



Mesa West Directional  
Telephone: 505.402.8944  
[www.mesawestdirectional.com](http://www.mesawestdirectional.com)

## **Austin Exploration**

**Fremont County (Nad 83)**

**Sec 18, T20S,R69W**

**C-18 #8**

**Hz**

**UWI:**

**API:**

**Plan: #2**

## **Mesa West Planning Report**

**23 September, 2014**





Project: Fremont County (Nad 83)  
Site: Sec 18, T20S,R69W  
Well: C-18 #8  
Wellbore: Hz  
Plan: #2



PLAN DETAILS

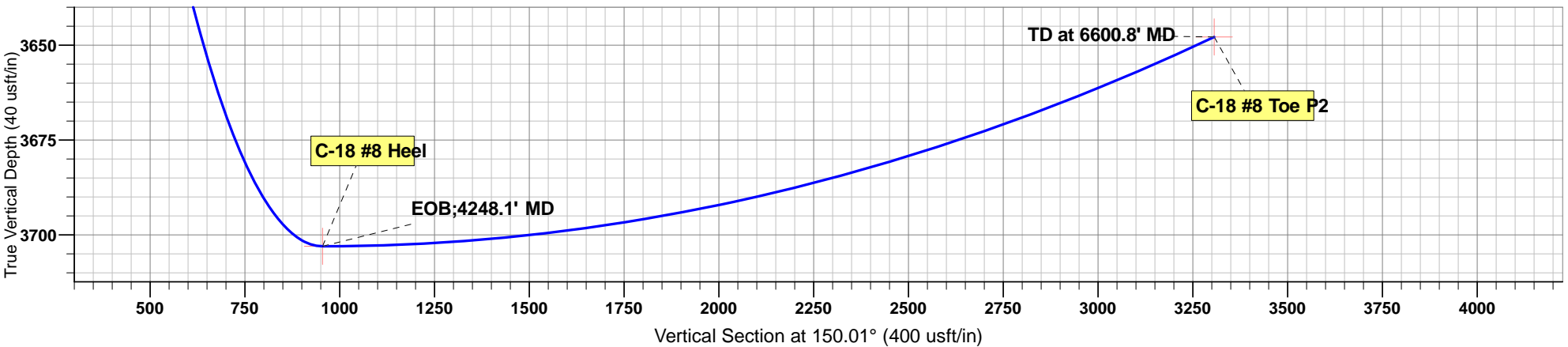
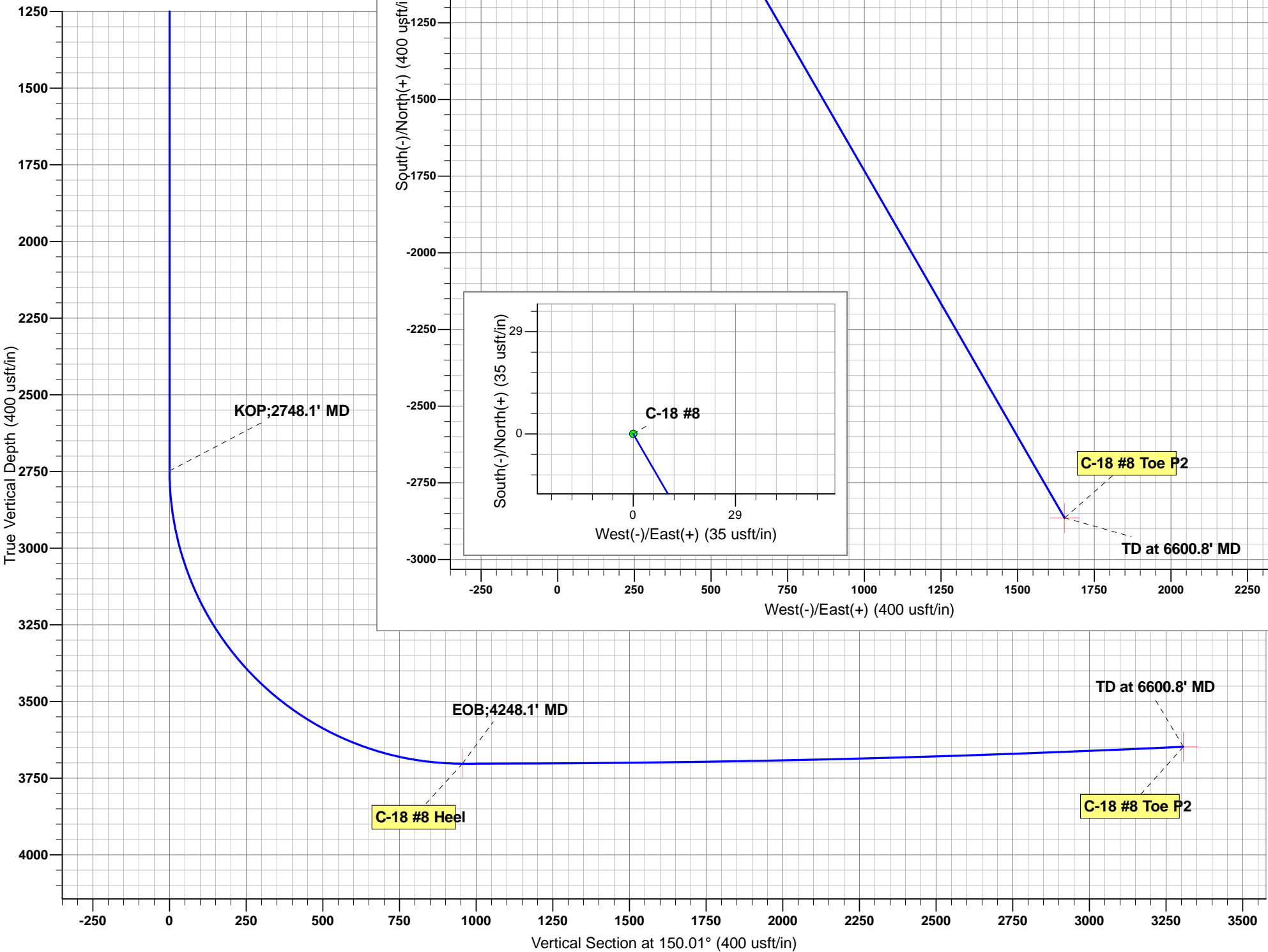
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2748.1	0.00	0.00	2748.1	0.0	0.0	0.00	0.00	0.0	
3	4248.1	90.00	150.00	3703.0	-827.0	477.5	6.00	150.00	954.9	C-18 #8 Heel
4	6600.8	92.69	150.02	3647.9	-2864.0	1653.0	0.11	0.48	3306.8	C-18 #8 Toe P2

Well Centre Reference

Geodetic System: US State Plane 1983  
Ellipsoid: GRS 1980  
Zone: Colorado Central Zone  
Northing: 1175533.74  
Easting: 3100269.54  
Latitude: 38° 18' 53.182 N  
Longitude: 105° 9' 1.980 W  
Grid Convergence: 0.22° West  
Ground Elevation: 5797.1  
KB Elevation: Est RKV @ 5811.1usft

Formation Tops

No formation data is available



<b>Database:</b>	WellPlan Services	<b>Local Co-ordinate Reference:</b>	Well C-18 #8
<b>Company:</b>	Austin Exploration	<b>TVD Reference:</b>	Est RKV @ 5811.1usft
<b>Project:</b>	Fremont County (Nad 83)	<b>MD Reference:</b>	Est RKV @ 5811.1usft
<b>Site:</b>	Sec 18, T20S,R69W	<b>North Reference:</b>	True
<b>Well:</b>	C-18 #8	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Plan:</b>	#2		

<b>Project</b>	Fremont County (Nad 83)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Central Zone		

Site	Sec 18, T20S,R69W				
Site Position:		Northing:	1,173,713.71 usft	Latitude:	38° 18' 35.172 N
From:	Lat/Long	Easting:	3,100,788.76 usft	Longitude:	105° 8' 55.554 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.22

Well	C-18 #8					
Well Position	+N/-S	1,822.0 usft	Northing:	1,175,533.74 usft	Latitude:	38° 18' 53.182 N
	+E/-W	-512.2 usft	Easting:	3,100,269.54 usft	Longitude:	105° 9' 1.980 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	5,797.1 usft

<b>Wellbore</b>	Hz				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	13/09/2014	8.45	65.17	51,620

<b>Plan</b>	#2			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	150.01

<b>Plan Sections</b>										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,748.1	0.00	0.00	2,748.1	0.0	0.0	0.00	0.00	0.00	0.00	
4,248.1	90.00	150.00	3,703.0	-827.0	477.5	6.00	6.00	10.00	150.00	C-18 #8 Heel
6,600.8	92.69	150.02	3,647.9	-2,864.0	1,653.0	0.11	0.11	0.00	0.48	C-18 #8 Toe P2

<b>Database:</b>	WellPlan Services	<b>Local Co-ordinate Reference:</b>	Well C-18 #8
<b>Company:</b>	Austin Exploration	<b>TVD Reference:</b>	Est RKV @ 5811.1usft
<b>Project:</b>	Fremont County (Nad 83)	<b>MD Reference:</b>	Est RKV @ 5811.1usft
<b>Site:</b>	Sec 18, T20S,R69W	<b>North Reference:</b>	True
<b>Well:</b>	C-18 #8	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Plan:</b>	#2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Subsea (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	5,811.1	0.0	0.0	0.0	0.00	0.00	0.00
<b>KOP;2748.1' MD</b>										
2,748.1	0.00	0.00	2,748.1	3,063.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	3.11	150.00	2,800.0	3,011.1	-1.2	0.7	1.4	6.00	6.00	0.00
2,900.0	9.11	150.00	2,899.4	2,911.7	-10.4	6.0	12.1	6.00	6.00	0.00
3,000.0	15.11	150.00	2,997.1	2,814.0	-28.6	16.5	33.0	6.00	6.00	0.00
3,100.0	21.11	150.00	3,092.1	2,719.0	-55.5	32.1	64.1	6.00	6.00	0.00
3,200.0	27.11	150.00	3,183.3	2,627.8	-90.9	52.5	104.9	6.00	6.00	0.00
3,300.0	33.11	150.00	3,269.8	2,541.3	-134.3	77.5	155.1	6.00	6.00	0.00
3,400.0	39.11	150.00	3,350.5	2,460.6	-185.3	107.0	214.0	6.00	6.00	0.00
3,500.0	45.11	150.00	3,424.7	2,386.4	-243.4	140.5	281.0	6.00	6.00	0.00
3,600.0	51.11	150.00	3,491.4	2,319.7	-307.8	177.7	355.5	6.00	6.00	0.00
3,700.0	57.11	150.00	3,550.0	2,261.1	-378.0	218.2	436.4	6.00	6.00	0.00
3,800.0	63.11	150.00	3,599.8	2,211.3	-453.0	261.5	523.1	6.00	6.00	0.00
3,900.0	69.11	150.00	3,640.3	2,170.8	-532.2	307.2	614.5	6.00	6.00	0.00
4,000.0	75.11	150.00	3,671.0	2,140.1	-614.5	354.8	709.6	6.00	6.00	0.00
4,100.0	81.11	150.00	3,691.6	2,119.5	-699.2	403.7	807.4	6.00	6.00	0.00
4,200.0	87.11	150.00	3,701.8	2,109.3	-785.4	453.4	906.8	6.00	6.00	0.00
<b>EOB;4248.1' MD</b>										
4,248.1	90.00	150.00	3,703.0	2,108.1	-827.0	477.5	954.9	6.00	6.00	0.00
4,300.0	90.06	150.00	3,703.0	2,108.1	-871.9	503.4	1,006.8	0.11	0.11	0.00
4,400.0	90.17	150.00	3,702.8	2,108.3	-958.5	553.4	1,106.8	0.11	0.11	0.00
4,500.0	90.29	150.00	3,702.4	2,108.7	-1,045.1	603.4	1,206.8	0.11	0.11	0.00
4,600.0	90.40	150.00	3,701.8	2,109.3	-1,131.8	653.4	1,306.8	0.11	0.11	0.00
4,700.0	90.52	150.00	3,701.0	2,110.1	-1,218.4	703.4	1,406.8	0.11	0.11	0.00
4,800.0	90.63	150.01	3,700.0	2,111.1	-1,305.0	753.4	1,506.8	0.11	0.11	0.00
4,900.0	90.74	150.01	3,698.8	2,112.3	-1,391.6	803.4	1,606.8	0.11	0.11	0.00
5,000.0	90.86	150.01	3,697.4	2,113.7	-1,478.2	853.4	1,706.8	0.11	0.11	0.00
5,100.0	90.97	150.01	3,695.8	2,115.3	-1,564.8	903.3	1,806.8	0.11	0.11	0.00
5,200.0	91.09	150.01	3,694.0	2,117.1	-1,651.4	953.3	1,906.8	0.11	0.11	0.00
5,300.0	91.20	150.01	3,692.0	2,119.1	-1,737.9	1,003.3	2,006.8	0.11	0.11	0.00
5,400.0	91.32	150.01	3,689.8	2,121.3	-1,824.5	1,053.3	2,106.7	0.11	0.11	0.00
5,500.0	91.43	150.01	3,687.4	2,123.7	-1,911.1	1,103.2	2,206.7	0.11	0.11	0.00
5,600.0	91.54	150.01	3,684.8	2,126.3	-1,997.7	1,153.2	2,306.7	0.11	0.11	0.00
5,700.0	91.66	150.01	3,682.0	2,129.1	-2,084.3	1,203.2	2,406.6	0.11	0.11	0.00
5,800.0	91.77	150.01	3,679.0	2,132.1	-2,170.9	1,253.1	2,506.6	0.11	0.11	0.00
5,900.0	91.89	150.02	3,675.8	2,135.3	-2,257.4	1,303.1	2,606.5	0.11	0.11	0.00
6,000.0	92.00	150.02	3,672.4	2,138.7	-2,344.0	1,353.0	2,706.5	0.11	0.11	0.00
6,100.0	92.11	150.02	3,668.9	2,142.2	-2,430.6	1,403.0	2,806.4	0.11	0.11	0.00
6,200.0	92.23	150.02	3,665.1	2,146.0	-2,517.1	1,452.9	2,906.3	0.11	0.11	0.00
6,300.0	92.34	150.02	3,661.1	2,150.0	-2,603.7	1,502.8	3,006.3	0.11	0.11	0.00
6,400.0	92.46	150.02	3,656.9	2,154.2	-2,690.2	1,552.8	3,106.2	0.11	0.11	0.00
6,500.0	92.57	150.02	3,652.5	2,158.6	-2,776.8	1,602.7	3,206.1	0.11	0.11	0.00
6,600.0	92.69	150.02	3,647.9	2,163.2	-2,863.3	1,652.6	3,306.0	0.11	0.11	0.00
<b>TD at 6600.8' MD</b>										
6,600.8	92.69	150.02	3,647.9	2,163.2	-2,864.0	1,653.0	3,306.8	0.11	0.11	0.00

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<b>Site:</b>	Sec 18, T20S,R69W	<b>North Reference:</b>	True
<b>Well:</b>	C-18 #8	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Hz		
<b>Plan:</b>	#2		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
C-18 #8 Toe P2	0.00	0.00	3,647.9	-2,864.0	1,653.0	1,172,676.11	3,101,933.55	38° 18' 24.872 N	105° 8' 41.243 W
- plan hits target center									
- Point									
C-18 #8 Heel	0.00	0.00	3,703.0	-827.0	477.5	1,174,708.58	3,100,750.18	38° 18' 45.008 N	105° 8' 55.990 W
- plan hits target center									
- Point									

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S	+E/-W	Comment	
(usft)	(usft)	(usft)	(usft)		
2,748.1	2,748.1	0.0	0.0	KOP;2748.1' MD	
4,248.1	3,703.0	-827.0	477.5	EOB;4248.1' MD	
6,600.8	3,647.9	-2,864.0	1,653.0	TD at 6600.8' MD	