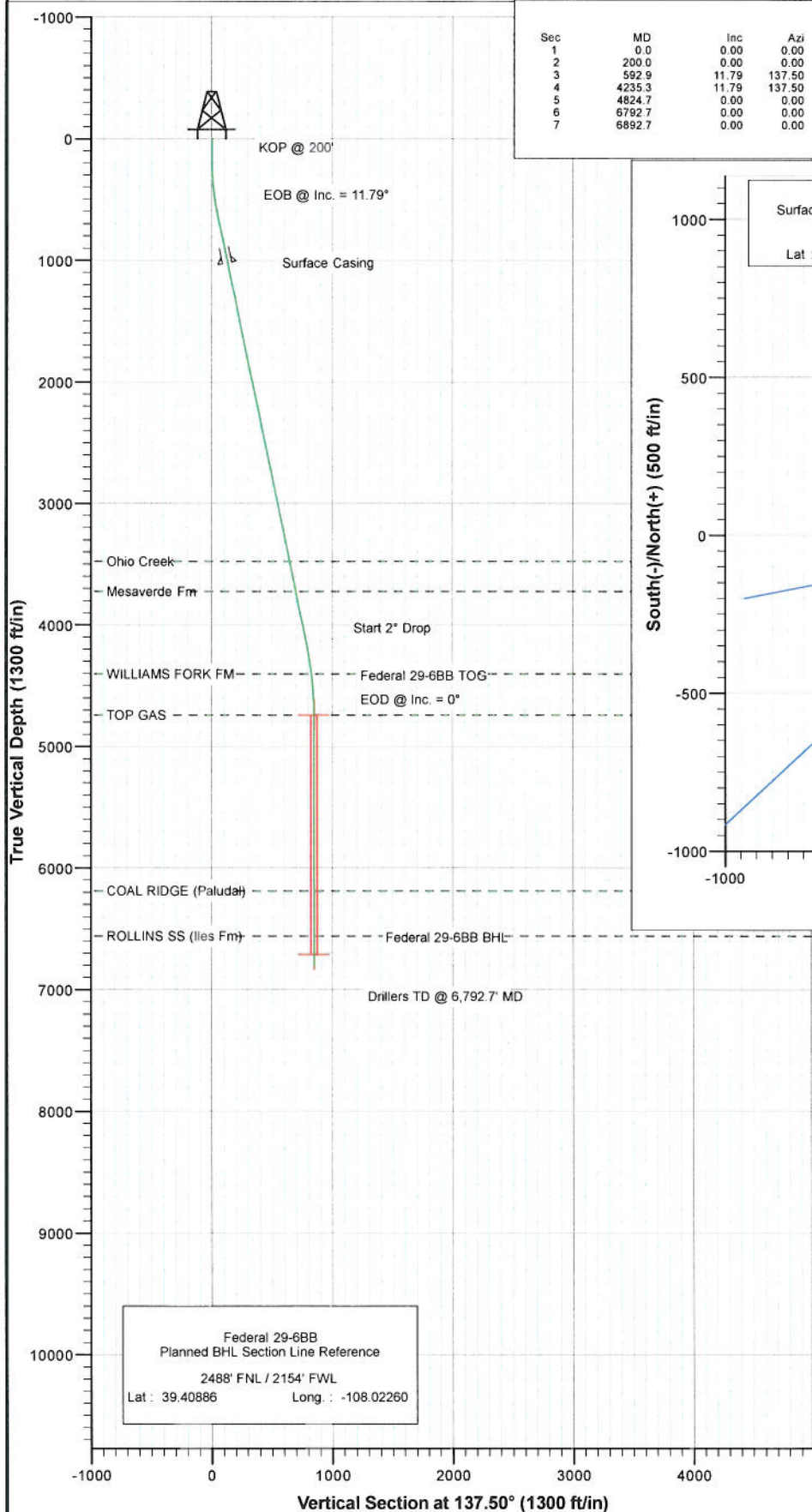
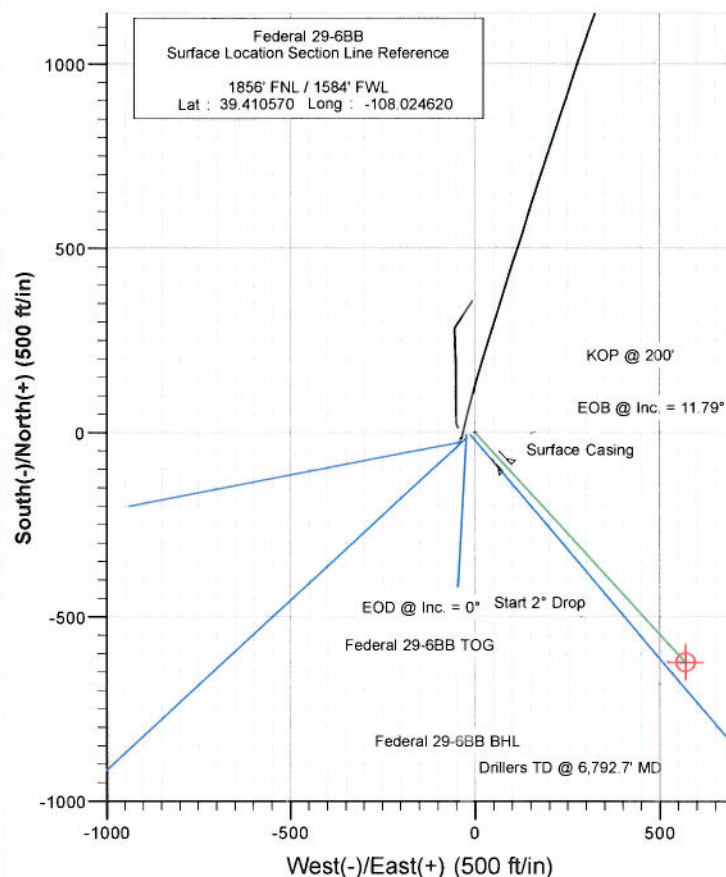




Project: S. Piceance (Parachute)
 Site: S29-T7S-R95W (PP-29-P-60)
 Well: Federal 29-6BB
 Wellbore: DD
 Plan: Plan #2



SECTION 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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0
3	592.9	11.79	137.50	590.2	-29.7	27.2	3.00	137.50	40.3
4	4235.3	11.79	137.50	4155.8	-578.3	529.9	0.00	0.00	784.4
5	4824.7	0.00	0.00	4741.0	-622.8	570.8	2.00	180.00	844.8 Federal 29-6BB TOG
6	6792.7	0.00	0.00	6709.0	-622.8	570.8	0.00	0.00	844.8 Federal 29-6BB BHL
7	6892.7	0.00	0.00	6809.0	-622.8	570.8	0.00	0.00	844.8



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3477.0	3542.0	Ohio Creek
3723.0	3793.3	Mesaverde Fm
4404.0	4486.9	WILLIAMS FORK FM
4741.0	4824.7	TOP GAS
6187.0	6270.7	COAL RIDGE (Paludal)
6559.0	6642.7	ROLLINS SS (Iles Fm)



Azimuths to True North
 Magnetic North: 10.42°

Magnetic Field
 Strength: 52302.2snT
 Dip Angle: 65.69°
 Date: 9/27/2010
 Model: IGRF200510

DESIGN DETAILS: Plan #2
 115XXX; SC

WELL @ 6058.0ft (Original Well Elev)				
Target	Azimuth	Origin Type	N/S	E/W
Federal 29-6BB BHL	137.50	Spot	0.0	0.0

Cathedral Energy Services

Planning Report

Database: USA EDM 5000 Multi Users DB
 Company: EnCana Oil & Gas (USA) Inc
 Project: S. Piceance (Parachute)
 Site: S29-T7S-R95W (PF-29 Pad)
 Well: Federal 29-6BB
 Wellbore: DD
 Design: Plan #2

Local Co-ordinate Reference: Well Federal 29-6BB
 TVD Reference: WELL @ 6058.0ft (Original Well Elev)
 MD Reference: WELL @ 6058.0ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature

Project S. Piceance (Parachute), Garfield County, CO

Map System: US State Plane 1983 **System Datum:** Mean Sea Level
Geo Datum: North American Datum 1983
Map Zone: Colorado Central Zone

Site S29-T7S-R95W (PF-29 Pad)

Site Position: **From:** Lat/Long **Northing:** 1,584,347.66 ft **Latitude:** 39.410580
Eastings: 2,286,791.27 ft **Longitude:** -108.024590
Position Uncertainty: 0.0 ft **Slot Radius:** 13.200 in **Grid Convergence:** -1.59 °

Well Federal 29-6BB

Well Position **+N/-S** 0.0 ft **Northing:** 1,584,344.24 ft **Latitude:** 39.410570
+E/-W 0.0 ft **Eastings:** 2,286,782.70 ft **Longitude:** -108.024620
Position Uncertainty 0.0 ft **Wellhead Elevation:** ft **Ground Level:** 6,036.0 ft

Wellbore DD

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	9/27/2010	10.42	65.69	52,302

Design Plan #2

Audit Notes:

Version: **Phase:** PLAN **Tie On Depth:** 0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	137.50

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
592.9	11.79	137.50	590.2	-29.7	27.2	3.00	3.00	0.00	137.50	
4,235.3	11.79	137.50	4,155.8	-578.3	529.9	0.00	0.00	0.00	0.00	
4,824.7	0.00	0.00	4,741.0	-622.8	570.8	2.00	-2.00	0.00	180.00	Federal 29-6BB TOG
6,792.7	0.00	0.00	6,709.0	-622.8	570.8	0.00	0.00	0.00	0.00	Federal 29-6BB BHL
6,892.7	0.00	0.00	6,809.0	-622.8	570.8	0.00	0.00	0.00	0.00	

Cathedral Energy Services

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: S. Piceance (Parachute)
Site: S29-T7S-R95W (PF-29 Pad)
Well: Federal 29-6BB
Wellbore: DD
Design: Plan #2

Local Co-ordinate Reference: Well Federal 29-6BB
TVD Reference: WELL @ 6058.0ft (Original Well Elev)
MD Reference: WELL @ 6058.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	KOP @ 200'
300.0	3.00	137.50	300.0	-1.9	1.8	2.6	3.00	3.00	
400.0	6.00	137.50	399.6	-7.7	7.1	10.5	3.00	3.00	
500.0	9.00	137.50	498.8	-17.3	15.9	23.5	3.00	3.00	
592.9	11.79	137.50	590.2	-29.7	27.2	40.3	3.00	3.00	EOB @ Inc. = 11.79°
600.0	11.79	137.50	597.1	-30.8	28.2	41.7	0.00	0.00	
700.0	11.79	137.50	695.0	-45.8	42.0	62.2	0.00	0.00	
800.0	11.79	137.50	792.9	-60.9	55.8	82.6	0.00	0.00	
900.0	11.79	137.50	890.8	-75.9	69.6	103.0	0.00	0.00	
1,000.0	11.79	137.50	988.6	-91.0	83.4	123.4	0.00	0.00	
1,033.0	11.79	137.50	1,021.0	-96.0	88.0	130.2	0.00	0.00	Surface Casing
1,100.0	11.79	137.50	1,086.5	-106.1	97.2	143.9	0.00	0.00	
1,200.0	11.79	137.50	1,184.4	-121.1	111.0	164.3	0.00	0.00	
1,300.0	11.79	137.50	1,282.3	-136.2	124.8	184.7	0.00	0.00	
1,400.0	11.79	137.50	1,380.2	-151.2	138.6	205.2	0.00	0.00	
1,500.0	11.79	137.50	1,478.1	-166.3	152.4	225.6	0.00	0.00	
1,600.0	11.79	137.50	1,576.0	-181.4	166.2	246.0	0.00	0.00	
1,700.0	11.79	137.50	1,673.9	-196.4	180.0	266.4	0.00	0.00	
1,800.0	11.79	137.50	1,771.8	-211.5	193.8	286.9	0.00	0.00	
1,900.0	11.79	137.50	1,869.7	-226.6	207.6	307.3	0.00	0.00	
2,000.0	11.79	137.50	1,967.6	-241.6	221.4	327.7	0.00	0.00	
2,100.0	11.79	137.50	2,065.5	-256.7	235.2	348.2	0.00	0.00	
2,200.0	11.79	137.50	2,163.3	-271.7	249.0	368.6	0.00	0.00	
2,300.0	11.79	137.50	2,261.2	-286.8	262.8	389.0	0.00	0.00	
2,400.0	11.79	137.50	2,359.1	-301.9	276.6	409.4	0.00	0.00	
2,500.0	11.79	137.50	2,457.0	-316.9	290.4	429.9	0.00	0.00	
2,600.0	11.79	137.50	2,554.9	-332.0	304.2	450.3	0.00	0.00	
2,700.0	11.79	137.50	2,652.8	-347.0	318.0	470.7	0.00	0.00	
2,800.0	11.79	137.50	2,750.7	-362.1	331.8	491.2	0.00	0.00	
2,900.0	11.79	137.50	2,848.6	-377.2	345.6	511.6	0.00	0.00	
3,000.0	11.79	137.50	2,946.5	-392.2	359.4	532.0	0.00	0.00	
3,100.0	11.79	137.50	3,044.4	-407.3	373.2	552.4	0.00	0.00	
3,200.0	11.79	137.50	3,142.3	-422.3	387.0	572.9	0.00	0.00	
3,300.0	11.79	137.50	3,240.1	-437.4	400.8	593.3	0.00	0.00	
3,400.0	11.79	137.50	3,338.0	-452.5	414.6	613.7	0.00	0.00	
3,500.0	11.79	137.50	3,435.9	-467.5	428.4	634.2	0.00	0.00	
3,542.0	11.79	137.50	3,477.0	-473.8	434.2	642.7	0.00	0.00	Ohio Creek
3,600.0	11.79	137.50	3,533.8	-482.6	442.2	654.6	0.00	0.00	
3,700.0	11.79	137.50	3,631.7	-497.7	456.0	675.0	0.00	0.00	
3,793.3	11.79	137.50	3,723.0	-511.7	468.9	694.1	0.00	0.00	Mesaverde Fm
3,800.0	11.79	137.50	3,729.6	-512.7	469.8	695.4	0.00	0.00	
3,900.0	11.79	137.50	3,827.5	-527.8	483.7	715.9	0.00	0.00	
4,000.0	11.79	137.50	3,925.4	-542.8	497.5	736.3	0.00	0.00	
4,100.0	11.79	137.50	4,023.3	-557.9	511.3	756.7	0.00	0.00	
4,200.0	11.79	137.50	4,121.2	-573.0	525.1	777.2	0.00	0.00	
4,235.3	11.79	137.50	4,155.8	-578.3	529.9	784.4	0.00	0.00	Start 2° Drop
4,300.0	10.49	137.50	4,219.2	-587.5	538.4	796.9	2.00	-2.00	
4,400.0	8.49	137.50	4,317.8	-599.7	549.5	813.4	2.00	-2.00	
4,486.9	6.76	137.50	4,404.0	-608.2	557.3	824.9	2.00	-2.00	WILLIAMS FORK FM
4,500.0	6.49	137.50	4,417.0	-609.3	558.3	826.4	2.00	-2.00	

Cathedral Energy Services

Planning Report

Database: USA EDM 5000 Multi Users DB
 Company: EnCana Oil & Gas (USA) Inc
 Project: S. Piceance (Parachute)
 Site: S29-T7S-R95W (PF-29 Pad)
 Well: Federal 29-6BB
 Wellbore: DD
 Design: Plan #2

Local Co-ordinate Reference: Well Federal 29-6BB
 TVD Reference: WELL @ 6058.0ft (Original Well Elev)
 MD Reference: WELL @ 6058.0ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,600.0	4.49	137.50	4,516.5	-616.3	564.8	836.0	2.00	-2.00	
4,700.0	2.49	137.50	4,616.3	-620.8	568.9	842.1	2.00	-2.00	
4,800.0	0.49	137.50	4,716.3	-622.7	570.7	844.7	2.00	-2.00	
4,824.7	0.00	0.00	4,741.0	-622.8	570.8	844.8	2.00	-2.00	EOD @ Inc. = 0° - TOP GAS
4,900.0	0.00	0.00	4,816.3	-622.8	570.8	844.8	0.00	0.00	
5,000.0	0.00	0.00	4,916.3	-622.8	570.8	844.8	0.00	0.00	
5,100.0	0.00	0.00	5,016.3	-622.8	570.8	844.8	0.00	0.00	
5,200.0	0.00	0.00	5,116.3	-622.8	570.8	844.8	0.00	0.00	
5,300.0	0.00	0.00	5,216.3	-622.8	570.8	844.8	0.00	0.00	
5,400.0	0.00	0.00	5,316.3	-622.8	570.8	844.8	0.00	0.00	
5,500.0	0.00	0.00	5,416.3	-622.8	570.8	844.8	0.00	0.00	
5,600.0	0.00	0.00	5,516.3	-622.8	570.8	844.8	0.00	0.00	
5,700.0	0.00	0.00	5,616.3	-622.8	570.8	844.8	0.00	0.00	
5,800.0	0.00	0.00	5,716.3	-622.8	570.8	844.8	0.00	0.00	
5,900.0	0.00	0.00	5,816.3	-622.8	570.8	844.8	0.00	0.00	
6,000.0	0.00	0.00	5,916.3	-622.8	570.8	844.8	0.00	0.00	
6,100.0	0.00	0.00	6,016.3	-622.8	570.8	844.8	0.00	0.00	
6,200.0	0.00	0.00	6,116.3	-622.8	570.8	844.8	0.00	0.00	
6,270.7	0.00	0.00	6,187.0	-622.8	570.8	844.8	0.00	0.00	COAL RIDGE (Paludal)
6,300.0	0.00	0.00	6,216.3	-622.8	570.8	844.8	0.00	0.00	
6,400.0	0.00	0.00	6,316.3	-622.8	570.8	844.8	0.00	0.00	
6,500.0	0.00	0.00	6,416.3	-622.8	570.8	844.8	0.00	0.00	
6,600.0	0.00	0.00	6,516.3	-622.8	570.8	844.8	0.00	0.00	
6,642.7	0.00	0.00	6,559.0	-622.8	570.8	844.8	0.00	0.00	ROLLINS SS (Iles Fm)
6,700.0	0.00	0.00	6,616.3	-622.8	570.8	844.8	0.00	0.00	
6,792.7	0.00	0.00	6,709.0	-622.8	570.8	844.8	0.00	0.00	Drillers TD @ 6,792.7' MD
6,800.0	0.00	0.00	6,716.3	-622.8	570.8	844.8	0.00	0.00	
6,892.7	0.00	0.00	6,809.0	-622.8	570.8	844.8	0.00	0.00	Permit TD @ 6,892.7' MD

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Federal 29-6BB BHL	0.00	0.00	6,709.0	-622.8	570.8	1,583,705.80	2,287,335.92	39.408860	-108.022600
- plan hits target center									
- Circle (radius 25.0)									
Federal 29-6BB TOG	0.00	0.00	4,741.0	-622.8	570.8	1,583,705.80	2,287,335.92	39.408860	-108.022600
- plan hits target center									
- Point									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,033.0	1,021.0	Surface Casing	5.500	6.000

Cathedral Energy Services

Planning Report

Database: USA EDM 5000 Multi Users DB
Company: EnCana Oil & Gas (USA) Inc
Project: S. Piceance (Parachute)
Site: S29-T7S-R95W (PF-29 Pad)
Well: Federal 29-6BB
Wellbore: DD
Design: Plan #2

Local Co-ordinate Reference: Well Federal 29-6BB
TVD Reference: WELL @ 6058.0ft (Original Well Elev)
MD Reference: WELL @ 6058.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,542.0	3,477.0	Ohio Creek			
3,793.3	3,723.0	Mesaverde Fm			
4,486.9	4,404.0	WILLIAMS FORK FM			
4,824.7	4,741.0	TOP GAS			
6,270.7	6,187.0	COAL RIDGE (Paludal)			
6,642.7	6,559.0	ROLLINS SS (Iles Fm)			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.0	200.0	0.0	0.0	KOP @ 200'
592.9	590.2	-29.7	27.2	EOB @ Inc. = 11.79°
4,235.3	4,155.8	-578.3	529.9	Start 2° Drop
4,824.7	4,741.0	-622.8	570.8	EOD @ Inc. = 0°
6,792.7	6,709.0	-622.8	570.8	Drillers TD @ 6,792.7' MD
6,892.7	6,809.0	-622.8	570.8	Permit TD @ 6,892.7' MD