

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_Overlook 1-30 PAD**

**Overlook 21-30**

**Overlook 21-30**

**Plan: Overlook 21-30 (wp01)**

## **Standard Planning Report**

**15 July, 2011**



Project: COLORADO NORTHERN ZONE - 83  
Site: WELD\_Overlook 1-30 PAD  
Well: Overlook 21-30  
Wellbore: Overlook 21-30  
Section:  
SHL:  
Design: Overlook 21-30 (wp01)  
Latitude: 40.114830  
Longitude: -104.926114  
GL: 5010.00  
KB: 15' rkb + 5010' gl @ 5025.00ft

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4160.00	4347.78	PK Depth
4553.00	4763.66	SX Depth
7318.00	7639.53	NIO Depth
7624.00	7945.53	CD Depth
7710.00	8031.53	GH Depth
8043.00	8364.53	J Depth

Azimuths to True North  
Magnetic North: 8.91°

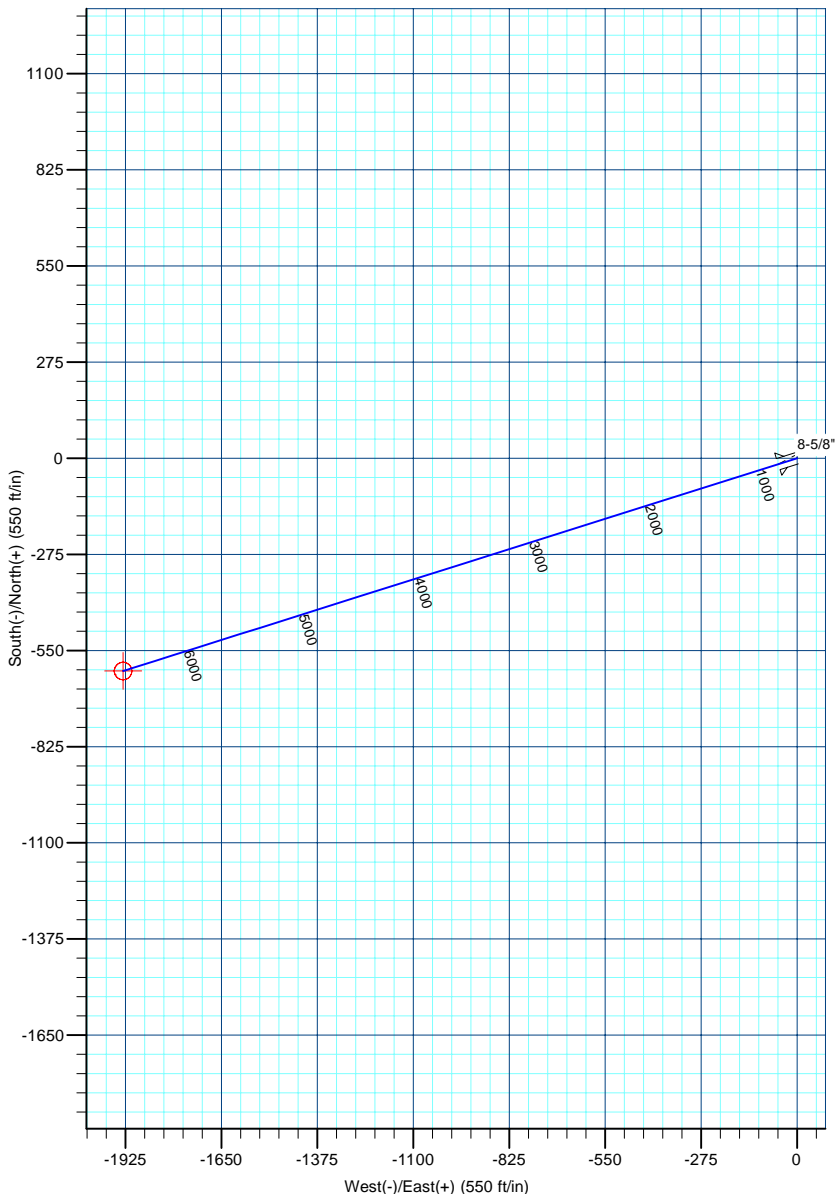
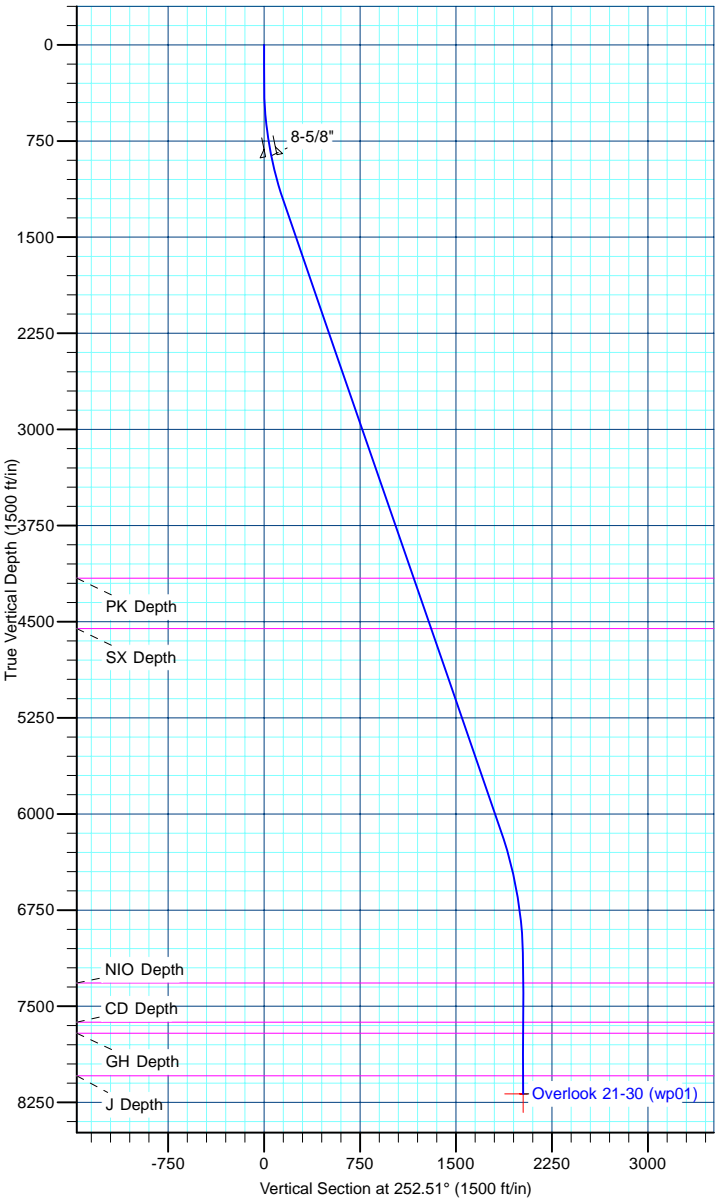
Magnetic Field  
Strength: 52953.5snT  
Dip Angle: 66.79°  
Date: 7/15/2011  
Model: IGRF2010

WELL DETAILS: Overlook 21-30						
+N/-S	+E/-W	Northing	Ground Level: Easting	5010.00 Latitude	Longitude	Slot
0.00	0.00	1285196.03	3160504.39	40.114830	-104.926114	

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 21-30 BHL	8183.00	-608.62	-1931.81	1284574.92	3158576.56	40.113159	-104.933021	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
1254.79	19.10	252.51	1237.21	-47.37	-150.36	2.00	252.51	157.64
6413.34	19.10	252.51	6111.90	-554.48	-1759.97	0.00	0.00	1845.25
7504.53	0.00	0.00	7183.00	-608.62	-1931.81	1.75	180.00	2025.42
8504.53	0.00	0.00	8183.00	-608.62	-1931.81	0.00	0.00	2025.42



<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well Overlook 21-30
<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 21-30	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Overlook 21-30		
<b>Design:</b>	Overlook 21-30 (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 21-30					
Well Position	+N-S	-28.43 ft	Northing:	1,285,196.03 ft	Latitude:	40.114830
	+E-W	14.26 ft	Easting:	3,160,504.39 ft	Longitude:	-104.926114
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,010.00 ft

<b>Wellbore</b>	Overlook 21-30				
<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	52,953

<b>Design</b>	Overlook 21-30 (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	252.51

<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	
1,254.79	19.10	252.51	1,237.21	-47.37	-150.36	2.00	2.00	0.00	252.51	
6,413.34	19.10	252.51	6,111.90	-554.48	-1,759.97	0.00	0.00	0.00	0.00	
7,504.53	0.00	0.00	7,183.00	-608.62	-1,931.81	1.75	-1.75	0.00	180.00	
8,504.53	0.00	0.00	8,183.00	-608.62	-1,931.81	0.00	0.00	0.00	0.00	Overlook 21-30 BHI

<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well Overlook 21-30
<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 21-30	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Overlook 21-30		
<b>Design:</b>	Overlook 21-30 (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	252.51	399.98	-0.52	-1.66	1.75	2.00	2.00	0.00
500.00	4.00	252.51	499.84	-2.10	-6.66	6.98	2.00	2.00	0.00
600.00	6.00	252.51	599.45	-4.72	-14.97	15.69	2.00	2.00	0.00
700.00	8.00	252.51	698.70	-8.38	-26.59	27.88	2.00	2.00	0.00
800.00	10.00	252.51	797.47	-13.08	-41.51	43.52	2.00	2.00	0.00
868.73	11.37	252.51	865.00	-16.91	-53.67	56.27	2.00	2.00	0.00
8-5/8"									
900.00	12.00	252.51	895.62	-18.81	-59.71	62.60	2.00	2.00	0.00
1,000.00	14.00	252.51	993.06	-25.57	-81.16	85.10	2.00	2.00	0.00
1,100.00	16.00	252.51	1,089.64	-33.35	-105.85	110.98	2.00	2.00	0.00
1,200.00	18.00	252.51	1,185.27	-42.13	-133.73	140.21	2.00	2.00	0.00
1,254.79	19.10	252.51	1,237.21	-47.37	-150.36	157.64	2.00	2.00	0.00
1,300.00	19.10	252.51	1,279.93	-51.81	-164.46	172.43	0.00	0.00	0.00
1,400.00	19.10	252.51	1,374.43	-61.64	-195.67	205.15	0.00	0.00	0.00
1,500.00	19.10	252.51	1,468.93	-71.48	-226.87	237.86	0.00	0.00	0.00
1,600.00	19.10	252.51	1,563.43	-81.31	-258.07	270.58	0.00	0.00	0.00
1,700.00	19.10	252.51	1,657.92	-91.14	-289.27	303.29	0.00	0.00	0.00
1,800.00	19.10	252.51	1,752.42	-100.97	-320.48	336.01	0.00	0.00	0.00
1,900.00	19.10	252.51	1,846.92	-110.80	-351.68	368.72	0.00	0.00	0.00
2,000.00	19.10	252.51	1,941.42	-120.63	-382.88	401.44	0.00	0.00	0.00
2,100.00	19.10	252.51	2,035.91	-130.46	-414.09	434.15	0.00	0.00	0.00
2,200.00	19.10	252.51	2,130.41	-140.29	-445.29	466.87	0.00	0.00	0.00
2,300.00	19.10	252.51	2,224.91	-150.12	-476.49	499.58	0.00	0.00	0.00
2,400.00	19.10	252.51	2,319.40	-159.95	-507.69	532.30	0.00	0.00	0.00
2,500.00	19.10	252.51	2,413.90	-169.78	-538.90	565.01	0.00	0.00	0.00
2,600.00	19.10	252.51	2,508.40	-179.61	-570.10	597.73	0.00	0.00	0.00
2,700.00	19.10	252.51	2,602.90	-189.44	-601.30	630.44	0.00	0.00	0.00
2,800.00	19.10	252.51	2,697.39	-199.27	-632.51	663.15	0.00	0.00	0.00
2,900.00	19.10	252.51	2,791.89	-209.10	-663.71	695.87	0.00	0.00	0.00
3,000.00	19.10	252.51	2,886.39	-218.93	-694.91	728.58	0.00	0.00	0.00
3,100.00	19.10	252.51	2,980.89	-228.76	-726.12	761.30	0.00	0.00	0.00
3,200.00	19.10	252.51	3,075.38	-238.60	-757.32	794.01	0.00	0.00	0.00
3,300.00	19.10	252.51	3,169.88	-248.43	-788.52	826.73	0.00	0.00	0.00
3,400.00	19.10	252.51	3,264.38	-258.26	-819.72	859.44	0.00	0.00	0.00
3,500.00	19.10	252.51	3,358.87	-268.09	-850.93	892.16	0.00	0.00	0.00
3,600.00	19.10	252.51	3,453.37	-277.92	-882.13	924.87	0.00	0.00	0.00
3,700.00	19.10	252.51	3,547.87	-287.75	-913.33	957.59	0.00	0.00	0.00
3,800.00	19.10	252.51	3,642.37	-297.58	-944.54	990.30	0.00	0.00	0.00
3,900.00	19.10	252.51	3,736.86	-307.41	-975.74	1,023.02	0.00	0.00	0.00
4,000.00	19.10	252.51	3,831.36	-317.24	-1,006.94	1,055.73	0.00	0.00	0.00
4,100.00	19.10	252.51	3,925.86	-327.07	-1,038.15	1,088.45	0.00	0.00	0.00
4,200.00	19.10	252.51	4,020.36	-336.90	-1,069.35	1,121.16	0.00	0.00	0.00
4,300.00	19.10	252.51	4,114.85	-346.73	-1,100.55	1,153.88	0.00	0.00	0.00
4,347.78	19.10	252.51	4,160.00	-351.43	-1,115.46	1,169.51	0.00	0.00	0.00
PK Depth									
4,400.00	19.10	252.51	4,209.35	-356.56	-1,131.75	1,186.59	0.00	0.00	0.00
4,500.00	19.10	252.51	4,303.85	-366.39	-1,162.96	1,219.31	0.00	0.00	0.00
4,600.00	19.10	252.51	4,398.34	-376.22	-1,194.16	1,252.02	0.00	0.00	0.00
4,700.00	19.10	252.51	4,492.84	-386.05	-1,225.36	1,284.74	0.00	0.00	0.00
4,763.66	19.10	252.51	4,553.00	-392.31	-1,245.23	1,305.56	0.00	0.00	0.00

<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well Overlook 21-30
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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 21-30	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Overlook 21-30		
<b>Design:</b>	Overlook 21-30 (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)	
<b>SX Depth</b>										
4,800.00	19.10	252.51	4,587.34	-395.88	-1,256.57	1,317.45	0.00	0.00	0.00	
4,900.00	19.10	252.51	4,681.84	-405.71	-1,287.77	1,350.17	0.00	0.00	0.00	
5,000.00	19.10	252.51	4,776.33	-415.55	-1,318.97	1,382.88	0.00	0.00	0.00	
5,100.00	19.10	252.51	4,870.83	-425.38	-1,350.17	1,415.60	0.00	0.00	0.00	
5,200.00	19.10	252.51	4,965.33	-435.21	-1,381.38	1,448.31	0.00	0.00	0.00	
5,300.00	19.10	252.51	5,059.83	-445.04	-1,412.58	1,481.03	0.00	0.00	0.00	
5,400.00	19.10	252.51	5,154.32	-454.87	-1,443.78	1,513.74	0.00	0.00	0.00	
5,500.00	19.10	252.51	5,248.82	-464.70	-1,474.99	1,546.46	0.00	0.00	0.00	
5,600.00	19.10	252.51	5,343.32	-474.53	-1,506.19	1,579.17	0.00	0.00	0.00	
5,700.00	19.10	252.51	5,437.81	-484.36	-1,537.39	1,611.89	0.00	0.00	0.00	
5,800.00	19.10	252.51	5,532.31	-494.19	-1,568.60	1,644.60	0.00	0.00	0.00	
5,900.00	19.10	252.51	5,626.81	-504.02	-1,599.80	1,677.32	0.00	0.00	0.00	
6,000.00	19.10	252.51	5,721.31	-513.85	-1,631.00	1,710.03	0.00	0.00	0.00	
6,100.00	19.10	252.51	5,815.80	-523.68	-1,662.20	1,742.75	0.00	0.00	0.00	
6,200.00	19.10	252.51	5,910.30	-533.51	-1,693.41	1,775.46	0.00	0.00	0.00	
6,300.00	19.10	252.51	6,004.80	-543.34	-1,724.61	1,808.18	0.00	0.00	0.00	
6,400.00	19.10	252.51	6,099.30	-553.17	-1,755.81	1,840.89	0.00	0.00	0.00	
6,413.34	19.10	252.51	6,111.90	-554.48	-1,759.97	1,845.25	0.00	0.00	0.00	
6,500.00	17.58	252.51	6,194.16	-562.68	-1,785.98	1,872.52	1.75	-1.75	0.00	
6,600.00	15.83	252.51	6,289.93	-571.31	-1,813.39	1,901.26	1.75	-1.75	0.00	
6,700.00	14.08	252.51	6,386.54	-579.07	-1,838.00	1,927.06	1.75	-1.75	0.00	
6,800.00	12.33	252.51	6,483.90	-585.93	-1,859.79	1,949.91	1.75	-1.75	0.00	
6,900.00	10.58	252.51	6,581.90	-591.90	-1,878.73	1,969.76	1.75	-1.75	0.00	
7,000.00	8.83	252.51	6,680.47	-596.96	-1,894.81	1,986.62	1.75	-1.75	0.00	
7,100.00	7.08	252.51	6,779.50	-601.12	-1,908.00	2,000.46	1.75	-1.75	0.00	
7,200.00	5.33	252.51	6,878.91	-604.37	-1,918.31	2,011.26	1.75	-1.75	0.00	
7,300.00	3.58	252.51	6,978.60	-606.70	-1,925.72	2,019.03	1.75	-1.75	0.00	
7,400.00	1.83	252.51	7,078.49	-608.12	-1,930.22	2,023.75	1.75	-1.75	0.00	
7,500.00	0.08	252.51	7,178.47	-608.62	-1,931.81	2,025.41	1.75	-1.75	0.00	
7,504.53	0.00	0.00	7,183.00	-608.62	-1,931.81	2,025.42	1.75	-1.75	0.00	
7,600.00	0.00	0.00	7,278.47	-608.62	-1,931.81	2,025.42	0.00	0.00	0.00	
7,639.53	0.00	0.00	7,318.00	-608.62	-1,931.81	2,025.42	0.00	0.00	0.00	
<b>NIO Depth</b>										
7,700.00	0.00	0.00	7,378.47	-608.62	-1,931.81	2,025.42	0.00	0.00	0.00	
7,800.00	0.00	0.00	7,478.47	-608.62	-1,931.81	2,025.42	0.00	0.00	0.00	
7,900.00	0.00	0.00	7,578.47	-608.62	-1,931.81	2,025.42	0.00	0.00	0.00	
7,945.53	0.00	0.00	7,624.00	-608.62	-1,931.81	2,025.42	0.00	0.00	0.00	
<b>CD Depth</b>										
8,000.00	0.00	0.00	7,678.47	-608.62	-1,931.81	2,025.42	0.00	0.00	0.00	
8,031.53	0.00	0.00	7,710.00	-608.62	-1,931.81	2,025.42	0.00	0.00	0.00	
<b>GH Depth</b>										
8,100.00	0.00	0.00	7,778.47	-608.62	-1,931.81	2,025.42	0.00	0.00	0.00	
8,200.00	0.00	0.00	7,878.47	-608.62	-1,931.81	2,025.42	0.00	0.00	0.00	
8,300.00	0.00	0.00	7,978.47	-608.62	-1,931.81	2,025.42	0.00	0.00	0.00	
8,364.53	0.00	0.00	8,043.00	-608.62	-1,931.81	2,025.42	0.00	0.00	0.00	
<b>J Depth</b>										
8,400.00	0.00	0.00	8,078.47	-608.62	-1,931.81	2,025.42	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,178.47	-608.62	-1,931.81	2,025.42	0.00	0.00	0.00	
8,504.53	0.00	0.00	8,183.00	-608.62	-1,931.81	2,025.42	0.00	0.00	0.00	
<b>Overlook 21-30 BHL</b>										

<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well Overlook 21-30
<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 21-30	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Overlook 21-30		
<b>Design:</b>	Overlook 21-30 (wp01)		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
Overlook 21-30 BHL	0.00	0.00	8,183.00	-608.62	-1,931.81	1,284,574.91	3,158,576.56	40.113159	-104.933021
- plan hits target center									
- Circle (radius 25.00)									

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

Formations						
Measured Depth	Vertical Depth				Dip	Dip Direction
(ft)	(ft)		Name	Lithology	(°)	(°)
4,347.78	4,160.00	PK Depth				
4,763.66	4,553.00	SX Depth				
7,639.53	7,318.00	NIO Depth				
7,945.53	7,624.00	CD Depth				
8,031.53	7,710.00	GH Depth				
8,364.53	8,043.00	J Depth				