



ENCANA OIL & GAS (USA) INC

Location: COLORADO Slot: Slot #06 Federal Gardner 20-6BB (PN20) 1063 FSL & 2163 FWL
 Field: GARFIELD COUNTY (NEW) Well: Federal Gardner 20-6BB
 Facility: SEC.20-T7S-R95W Wellbore: Federal Gardner 20-6BB PWB

Plot reference wellpath is Federal Gardner 20-6BB PWB Rev-A-0		Grid System: NAD83 / Lambert Colorado State Planes, Central Zone (502), US feet
True vertical depths are referenced to Rig on Slot #06 Federal Gardner 20-6BB (PN20) 1063 FSL & 2163 FWL (RT)		North Reference: True north
Measured depths are referenced to Rig on Slot #06 Federal Gardner 20-6BB (PN20) 1063 FSL & 2163 FWL (RT)		Scale: True distance
Rig on Slot #06 Federal Gardner 20-6BB (PN20) 1063 FSL & 2163 FWL (RT) to Mean Sea Level: 5795 feet		Depths are in feet
Mean Sea Level to Mud line (Facility: SEC.20-T7S-R95W): 0 feet		Created by: thomsuzc on 9/16/2009
Coordinates are in feet referenced to Slot		

Location Information

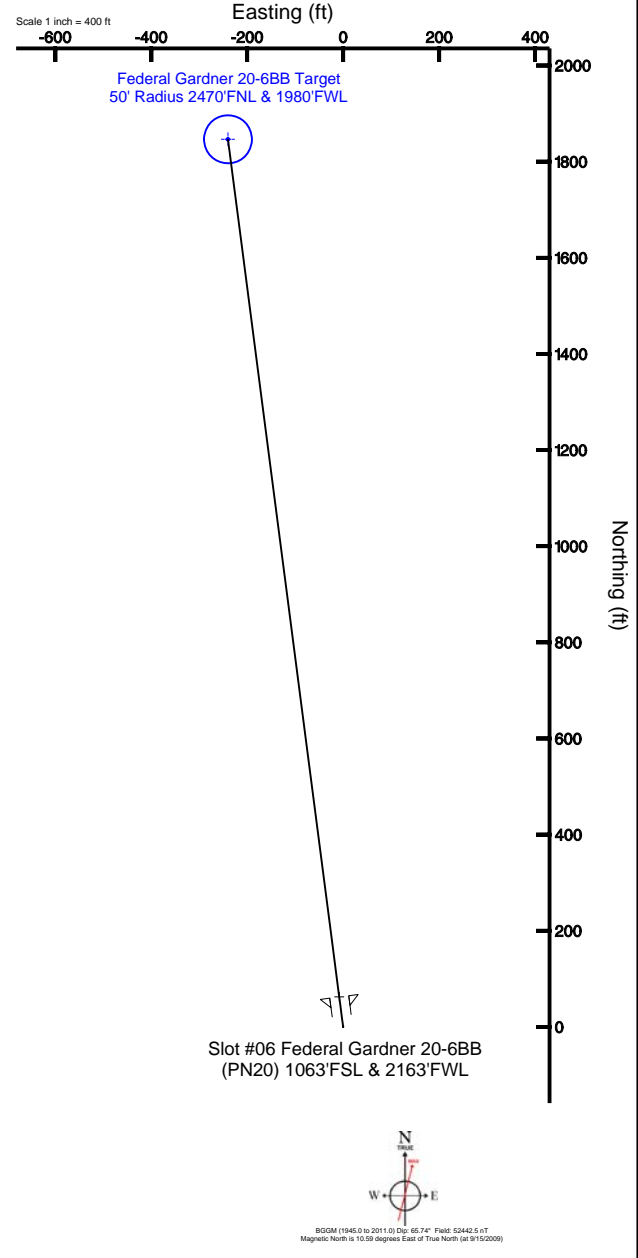
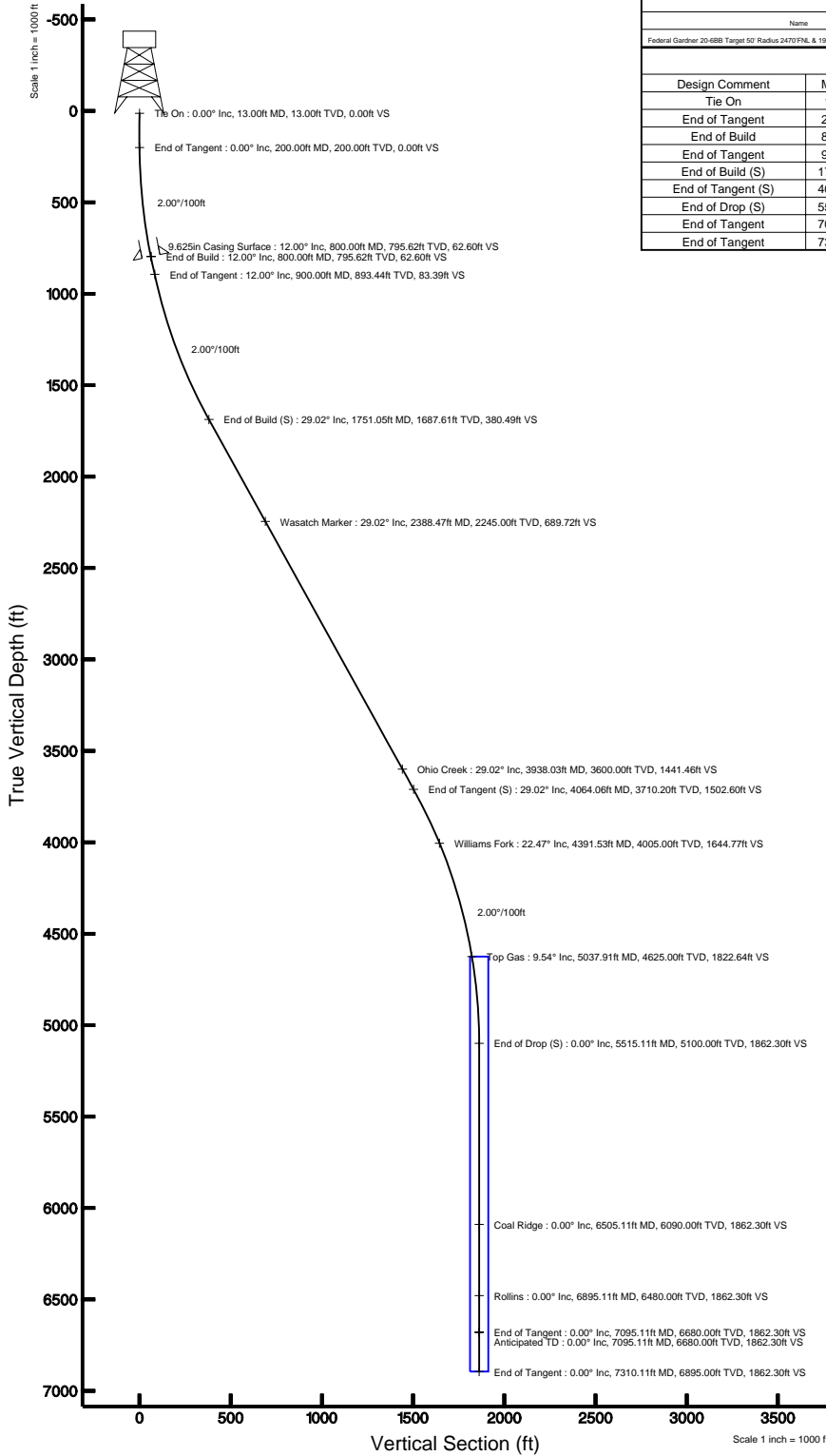
Facility Name		Grid East (USF)	Grid North (USF)	Latitude	Longitude	
SEC.20-T7S-R95W		238750.922	1587271.857	39°25'07.212"N	108°01'20.328"W	
Slot	Local N (ft)	Local E (ft)	Grid East (USF)	Grid North (USF)	Latitude	Longitude
Slot #06 Federal Gardner 20-6BB (PN20) 1063 FSL & 2163 FWL	-21.86	-22.60	2287487.723	1587250.639	39°25'06.996"N	108°01'20.496"W
Rig on Slot #06 Federal Gardner 20-6BB (PN20) 1063 FSL & 2163 FWL (RT) to Mud line (Facility: SEC.20-T7S-R95W)						
5795ft						
Mean Sea Level to Mud line (Facility: SEC.20-T7S-R95W)						
0ft						
Rig on Slot #06 Federal Gardner 20-6BB (PN20) 1063 FSL & 2163 FWL (RT) to Mean Sea Level						
5795ft						

Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (USF)	Grid North (USF)	Latitude	Longitude
Federal Gardner 20-6BB Target 50' Radius 2470 FNL & 1980 FWL	4625.00	1846.75	-240.13	2287308.97	1589103.25	39°25'25.248"N	108°01'23.556"W	

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	13.00	0.000	352.592	13.00	0.00	0.00	0.00	0.00
End of Tangent	200.00	0.000	352.592	200.00	0.00	0.00	0.00	0.00
End of Build	800.00	12.000	352.592	795.62	62.08	-8.07	2.00	62.60
End of Tangent	900.00	12.000	352.592	893.44	82.70	-10.75	0.00	83.39
End of Build (S)	1751.05	29.021	352.592	1687.61	377.31	-49.06	2.00	380.49
End of Tangent (S)	4064.06	29.021	352.592	3710.20	1490.06	-193.75	0.00	1502.60
End of Drop (S)	5515.11	0.000	352.592	5100.00	1846.75	-240.13	2.00	1862.30
End of Tangent	7095.11	0.000	352.592	6680.00	1846.75	-240.13	0.00	1862.30
End of Tangent	7310.11	0.000	352.592	6895.00	1846.75	-240.13	0.00	1862.30



BDGM (1946.0 to 2011.0) On: 85.7° Field: 52442.5 ft
 Magnetic North is 10.59 degrees East of True North (at 9/15/2009)
 To correct azimuth from Magnetic to True add 10.59 degrees



Planned Wellpath Report

Federal Gardner 20-6BB PWP Rev-A.0

Page 1 of 5



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	ENCANA OIL & GAS (USA) INC	Slot	Slot #06 Federal Gardner 20-6BB (PN20) 1063'FSL & 2163'FWL
Area	COLORADO	Well	Federal Gardner 20-6BB
Field	GARFIELD COUNTY (NEW)	Wellbore	Federal Gardner 20-6BB PWB
Facility	SEC.20-T7S-R95W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado State Planes, Central Zone (502), US feet	Software System	WellArchitect® 2.0
North Reference	True	User	Thomsuzc
Scale	0.999951	Report Generated	9/16/2009 at 1:55:48 PM
Convergence at slot	1.59° West	Database/Source file	Denver/Federal_Gardner_20-6BB_PWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	-21.86	-22.60	2287497.72	1587250.64	39°25'06.996"N	108°01'20.496"W
Facility Reference Pt			2287520.92	1587271.86	39°25'07.212"N	108°01'20.208"W
Field Reference Pt			3000000.01	4560984.48	47°34'21.070"N	105°30'00.000"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on Slot #06 Federal Gardner 20-6BB (PN20) 1063'FSL & 2163'FWL (RT) to Facility Vertical Datum	5795.00ft
Horizontal Reference Pt	Slot	Rig on Slot #06 Federal Gardner 20-6BB (PN20) 1063'FSL & 2163'FWL (RT) to Mean Sea Level	5795.00ft
Vertical Reference Pt	Rig on Slot #06 Federal Gardner 20-6BB (PN20) 1063'FSL & 2163'FWL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on Slot #06 Federal Gardner 20-6BB (PN20) 1063'FSL & 2163'FWL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	352.59°



Planned Wellpath Report

Federal Gardner 20-6BB PWP Rev-A.0

Page 2 of 5



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	ENCANA OIL & GAS (USA) INC	Slot	Slot #06 Federal Gardner 20-6BB (PN20) 1063'FSL & 2163'FWL
Area	COLORADO	Well	Federal Gardner 20-6BB
Field	GARFIELD COUNTY (NEW)	Wellbore	Federal Gardner 20-6BB PWB
Facility	SEC.20-T7S-R95W		

WELLPATH DATA (82 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]
0.00†	0.000	352.592	0.00	0.00	0.00	0.00	0.00
13.00	0.000	352.592	13.00	0.00	0.00	0.00	0.00
113.00†	0.000	352.592	113.00	0.00	0.00	0.00	0.00
200.00	0.000	352.592	200.00	0.00	0.00	0.00	0.00
213.00†	0.260	352.592	213.00	0.03	0.03	0.00	2.00
313.00†	2.260	352.592	312.97	2.23	2.21	-0.29	2.00
413.00†	4.260	352.592	412.80	7.91	7.85	-1.02	2.00
513.00†	6.260	352.592	512.38	17.08	16.94	-2.20	2.00
613.00†	8.260	352.592	611.57	29.72	29.47	-3.83	2.00
713.00†	10.260	352.592	710.26	45.81	45.43	-5.91	2.00
800.00	12.000	352.592	795.62	62.60	62.08	-8.07	2.00
813.00†	12.000	352.592	808.34	65.31	64.76	-8.42	0.00
900.00	12.000	352.592	893.44	83.39	82.70	-10.75	0.00
913.00†	12.260	352.592	906.15	86.13	85.41	-11.11	2.00
1013.00†	14.260	352.592	1003.48	109.06	108.15	-14.06	2.00
1113.00†	16.260	352.592	1099.95	135.38	134.25	-17.46	2.00
1213.00†	18.260	352.592	1195.44	165.05	163.67	-21.28	2.00
1313.00†	20.260	352.592	1289.84	198.03	196.38	-25.53	2.00
1413.00†	22.260	352.592	1383.03	234.29	232.34	-30.21	2.00
1513.00†	24.260	352.592	1474.89	273.78	271.49	-35.30	2.00
1613.00†	26.260	352.592	1565.33	316.45	313.81	-40.80	2.00
1713.00†	28.260	352.592	1654.22	362.25	359.23	-46.71	2.00
1751.05	29.021	352.592	1687.61	380.49	377.31	-49.06	2.00
1813.00†	29.021	352.592	1741.78	410.54	407.12	-52.94	0.00
1913.00†	29.021	352.592	1829.23	459.06	455.22	-59.19	0.00
2013.00†	29.021	352.592	1916.67	507.57	503.33	-65.45	0.00
2113.00†	29.021	352.592	2004.11	556.08	551.44	-71.70	0.00
2213.00†	29.021	352.592	2091.56	604.59	599.55	-77.96	0.00
2313.00†	29.021	352.592	2179.00	653.11	647.66	-84.21	0.00
2413.00†	29.021	352.592	2266.45	701.62	695.76	-90.47	0.00
2513.00†	29.021	352.592	2353.89	750.13	743.87	-96.72	0.00
2613.00†	29.021	352.592	2441.34	798.65	791.98	-102.98	0.00
2713.00†	29.021	352.592	2528.78	847.16	840.09	-109.23	0.00
2813.00†	29.021	352.592	2616.22	895.67	888.20	-115.49	0.00
2913.00†	29.021	352.592	2703.67	944.19	936.30	-121.75	0.00
3013.00†	29.021	352.592	2791.11	992.70	984.41	-128.00	0.00
3113.00†	29.021	352.592	2878.56	1041.21	1032.52	-134.26	0.00
3213.00†	29.021	352.592	2966.00	1089.72	1080.63	-140.51	0.00
3313.00†	29.021	352.592	3053.44	1138.24	1128.74	-146.77	0.00
3413.00†	29.021	352.592	3140.89	1186.75	1176.84	-153.02	0.00
3513.00†	29.021	352.592	3228.33	1235.26	1224.95	-159.28	0.00
3613.00†	29.021	352.592	3315.78	1283.78	1273.06	-165.53	0.00
3713.00†	29.021	352.592	3403.22	1332.29	1321.17	-171.79	0.00
3813.00†	29.021	352.592	3490.67	1380.80	1369.28	-178.04	0.00
3913.00†	29.021	352.592	3578.11	1429.32	1417.38	-184.30	0.00



Planned Wellpath Report

Federal Gardner 20-6BB PWP Rev-A.0

Page 3 of 5



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ENCANA OIL & GAS (USA) INC	Slot	Slot #06 Federal Gardner 20-6BB (PN20) 1063'FSL & 2163'FWL
Area	COLORADO	Well	Federal Gardner 20-6BB
Field	GARFIELD COUNTY (NEW)	Wellbore	Federal Gardner 20-6BB PWB
Facility	SEC.20-T7S-R95W		

WELLPATH DATA (82 stations) † = interpolated/extrapolated station								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	
4013.00†	29.021	352.592	3665.55	1477.83	1465.49	-190.55	0.00	
4064.06	29.021	352.592	3710.20	1502.60	1490.06	-193.75	0.00	
4113.00†	28.042	352.592	3753.20	1525.98	1513.24	-196.76	2.00	
4213.00†	26.042	352.592	3842.26	1571.44	1558.32	-202.62	2.00	
4313.00†	24.042	352.592	3932.86	1613.76	1600.29	-208.08	2.00	
4413.00†	22.042	352.592	4024.87	1652.90	1639.10	-213.13	2.00	
4513.00†	20.042	352.592	4118.20	1688.81	1674.71	-217.76	2.00	
4613.00†	18.042	352.592	4212.72	1721.43	1707.06	-221.97	2.00	
4713.00†	16.042	352.592	4308.33	1750.74	1736.12	-225.74	2.00	
4813.00†	14.042	352.592	4404.90	1776.69	1761.86	-229.09	2.00	
4913.00†	12.042	352.592	4502.31	1799.26	1784.24	-232.00	2.00	
5013.00†	10.042	352.592	4600.46	1818.41	1803.23	-234.47	2.00	
5113.00†	8.042	352.592	4699.21	1834.12	1818.81	-236.50	2.00	
5213.00†	6.042	352.592	4798.45	1846.38	1830.97	-238.08	2.00	
5313.00†	4.042	352.592	4898.06	1855.17	1839.68	-239.21	2.00	
5413.00†	2.042	352.592	4997.91	1860.48	1844.95	-239.89	2.00	
5513.00†	0.042	352.592	5097.89	1862.30	1846.75	-240.13	2.00	
5515.11	0.000	352.592	5100.00†	1862.30	1846.75	-240.13	2.00	
5613.00†	0.000	352.592	5197.89	1862.30	1846.75	-240.13	0.00	
5713.00†	0.000	352.592	5297.89	1862.30	1846.75	-240.13	0.00	
5813.00†	0.000	352.592	5397.89	1862.30	1846.75	-240.13	0.00	
5913.00†	0.000	352.592	5497.89	1862.30	1846.75	-240.13	0.00	
6013.00†	0.000	352.592	5597.89	1862.30	1846.75	-240.13	0.00	
6113.00†	0.000	352.592	5697.89	1862.30	1846.75	-240.13	0.00	
6213.00†	0.000	352.592	5797.89	1862.30	1846.75	-240.13	0.00	
6313.00†	0.000	352.592	5897.89	1862.30	1846.75	-240.13	0.00	
6413.00†	0.000	352.592	5997.89	1862.30	1846.75	-240.13	0.00	
6513.00†	0.000	352.592	6097.89	1862.30	1846.75	-240.13	0.00	
6613.00†	0.000	352.592	6197.89	1862.30	1846.75	-240.13	0.00	
6713.00†	0.000	352.592	6297.89	1862.30	1846.75	-240.13	0.00	
6813.00†	0.000	352.592	6397.89	1862.30	1846.75	-240.13	0.00	
6913.00†	0.000	352.592	6497.89	1862.30	1846.75	-240.13	0.00	
7013.00†	0.000	352.592	6597.89	1862.30	1846.75	-240.13	0.00	
7095.11	0.000	352.592	6680.00	1862.30	1846.75	-240.13	0.00	
7113.00†	0.000	352.592	6697.89	1862.30	1846.75	-240.13	0.00	
7213.00†	0.000	352.592	6797.89	1862.30	1846.75	-240.13	0.00	
7310.11	0.000	352.592	6895.00	1862.30	1846.75	-240.13	0.00	



Planned Wellpath Report

Federal Gardner 20-6BB PWP Rev-A.0

Page 4 of 5



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ENCANA OIL & GAS (USA) INC	Slot	Slot #06 Federal Gardner 20-6BB (PN20) 1063'FSL & 2163'FWL
Area	COLORADO	Well	Federal Gardner 20-6BB
Field	GARFIELD COUNTY (NEW)	Wellbore	Federal Gardner 20-6BB PWB
Facility	SEC.20-T7S-R95W		

HOLE & CASING SECTIONS Ref Wellbore: Federal Gardner 20-6BB PWB Ref Wellpath: Federal Gardner 20-6BB PWP Rev-A.0									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
12.25in Open Hole	13.00	800.00	787.00	13.00	795.62	0.00	0.00	62.08	-8.07
9.625in Casing Surface	13.00	800.00	787.00	13.00	795.62	0.00	0.00	62.08	-8.07

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) Federal Gardner 20-6BB Target 50' Radius 2470'FNL & 1980'FWL		4625.00	1846.75	-240.13	2287308.97	1589103.25	39°25'25.248"N	108°01'23.556"W	circle

SURVEY PROGRAM Ref Wellbore: Federal Gardner 20-6BB PWB Ref Wellpath: Federal Gardner 20-6BB PWP Rev-A.0				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
13.00	7310.11	MTC (Collar, post-2000) (Standard)		Federal Gardner 20-6BB PWB



Planned Wellpath Report

Federal Gardner 20-6BB PWP Rev-A.0

Page 5 of 5



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	ENCANA OIL & GAS (USA) INC	Slot	Slot #06 Federal Gardner 20-6BB (PN20) 1063'FSL & 2163'FWL
Area	COLORADO	Well	Federal Gardner 20-6BB
Field	GARFIELD COUNTY (NEW)	Wellbore	Federal Gardner 20-6BB PWB
Facility	SEC.20-T7S-R95W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]		Azimuth [°]	TVD [ft]	Comment
2388.47	29.021	29.021	352.592	2245.00	Wasatch Marker
3938.03	29.021	29.021	352.592	3600.00	Ohio Creek
4391.53	22.472	22.472	352.592	4005.00	Williams Fork
5037.91	9.544	9.544	352.592	4625.00	Top Gas
6505.11	0.000	0.000	352.592	6090.00	Coal Ridge
6895.11	0.000	0.000	352.592	6480.00	Rollins
7095.11	0.000	0.000	352.592	6680.00	Anticipated TD