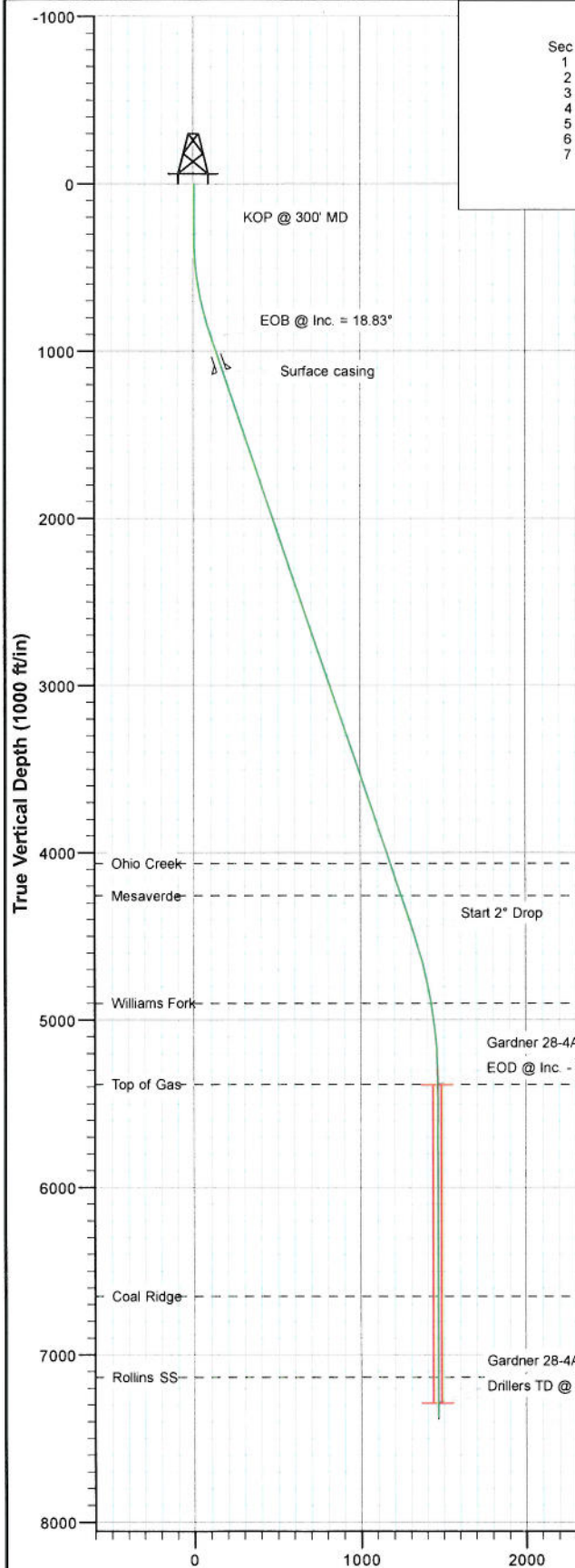
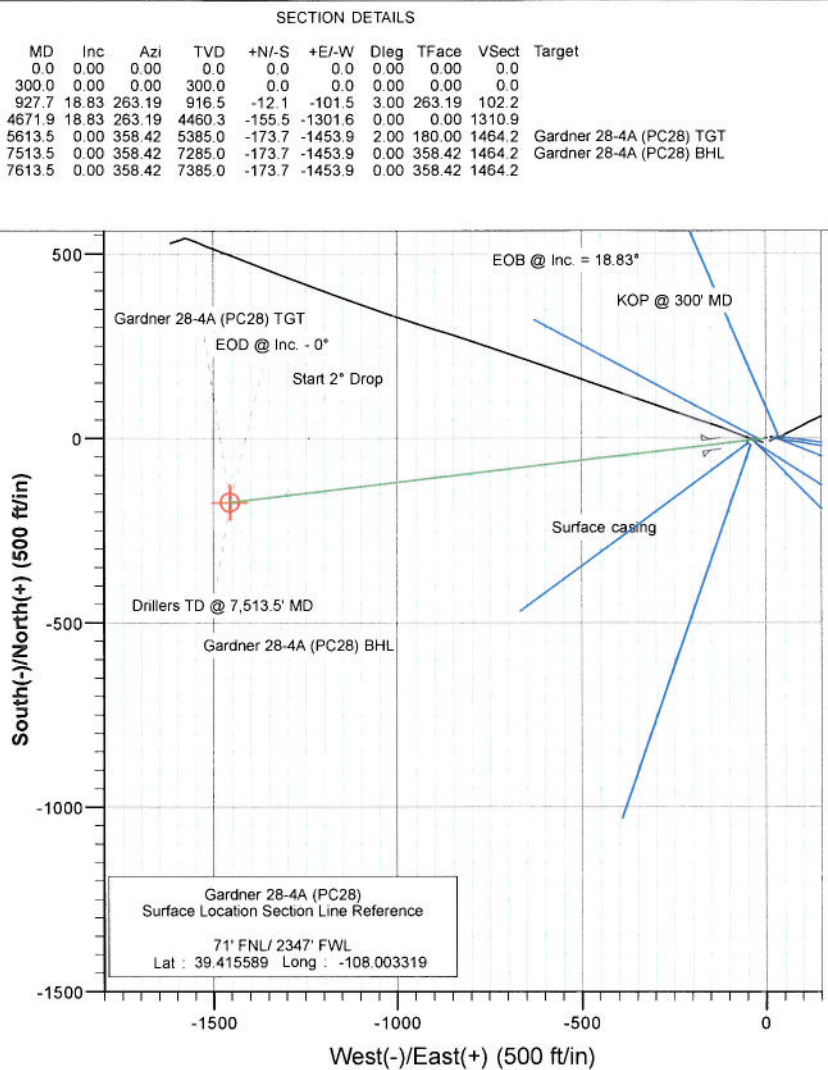




Project: S. Piceance (Parachute)  
 Site: NENW Sec28-T7S-R95W (PC-28)  
 Wellbore: DD  
 Plan: Plan #3



Vertical Section at 263.19° (1000 ft/in)



FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4065.0	4254.3	Ohio Creek
4258.0	4458.2	Mesaverde
4900.0	5126.2	Williams Fork
5385.0	5613.5	Top of Gas
6651.0	6879.5	Coal Ridge
7135.0	7363.5	Rollins SS



Azimuths to True North  
 Magnetic North: 10.39°  
 Magnetic Field  
 Strength: 52290.7nT  
 Dip Angle: 65.70°  
 Date: 11/18/2010  
 Model: IGRF200510

Plan #3 Gardner 28-4A (PC28) 115XXX; SC				
KBE @ 6442.0ft (Original Well Elev) North American Datum 1983 Well Gardner 28-4A (PC28), True North				
Target	Azimuth	Origin Type	N/S	
Gardner 28-4A (PC28) BHL	263.19	Slot	0.0	
Name	TVD	+N/-S	+E/-W	Latitude
Gardner 28-4A (PC28) TGT	5385.0	-173.7	-1453.9	39.415112
Gardner 28-4A (PC28) BHL	7285.0	-173.7	-1453.9	39.415112
				-108.008465

# Cathedral Energy Services

## Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Gardner 28-4A (PC28)
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 6442.0ft (Original Well Elev)
Project:	S. Piceance (Parachute)	MD Reference:	KBE @ 6442.0ft (Original Well Elev)
Site:	NENW Sec28-T7S-R95W (PC28)	North Reference:	True
Well:	Gardner 28-4A (PC28)	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #3		

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	NENW Sec28-T7S-R95W (PC28)				
Site Position:		Northing:	1,585,994.80 ft	Latitude:	39.415560
From:	Lat/Long	Easting:	2,292,840.18 ft	Longitude:	-108.003350
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.58 °

Well	Gardner 28-4A (PC28)					
Well Position	+N/-S	0.0 ft	Northing:	1,586,005.10 ft	Latitude:	39.415589
	+E/-W	0.0 ft	Easting:	2,292,849.22 ft	Longitude:	-108.003319
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level:	6,420.0 ft	

Wellbore	DD				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/18/2010	10.39	65.70	52,291

Design	Plan #3				
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	263.19	

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	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
927.7	18.83	263.19	916.5	-12.1	-101.5	3.00	3.00	0.00	263.19	
4,671.9	18.83	263.19	4,460.3	-155.5	-1,301.6	0.00	0.00	0.00	0.00	
5,613.5	0.00	358.42	5,385.0	-173.7	-1,453.9	2.00	-2.00	0.00	180.00	Gardner 28-4A (PC28)
7,513.5	0.00	358.42	7,285.0	-173.7	-1,453.9	0.00	0.00	0.00	358.42	Gardner 28-4A (PC28)
7,613.5	0.00	358.42	7,385.0	-173.7	-1,453.9	0.00	0.00	0.00	358.42	



# Cathedral Energy Services

## Planning Report

Database: USA EDM 5000 Multi Users DB  
 Company: EnCana Oil & Gas (USA) Inc  
 Project: S. Piceance (Parachute)  
 Site: NENW Sec28-T7S-R95W (PC28)  
 Well: Gardner 28-4A (PC28)  
 Wellbore: DD  
 Design: Plan #3

Local Co-ordinate Reference: Well Gardner 28-4A (PC28)  
 TVD Reference: KBE @ 6442.0ft (Original Well Elev)  
 MD Reference: KBE @ 6442.0ft (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	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	KOP @ 300' MD
400.0	3.00	263.19	400.0	-0.3	-2.6	2.6	3.00	3.00	
500.0	6.00	263.19	499.6	-1.2	-10.4	10.5	3.00	3.00	
600.0	9.00	263.19	598.8	-2.8	-23.3	23.5	3.00	3.00	
700.0	12.00	263.19	697.1	-5.0	-41.4	41.7	3.00	3.00	
800.0	15.00	263.19	794.3	-7.7	-64.6	65.1	3.00	3.00	
900.0	18.00	263.19	890.2	-11.1	-92.8	93.5	3.00	3.00	
927.7	18.83	263.19	916.5	-12.1	-101.5	102.2	3.00	3.00	EOB @ Inc. = 18.83°
1,000.0	18.83	263.19	984.9	-14.9	-124.7	125.6	0.00	0.00	
1,100.0	18.83	263.19	1,079.5	-18.7	-156.7	157.8	0.00	0.00	
1,141.9	18.83	263.19	1,119.2	-20.3	-170.2	171.4	0.00	0.00	Surface casing
1,200.0	18.83	263.19	1,174.2	-22.6	-188.8	190.1	0.00	0.00	
1,300.0	18.83	263.19	1,268.8	-26.4	-220.8	222.4	0.00	0.00	
1,400.0	18.83	263.19	1,363.5	-30.2	-252.9	254.7	0.00	0.00	
1,500.0	18.83	263.19	1,458.1	-34.0	-284.9	287.0	0.00	0.00	
1,600.0	18.83	263.19	1,552.8	-37.9	-317.0	319.2	0.00	0.00	
1,700.0	18.83	263.19	1,647.4	-41.7	-349.0	351.5	0.00	0.00	
1,800.0	18.83	263.19	1,742.1	-45.5	-381.1	383.8	0.00	0.00	
1,900.0	18.83	263.19	1,836.7	-49.4	-413.1	416.1	0.00	0.00	
2,000.0	18.83	263.19	1,931.4	-53.2	-445.2	448.4	0.00	0.00	
2,100.0	18.83	263.19	2,026.0	-57.0	-477.2	480.6	0.00	0.00	
2,200.0	18.83	263.19	2,120.7	-60.8	-509.3	512.9	0.00	0.00	
2,300.0	18.83	263.19	2,215.3	-64.7	-541.4	545.2	0.00	0.00	
2,400.0	18.83	263.19	2,309.9	-68.5	-573.4	577.5	0.00	0.00	
2,500.0	18.83	263.19	2,404.6	-72.3	-605.5	609.8	0.00	0.00	
2,600.0	18.83	263.19	2,499.2	-76.2	-637.5	642.0	0.00	0.00	
2,700.0	18.83	263.19	2,593.9	-80.0	-669.6	674.3	0.00	0.00	
2,800.0	18.83	263.19	2,688.5	-83.8	-701.6	706.6	0.00	0.00	
2,900.0	18.83	263.19	2,783.2	-87.6	-733.7	738.9	0.00	0.00	
3,000.0	18.83	263.19	2,877.8	-91.5	-765.7	771.2	0.00	0.00	
3,100.0	18.83	263.19	2,972.5	-95.3	-797.8	803.4	0.00	0.00	
3,200.0	18.83	263.19	3,067.1	-99.1	-829.8	835.7	0.00	0.00	
3,300.0	18.83	263.19	3,161.8	-103.0	-861.9	868.0	0.00	0.00	
3,400.0	18.83	263.19	3,256.4	-106.8	-893.9	900.3	0.00	0.00	
3,500.0	18.83	263.19	3,351.1	-110.6	-926.0	932.6	0.00	0.00	
3,600.0	18.83	263.19	3,445.7	-114.5	-958.0	964.8	0.00	0.00	
3,700.0	18.83	263.19	3,540.4	-118.3	-990.1	997.1	0.00	0.00	
3,800.0	18.83	263.19	3,635.0	-122.1	-1,022.1	1,029.4	0.00	0.00	
3,900.0	18.83	263.19	3,729.6	-125.9	-1,054.2	1,061.7	0.00	0.00	
4,000.0	18.83	263.19	3,824.3	-129.8	-1,086.2	1,094.0	0.00	0.00	
4,100.0	18.83	263.19	3,918.9	-133.6	-1,118.3	1,126.2	0.00	0.00	
4,200.0	18.83	263.19	4,013.6	-137.4	-1,150.3	1,158.5	0.00	0.00	
4,254.3	18.83	263.19	4,065.0	-139.5	-1,167.7	1,176.1	0.00	0.00	Ohio Creek
4,300.0	18.83	263.19	4,108.2	-141.3	-1,182.4	1,190.8	0.00	0.00	
4,400.0	18.83	263.19	4,202.9	-145.1	-1,214.4	1,223.1	0.00	0.00	
4,458.2	18.83	263.19	4,258.0	-147.3	-1,233.1	1,241.9	0.00	0.00	Mesaverde
4,500.0	18.83	263.19	4,297.5	-148.9	-1,246.5	1,255.4	0.00	0.00	
4,600.0	18.83	263.19	4,392.2	-152.7	-1,278.5	1,287.6	0.00	0.00	
4,671.9	18.83	263.19	4,460.3	-155.5	-1,301.6	1,310.9	0.00	0.00	Start 2° Drop

# Cathedral Energy Services

## Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Gardner 28-4A (PC28)
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 6442.0ft (Original Well Elev)
Project:	S. Piceance (Parachute)	MD Reference:	KBE @ 6442.0ft (Original Well Elev)
Site:	NENW Sec28-T7S-R95W (PC28)	North Reference:	True
Well:	Gardner 28-4A (PC28)	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #3		

### 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
4,700.0	18.27	263.19	4,486.9	-156.6	-1,310.5	1,319.8	2.00	-2.00	
4,800.0	16.27	263.19	4,582.4	-160.1	-1,339.9	1,349.5	2.00	-2.00	
4,900.0	14.27	263.19	4,678.8	-163.2	-1,366.1	1,375.8	2.00	-2.00	
5,000.0	12.27	263.19	4,776.1	-165.9	-1,388.9	1,398.8	2.00	-2.00	
5,100.0	10.27	263.19	4,874.2	-168.2	-1,408.3	1,418.3	2.00	-2.00	
5,126.2	9.75	263.19	4,900.0	-168.8	-1,412.8	1,422.9	2.00	-2.00	Williams Fork
5,200.0	8.27	263.19	4,972.9	-170.2	-1,424.3	1,434.4	2.00	-2.00	
5,300.0	6.27	263.19	5,072.1	-171.7	-1,436.9	1,447.1	2.00	-2.00	
5,400.0	4.27	263.19	5,171.7	-172.7	-1,446.0	1,456.3	2.00	-2.00	
5,500.0	2.27	263.19	5,271.5	-173.4	-1,451.6	1,462.0	2.00	-2.00	
5,600.0	0.27	263.19	5,371.5	-173.7	-1,453.8	1,464.2	2.00	-2.00	
5,613.5	0.00	358.42	5,385.0	-173.7	-1,453.9	1,464.2	2.00	-2.00	EOD @ Inc - 0° - Top of Gas
5,700.0	0.00	358.42	5,471.5	-173.7	-1,453.9	1,464.2	0.00	0.00	
5,800.0	0.00	358.42	5,571.5	-173.7	-1,453.9	1,464.2	0.00	0.00	
5,900.0	0.00	358.42	5,671.5	-173.7	-1,453.9	1,464.2	0.00	0.00	
6,000.0	0.00	358.42	5,771.5	-173.7	-1,453.9	1,464.2	0.00	0.00	
6,100.0	0.00	358.42	5,871.5	-173.7	-1,453.9	1,464.2	0.00	0.00	
6,200.0	0.00	358.42	5,971.5	-173.7	-1,453.9	1,464.2	0.00	0.00	
6,300.0	0.00	358.42	6,071.5	-173.7	-1,453.9	1,464.2	0.00	0.00	
6,400.0	0.00	358.42	6,171.5	-173.7	-1,453.9	1,464.2	0.00	0.00	
6,500.0	0.00	358.42	6,271.5	-173.7	-1,453.9	1,464.2	0.00	0.00	
6,600.0	0.00	358.42	6,371.5	-173.7	-1,453.9	1,464.2	0.00	0.00	
6,700.0	0.00	358.42	6,471.5	-173.7	-1,453.9	1,464.2	0.00	0.00	
6,800.0	0.00	358.42	6,571.5	-173.7	-1,453.9	1,464.2	0.00	0.00	
6,879.5	0.00	358.42	6,651.0	-173.7	-1,453.9	1,464.2	0.00	0.00	Coal Ridge
6,900.0	0.00	358.42	6,671.5	-173.7	-1,453.9	1,464.2	0.00	0.00	
7,000.0	0.00	358.42	6,771.5	-173.7	-1,453.9	1,464.2	0.00	0.00	
7,100.0	0.00	358.42	6,871.5	-173.7	-1,453.9	1,464.2	0.00	0.00	
7,200.0	0.00	358.42	6,971.5	-173.7	-1,453.9	1,464.2	0.00	0.00	
7,300.0	0.00	358.42	7,071.5	-173.7	-1,453.9	1,464.2	0.00	0.00	
7,363.5	0.00	358.42	7,135.0	-173.7	-1,453.9	1,464.2	0.00	0.00	Rollins SS
7,400.0	0.00	358.42	7,171.5	-173.7	-1,453.9	1,464.2	0.00	0.00	
7,500.0	0.00	358.42	7,271.5	-173.7	-1,453.9	1,464.2	0.00	0.00	
7,513.5	0.00	358.42	7,285.0	-173.7	-1,453.9	1,464.2	0.00	0.00	Drillers TD @ 7,513.5' MD
7,600.0	0.00	358.42	7,371.5	-173.7	-1,453.9	1,464.2	0.00	0.00	
7,613.5	0.00	358.42	7,385.0	-173.7	-1,453.9	1,464.2	0.00	0.00	Permit TD @ 7,613.5' MD

### Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Gardner 28-4A (PC28) E - plan hits target center - Circle (radius 25.0)	0.00	358.42	7,285.0	-173.7	-1,453.9	1,585,871.54	2,291,391.11	39.415112	-108.008465
Gardner 28-4A (PC28) T - plan hits target center - Circle (radius 25.0)	0.00	358.42	5,385.0	-173.7	-1,453.9	1,585,871.54	2,291,391.11	39.415112	-108.008465



# Cathedral Energy Services

## Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Gardner 28-4A (PC28)
Company:	EnCana Oil & Gas (USA) Inc	TVD Reference:	KBE @ 6442.0ft (Original Well Elev)
Project:	S. Piceance (Parachute)	MD Reference:	KBE @ 6442.0ft (Original Well Elev)
Site:	NENW Sec28-T7S-R95W (PC28)	North Reference:	True
Well:	Gardner 28-4A (PC28)	Survey Calculation Method:	Minimum Curvature
Wellbore:	DD		
Design:	Plan #3		

### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
1,141.9	1,119.2	Surface casing	8.625	12.250

### Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,254.3	4,065.0	Ohio Creek		0.00	
4,458.2	4,258.0	Mesaverde		0.00	
5,126.2	4,900.0	Williams Fork		0.00	
5,613.5	5,385.0	Top of Gas		0.00	
6,879.5	6,651.0	Coal Ridge		0.00	
7,363.5	7,135.0	Rollins SS		0.00	

### Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
300.0	300.0	0.0	0.0	KOP @ 300' MD
927.7	916.5	-12.1	-101.5	EOB @ Inc. = 18.83°
4,671.9	4,460.3	-155.5	-1,301.6	Start 2° Drop
5,613.5	5,385.0	-173.7	-1,453.9	EOD @ Inc. - 0°
7,513.5	7,285.0	-173.7	-1,453.9	Drillers TD @ 7,513.5' MD
7,613.5	7,385.0	-173.7	-1,453.9	Permit TD @ 7,613.5' MD