



Job Number: SVMO-140860
 Company: BOPCO, LP
 Lease/Well: Poker Lane Unit CVX JV BS 029H
 Location: Eddy County, NM
 Rig Name: Latshaw #4
 RKB: 21'
 G.L. or M.S.L.: GL

State/Country: New Mexico/USA
 Declination: 7.23°
 Grid: East To Grid North
 File name: Y:\WINSER~1\2014SU~1\BOPCO\MO\POKERL~1\CVXJV\BS029H.SVY
 Date/Time: 26-Jun-14 / 11:04
 Curve Name: Surface - 1600' M.D. (Rate Gyro)

NM OIL CONSERVATION
 ARTESIA DISTRICT
 AUG 19 2014
 RECEIVED

MS Survey

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane .24
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

We hereby certify that our survey data from
 Surface MD to 1600 MD is, to the best of
 our knowledge a true and accurate account of
 the well bore.

James Gally 6/26/14
 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	C L O S U R E		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
100.00	.18	165.27	100.00	-.15	.04	-.15	.16	165.27	.18
200.00	.17	139.96	200.00	-.42	.18	-.42	.45	157.22	.08
300.00	.22	124.01	300.00	-.64	.43	-.64	.77	146.04	.07
400.00	.25	109.53	400.00	-.82	.79	-.82	1.14	135.85	.07
500.00	.45	120.00	500.00	-1.09	1.34	-1.08	1.73	129.07	.21
600.00	.52	117.68	599.99	-1.50	2.08	-1.49	2.56	125.68	.07
700.00	1.01	107.08	699.98	-1.96	3.33	-1.95	3.86	120.57	.51
800.00	1.47	113.15	799.96	-2.73	5.35	-2.71	6.00	117.02	.48
900.00	1.43	111.97	899.93	-3.70	7.69	-3.67	8.53	115.70	.05

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	
1000.00	1.37	108.04	999.90	-4.54	9.98	-4.49	10.96	114.44	.11
1100.00	.94	73.44	1099.88	-4.67	11.90	-4.62	12.79	111.43	.80
1200.00	.65	21.59	1199.87	-3.91	12.90	-3.86	13.48	106.87	.74
1300.00	.52	2.15	1299.86	-2.93	13.12	-2.88	13.45	102.59	.24
1400.00	.54	349.81	1399.86	-2.01	13.06	-1.96	13.21	98.77	.12
1500.00	.53	332.37	1499.86	-1.14	12.76	-1.09	12.81	95.10	.16
Last Survey Depth Recorded									
1600.00	.29	344.94	1599.85	-.49	12.48	-.43	12.49	92.23	.25



BOPCO, LP

Location: Eddy County, NM
Field: Eddy County, NM (NAD 27 / Grid)
Facility: PLU CVX JV BS 029H Sec. 2-25S-30E

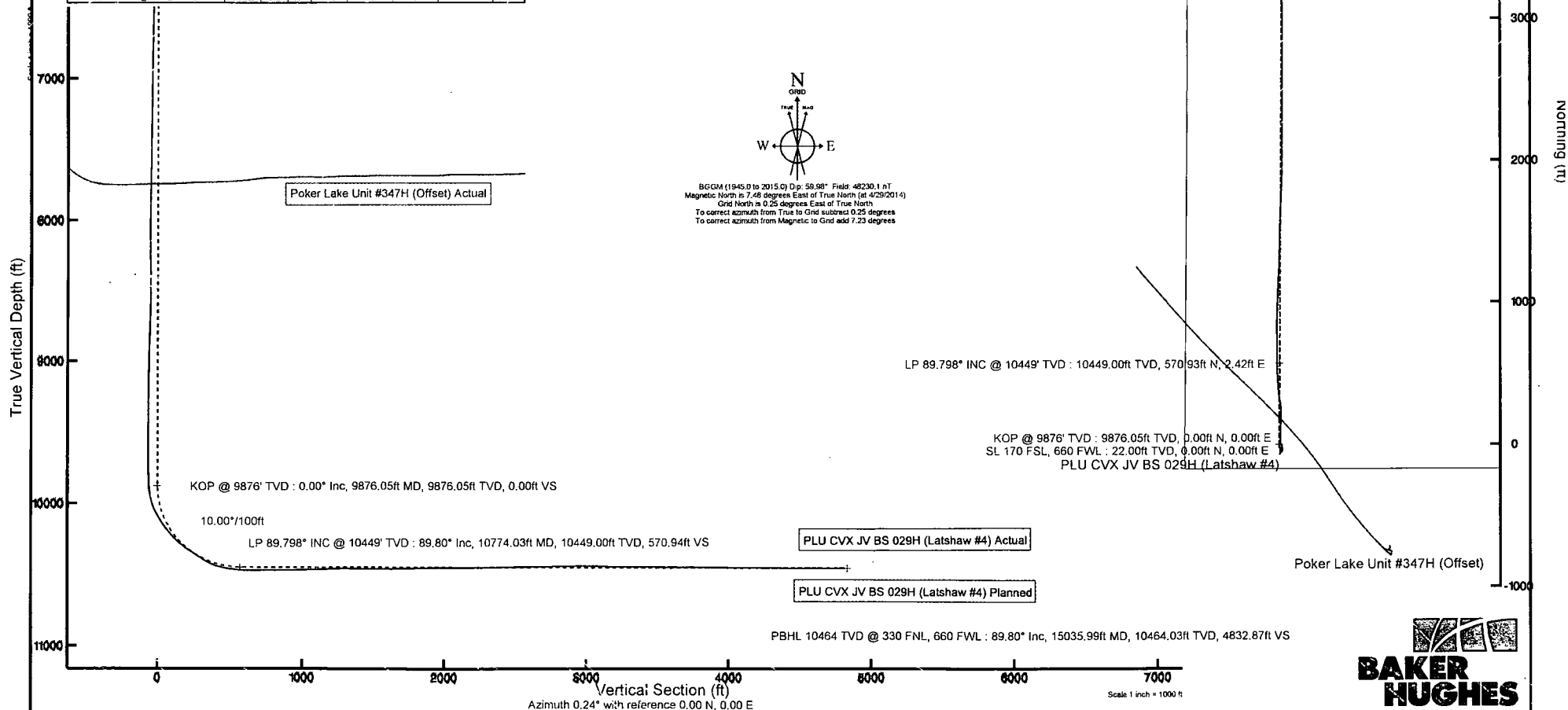
Slot: PLU CVX JV BS 029H (Latshaw #4)
Well: PLU CVX JV BS 029H (SL 170 FSL, 660 FWL)
Wellbore: PLU CVX JV BS 029H (Latshaw #4) Planned

Scale 1 inch = 1000 ft
Easting (ft)
-1000 0 1000

P&H reference wellbore is PLU CVX JV BS 029H (Latshaw #4)	
True vertical depths are referenced to Latshaw #4 (1913)	One Section 1000' / 100' New Mexico SP, Eastern Zone (1913), USFWS
Observed depths are referenced to Latshaw #4 (1913)	North American Datum
Location #4 (1913) is shown on Section 1000' / 100'	Scale: True Address
Latshaw #4 (1913) is shown on Section 1000' / 100'	Depth: as at well
Coordinates are shown referenced to SL	Created by: JH/10/2014

Location Information					
Facility Name	Grid East (USF)	Grid North (USF)	Latitude	Longitude	
PLU CVX JV BS 029H Sec. 2-25S-30E	64727.300	419647.300	32°09'10.199"N	103°11'21.489"W	
Slot	Local N (ft)	Local E (ft)	Grid East (USF)	Latitude	Longitude
PLU CVX JV BS 029H (Latshaw #4)	0.00	64727.300	419647.300	32°09'10.199"N	103°11'21.489"W
Latshaw #4 (1913) is shown on Section 1000' / 100'					
Latshaw #4 (1913) is shown on Section 1000' / 100'					
Latshaw #4 (1913) is shown on Section 1000' / 100'					
Latshaw #4 (1913) is shown on Section 1000' / 100'					

Well Profile Data						
Design Constant	MD (ft)	Inc (°)	AV (°)	TVD (ft)	Local N (ft)	Local E (ft)
SL 170 FSL, 660 FWL	22.00	0.00	0.00	22.00	0.00	0.00
KOP @ 9876' TVD	9876.05	0.00	0.00	9876.05	0.00	0.00
LP 89.798° INC @ 10449' TVD	10774.03	89.798	0.24	10449.00	570.93	2.42
PBL 10464 TVD @ 330 FNL, 660 FWL	15035.99	89.798	0.24	10464.03	4832.87	20.50





Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	PLU CVX JV BS 029H (Latshaw #4)
Area	Eddy County, NM	Well	PLU CVX JV BS 029H (SL 170 FSL, 660 FWL)
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	PLU CVX JV BS 029H (Latshaw #4) Actual
Facility	PLU CVX JV BS 029H Sec. 2-25S-30E		

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 9:57:43 AM
Convergence at slot	0.25° East	Database/Source file	WA_Midland/PLU_CVX_JV_BS_029H_Latshaw_#4_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	647221.30	419647.30	32°09'10.199"N	103°51'27.466"W
Facility Reference Pt			647221.30	419647.30	32°09'10.199"N	103°51'27.466"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 #4 (RKB) to Facility Vertical Datum	22.00ft
Horizontal Reference Pt	Slot	Latshaw #4 (RKB) to Mean Sea Level	3367.00ft
Vertical Reference Pt	Latshaw #4 (RKB)	Latshaw #4 (RKB) to Mud Line at Slot (PLU CVX JV BS 029H (Latshaw #4))	22.00ft
MD Reference Pt	Latshaw #4 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	0.24°



Actual Wellpath Report

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BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	PLU CVX JV BS 029H (Latshaw #4)
Area	Eddy County, NM	Well	PLU CVX JV BS 029H (SL 170 FSL, 660 FWL)
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	PLU CVX JV BS 029H (Latshaw #4) Actual
Facility	PLU CVX JV BS 029H Sec. 2-25S-30E		

WELLPATH DATA (140 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	165.270	0.00	0.00	0.00	0.00	647221.30	419647.30	32°09'10.199"N	103°51'27.466"W	0.00	
22.00	0.000	165.270	22.00	0.00	0.00	0.00	647221.30	419647.30	32°09'10.199"N	103°51'27.466"W	0.00	
100.00	0.180	165.270	100.00	-0.12	-0.12	0.03	647221.33	419647.18	32°09'10.198"N	103°51'27.466"W	0.23	
200.00	0.170	139.960	200.00	-0.38	-0.38	0.17	647221.47	419646.92	32°09'10.195"N	103°51'27.464"W	0.08	
300.00	0.220	124.010	300.00	-0.60	-0.60	0.42	647221.72	419646.70	32°09'10.193"N	103°51'27.461"W	0.07	
400.00	0.250	109.530	400.00	-0.78	-0.79	0.79	647222.09	419646.51	32°09'10.191"N	103°51'27.457"W	0.07	
500.00	0.450	120.000	500.00	-1.05	-1.05	1.33	647222.63	419646.25	32°09'10.189"N	103°51'27.450"W	0.21	
600.00	0.520	117.680	599.99	-1.45	-1.46	2.07	647223.37	419645.84	32°09'10.185"N	103°51'27.442"W	0.07	
700.00	1.010	107.080	699.98	-1.92	-1.93	3.32	647224.62	419645.37	32°09'10.180"N	103°51'27.427"W	0.51	
800.00	1.470	113.150	799.96	-2.67	-2.69	5.34	647226.64	419644.61	32°09'10.172"N	103°51'27.404"W	0.48	
900.00	1.430	111.970	899.93	-3.63	-3.67	7.68	647228.98	419643.63	32°09'10.163"N	103°51'27.377"W	0.05	
1000.00	1.370	108.040	999.90	-4.46	-4.50	9.97	647231.27	419642.80	32°09'10.154"N	103°51'27.350"W	0.11	
1100.00	0.940	73.440	1099.88	-4.59	-4.64	11.89	647233.19	419642.66	32°09'10.153"N	103°51'27.328"W	0.80	
1200.00	0.650	21.590	1199.87	-3.82	-3.88	12.89	647234.19	419643.42	32°09'10.160"N	103°51'27.316"W	0.74	
1300.00	0.520	2.150	1299.86	-2.84	-2.90	13.11	647234.41	419644.40	32°09'10.170"N	103°51'27.314"W	0.24	
1400.00	0.540	349.810	1399.86	-1.92	-1.98	13.05	647234.35	419645.32	32°09'10.179"N	103°51'27.314"W	0.12	
1500.00	0.530	332.370	1499.86	-1.05	-1.11	12.75	647234.05	419646.19	32°09'10.188"N	103°51'27.318"W	0.16	
1600.00	0.290	344.940	1599.85	-0.40	-0.45	12.47	647233.77	419646.85	32°09'10.194"N	103°51'27.321"W	0.25	Tie to Gyro
1741.00	0.500	318.400	1740.85	0.40	0.35	11.97	647233.27	419647.65	32°09'10.202"N	103°51'27.327"W	0.19	
1932.00	0.200	237.700	1931.85	0.84	0.80	11.13	647232.43	419648.10	32°09'10.207"N	103°51'27.336"W	0.27	
2122.00	0.200	301.300	2121.85	0.84	0.79	10.57	647231.87	419648.09	32°09'10.207"N	103°51'27.343"W	0.11	
2312.00	0.500	313.100	2311.84	1.57	1.53	9.68	647230.98	419648.83	32°09'10.214"N	103°51'27.353"W	0.16	
2501.00	0.200	208.000	2500.84	1.84	1.80	8.92	647230.22	419649.10	32°09'10.217"N	103°51'27.362"W	0.31	
2692.00	0.200	238.600	2691.84	1.37	1.34	8.48	647229.78	419648.64	32°09'10.212"N	103°51'27.367"W	0.06	
2882.00	0.200	279.500	2881.84	1.25	1.22	7.87	647229.17	419648.52	32°09'10.211"N	103°51'27.374"W	0.07	
3072.00	0.200	244.200	3071.84	1.16	1.13	7.25	647228.55	419648.43	32°09'10.210"N	103°51'27.382"W	0.06	
3262.00	0.200	76.100	3261.84	1.09	1.06	7.27	647228.57	419648.36	32°09'10.209"N	103°51'27.381"W	0.21	
3453.00	0.900	117.300	3452.83	0.49	0.46	8.93	647230.23	419647.76	32°09'10.203"N	103°51'27.362"W	0.40	
3643.00	1.000	143.200	3642.80	-1.51	-1.56	11.25	647232.55	419645.74	32°09'10.183"N	103°51'27.335"W	0.23	
3833.00	1.400	150.600	3832.76	-4.85	-4.91	13.38	647234.68	419642.39	32°09'10.150"N	103°51'27.311"W	0.23	
3928.00	0.900	146.600	3927.74	-6.48	-6.54	14.36	647235.66	419640.76	32°09'10.134"N	103°51'27.299"W	0.53	
4030.00	0.400	154.400	4029.73	-7.47	-7.53	14.95	647236.25	419639.77	32°09'10.124"N	103°51'27.292"W	0.50	
4221.00	0.600	346.100	4220.73	-7.10	-7.16	15.00	647236.30	419640.14	32°09'10.128"N	103°51'27.292"W	0.52	
4411.00	0.700	146.200	4410.73	-7.09	-7.16	15.41	647236.71	419640.14	32°09'10.128"N	103°51'27.287"W	0.67	
4602.00	0.700	147.700	4601.71	-9.04	-9.11	16.68	647237.98	419638.19	32°09'10.108"N	103°51'27.272"W	0.01	
4792.00	0.600	166.800	4791.70	-10.99	-11.06	17.53	647238.83	419636.24	32°09'10.089"N	103°51'27.263"W	0.12	
4982.00	0.600	173.200	4981.69	-12.94	-13.02	17.87	647239.17	419634.28	32°09'10.070"N	103°51'27.259"W	0.04	
5172.00	0.600	189.700	5171.68	-14.91	-14.99	17.82	647239.12	419632.31	32°09'10.050"N	103°51'27.259"W	0.09	
5362.00	0.500	193.800	5361.67	-16.70	-16.78	17.46	647238.76	419630.53	32°09'10.032"N	103°51'27.264"W	0.06	
5553.00	0.200	113.000	5552.67	-17.64	-17.71	17.57	647238.86	419629.59	32°09'10.023"N	103°51'27.262"W	0.27	
5743.00	0.800	142.800	5742.66	-18.82	-18.90	18.67	647239.97	419628.40	32°09'10.011"N	103°51'27.250"W	0.33	
5933.00	1.000	167.100	5932.64	-21.49	-21.57	19.85	647241.14	419625.73	32°09'09.985"N	103°51'27.236"W	0.22	
6123.00	0.900	157.600	6122.61	-24.48	-24.57	20.78	647242.08	419622.73	32°09'09.955"N	103°51'27.225"W	0.10	
6313.00	0.900	184.800	6312.59	-27.35	-27.44	21.23	647242.53	419619.87	32°09'09.927"N	103°51'27.220"W	0.22	
6503.00	0.800	183.000	6502.57	-30.16	-30.25	21.03	647242.33	419617.05	32°09'09.899"N	103°51'27.223"W	0.05	



Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	PLU CVX JV BS 029H (Latshaw #4)
Area	Eddy County, NM	Well	PLU CVX JV BS 029H (SL 170 FSL, 660 FWL)
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	PLU CVX JV BS 029H (Latshaw #4) Actual
Facility	PLU CVX JV BS 029H Sec. 2-25S-30E		

WELLPATH DATA (140 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
6693.00	1.100	170.600	6692.54	-33.28	-33.37	21.26	647242.56	419613.93	32°09'09.868"N	103°51'27.220"W	0.19	
6883.00	0.900	195.700	6882.51	-36.52	-36.61	21.16	647242.45	419610.70	32°09'09.836"N	103°51'27.222"W	0.25	
7074.00	0.700	197.500	7073.49	-39.08	-39.16	20.40	647241.70	419608.14	32°09'09.811"N	103°51'27.231"W	0.11	
7264.00	0.900	202.100	7263.48	-41.57	-41.65	19.49	647240.79	419605.65	32°09'09.786"N	103°51'27.241"W	0.11	
7454.00	0.900	190.700	7453.45	-44.42	-44.50	18.65	647239.95	419602.80	32°09'09.758"N	103°51'27.251"W	0.09	
7645.00	0.900	191.800	7644.43	-47.37	-47.44	18.07	647239.36	419599.86	32°09'09.729"N	103°51'27.258"W	0.01	
7835.00	0.800	205.300	7834.41	-50.03	-50.10	17.19	647238.49	419597.20	32°09'09.703"N	103°51'27.268"W	0.12	
8025.00	1.500	236.900	8024.37	-52.60	-52.66	14.54	647235.84	419594.64	32°09'09.677"N	103°51'27.299"W	0.48	
8215.00	1.800	293.500	8214.30	-52.79	-52.83	9.72	647231.02	419594.47	32°09'09.676"N	103°51'27.356"W	0.83	
8405.00	0.900	354.900	8404.26	-50.12	-50.15	6.85	647228.15	419597.15	32°09'09.703"N	103°51'27.389"W	0.83	
8594.00	1.100	175.800	8593.25	-50.45	-50.48	6.85	647228.15	419596.82	32°09'09.699"N	103°51'27.389"W	1.06	
8784.00	2.200	187.500	8783.17	-55.89	-55.92	6.51	647227.81	419591.38	32°09'09.646"N	103°51'27.393"W	0.60	
8974.00	1.000	213.000	8973.09	-60.90	-60.93	5.13	647226.43	419586.38	32°09'09.596"N	103°51'27.409"W	0.72	
9164.00	0.600	214.600	9163.07	-63.12	-63.13	3.67	647224.96	419584.17	32°09'09.574"N	103°51'27.427"W	0.21	
9355.00	0.300	151.400	9354.07	-64.38	-64.40	3.34	647224.64	419582.91	32°09'09.562"N	103°51'27.430"W	0.28	
9545.00	0.200	85.800	9544.06	-64.79	-64.81	3.91	647225.21	419582.50	32°09'09.558"N	103°51'27.424"W	0.15	
9735.00	0.300	32.200	9734.06	-64.34	-64.36	4.50	647225.80	419582.94	32°09'09.562"N	103°51'27.417"W	0.13	
9851.00	1.600	13.800	9850.04	-62.51	-62.53	5.05	647226.35	419584.77	32°09'09.580"N	103°51'27.410"W	1.14	
9883.00	4.600	9.900	9881.99	-60.81	-60.84	5.38	647226.68	419586.47	32°09'09.597"N	103°51'27.406"W	9.39	
9915.00	7.500	9.600	9913.81	-57.49	-57.51	5.95	647227.25	419589.79	32°09'09.630"N	103°51'27.400"W	9.06	
9947.00	10.800	6.800	9945.40	-52.45	-52.47	6.65	647227.95	419594.83	32°09'09.680"N	103°51'27.391"W	10.40	
9978.00	15.300	4.200	9975.59	-45.48	-45.51	7.29	647228.59	419601.80	32°09'09.749"N	103°51'27.383"W	14.64	
10010.00	19.400	359.800	10006.13	-35.95	-35.98	7.58	647228.88	419611.32	32°09'09.843"N	103°51'27.380"W	13.44	
10042.00	23.600	357.900	10035.90	-24.23	-24.26	7.33	647228.63	419623.04	32°09'09.959"N	103°51'27.382"W	13.30	
10074.00	26.000	359.100	10064.95	-10.81	-10.84	6.99	647228.28	419636.46	32°09'10.092"N	103°51'27.385"W	7.66	
10105.00	28.600	0.000	10092.49	3.40	3.38	6.88	647228.18	419650.68	32°09'10.232"N	103°51'27.386"W	8.49	
10137.00	31.800	359.900	10120.14	19.50	19.47	6.86	647228.16	419666.77	32°09'10.392"N	103°51'27.385"W	10.00	
10169.00	34.600	0.200	10146.92	37.02	36.99	6.88	647228.18	419684.29	32°09'10.565"N	103°51'27.384"W	8.77	
10201.00	36.800	0.300	10172.90	55.69	55.66	6.96	647228.26	419702.96	32°09'10.750"N	103°51'27.382"W	6.88	
10233.00	39.000	0.800	10198.15	75.35	75.32	7.15	647228.45	419722.61	32°09'10.944"N	103°51'27.379"W	6.94	
10264.00	41.600	1.300	10221.79	95.39	95.36	7.52	647228.82	419742.66	32°09'11.143"N	103°51'27.373"W	8.45	
10296.00	44.600	1.400	10245.16	117.25	117.22	8.04	647229.34	419764.51	32°09'11.359"N	103°51'27.366"W	9.38	
10328.00	47.500	1.500	10267.36	140.28	140.25	8.62	647229.92	419787.54	32°09'11.587"N	103°51'27.358"W	9.07	
10359.00	49.900	1.300	10287.82	163.57	163.53	9.19	647230.49	419810.82	32°09'11.817"N	103°51'27.351"W	7.76	
10391.00	52.900	1.400	10307.78	188.57	188.53	9.78	647231.08	419835.81	32°09'12.064"N	103°51'27.342"W	9.38	
10423.00	55.400	0.900	10326.52	214.50	214.46	10.30	647231.60	419861.74	32°09'12.321"N	103°51'27.335"W	7.91	
10455.00	56.300	358.900	10344.49	240.98	240.94	10.25	647231.55	419888.22	32°09'12.583"N	103°51'27.334"W	5.89	
10486.00	55.600	354.800	10361.85	266.61	266.57	8.84	647230.14	419913.86	32°09'12.837"N	103°51'27.349"W	11.19	
10518.00	55.800	350.600	10379.89	292.81	292.78	5.48	647226.78	419940.07	32°09'13.096"N	103°51'27.387"W	10.86	
10550.00	57.700	348.700	10397.43	319.11	319.11	0.67	647221.97	419966.38	32°09'13.357"N	103°51'27.442"W	7.74	
10581.00	62.400	352.900	10412.91	345.59	345.61	-3.60	647217.70	419992.89	32°09'13.619"N	103°51'27.490"W	19.17	
10613.00	65.800	354.400	10426.89	374.18	374.21	-6.77	647214.53	420021.49	32°09'13.903"N	103°51'27.525"W	11.43	
10644.00	71.100	355.600	10438.27	402.88	402.93	-9.28	647212.02	420050.20	32°09'14.187"N	103°51'27.553"W	17.47	
10676.00	76.000	356.100	10447.33	433.47	433.53	-11.50	647209.80	420080.80	32°09'14.490"N	103°51'27.577"W	15.39	
10708.00	78.900	356.900	10454.28	464.64	464.70	-13.41	647207.90	420111.97	32°09'14.798"N	103°51'27.598"W	9.39	



Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	PLU CVX JV BS 029H (Latshaw #4)
Area	Eddy County, NM	Well	PLU CVX JV BS 029H (SL 170 FSL, 660 FWL)
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	PLU CVX JV BS 029H (Latshaw #4) Actual
Facility	PLU CVX JV BS 029H Sec. 2-25S-30E		

WELLPATH DATA (140 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
10739.00	81.700	357.300	10459.50	495.15	495.21	-14.95	647206.35	420142.48	32°09'15.100"N	103°51'27.614"W	9.12	
10771.00	83.700	358.300	10463.57	526.86	526.93	-16.17	647205.13	420174.19	32°09'15.414"N	103°51'27.627"W	6.98	
10803.00	86.000	359.400	10466.44	558.72	558.79	-16.81	647204.49	420206.05	32°09'15.729"N	103°51'27.633"W	7.96	
10835.00	88.800	359.900	10467.89	590.68	590.76	-17.00	647204.30	420238.01	32°09'16.046"N	103°51'27.633"W	8.89	
10867.00	90.500	0.100	10468.09	622.68	622.75	-17.00	647204.30	420270.01	32°09'16.362"N	103°51'27.632"W	5.35	
10898.00	90.300	359.300	10467.87	653.67	653.75	-17.16	647204.14	420301.01	32°09'16.669"N	103°51'27.632"W	2.66	
10993.00	89.800	359.500	10467.79	748.66	748.75	-18.16	647203.14	420396.00	32°09'17.609"N	103°51'27.639"W	0.57	
11088.00	89.000	0.100	10468.78	843.65	843.74	-18.49	647202.81	420490.98	32°09'18.549"N	103°51'27.638"W	1.05	
11184.00	91.500	2.100	10468.37	939.63	939.71	-16.65	647204.65	420586.94	32°09'19.499"N	103°51'27.611"W	3.33	
11279.00	91.400	1.800	10465.96	1034.56	1034.62	-13.42	647207.88	420681.85	32°09'20.438"N	103°51'27.569"W	0.33	
11374.00	91.200	2.600	10463.81	1129.48	1129.53	-9.77	647211.53	420776.75	32°09'21.377"N	103°51'27.521"W	0.87	
11469.00	91.500	2.100	10461.57	1224.38	1224.42	-5.88	647215.42	420871.64	32°09'22.316"N	103°51'27.471"W	0.61	
11564.00	89.300	1.600	10460.91	1319.34	1319.36	-2.81	647218.49	420966.57	32°09'23.255"N	103°51'27.431"W	2.37	
11659.00	88.700	1.100	10462.56	1414.31	1414.32	-0.57	647220.73	421061.52	32°09'24.195"N	103°51'27.400"W	0.82	
11755.00	90.100	1.600	10463.57	1510.28	1510.29	-1.69	647222.99	421157.48	32°09'25.144"N	103°51'27.369"W	1.55	
11850.00	90.400	1.600	10463.15	1605.25	1605.25	4.34	647225.64	421252.44	32°09'26.084"N	103°51'27.333"W	0.32	
11945.00	91.300	2.600	10461.74	1700.19	1700.17	7.82	647229.12	421347.36	32°09'27.023"N	103°51'27.288"W	1.42	
12040.00	91.300	2.200	10459.59	1795.10	1795.06	11.80	647233.10	421442.24	32°09'27.962"N	103°51'27.236"W	0.42	
12135.00	91.000	1.400	10457.68	1890.04	1890.00	14.78	647236.08	421537.17	32°09'28.901"N	103°51'27.197"W	0.90	
12230.00	89.800	0.300	10457.02	1985.03	1984.98	16.19	647237.49	421632.15	32°09'29.841"N	103°51'27.176"W	1.71	
12325.00	89.800	359.900	10457.35	2080.03	2079.98	16.36	647237.66	421727.14	32°09'30.781"N	103°51'27.169"W	0.42	
12420.00	90.200	0.300	10457.35	2175.03	2174.98	16.52	647237.82	421822.13	32°09'31.721"N	103°51'27.162"W	0.60	
12515.00	90.700	0.100	10456.61	2270.03	2269.98	16.86	647238.15	421917.12	32°09'32.661"N	103°51'27.153"W	0.57	
12610.00	91.100	0.400	10455.11	2365.01	2364.96	17.27	647238.57	422012.10	32°09'33.601"N	103°51'27.143"W	0.53	
12705.00	91.100	359.800	10453.29	2460.00	2459.94	17.44	647238.73	422107.08	32°09'34.541"N	103°51'27.137"W	0.63	
12800.00	90.700	0.300	10451.80	2554.98	2554.93	17.52	647238.82	422202.06	32°09'35.481"N	103°51'27.131"W	0.67	
12896.00	90.200	0.500	10451.04	2650.98	2650.93	18.19	647239.49	422298.05	32°09'36.431"N	103°51'27.118"W	0.56	
12990.00	91.600	0.100	10449.57	2744.97	2744.91	18.68	647239.98	422392.02	32°09'37.361"N	103°51'27.108"W	1.55	
13085.00	90.600	1.200	10447.74	2839.94	2839.89	19.76	647241.06	422486.99	32°09'38.300"N	103°51'27.090"W	1.56	
13180.00	91.700	0.200	10445.84	2934.92	2934.86	20.92	647242.22	422581.96	32°09'39.240"N	103°51'27.072"W	1.56	
13304.00	88.900	357.700	10445.19	3058.86	3058.81	18.65	647239.95	422705.90	32°09'40.467"N	103°51'27.092"W	3.03	
13399.00	87.900	358.500	10447.84	3153.76	3153.72	15.50	647236.80	422800.81	32°09'41.406"N	103°51'27.124"W	1.35	
13493.00	89.300	359.600	10450.14	3247.71	3247.68	13.94	647235.24	422894.75	32°09'42.336"N	103°51'27.137"W	1.89	
13589.00	89.400	359.100	10451.23	3343.69	3343.66	12.85	647234.15	422990.74	32°09'43.286"N	103°51'27.145"W	0.53	
13684.00	89.600	0.100	10452.05	3438.68	3438.66	12.19	647233.49	423085.72	32°09'44.226"N	103°51'27.147"W	1.07	
13779.00	89.500	0.100	10452.80	3533.67	3533.65	12.35	647233.65	423180.71	32°09'45.166"N	103°51'27.141"W	0.11	
13874.00	88.800	359.600	10454.21	3628.66	3628.64	12.11	647233.40	423275.69	32°09'46.106"N	103°51'27.139"W	0.91	
13969.00	89.400	0.500	10455.70	3723.65	3723.63	12.19	647233.49	423370.67	32°09'47.046"N	103°51'27.133"W	1.14	
14064.00	89.300	0.500	10456.78	3818.64	3818.62	13.02	647234.32	423465.66	32°09'47.986"N	103°51'27.118"W	0.11	
14159.00	88.900	0.300	10458.27	3913.63	3913.60	13.68	647234.98	423560.64	32°09'48.926"N	103°51'27.106"W	0.47	
14253.00	89.800	2.200	10459.34	4007.60	4007.57	15.73	647237.03	423654.60	32°09'49.855"N	103°51'27.077"W	2.24	
14348.00	89.700	1.900	10459.75	4102.55	4102.51	19.13	647240.43	423749.53	32°09'50.795"N	103°51'27.032"W	0.33	
14443.00	89.400	2.300	10460.50	4197.50	4197.44	22.61	647243.91	423844.46	32°09'51.734"N	103°51'26.987"W	0.53	
14539.00	89.200	1.600	10461.67	4293.45	4293.38	25.88	647247.17	423940.39	32°09'52.683"N	103°51'26.944"W	0.76	
14634.00	89.300	359.900	10462.92	4388.43	4388.36	27.12	647248.42	424035.36	32°09'53.623"N	103°51'26.925"W	1.79	



Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	BOPCO, LP	Slot	PLU CVX JV BS 029H (Latshaw #4)
Area	Eddy County, NM	Well	PLU CVX JV BS 029H (SL 170 FSL, 660 FWL)
Field	Eddy County, NM (NAD 27 / Grid)	Wellbore	PLU CVX JV BS 029H (Latshaw #4) Actual
Facility	PLU CVX JV BS 029H Sec. 2-25S-30E		

WELLPATH DATA (140 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
14729.00	90.200	0.400	10463.33	4483.43	4483.36	27.37	647248.67	424130.35	32°09'54.563"N	103°51'26.917"W	1.08	
14823.00	90.100	0.100	10463.08	4577.43	4577.35	27.78	647249.08	424224.34	32°09'55.493"N	103°51'26.907"W	0.34	
14919.00	90.100	0.200	10462.92	4673.43	4673.35	28.03	647249.33	424320.34	32°09'56.443"N	103°51'26.900"W	0.10	
15005.00	90.200	0.000	10462.69	4759.43	4759.35	28.18	647249.48	424406.33	32°09'57.294"N	103°51'26.893"W	0.26	
15054.00	90.200	0.000	10462.52	4808.43	4808.35	28.18	647249.48	424455.33	32°09'57.779"N	103°51'26.891"W	0.00	

WELLPATH COMPOSITION - Ref Wellbore: PLU CVX JV BS 029H (Latshaw #4) Actual Ref Wellpath: AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
22.00	1600.00	Generic gyro - northseeking (Standard)	01 MS Gyro Surveys <100 - 1600>	PLU CVX JV BS 029H (Latshaw #4) Actual
1600.00	15005.00	NaviTrak (Standard)	BHI MWD <1741 - 15005>	PLU CVX JV BS 029H (Latshaw #4) Actual
15005.00	15054.00	Blind Drilling (std)	Projection to bit	PLU CVX JV BS 029H (Latshaw #4) Actual