

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_Overlook 1-30 PAD**

**Overlook 27-30**

**Overlook 27-30**

**Plan: Overlook 27-30 (wp01)**

## **Standard Planning Report**

**10 August, 2011**



Project: COLORADO NORTHERN ZONE - 83  
Site: WELD\_Overlook 1-30 PAD  
Well: Overlook 27-30  
Wellbore: Overlook 27-30  
Section:  
SHL:  
Design: Overlook 27-30 (wp01)  
Latitude: 40.114908  
Longitude: -104.926165  
GL: 5010.00  
KB: 15' RKB + 5010' GL @ 5025.00ft

## FORMATION TOP DETAILS

TVDPPath	MDPath	Formation
4160.00	4291.21	PK Depth
4553.00	4684.21	SX Depth
7318.00	7449.21	NIO Depth
7624.00	7755.21	CD Depth
7710.00	7841.21	GH Depth



Azimuths to True North  
Magnetic North: 8.91°

Magnetic Field  
Strength: 52953.5snT  
Dip Angle: 66.79°  
Date: 7/15/2011  
Model: IGRF2010

## WELL DETAILS: Overlook 27-30

+N/-S	+E/-W	Northing	Ground Level: Easting	5010.00 Latitude	Longitude	Slot
0.00	0.00	1285224.36	3160489.94	40.114908	-104.926165	

## CASING DETAILS

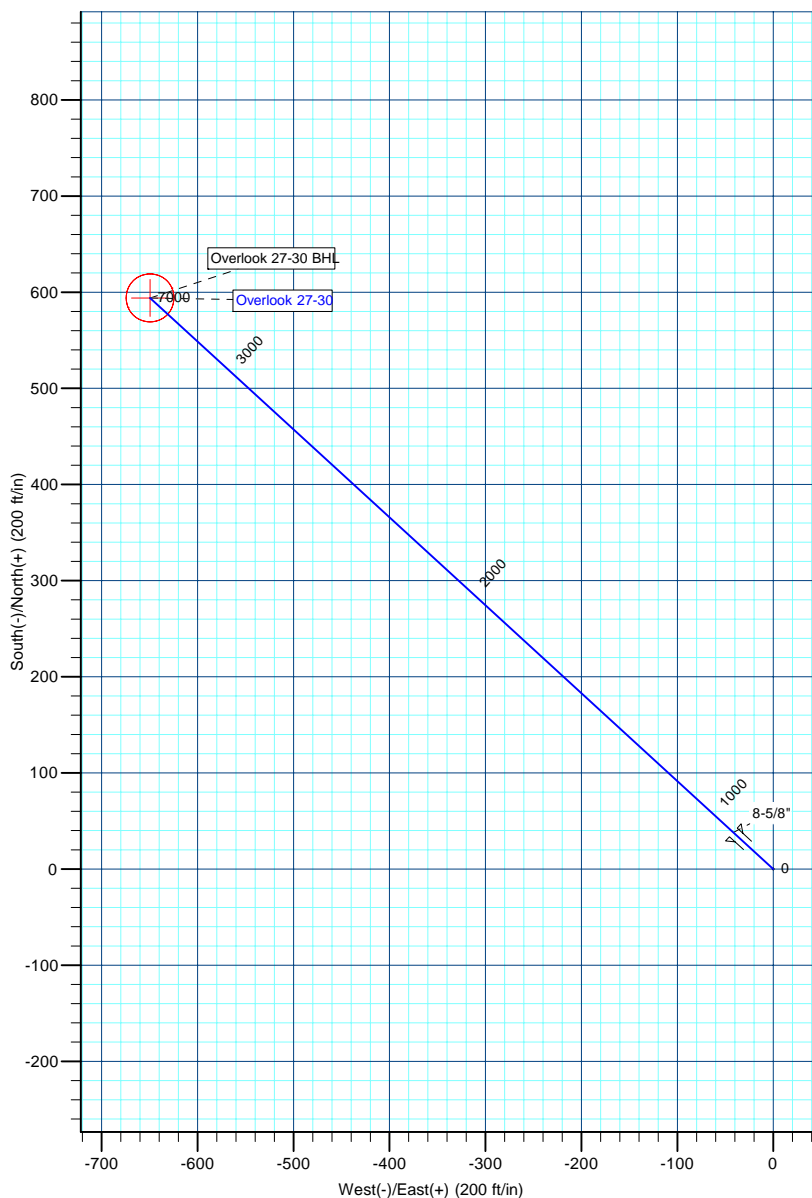
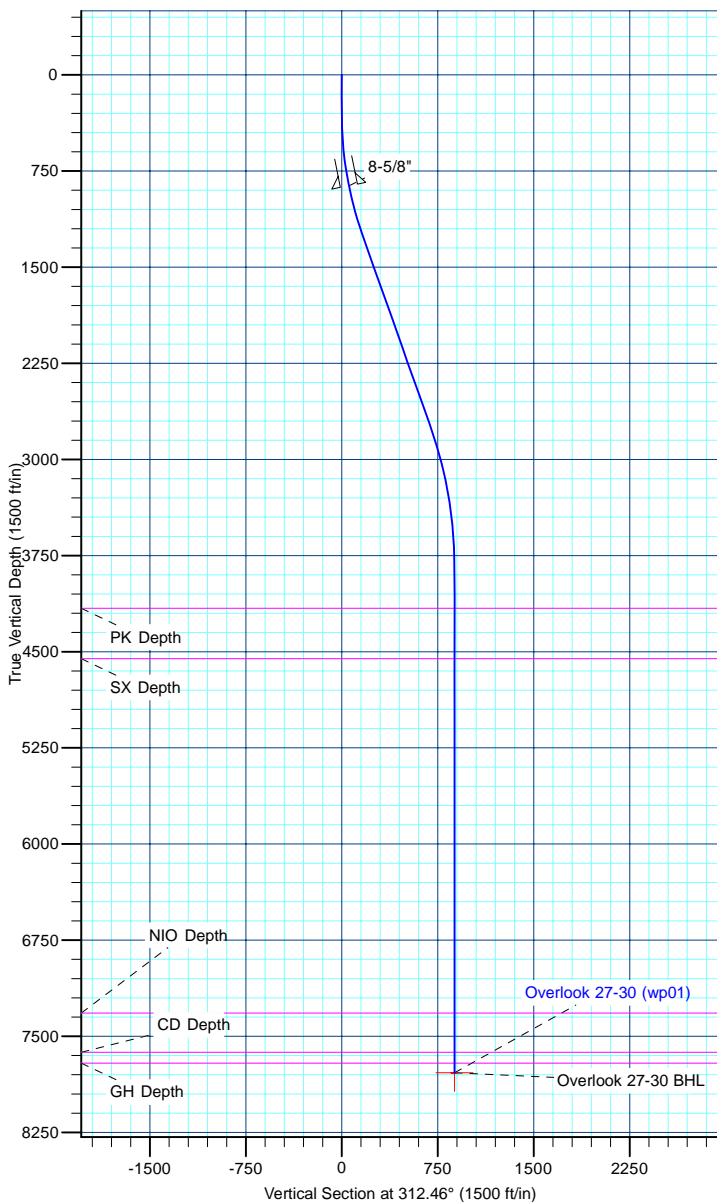
TVD	MD	Name	Size
865.00	868.73	8-5/8"	8-5/8

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Overlook 27-30 BHL	7784.00	594.15	-649.40	1285814.29	3159836.71	40.116539	-104.928487	Circle (Radius: 25.00)

## SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00
1278.92	19.58	312.46	1259.98	111.80	-122.20	2.00	312.46	165.63
2846.45	19.58	312.46	2736.88	466.38	-509.75	0.00	0.00	690.90
3965.21	0.00	0.00	3834.00	594.15	-649.40	1.75	180.00	880.19
7915.21	0.00	0.00	7784.00	594.15	-649.40	0.00	0.00	880.19



<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well Overlook 27-30
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	15' RKB + 5010' GL @ 5025.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	15' RKB + 5010' GL @ 5025.00ft
<b>Site:</b>	WELD_Overlook 1-30 PAD	<b>North Reference:</b>	True
<b>Well:</b>	Overlook 27-30	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Overlook 27-30		
<b>Design:</b>	Overlook 27-30 (wp01)		

<b>Project</b>	COLORADO NORTHERN ZONE - 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 Northern Zone		

Site		WELD_Overlook 1-30 PAD			
Site Position:		Northing:	1,285,224.36 ft	Latitude:	40.114908
From:	Lat/Long	Easting:	3,160,489.94 ft	Longitude:	-104.926165
Position Uncertainty:	0.00 ft	Slot Radius:	0 "	Grid Convergence:	0.37 °

Well	Overlook 27-30					
Well Position	+N/-S	0.00 ft	Northing:	1,285,224.35 ft	Latitude:	40.114908
	+E/-W	0.00 ft	Easting:	3,160,489.94 ft	Longitude:	-104.926165
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,010.00 ft

<b>Wellbore</b>	Overlook 27-30				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	7/15/2011	8.91	66.79	52,954

<b>Design</b>	Overlook 27-30 (wp01)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	312.46

<b>Plan Sections</b>										
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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,278.92	19.58	312.46	1,259.98	111.80	-122.20	2.00	2.00	0.00	312.46	
2,846.45	19.58	312.46	2,736.88	466.38	-509.75	0.00	0.00	0.00	0.00	
3,965.21	0.00	0.00	3,834.00	594.15	-649.41	1.75	-1.75	0.00	180.00	
7,915.21	0.00	0.00	7,784.00	594.15	-649.41	0.00	0.00	0.00	0.00	Overlook 27-30 BHL

<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well Overlook 27-30
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	15' RKB + 5010' GL @ 5025.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	15' RKB + 5010' GL @ 5025.00ft
<b>Site:</b>	WELD_Overlook 1-30 PAD	<b>North Reference:</b>	True
<b>Well:</b>	Overlook 27-30	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Overlook 27-30		
<b>Design:</b>	Overlook 27-30 (wp01)		

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)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	2.00	312.46	399.98	1.18	-1.29	1.75	2.00	2.00	0.00
500.00	4.00	312.46	499.84	4.71	-5.15	6.98	2.00	2.00	0.00
600.00	6.00	312.46	599.45	10.59	-11.58	15.69	2.00	2.00	0.00
700.00	8.00	312.46	698.70	18.82	-20.57	27.88	2.00	2.00	0.00
800.00	10.00	312.46	797.47	29.38	-32.11	43.52	2.00	2.00	0.00
868.73	11.37	312.46	865.00	37.98	-41.51	56.27	2.00	2.00	0.00
8-5/8"									
900.00	12.00	312.46	895.62	42.26	-46.19	62.60	2.00	2.00	0.00
1,000.00	14.00	312.46	993.06	57.44	-62.78	85.10	2.00	2.00	0.00
1,100.00	16.00	312.46	1,089.64	74.91	-81.88	110.98	2.00	2.00	0.00
1,200.00	18.00	312.46	1,185.27	94.65	-103.45	140.21	2.00	2.00	0.00
1,278.92	19.58	312.46	1,259.98	111.80	-122.20	165.63	2.00	2.00	0.00
1,300.00	19.58	312.46	1,279.84	116.57	-127.41	172.69	0.00	0.00	0.00
1,400.00	19.58	312.46	1,374.06	139.19	-152.14	206.20	0.00	0.00	0.00
1,500.00	19.58	312.46	1,468.28	161.81	-176.86	239.71	0.00	0.00	0.00
1,600.00	19.58	312.46	1,562.50	184.43	-201.58	273.22	0.00	0.00	0.00
1,700.00	19.58	312.46	1,656.72	207.05	-226.31	306.73	0.00	0.00	0.00
1,800.00	19.58	312.46	1,750.93	229.67	-251.03	340.24	0.00	0.00	0.00
1,900.00	19.58	312.46	1,845.15	252.29	-275.75	373.75	0.00	0.00	0.00
2,000.00	19.58	312.46	1,939.37	274.91	-300.48	407.26	0.00	0.00	0.00
2,100.00	19.58	312.46	2,033.59	297.53	-325.20	440.77	0.00	0.00	0.00
2,200.00	19.58	312.46	2,127.81	320.15	-349.92	474.28	0.00	0.00	0.00
2,300.00	19.58	312.46	2,222.03	342.77	-374.65	507.79	0.00	0.00	0.00
2,400.00	19.58	312.46	2,316.24	365.39	-399.37	541.30	0.00	0.00	0.00
2,500.00	19.58	312.46	2,410.46	388.01	-424.09	574.81	0.00	0.00	0.00
2,600.00	19.58	312.46	2,504.68	410.63	-448.82	608.32	0.00	0.00	0.00
2,700.00	19.58	312.46	2,598.90	433.25	-473.54	641.83	0.00	0.00	0.00
2,800.00	19.58	312.46	2,693.12	455.87	-498.26	675.34	0.00	0.00	0.00
2,846.45	19.58	312.46	2,736.88	466.38	-509.75	690.90	0.00	0.00	0.00
2,900.00	18.64	312.46	2,787.48	478.21	-522.68	708.43	1.75	-1.75	0.00
3,000.00	16.89	312.46	2,882.71	498.81	-545.19	738.95	1.75	-1.75	0.00
3,100.00	15.14	312.46	2,978.82	517.43	-565.55	766.54	1.75	-1.75	0.00
3,200.00	13.39	312.46	3,075.74	534.06	-583.73	791.18	1.75	-1.75	0.00
3,300.00	11.64	312.46	3,173.35	548.69	-599.72	812.85	1.75	-1.75	0.00
3,400.00	9.89	312.46	3,271.59	561.30	-613.50	831.53	1.75	-1.75	0.00
3,500.00	8.14	312.46	3,370.35	571.88	-625.06	847.20	1.75	-1.75	0.00
3,600.00	6.39	312.46	3,469.54	580.42	-634.39	859.85	1.75	-1.75	0.00
3,700.00	4.64	312.46	3,569.08	586.90	-641.48	869.46	1.75	-1.75	0.00
3,800.00	2.89	312.46	3,668.86	591.34	-646.33	876.03	1.75	-1.75	0.00
3,900.00	1.14	312.46	3,768.79	593.71	-648.93	879.55	1.75	-1.75	0.00
3,965.21	0.00	0.00	3,834.00	594.15	-649.41	880.19	1.75	-1.75	0.00
4,000.00	0.00	0.00	3,868.79	594.15	-649.41	880.19	0.00	0.00	0.00
4,100.00	0.00	0.00	3,968.79	594.15	-649.41	880.19	0.00	0.00	0.00
4,200.00	0.00	0.00	4,068.79	594.15	-649.41	880.19	0.00	0.00	0.00
4,291.21	0.00	0.00	4,160.00	594.15	-649.41	880.19	0.00	0.00	0.00
PK Depth									
4,300.00	0.00	0.00	4,168.79	594.15	-649.41	880.19	0.00	0.00	0.00
4,400.00	0.00	0.00	4,268.79	594.15	-649.41	880.19	0.00	0.00	0.00
4,500.00	0.00	0.00	4,368.79	594.15	-649.41	880.19	0.00	0.00	0.00
4,600.00	0.00	0.00	4,468.79	594.15	-649.41	880.19	0.00	0.00	0.00

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<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	15' RKB + 5010' GL @ 5025.00ft
<b>Site:</b>	WELD_Overlook 1-30 PAD	<b>North Reference:</b>	True
<b>Well:</b>	Overlook 27-30	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Overlook 27-30		
<b>Design:</b>	Overlook 27-30 (wp01)		

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)	Turn Rate (°/100ft)
4,684.21	0.00	0.00	4,553.00	594.15	-649.41	880.19	0.00	0.00	0.00
<b>SX Depth</b>									
4,700.00	0.00	0.00	4,568.79	594.15	-649.41	880.19	0.00	0.00	0.00
4,800.00	0.00	0.00	4,668.79	594.15	-649.41	880.19	0.00	0.00	0.00
4,900.00	0.00	0.00	4,768.79	594.15	-649.41	880.19	0.00	0.00	0.00
5,000.00	0.00	0.00	4,868.79	594.15	-649.41	880.19	0.00	0.00	0.00
5,100.00	0.00	0.00	4,968.79	594.15	-649.41	880.19	0.00	0.00	0.00
5,200.00	0.00	0.00	5,068.79	594.15	-649.41	880.19	0.00	0.00	0.00
5,300.00	0.00	0.00	5,168.79	594.15	-649.41	880.19	0.00	0.00	0.00
5,400.00	0.00	0.00	5,268.79	594.15	-649.41	880.19	0.00	0.00	0.00
5,500.00	0.00	0.00	5,368.79	594.15	-649.41	880.19	0.00	0.00	0.00
5,600.00	0.00	0.00	5,468.79	594.15	-649.41	880.19	0.00	0.00	0.00
5,700.00	0.00	0.00	5,568.79	594.15	-649.41	880.19	0.00	0.00	0.00
5,800.00	0.00	0.00	5,668.79	594.15	-649.41	880.19	0.00	0.00	0.00
5,900.00	0.00	0.00	5,768.79	594.15	-649.41	880.19	0.00	0.00	0.00
6,000.00	0.00	0.00	5,868.79	594.15	-649.41	880.19	0.00	0.00	0.00
6,100.00	0.00	0.00	5,968.79	594.15	-649.41	880.19	0.00	0.00	0.00
6,200.00	0.00	0.00	6,068.79	594.15	-649.41	880.19	0.00	0.00	0.00
6,300.00	0.00	0.00	6,168.79	594.15	-649.41	880.19	0.00	0.00	0.00
6,400.00	0.00	0.00	6,268.79	594.15	-649.41	880.19	0.00	0.00	0.00
6,500.00	0.00	0.00	6,368.79	594.15	-649.41	880.19	0.00	0.00	0.00
6,600.00	0.00	0.00	6,468.79	594.15	-649.41	880.19	0.00	0.00	0.00
6,700.00	0.00	0.00	6,568.79	594.15	-649.41	880.19	0.00	0.00	0.00
6,800.00	0.00	0.00	6,668.79	594.15	-649.41	880.19	0.00	0.00	0.00
6,900.00	0.00	0.00	6,768.79	594.15	-649.41	880.19	0.00	0.00	0.00
7,000.00	0.00	0.00	6,868.79	594.15	-649.41	880.19	0.00	0.00	0.00
7,100.00	0.00	0.00	6,968.79	594.15	-649.41	880.19	0.00	0.00	0.00
7,200.00	0.00	0.00	7,068.79	594.15	-649.41	880.19	0.00	0.00	0.00
7,300.00	0.00	0.00	7,168.79	594.15	-649.41	880.19	0.00	0.00	0.00
7,400.00	0.00	0.00	7,268.79	594.15	-649.41	880.19	0.00	0.00	0.00
7,449.21	0.00	0.00	7,318.00	594.15	-649.41	880.19	0.00	0.00	0.00
<b>NIO Depth</b>									
7,500.00	0.00	0.00	7,368.79	594.15	-649.41	880.19	0.00	0.00	0.00
7,600.00	0.00	0.00	7,468.79	594.15	-649.41	880.19	0.00	0.00	0.00
7,700.00	0.00	0.00	7,568.79	594.15	-649.41	880.19	0.00	0.00	0.00
7,755.21	0.00	0.00	7,624.00	594.15	-649.41	880.19	0.00	0.00	0.00
<b>CD Depth</b>									
7,800.00	0.00	0.00	7,668.79	594.15	-649.41	880.19	0.00	0.00	0.00
7,841.21	0.00	0.00	7,710.00	594.15	-649.41	880.19	0.00	0.00	0.00
<b>GH Depth</b>									
7,900.00	0.00	0.00	7,768.79	594.15	-649.41	880.19	0.00	0.00	0.00
7,915.21	0.00	0.00	7,784.00	594.15	-649.41	880.19	0.00	0.00	0.00
<b>Overlook 27-30 BHL</b>									

Design 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
Overlook 27-30 BHL - plan hits target center - Circle (radius 25.00)	0.00	0.00	7,784.00	594.15	-649.41	1,285,814.29	3,159,836.71	40.116539	-104.928487

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<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	15' RKB + 5010' GL @ 5025.00ft
<b>Site:</b>	WELD_Overlook 1-30 PAD	<b>North Reference:</b>	True
<b>Well:</b>	Overlook 27-30	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Overlook 27-30		
<b>Design:</b>	Overlook 27-30 (wp01)		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
868.73	865.00	8-5/8"	8-5/8	11	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,291.21	4,160.00	PK Depth				
4,684.21	4,553.00	SX Depth				
7,449.21	7,318.00	NIO Depth				
7,755.21	7,624.00	CD Depth				
7,841.21	7,710.00	GH Depth				