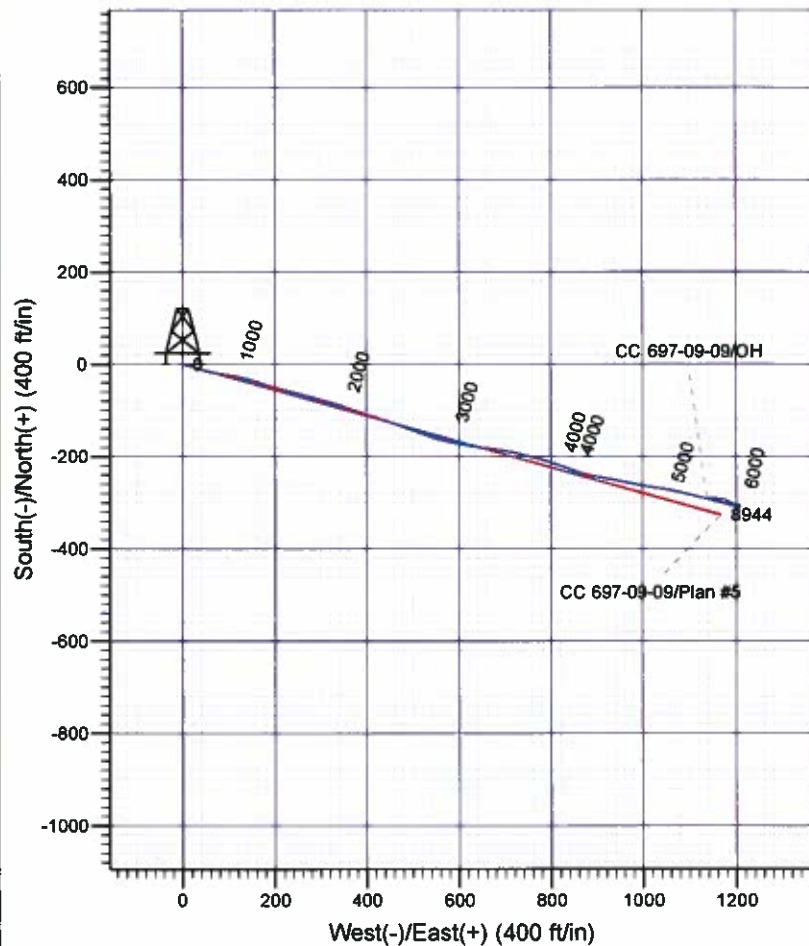
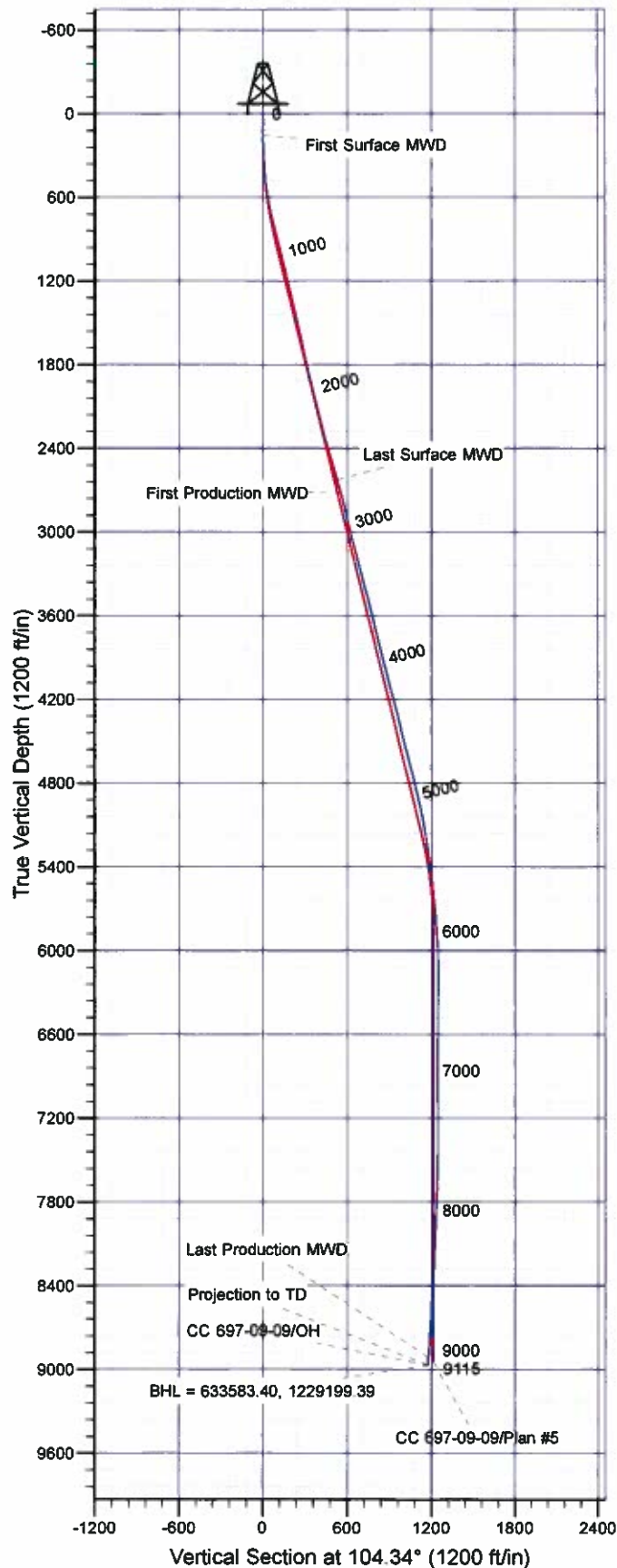




Scientific Drilling
Rocky Mountain Operations

Company: OXY USA RMAT
Project: Garfield County, CO NAD27
Site: Cascade Creek 606-41 Pad
Well: CC 697-09-09
Wellbore: OH
Design: OH



Well Details: CC 697-09-09

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	633908.28	1228071.32	39° 32' 31.077 N	108° 14' 15.079 W	M

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well CC 697-09-09 - Slot M, True North
Vertical (TVD) Reference: GL 8407' & RKB 30' @ 8437.00ft (H&P)
Section (VS) Reference: Slot - M(0.00N, 0.00E)
Measured Depth Reference: GL 8407' & RKB 30' @ 8437.00ft (H&P)
Calculation Method: Minimum Curvature

PROJECT DETAILS: Garfield County, CO NAD27

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Colorado Central 502

System Datum: Mean Sea Level

Plan: OH

8:38, May 03 2011
Created By: Janie Cooke

OXY USA RMAT

Garfield County, CO NAD27

Cascade Creek 608-41 Pad

CC 697-09-09 - Slot M

OH

Design: OH

Standard Survey Report

03 May, 2011

Scientific Drilling International, Inc.

Survey Report

Company:	OXY USA RMAT	Local Co-ordinate Reference:	Well CC 697-09-09 - Slot M
Project:	Garfield County, CO NAD27	TVD Reference:	GL 8407' & RKB 30' @ 8437.00ft (H&P)
Site:	Cascade Creek 608-41 Pad	MD Reference:	GL 8407' & RKB 30' @ 8437.00ft (H&P)
Well:	CC 697-09-09	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM-R5000-JanieCooke-Local

Project	Garfield County, CO NAD27		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Colorado Central 502		

Site		Cascade Creek 608-41 Pad, S Ection 8 T6S R97W			
Site Position:		Northing:	633,966.95 usft	Latitude:	39° 32' 31.685 N
From:	Map	Easting:	1,228,168.67 usft	Longitude:	108° 14' 13.859 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.73 °

Well	CC 697-09-09 - Slot M					
Well Position	+N/-S	0.00 ft	Northing:	633,908.29 usft	Latitude:	39° 32' 31.077 N
	+E/-W	0.00 ft	Easting:	1,228,071.32 usft	Longitude:	108° 14' 15.079 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	8,407.00 ft

Wellbore	OH
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/15/2008	10.80	65.80	52,494

Design	OH
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Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	104.34

Survey Program		Date	5/3/2011		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
155.00	2,690.00	Survey #1 - Surface MWD (OH)	MWD-SDI	MWD - Standard	SCWSA
2,781.00	9,115.00	Survey #2 - Production MWD (OH)	MWD-SDI	MWD - Standard	SCWSA

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
155.00	0.51	105.41	155.00	-0.18	0.67	0.69	0.33	0.33	0.00
First Surface MWD									
247.00	1.53	118.47	246.98	-0.88	2.14	2.29	1.13	1.11	14.20
339.00	2.97	98.10	338.91	-1.80	5.58	5.85	1.77	1.57	-22.14
431.00	5.32	99.46	430.66	-2.84	12.15	12.47	2.56	2.55	1.48
522.00	7.12	109.20	521.13	-5.38	21.63	22.29	2.29	1.98	10.70
614.00	10.46	110.43	612.03	-10.18	34.85	36.28	3.64	3.63	1.34
706.00	13.28	104.54	702.06	-15.75	52.91	55.16	3.33	3.07	-6.40
800.00	13.89	99.80	793.43	-20.38	74.48	77.20	1.35	0.65	-5.04

Scientific Drilling International, Inc.

Survey Report

Company:	OXY USA RMAT	Local Co-ordinate Reference:	Well CC 897-09-09 - Slot M
Project:	Garfield County, CO NAD27	TVD Reference:	GL 8407' & RKB 30' @ 8437.00ft (H&P)
Site:	Cascade Creek 608-41 Pad	MD Reference:	GL 8407' & RKB 30' @ 8437.00ft (H&P)
Well:	CC 897-09-09	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM-R5000-JanieCooke-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
894.00	13.89	97.78	884.68	-23.82	96.77	99.66	0.52	0.00	-2.15
989.00	13.89	99.97	976.91	-27.34	119.30	122.36	0.55	0.00	2.31
1,083.00	13.81	107.62	1,068.18	-32.69	141.11	144.81	1.95	-0.09	8.14
1,178.00	13.10	107.62	1,160.57	-39.38	162.18	166.88	0.75	-0.75	0.00
1,272.00	14.42	108.50	1,251.87	-46.32	183.43	189.19	1.42	1.40	0.94
1,367.00	13.81	103.31	1,344.01	-52.69	205.68	212.32	1.48	-0.64	-5.46
1,462.00	11.78	104.54	1,436.65	-57.73	226.11	233.36	2.16	-2.14	1.29
1,556.00	12.57	102.79	1,528.53	-62.40	245.37	253.18	0.93	0.84	-1.86
1,651.00	12.66	106.74	1,621.24	-67.69	265.42	273.92	0.91	0.09	4.16
1,745.00	12.05	106.04	1,713.06	-73.37	284.71	294.02	0.67	-0.65	-0.74
1,840.00	12.57	104.54	1,805.88	-78.70	304.25	314.26	0.64	0.55	-1.58
1,934.00	13.72	105.86	1,897.41	-84.32	324.88	335.64	1.26	1.22	1.40
2,029.00	14.60	109.99	1,989.53	-91.49	346.97	358.82	1.41	0.93	4.35
2,124.00	14.25	109.20	2,081.53	-99.43	369.26	382.38	0.42	-0.37	-0.83
2,218.00	13.10	106.92	2,172.87	-106.34	390.38	404.55	1.35	-1.22	-2.43
2,312.00	14.42	107.45	2,264.17	-112.95	411.74	426.88	1.41	1.40	0.56
2,407.00	16.09	108.41	2,355.82	-120.65	435.51	451.83	1.78	1.76	1.01
2,501.00	16.44	109.29	2,446.06	-129.16	460.43	478.07	0.46	0.37	0.94
2,596.00	16.00	110.17	2,537.27	-138.11	485.41	504.49	0.53	-0.46	0.93
2,690.00	15.04	110.98	2,627.85	-146.94	508.96	529.49	1.05	-1.02	0.84
Last Surface MWD									
2,781.00	14.72	110.66	2,715.79	-155.25	530.80	552.71	0.36	-0.35	-0.33
First Production MWD									
2,876.00	13.57	104.30	2,807.92	-162.26	552.89	575.86	2.03	-1.21	-6.69
2,970.00	12.45	102.89	2,899.50	-167.24	573.46	597.01	1.24	-1.19	-1.50
3,065.00	14.77	101.29	2,991.83	-171.90	595.32	619.35	2.47	2.44	-1.68
3,160.00	14.51	99.01	3,083.75	-176.13	618.95	643.29	0.67	-0.27	-2.40
3,254.00	13.81	98.04	3,174.89	-179.55	641.69	666.16	0.79	-0.74	-1.03
3,349.00	15.65	98.92	3,266.76	-183.12	665.58	690.19	1.95	1.94	0.93
3,443.00	13.98	98.13	3,357.64	-186.69	689.34	714.10	1.79	-1.78	-0.84
3,538.00	15.21	99.27	3,449.57	-190.32	713.00	737.93	1.33	1.29	1.20
3,632.00	14.33	106.65	3,540.47	-195.64	736.32	761.84	2.21	-0.94	7.85
3,727.00	12.66	104.02	3,632.84	-201.53	757.69	783.99	1.87	-1.76	-2.77
3,821.00	13.01	103.75	3,724.50	-206.54	777.96	804.88	0.38	0.37	-0.29
3,916.00	15.12	109.64	3,816.65	-213.25	800.02	827.91	2.68	2.22	6.20
4,010.00	14.51	109.38	3,907.52	-221.28	822.67	851.85	0.65	-0.65	-0.28
4,105.00	13.54	109.91	3,999.69	-229.02	844.36	874.77	1.03	-1.02	0.56
4,199.00	14.33	106.04	4,090.92	-235.98	865.88	897.35	1.30	0.84	-4.12
4,294.00	15.83	102.26	4,182.65	-241.98	889.85	922.05	1.89	1.58	-3.98
4,389.00	14.42	99.80	4,274.36	-246.74	914.16	946.79	1.63	-1.48	-2.59
4,483.00	12.84	100.41	4,365.71	-250.62	935.97	968.88	1.69	-1.68	0.65
4,578.00	13.19	102.88	4,458.27	-254.95	956.92	990.25	0.69	0.37	2.60
4,672.00	14.51	100.85	4,549.54	-259.55	978.94	1,012.73	1.50	1.40	-2.16

Scientific Drilling International, Inc.

Survey Report

Company:	OXY USA RMAT	Local Co-ordinate Reference:	Well CC 697-09-09 - Slot M
Project:	Garfield County, CO NAD27	TVD Reference:	GL 8407' & RKB 30' @ 8437.00ft (H&P)
Site:	Cascade Creek 608-41 Pad	MD Reference:	GL 8407' & RKB 30' @ 8437.00ft (H&P)
Well:	CC 697-09-09	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM-R5000-JanieCooke-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,767.00	15.48	100.50	4,641.30	-264.10	1,003.10	1,037.26	1.03	1.02	-0.37
4,861.00	13.89	98.83	4,732.23	-268.12	1,026.58	1,061.00	1.75	-1.69	-1.78
4,956.00	13.98	98.39	4,824.43	-271.55	1,049.20	1,083.77	0.15	0.09	-0.46
5,050.00	13.19	103.58	4,915.80	-275.72	1,070.86	1,105.79	1.54	-0.84	5.52
5,145.00	11.17	102.52	5,008.66	-280.26	1,090.38	1,125.82	2.14	-2.13	-1.12
5,239.00	10.02	105.42	5,101.06	-284.41	1,107.15	1,143.10	1.35	-1.22	3.09
5,334.00	9.06	103.75	5,194.74	-288.39	1,122.39	1,158.84	1.05	-1.01	-1.76
5,428.00	8.44	102.79	5,287.65	-291.67	1,138.30	1,173.14	0.68	-0.66	-1.02
5,523.00	7.65	105.69	5,381.71	-294.93	1,149.19	1,186.43	0.93	-0.83	3.05
5,617.00	7.03	107.09	5,474.94	-298.31	1,160.71	1,198.43	0.69	-0.66	1.49
5,712.00	6.42	106.24	5,569.29	-301.50	1,171.37	1,209.55	0.65	-0.64	-0.89
5,806.00	5.45	103.67	5,662.78	-304.03	1,180.75	1,219.26	1.07	-1.03	-2.73
5,901.00	4.75	102.35	5,757.41	-305.93	1,188.98	1,227.70	0.75	-0.74	-1.39
5,995.00	3.87	100.41	5,851.14	-307.34	1,195.90	1,234.76	0.95	-0.94	-2.06
6,090.00	3.52	98.57	5,945.94	-308.35	1,201.94	1,240.86	0.39	-0.37	-1.94
6,184.00	2.02	102.52	6,039.83	-309.14	1,206.41	1,245.39	1.61	-1.60	4.20
6,279.00	0.35	178.81	6,134.81	-309.80	1,208.05	1,247.14	2.07	-1.76	80.31
6,373.00	1.14	218.89	6,228.80	-310.81	1,207.47	1,246.83	0.96	0.84	42.64
6,468.00	1.41	238.93	6,323.78	-312.15	1,205.87	1,245.61	0.54	0.28	21.09
6,562.00	0.53	293.51	6,417.76	-312.57	1,204.48	1,244.37	1.26	-0.94	58.06
6,657.00	0.44	315.57	6,512.76	-312.14	1,203.82	1,243.63	0.22	-0.09	23.22
6,752.00	0.97	277.51	6,607.75	-311.77	1,202.77	1,242.52	0.72	0.56	-40.06
6,846.00	0.53	312.49	6,701.75	-311.37	1,201.66	1,241.34	0.66	-0.47	37.21
6,941.00	1.41	31.24	6,796.73	-310.08	1,201.94	1,241.29	1.48	0.93	82.89
7,035.00	1.41	46.80	6,890.71	-308.30	1,203.39	1,242.25	0.41	0.00	16.55
7,130.00	0.88	47.86	6,985.69	-307.01	1,204.78	1,243.28	0.56	-0.56	1.12
7,224.00	0.62	44.96	7,079.68	-306.16	1,205.67	1,243.94	0.28	-0.28	-3.09
7,319.00	0.44	45.31	7,174.67	-305.54	1,206.30	1,244.39	0.19	-0.19	0.37
7,413.00	0.18	5.05	7,268.67	-305.14	1,206.57	1,244.55	0.34	-0.28	-42.83
7,508.00	0.53	260.55	7,363.67	-305.07	1,206.15	1,244.12	0.63	0.37	-110.00
7,602.00	0.97	256.16	7,457.66	-305.33	1,204.95	1,243.03	0.47	0.47	-4.67
7,697.00	1.41	255.54	7,552.64	-305.81	1,203.03	1,241.29	0.46	0.46	-0.65
7,791.00	1.41	264.59	7,646.61	-306.21	1,200.76	1,239.19	0.24	0.00	9.63
7,886.00	1.49	279.18	7,741.58	-306.12	1,198.38	1,236.86	0.40	0.08	15.36
7,980.00	2.29	294.65	7,835.53	-305.15	1,195.47	1,233.79	1.00	0.85	16.46
8,075.00	2.29	301.24	7,930.46	-303.37	1,192.12	1,230.11	0.28	0.00	6.94
8,169.00	2.73	309.42	8,024.37	-300.97	1,188.78	1,226.29	0.60	0.47	8.70
8,263.00	2.81	299.84	8,118.26	-298.41	1,185.05	1,222.04	0.50	0.09	-10.19
8,358.00	3.17	292.89	8,213.13	-296.23	1,180.61	1,217.20	0.54	0.38	-7.32
8,452.00	3.17	281.47	8,306.99	-294.70	1,175.67	1,212.03	0.67	0.00	-12.15
8,547.00	2.55	282.88	8,401.87	-293.70	1,171.04	1,207.30	0.66	-0.65	1.48
8,641.00	3.25	276.72	8,495.75	-292.93	1,166.35	1,202.56	0.81	0.74	-6.55
8,735.00	3.34	275.67	8,589.59	-292.34	1,160.98	1,197.22	0.12	0.10	-1.12
8,830.00	3.34	274.26	8,684.43	-291.86	1,155.47	1,191.76	0.09	0.00	-1.48

Scientific Drilling International, Inc.

Survey Report

Company:	OXY USA RMAT	Local Co-ordinate Reference:	Well CC 697-09-09 - Slot M
Project:	Garfield County, CO NAD27	TVD Reference:	GL 8407' & RKB 30' @ 8437.00ft (H&P)
Site:	Cascade Creek 608-41 Pad	MD Reference:	GL 8407' & RKB 30' @ 8437.00ft (H&P)
Well:	CC 697-09-09	North Reference:	True
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM-R5000-JanieCooke-Local

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,924.00	3.69	273.91	8,778.25	-291.46	1,149.72	1,186.08	0.37	0.37	-0.37
9,019.00	3.87	274.88	8,873.05	-290.97	1,143.48	1,179.92	0.20	0.19	1.02
9,060.00	3.61	271.27	8,913.96	-290.83	1,140.81	1,177.29	0.86	-0.63	-8.80
Last Production MWD									
9,115.00	3.61	271.27	8,968.85	-290.75	1,137.34	1,173.92	0.00	0.00	0.00
Projection to TD - BHL = 633583.40, 1229199.39									

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
155.00	155.00	-0.18	0.67	First Surface MWD
2,690.00	2,627.85	-146.94	508.96	Last Surface MWD
2,781.00	2,715.79	-155.25	530.80	First Production MWD
9,060.00	8,913.96	-290.83	1,140.81	Last Production MWD
9,115.00	8,968.85	-290.75	1,137.34	Projection to TD
9,115.00	8,968.85	-290.75	1,137.34	BHL = 633583.40, 1229199.39

Checked By: _____ Approved By: _____ Date: _____