL		9225.00	-971.87	6348.33	647995.29	586461.90	32°36'40.927"N	103°51'09.745"W	point	

WELLPATH COMPOSITION - Ref Wellbore: No.257H AWB					Ref Wellpath: No.257H AWP		
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment		Wellbore		
0.00	4140.00	Generic gyro - northseeking (Standard)	MS Gyro <154-4140>		No.257H AWB		
4140.00	15380.00	NaviTrak (Standard)	BHI MWD NaviTrak <4241-15380>		No.257H AWB		
15380.00	15457.00	Blind Drilling (std)	Projection to bit		No.257H AWB		



Job Number: SVMO-140185  
 Company: BOPCO, LP  
 Lease/Well: Big Eddy Unit 257  
 Location: Eddy County, NM  
 Rig Name: Latshaw #4  
 RKB: 22'  
 G.L. or M.S.L.: GL

State/Country: New Mexico/USA  
 Declination: 7.62°  
 Grid: East To Grid North  
 File name: S:\2014SU-1\BOPCO\MO\BIGEDD-1\257.SVY  
 Date/Time: 18-Feb-14 / 11:01  
 Curve Name: Surface - 4140' M.D. (Rate Gyro)

WINSERVE SURVEY CALCULATIONS  
 Minimum Curvature Method  
 Vertical Section Plane .00  
 Vertical Section Referenced to Wellhead  
 Rectangular Coordinates Referenced to Wellhead

We hereby certify that our survey data from  
 Surface MD to 4140' MD is, to the best of  
 our knowledge a true and accurate account of  
 the well bore.  
 Daniel West 2/18/14  
 MS Energy Services Date

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
154.00	.69	234.97	154.00	-.53	-.76	-.53	.93	234.97	.45
249.00	.82	127.65	248.99	-1.28	-.69	-1.28	1.45	208.39	1.28
344.00	1.31	128.58	343.97	-2.37	.70	-2.37	2.47	163.59	.52
439.00	1.35	113.64	438.95	-3.49	2.57	-3.49	4.34	143.65	.37
533.00	1.26	111.98	532.93	-4.33	4.54	-4.33	6.27	133.58	.10
628.00	1.14	107.55	627.90	-5.00	6.41	-5.00	8.13	127.94	.16
724.00	1.00	108.91	723.89	-5.56	8.12	-5.56	9.84	124.41	.15
818.00	1.02	108.12	817.87	-6.09	9.69	-6.09	11.44	122.14	.03
913.00	1.03	113.70	912.86	-6.69	11.27	-6.69	13.11	120.70	.11



Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
1008.00	1.06	121.26	1007.84	-7.49	12.81	-7.49	14.84	120.33	.15
1103.00	1.02	121.80	1102.83	-8.39	14.28	-8.39	16.56	120.45	.04
1198.00	.96	123.35	1197.81	-9.28	15.66	-9.28	18.20	120.64	.07
1293.00	.78	123.23	1292.80	-10.07	16.87	-10.07	19.64	120.84	.19
1388.00	.61	120.09	1387.79	-10.68	17.84	-10.68	20.79	120.89	.18
1483.00	.44	112.17	1482.79	-11.07	18.62	-11.07	21.66	120.73	.19
1578.00	.30	99.34	1577.79	-11.25	19.20	-11.25	22.25	120.35	.17
1672.00	.23	86.37	1671.79	-11.27	19.63	-11.27	22.64	119.86	.10
1767.00	.21	73.09	1766.79	-11.21	19.99	-11.21	22.92	119.28	.06
1862.00	.34	65.16	1861.79	-11.04	20.41	-11.04	23.21	118.41	.14
1957.00	.41	63.82	1956.78	-10.77	20.97	-10.77	23.58	117.19	.07
2052.00	.44	55.72	2051.78	-10.42	21.58	-10.42	23.96	115.77	.07
2147.00	.47	53.15	2146.78	-9.98	22.19	-9.98	24.33	114.21	.04
2242.00	.35	52.02	2241.78	-9.57	22.73	-9.57	24.66	112.82	.13
2337.00	.23	48.88	2336.77	-9.26	23.11	-9.26	24.89	111.84	.13
2432.00	.20	39.77	2431.77	-9.01	23.36	-9.01	25.03	111.09	.05
2527.00	.20	30.50	2526.77	-8.74	23.55	-8.74	25.12	110.36	.03
2621.00	.22	26.42	2620.77	-8.44	23.71	-8.44	25.17	109.59	.03
2716.00	.26	19.79	2715.77	-8.07	23.86	-8.07	25.19	108.68	.05
2811.00	.64	15.05	2810.77	-7.36	24.07	-7.36	25.17	106.99	.40
2906.00	.92	12.70	2905.76	-6.10	24.38	-6.10	25.13	104.04	.30
3001.00	.96	11.12	3000.75	-4.57	24.70	-4.57	25.12	100.49	.05
3095.00	.90	14.46	3094.73	-3.09	25.04	-3.09	25.23	97.03	.09
3190.00	1.10	10.61	3189.72	-1.47	25.39	-1.47	25.43	93.31	.22
3285.00	1.49	351.77	3284.70	.65	25.38	.65	25.39	88.53	.60
3380.00	1.57	347.02	3379.66	3.14	24.91	3.14	25.11	82.81	.16
3475.00	1.32	347.38	3474.63	5.48	24.38	5.48	24.99	77.34	.26
3570.00	1.25	347.72	3569.61	7.56	23.92	7.56	25.09	72.47	.07
3665.00	1.19	347.62	3664.59	9.53	23.49	9.53	25.35	67.91	.06

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
3760.00	1.25	346.65	3759.56	11.51	23.04	11.51	25.75	63.46	.07
3855.00	1.26	349.20	3854.54	13.54	22.61	13.54	26.35	59.08	.06
3950.00	1.19	349.04	3949.52	15.53	22.22	15.53	27.11	55.04	.07
4045.00	1.25	348.97	4044.50	17.52	21.84	17.52	28.00	51.26	.06
<b>Last Survey Depth Recorded</b>									
4140.00	1.14	349.04	4139.48	19.46	21.46	19.46	28.97	47.79	.12