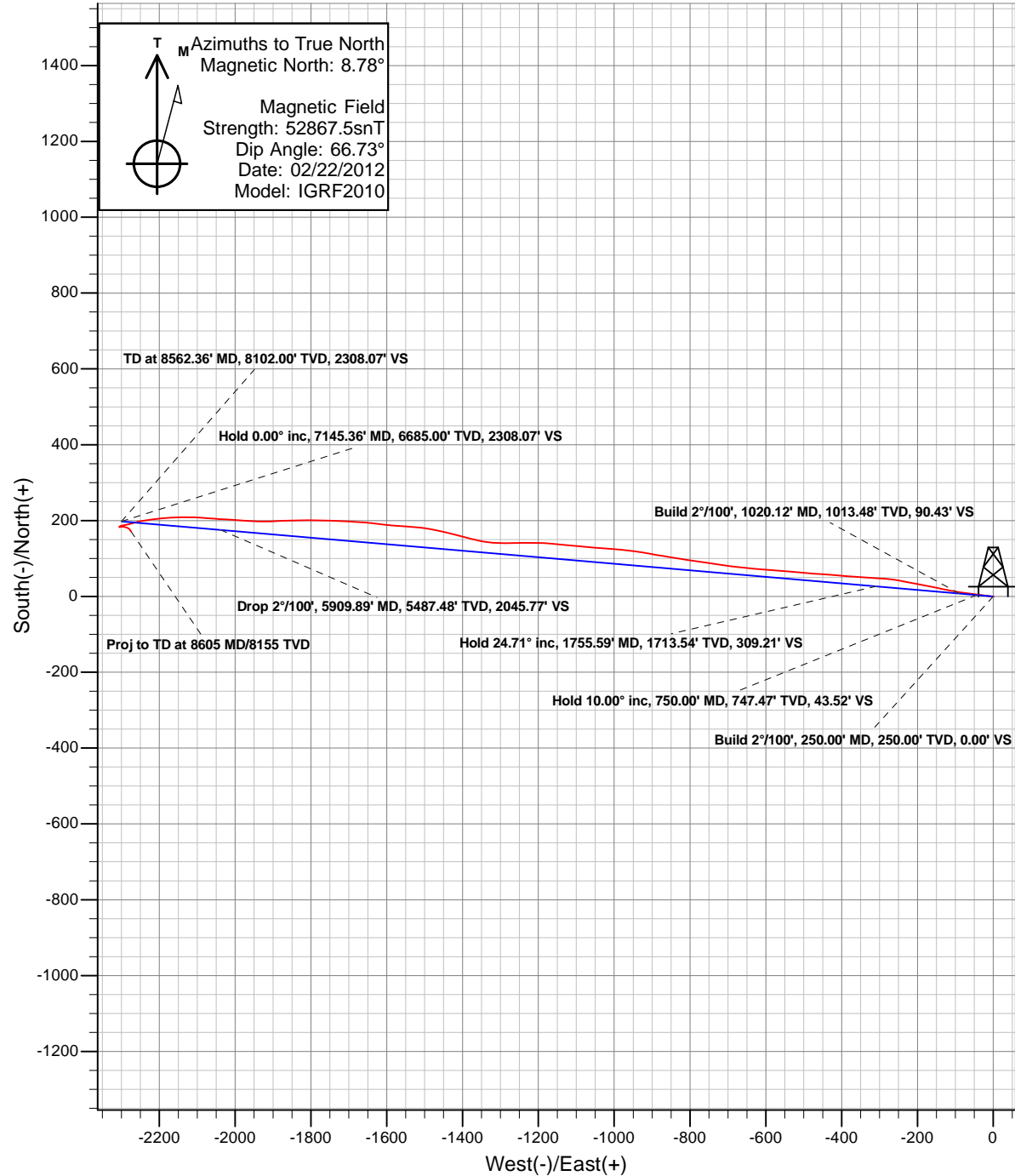
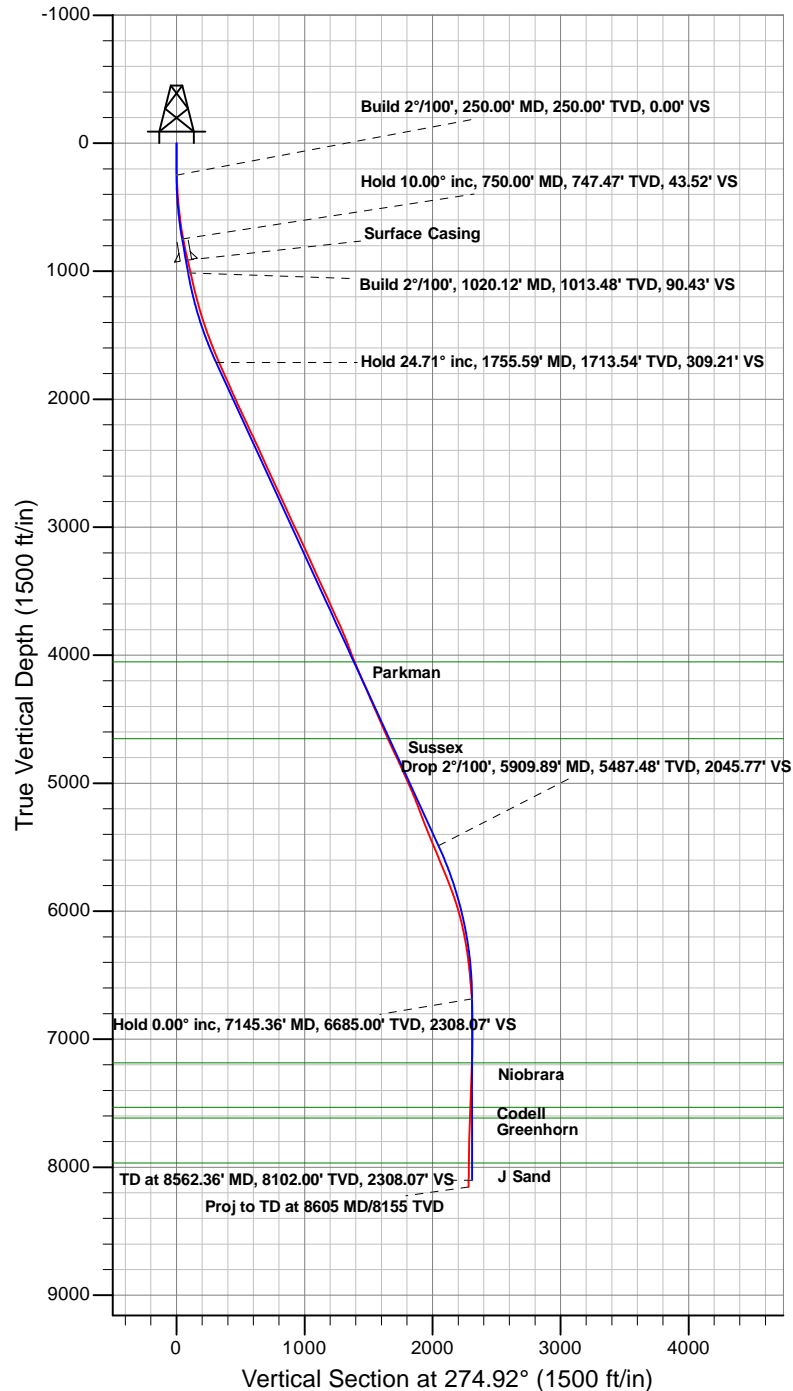




Anadarko Petroleum Corporation

Riverbend 02-14 (111412)
Plan vs Actual



Anadarko Petroleum Corporation

Riverbend

Riverbend 14 Pad

Riverbend 02-14 (111412) - Slot 02-14

02-14

Survey: 02-14

Survey Report - Geographic

03 January, 2012

Survey Report - Geographic

Company:	Anadarko Petroleum Corporation	Local Co-ordinate Reference:	Well Riverbend 02-14 (111412) - Slot 02-14
Project:	Riverbend	TVD Reference:	KB @ 4967.00ft (Original Well Elev)
Site:	Riverbend 14 Pad	MD Reference:	KB @ 4967.00ft (Original Well Elev)
Well:	Riverbend 02-14 (111412)	North Reference:	True
Wellbore:	02-14	Survey Calculation Method:	Minimum Curvature
Design:	02-14	Database:	EDM5000

Project	Riverbend		
Map System:	Universal Transverse Mercator	System Datum:	Mean Sea Level
Geo Datum:	NAD83 Colorado - HARN		
Map Zone:	Zone 13N (108 W to 102 W)		

Site	Riverbend 14 Pad		
Site Position:		Northing:	14,547,138.00 usft
From:	Lat/Long	Easting:	1,683,122.87 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13.20 in
		Latitude:	40.055934°N
		Longitude:	104.847381°W
		Grid Convergence:	0.10 °

Well	Riverbend 02-14 (111412) - Slot 02-14		
Well Position	+N/-S	0.00 ft	Northing: 14,547,138.00 usft
	+E/-W	0.00 ft	Easting: 1,683,122.88 usft
Position Uncertainty	0.00 ft	Wellhead Elevation:	ft
		Latitude:	40.055934°N
		Longitude:	104.847381°W
		Ground Level:	4,952.00 ft

Wellbore	02-14		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF2010	02/22/12	8.79
			Dip Angle (°)
			66.73
			Field Strength (nT)
			52,867

Design	02-14		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
		Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S (ft)	+E/-W (ft)
	(ft)	(ft)	(ft)
	0.00	0.00	0.00
			Direction (°)
			274.92

Survey Program	Date	01/03/12		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
138.00	8,605.00	02-14 (02-14)	MWD	MWD - Standard

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	14,547,138.00	1,683,122.88	40.055934°N	104.847381°W
Doversberger Eugene #3 (VE) - 02-14 Legal Window - Doversberger Unit A #1 (VE) - Doversberger Eugene #5 (VE) - Doversberger Eugene #6 (VE)									
3.12	0.00	49.87	3.12	0.00	0.00	14,547,138.00	1,683,122.88	40.055934°N	104.847381°W
Chikuma Harry S #2 (VE) at TD									
19.56	0.03	49.87	19.56	0.00	0.00	14,547,138.00	1,683,122.88	40.055934°N	104.847381°W
Harry S Chikuma #1 (VE)									
26.38	0.04	49.87	26.38	0.01	0.01	14,547,138.01	1,683,122.89	40.055934°N	104.847381°W
Harry S Chikuma GU B-True #1 (8096' MD)									
38.64	0.06	49.87	38.64	0.01	0.02	14,547,138.01	1,683,122.90	40.055934°N	104.847381°W
Mathisen Unit #2 (VE)									
138.00	0.22	49.87	138.00	0.17	0.20	14,547,138.17	1,683,123.08	40.055935°N	104.847381°W
230.00	1.49	260.89	229.99	0.10	-0.84	14,547,138.10	1,683,122.04	40.055934°N	104.847384°W

Survey Report - Geographic

Company:	Anadarko Petroleum Corporation	Local Co-ordinate Reference:	Well Riverbend 02-14 (111412) - Slot 02-14
Project:	Riverbend	TVD Reference:	KB @ 4967.00ft (Original Well Elev)
Site:	Riverbend 14 Pad	MD Reference:	KB @ 4967.00ft (Original Well Elev)
Well:	Riverbend 02-14 (111412)	North Reference:	True
Wellbore:	02-14	Survey Calculation Method:	Minimum Curvature
Design:	02-14	Database:	EDM5000

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
322.00	2.99	272.76	321.92	0.02	-4.42	14,547,138.02	1,683,118.46	40.055934°N	104.847397°W	
397.00	3.78	275.66	396.79	0.36	-8.84	14,547,138.35	1,683,114.04	40.055935°N	104.847413°W	
487.00	5.41	277.20	486.49	1.18	-16.00	14,547,139.16	1,683,106.88	40.055937°N	104.847438°W	
576.00	6.68	277.99	575.00	2.43	-25.29	14,547,140.39	1,683,097.59	40.055941°N	104.847472°W	
663.00	8.70	278.47	661.21	4.10	-36.81	14,547,142.04	1,683,086.07	40.055945°N	104.847513°W	
751.00	10.68	276.19	747.95	5.96	-51.50	14,547,143.87	1,683,071.37	40.055950°N	104.847565°W	
841.00	12.48	277.46	836.12	8.12	-69.43	14,547,146.01	1,683,053.43	40.055956°N	104.847629°W	
906.00	12.70	278.87	899.55	10.14	-83.46	14,547,148.00	1,683,039.41	40.055962°N	104.847679°W	
1,012.00	12.92	280.89	1,002.92	14.17	-106.61	14,547,151.99	1,683,016.25	40.055973°N	104.847762°W	
1,100.00	12.30	280.36	1,088.79	17.72	-125.49	14,547,155.50	1,682,997.36	40.055983°N	104.847830°W	
1,190.00	14.69	281.59	1,176.30	21.73	-146.10	14,547,159.48	1,682,976.74	40.055994°N	104.847903°W	
1,277.00	15.12	281.28	1,260.37	26.17	-168.03	14,547,163.88	1,682,954.80	40.056006°N	104.847982°W	
1,364.00	17.58	281.78	1,343.85	31.07	-192.03	14,547,168.74	1,682,930.80	40.056019°N	104.848067°W	
1,452.00	19.12	280.36	1,427.37	36.38	-219.21	14,547,174.00	1,682,903.60	40.056034°N	104.848165°W	
1,542.00	20.00	280.98	1,512.18	41.96	-248.82	14,547,179.53	1,682,873.99	40.056049°N	104.848270°W	
1,630.00	21.49	273.86	1,594.48	45.91	-279.69	14,547,183.43	1,682,843.12	40.056060°N	104.848381°W	
1,720.00	23.12	273.68	1,677.75	48.16	-313.77	14,547,185.62	1,682,809.03	40.056066°N	104.848503°W	
1,811.00	24.21	274.39	1,761.09	50.73	-350.20	14,547,188.13	1,682,772.59	40.056073°N	104.848633°W	
1,901.00	23.91	273.77	1,843.27	53.34	-386.80	14,547,190.68	1,682,735.99	40.056081°N	104.848764°W	
1,991.00	24.52	275.57	1,925.36	56.35	-423.59	14,547,193.63	1,682,699.19	40.056089°N	104.848895°W	
2,081.00	23.60	273.29	2,007.54	59.20	-460.16	14,547,196.41	1,682,662.62	40.056097°N	104.849026°W	
2,171.00	25.71	275.40	2,089.33	62.07	-497.59	14,547,199.22	1,682,625.18	40.056105°N	104.849159°W	
2,261.00	24.79	274.17	2,170.73	65.28	-535.84	14,547,202.36	1,682,586.92	40.056113°N	104.849296°W	
2,351.00	25.40	274.56	2,252.23	68.19	-573.90	14,547,205.21	1,682,548.86	40.056121°N	104.849432°W	
2,439.00	25.62	275.66	2,331.66	71.57	-611.65	14,547,208.52	1,682,511.11	40.056131°N	104.849567°W	
2,528.00	24.08	273.68	2,412.41	74.63	-648.92	14,547,211.52	1,682,473.83	40.056139°N	104.849700°W	
2,615.00	23.99	278.16	2,491.88	78.28	-684.14	14,547,215.11	1,682,438.60	40.056149°N	104.849826°W	
2,704.00	25.00	278.38	2,572.87	83.59	-720.66	14,547,220.35	1,682,402.08	40.056164°N	104.849957°W	
2,795.00	25.00	277.90	2,655.34	89.03	-758.73	14,547,225.73	1,682,364.00	40.056179°N	104.850093°W	
2,885.00	25.71	278.56	2,736.67	94.55	-796.87	14,547,231.19	1,682,325.85	40.056194°N	104.850229°W	
2,974.00	23.69	279.97	2,817.52	100.52	-833.58	14,547,237.09	1,682,289.13	40.056210°N	104.850360°W	
3,064.00	24.79	278.16	2,899.59	106.33	-870.06	14,547,242.84	1,682,252.64	40.056226°N	104.850491°W	
3,154.00	25.62	281.07	2,981.02	112.75	-907.84	14,547,249.19	1,682,214.85	40.056244°N	104.850626°W	
3,244.00	25.49	277.20	3,062.22	118.91	-946.15	14,547,255.29	1,682,176.53	40.056261°N	104.850762°W	
3,332.00	25.62	275.18	3,141.62	123.00	-983.88	14,547,259.31	1,682,138.79	40.056272°N	104.850897°W	
3,420.00	23.60	274.39	3,221.62	126.07	-1,020.40	14,547,262.32	1,682,102.27	40.056280°N	104.851028°W	
3,507.00	24.08	274.78	3,301.20	128.88	-1,055.45	14,547,265.07	1,682,067.21	40.056288°N	104.851153°W	
3,598.00	24.70	275.26	3,384.07	132.17	-1,092.88	14,547,268.30	1,682,029.77	40.056297°N	104.851287°W	
3,686.00	24.92	276.10	3,463.95	135.82	-1,129.63	14,547,271.89	1,681,993.02	40.056307°N	104.851418°W	
3,775.00	24.21	274.47	3,544.90	139.24	-1,166.46	14,547,275.24	1,681,956.18	40.056316°N	104.851550°W	
3,864.00	24.30	271.00	3,626.05	140.98	-1,202.97	14,547,276.92	1,681,919.67	40.056321°N	104.851680°W	
3,952.00	25.88	269.60	3,705.74	141.16	-1,240.28	14,547,277.04	1,681,882.36	40.056322°N	104.851814°W	
4,043.00	23.69	268.50	3,788.35	140.55	-1,278.42	14,547,276.36	1,681,844.22	40.056320°N	104.851950°W	
4,130.00	22.10	272.89	3,868.50	140.91	-1,312.24	14,547,276.67	1,681,810.40	40.056321°N	104.852071°W	
4,220.00	19.90	280.49	3,952.54	144.56	-1,344.22	14,547,280.25	1,681,778.41	40.056331°N	104.852185°W	
4,308.00	23.20	283.79	4,034.38	151.42	-1,375.79	14,547,287.06	1,681,746.83	40.056350°N	104.852298°W	
4,398.00	23.12	284.49	4,117.12	160.06	-1,410.12	14,547,295.65	1,681,712.49	40.056374°N	104.852421°W	
4,486.00	24.39	283.70	4,197.67	168.69	-1,444.50	14,547,304.22	1,681,678.10	40.056397°N	104.852543°W	
4,573.00	22.50	281.28	4,277.48	176.20	-1,478.28	14,547,311.67	1,681,644.30	40.056418°N	104.852664°W	
4,662.00	23.51	275.48	4,359.41	181.23	-1,512.65	14,547,316.64	1,681,609.92	40.056432°N	104.852787°W	
4,751.00	23.38	274.30	4,441.07	184.25	-1,547.93	14,547,319.60	1,681,574.63	40.056440°N	104.852913°W	
4,840.00	24.30	274.69	4,522.47	187.07	-1,583.80	14,547,322.36	1,681,538.77	40.056448°N	104.853041°W	
4,930.00	23.60	277.20	4,604.72	190.84	-1,620.13	14,547,326.07	1,681,502.43	40.056458°N	104.853171°W	
5,020.00	24.21	275.09	4,687.00	194.74	-1,656.38	14,547,329.90	1,681,466.17	40.056469°N	104.853301°W	
5,109.00	25.62	272.76	4,767.72	197.28	-1,693.78	14,547,332.38	1,681,428.77	40.056476°N	104.853434°W	

Survey Report - Geographic

Company:	Anadarko Petroleum Corporation	Local Co-ordinate Reference:	Well Riverbend 02-14 (111412) - Slot 02-14
Project:	Riverbend	TVD Reference:	KB @ 4967.00ft (Original Well Elev)
Site:	Riverbend 14 Pad	MD Reference:	KB @ 4967.00ft (Original Well Elev)
Well:	Riverbend 02-14 (111412)	North Reference:	True
Wellbore:	02-14	Survey Calculation Method:	Minimum Curvature
Design:	02-14	Database:	EDM5000

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
5,200.00	25.09	272.67	4,849.96	199.13	-1,732.71	14,547,334.16	1,681,389.84	40.056481°N	104.853573°W	
5,288.00	23.60	271.27	4,930.13	200.39	-1,768.96	14,547,335.36	1,681,353.59	40.056484°N	104.853703°W	
5,382.00	24.30	269.77	5,016.04	200.73	-1,807.11	14,547,335.63	1,681,315.43	40.056485°N	104.853839°W	
5,471.00	22.41	269.38	5,097.74	200.47	-1,842.39	14,547,335.31	1,681,280.15	40.056484°N	104.853965°W	
5,561.00	20.79	266.48	5,181.42	199.31	-1,875.49	14,547,334.09	1,681,247.05	40.056481°N	104.854084°W	
5,649.00	21.09	267.97	5,263.61	197.79	-1,906.90	14,547,332.52	1,681,215.65	40.056477°N	104.854196°W	
5,737.00	22.10	271.79	5,345.43	197.74	-1,939.27	14,547,332.42	1,681,183.28	40.056477°N	104.854312°W	
5,825.00	22.19	274.08	5,426.94	199.44	-1,972.39	14,547,334.06	1,681,150.15	40.056482°N	104.854430°W	
5,915.00	22.81	274.08	5,510.09	201.89	-2,006.75	14,547,336.45	1,681,115.79	40.056488°N	104.854553°W	
6,003.00	21.81	272.76	5,591.51	203.89	-2,040.09	14,547,338.40	1,681,082.45	40.056494°N	104.854672°W	
6,094.00	23.20	274.87	5,675.57	206.23	-2,074.84	14,547,340.67	1,681,047.69	40.056500°N	104.854796°W	
6,183.00	21.18	272.98	5,757.98	208.55	-2,108.37	14,547,342.94	1,681,014.16	40.056507°N	104.854916°W	
6,272.00	20.62	268.28	5,841.13	208.92	-2,140.09	14,547,343.25	1,680,982.44	40.056508°N	104.855029°W	
6,362.00	18.41	266.87	5,925.95	207.67	-2,170.12	14,547,341.95	1,680,952.41	40.056504°N	104.855137°W	
6,451.00	15.91	263.57	6,010.99	205.53	-2,196.28	14,547,339.77	1,680,926.25	40.056498°N	104.855230°W	
6,541.00	13.49	263.18	6,098.04	202.90	-2,218.97	14,547,337.10	1,680,903.57	40.056491°N	104.855311°W	
6,629.00	11.51	260.67	6,183.95	200.26	-2,237.82	14,547,334.43	1,680,884.72	40.056484°N	104.855379°W	
6,719.00	10.11	258.17	6,272.35	197.19	-2,254.42	14,547,331.32	1,680,868.13	40.056475°N	104.855438°W	
6,809.00	7.60	254.70	6,361.27	194.00	-2,267.89	14,547,328.11	1,680,854.66	40.056467°N	104.855486°W	
6,898.00	6.68	253.16	6,449.58	190.94	-2,278.52	14,547,325.04	1,680,844.04	40.056458°N	104.855524°W	
6,988.00	5.41	262.08	6,539.08	188.84	-2,287.74	14,547,322.92	1,680,834.83	40.056452°N	104.855557°W	
7,076.00	5.01	259.40	6,626.71	187.56	-2,295.62	14,547,321.63	1,680,826.94	40.056449°N	104.855585°W	
7,134.26	3.32	254.46	6,684.82	186.64	-2,299.75	14,547,320.70	1,680,822.82	40.056446°N	104.855600°W	
02-14 BH										
7,166.00	2.42	248.90	6,716.52	186.16	-2,301.26	14,547,320.21	1,680,821.31	40.056445°N	104.855605°W	
7,256.00	1.49	237.69	6,806.46	184.85	-2,304.02	14,547,318.90	1,680,818.55	40.056441°N	104.855615°W	
7,344.00	0.79	208.16	6,894.45	183.70	-2,305.27	14,547,317.75	1,680,817.30	40.056438°N	104.855620°W	
7,433.00	0.62	131.56	6,983.44	182.84	-2,305.20	14,547,316.89	1,680,817.37	40.056436°N	104.855619°W	
7,523.00	1.19	78.70	7,073.43	182.70	-2,303.92	14,547,316.75	1,680,818.65	40.056436°N	104.855615°W	
7,612.00	2.02	70.57	7,162.40	183.40	-2,301.54	14,547,317.46	1,680,821.04	40.056437°N	104.855606°W	
7,700.00	1.89	89.20	7,250.35	183.94	-2,298.62	14,547,318.00	1,680,823.95	40.056439°N	104.855596°W	
7,790.00	2.11	100.10	7,340.29	183.67	-2,295.51	14,547,317.74	1,680,827.06	40.056438°N	104.855585°W	
7,880.00	2.20	103.39	7,430.23	182.98	-2,292.20	14,547,317.05	1,680,830.38	40.056436°N	104.855573°W	
7,970.00	2.29	104.19	7,520.16	182.14	-2,288.77	14,547,316.22	1,680,833.80	40.056434°N	104.855561°W	
8,059.00	2.11	107.17	7,609.09	181.22	-2,285.48	14,547,315.30	1,680,837.09	40.056431°N	104.855549°W	
8,149.00	2.02	113.68	7,699.03	180.09	-2,282.45	14,547,314.18	1,680,840.13	40.056428°N	104.855538°W	
8,240.00	1.49	118.86	7,789.99	178.88	-2,279.94	14,547,312.97	1,680,842.64	40.056425°N	104.855529°W	
8,330.00	1.41	146.07	7,879.96	177.39	-2,278.30	14,547,311.49	1,680,844.28	40.056421°N	104.855523°W	
8,420.00	1.41	153.89	7,969.94	175.48	-2,277.19	14,547,309.58	1,680,845.39	40.056416°N	104.855519°W	
8,509.00	1.49	152.79	8,058.91	173.47	-2,276.18	14,547,307.57	1,680,846.41	40.056410°N	104.855516°W	
8,561.00	1.41	148.70	8,110.89	172.32	-2,275.54	14,547,306.42	1,680,847.05	40.056407°N	104.855513°W	
8,605.00	1.41	148.70	8,154.88	171.40	-2,274.98	14,547,305.50	1,680,847.61	40.056404°N	104.855511°W	
Proj to TD at 8605 MD/8155 TVD										

Survey Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
8,605.00	8,154.88	171.40	-2,274.98	Proj to TD at 8605 MD/8155 TVD	

Checked By: _____ Approved By: _____ Date: _____