

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_REI 35-3 PAD

REI 35-5

REI 35-5

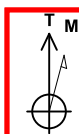
Plan: REI 35-5 (wp01)

Standard Planning Report

09 December, 2010



Project: COLORADO NORTHERN ZONE - 83
Site: WELD_REI 35-3 PAD
Well: REI 35-5
Wellbore: REI 35-5
Section:
SHL:
Design: REI 35-5 (wp01)
Latitude: 40.249393
Longitude: -104.689370
GL: 4902.00
KB: WELL @ 4902.00ft (Original Well Elev)



Azimuths to True North
Magnetic North: 8.88°
Magnetic Field
Strength: 53114.3snT
Dip Angle: 66.96°
Date: 12/9/2010
Model: IGRF2010



Weatherford®

FORMATION TOP DETAILS

TVDPath	MDPath	PK	Formation
4202.00	4360.99	0.00	
4452.00	4610.99	0.00	
6974.00	7132.99	0.00	
7262.00	7420.99	0.00	
7334.00	7492.99	0.00	
7712.00	7870.99	0.00	

WELL DETAILS: REI 35-5

+N/-S	+E/-W	Northing	Ground Level: Easting	4902.00 Latitude	Longitude	Slot
0.00	0.00	1334729.80	3226267.25	40.249393	-104.689370	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

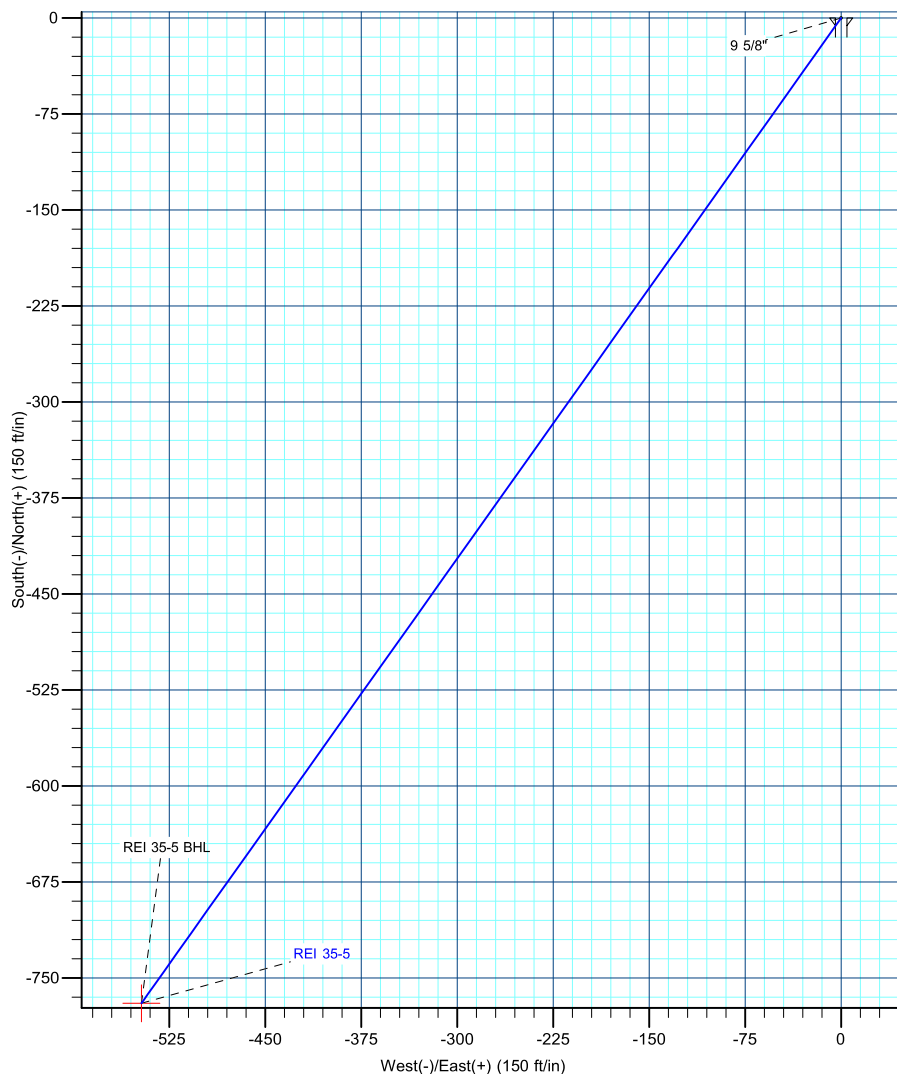
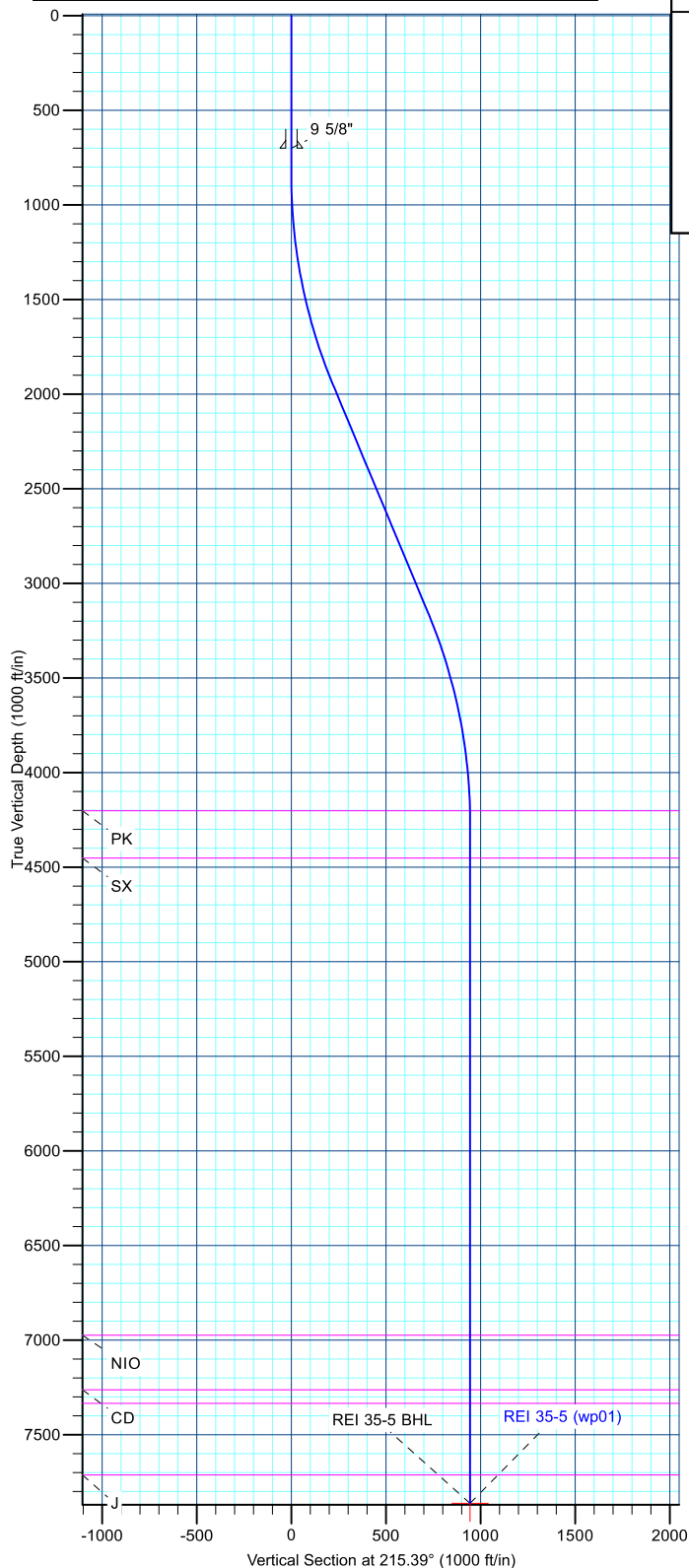
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Point	Shape
REI 35-5 BHL	7862.00	-769.73	-546.83	40.247280	-104.691329		

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	
3	1980.98	22.62	215.39	1951.83	-179.64	-127.62	2.00	215.39	220.36	
4	3290.02	22.62	215.39	3160.17	-590.08	-419.21	0.00	0.00	723.83	
5	4420.99	0.00	0.00	4262.00	-769.73	-546.83	2.00	180.00	944.19	
6	8020.99	0.00	0.00	7862.00	-769.73	-546.83	0.00	0.00	944.19	REI 35-5 BHL

CASING DETAILS

TVD	MD	Name	Size
700.00	700.00	9 5/8"	9-5/8



Database:	edm5000p	Local Co-ordinate Reference:	Well REI 35-5
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4902.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4902.00ft (Original Well Elev)
Site:	WELD_REI 35-3 PAD	North Reference:	True
Well:	REI 35-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	REI 35-5		
Design:	REI 35-5 (wp01)		

Project	COLORADO NORTHERN ZONE - 83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		WELD_REI 35-3 PAD			
Site Position:		Northing:	1,334,729.80 ft	Latitude:	40.249393
From:	Lat/Long	Easting:	3,226,267.25 ft	Longitude:	-104.689370
Position Uncertainty:	0.00 ft	Slot Radius:	0 "	Grid Convergence:	0.52 °

Well	REI 35-5					
Well Position	+N/-S	0.00 ft	Northing:	1,334,729.80 ft	Latitude:	40.249393
	+E/-W	0.00 ft	Easting:	3,226,267.25 ft	Longitude:	-104.689370
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,902.00 ft

Wellbore	REI 35-5				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/9/2010	8.88	66.96	53,114

Design	REI 35-5 (wp01)				
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Audit Notes:					
Version:		Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	215.39	

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,980.98	22.62	215.39	1,951.83	-179.64	-127.62	2.00	2.00	0.00	215.39	
3,290.02	22.62	215.39	3,160.17	-590.08	-419.21	0.00	0.00	0.00	0.00	
4,420.99	0.00	0.00	4,262.00	-769.73	-546.83	2.00	-2.00	0.00	180.00	
8,020.99	0.00	0.00	7,862.00	-769.73	-546.83	0.00	0.00	0.00	0.00	REI 35-5 BHL

Database:	edm5000p	Local Co-ordinate Reference:	Well REI 35-5
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4902.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4902.00ft (Original Well Elev)
Site:	WELD_REI 35-3 PAD	North Reference:	True
Well:	REI 35-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	REI 35-5		
Design:	REI 35-5 (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	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
900.00	1.00	215.39	900.00	-0.36	-0.25	0.44	2.00	2.00	0.00
1,000.00	3.00	215.39	999.93	-3.20	-2.27	3.93	2.00	2.00	0.00
1,100.00	5.00	215.39	1,099.68	-8.89	-6.31	10.90	2.00	2.00	0.00
1,200.00	7.00	215.39	1,199.13	-17.41	-12.37	21.35	2.00	2.00	0.00
1,300.00	9.00	215.39	1,298.15	-28.75	-20.43	35.27	2.00	2.00	0.00
1,400.00	11.00	215.39	1,396.63	-42.91	-30.48	52.63	2.00	2.00	0.00
1,500.00	13.00	215.39	1,494.44	-59.86	-42.52	73.42	2.00	2.00	0.00
1,600.00	15.00	215.39	1,591.46	-79.58	-56.53	97.62	2.00	2.00	0.00
1,700.00	17.00	215.39	1,687.58	-102.05	-72.50	125.18	2.00	2.00	0.00
1,800.00	19.00	215.39	1,782.68	-127.24	-90.39	156.08	2.00	2.00	0.00
1,900.00	21.00	215.39	1,876.65	-155.12	-110.20	190.28	2.00	2.00	0.00
1,980.98	22.62	215.39	1,951.83	-179.64	-127.62	220.36	2.00	2.00	0.00
Start 1309.04 hold at 1980.98 MD									
2,000.00	22.62	215.39	1,969.39	-185.61	-131.86	227.68	0.00	0.00	0.00
2,100.00	22.62	215.39	2,061.69	-216.96	-154.13	266.14	0.00	0.00	0.00
2,200.00	22.62	215.39	2,154.00	-248.32	-176.41	304.60	0.00	0.00	0.00
2,300.00	22.62	215.39	2,246.31	-279.67	-198.68	343.06	0.00	0.00	0.00
2,400.00	22.62	215.39	2,338.62	-311.03	-220.96	381.52	0.00	0.00	0.00
2,500.00	22.62	215.39	2,430.93	-342.38	-243.23	419.98	0.00	0.00	0.00
2,600.00	22.62	215.39	2,523.23	-373.73	-265.51	458.44	0.00	0.00	0.00
2,700.00	22.62	215.39	2,615.54	-405.09	-287.78	496.91	0.00	0.00	0.00
2,800.00	22.62	215.39	2,707.85	-436.44	-310.06	535.37	0.00	0.00	0.00
2,900.00	22.62	215.39	2,800.16	-467.80	-332.33	573.83	0.00	0.00	0.00
3,000.00	22.62	215.39	2,892.47	-499.15	-354.61	612.29	0.00	0.00	0.00
3,100.00	22.62	215.39	2,984.77	-530.50	-376.88	650.75	0.00	0.00	0.00
3,200.00	22.62	215.39	3,077.08	-561.86	-399.16	689.21	0.00	0.00	0.00
3,290.02	22.62	215.39	3,160.17	-590.08	-419.21	723.83	0.00	0.00	0.00
Start Drop -2.00									
3,300.00	22.42	215.39	3,169.40	-593.20	-421.42	727.66	2.00	-2.00	0.00
3,400.00	20.42	215.39	3,262.48	-622.97	-442.57	764.17	2.00	-2.00	0.00
3,500.00	18.42	215.39	3,356.79	-650.07	-461.83	797.42	2.00	-2.00	0.00
3,600.00	16.42	215.39	3,452.20	-674.48	-479.16	827.36	2.00	-2.00	0.00
3,700.00	14.42	215.39	3,548.59	-696.15	-494.56	853.94	2.00	-2.00	0.00
3,800.00	12.42	215.39	3,645.86	-715.07	-508.00	877.15	2.00	-2.00	0.00
3,900.00	10.42	215.39	3,743.87	-731.21	-519.47	896.95	2.00	-2.00	0.00
4,000.00	8.42	215.39	3,842.52	-744.55	-528.95	913.32	2.00	-2.00	0.00
4,100.00	6.42	215.39	3,941.68	-755.08	-536.43	926.23	2.00	-2.00	0.00
4,200.00	4.42	215.39	4,041.23	-762.78	-541.90	935.67	2.00	-2.00	0.00
4,300.00	2.42	215.39	4,141.04	-767.64	-545.35	941.64	2.00	-2.00	0.00
4,360.99	1.20	215.39	4,202.00	-769.21	-546.47	943.57	2.00	-2.00	0.00
PK									
4,400.00	0.42	215.39	4,241.01	-769.66	-546.79	944.12	2.00	-2.00	0.00

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Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4902.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4902.00ft (Original Well Elev)
Site:	WELD_REI 35-3 PAD	North Reference:	True
Well:	REI 35-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	REI 35-5		
Design:	REI 35-5 (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)
4,420.99	0.00	0.00	4,262.00	-769.73	-546.83	944.19	2.00	-2.00	0.00
Start 3600.00 hold at 4420.99 MD									
4,500.00	0.00	0.00	4,341.01	-769.73	-546.83	944.19	0.00	0.00	0.00
4,600.00	0.00	0.00	4,441.01	-769.73	-546.83	944.19	0.00	0.00	0.00
4,610.99	0.00	0.00	4,452.00	-769.73	-546.83	944.19	0.00	0.00	0.00
SX									
4,700.00	0.00	0.00	4,541.01	-769.73	-546.83	944.19	0.00	0.00	0.00
4,800.00	0.00	0.00	4,641.01	-769.73	-546.83	944.19	0.00	0.00	0.00
4,900.00	0.00	0.00	4,741.01	-769.73	-546.83	944.19	0.00	0.00	0.00
5,000.00	0.00	0.00	4,841.01	-769.73	-546.83	944.19	0.00	0.00	0.00
5,100.00	0.00	0.00	4,941.01	-769.73	-546.83	944.19	0.00	0.00	0.00
5,200.00	0.00	0.00	5,041.01	-769.73	-546.83	944.19	0.00	0.00	0.00
5,300.00	0.00	0.00	5,141.01	-769.73	-546.83	944.19	0.00	0.00	0.00
5,400.00	0.00	0.00	5,241.01	-769.73	-546.83	944.19	0.00	0.00	0.00
5,500.00	0.00	0.00	5,341.01	-769.73	-546.83	944.19	0.00	0.00	0.00
5,600.00	0.00	0.00	5,441.01	-769.73	-546.83	944.19	0.00	0.00	0.00
5,700.00	0.00	0.00	5,541.01	-769.73	-546.83	944.19	0.00	0.00	0.00
5,800.00	0.00	0.00	5,641.01	-769.73	-546.83	944.19	0.00	0.00	0.00
5,900.00	0.00	0.00	5,741.01	-769.73	-546.83	944.19	0.00	0.00	0.00
6,000.00	0.00	0.00	5,841.01	-769.73	-546.83	944.19	0.00	0.00	0.00
6,100.00	0.00	0.00	5,941.01	-769.73	-546.83	944.19	0.00	0.00	0.00
6,200.00	0.00	0.00	6,041.01	-769.73	-546.83	944.19	0.00	0.00	0.00
6,300.00	0.00	0.00	6,141.01	-769.73	-546.83	944.19	0.00	0.00	0.00
6,400.00	0.00	0.00	6,241.01	-769.73	-546.83	944.19	0.00	0.00	0.00
6,500.00	0.00	0.00	6,341.01	-769.73	-546.83	944.19	0.00	0.00	0.00
6,600.00	0.00	0.00	6,441.01	-769.73	-546.83	944.19	0.00	0.00	0.00
6,700.00	0.00	0.00	6,541.01	-769.73	-546.83	944.19	0.00	0.00	0.00
6,800.00	0.00	0.00	6,641.01	-769.73	-546.83	944.19	0.00	0.00	0.00
6,900.00	0.00	0.00	6,741.01	-769.73	-546.83	944.19	0.00	0.00	0.00
7,000.00	0.00	0.00	6,841.01	-769.73	-546.83	944.19	0.00	0.00	0.00
7,100.00	0.00	0.00	6,941.01	-769.73	-546.83	944.19	0.00	0.00	0.00
7,132.99	0.00	0.00	6,974.00	-769.73	-546.83	944.19	0.00	0.00	0.00
NIO									
7,200.00	0.00	0.00	7,041.01	-769.73	-546.83	944.19	0.00	0.00	0.00
7,300.00	0.00	0.00	7,141.01	-769.73	-546.83	944.19	0.00	0.00	0.00
7,400.00	0.00	0.00	7,241.01	-769.73	-546.83	944.19	0.00	0.00	0.00
7,420.99	0.00	0.00	7,262.00	-769.73	-546.83	944.19	0.00	0.00	0.00
CD									
7,492.99	0.00	0.00	7,334.00	-769.73	-546.83	944.19	0.00	0.00	0.00
GH									
7,500.00	0.00	0.00	7,341.01	-769.73	-546.83	944.19	0.00	0.00	0.00
7,600.00	0.00	0.00	7,441.01	-769.73	-546.83	944.19	0.00	0.00	0.00
7,700.00	0.00	0.00	7,541.01	-769.73	-546.83	944.19	0.00	0.00	0.00
7,800.00	0.00	0.00	7,641.01	-769.73	-546.83	944.19	0.00	0.00	0.00
7,870.99	0.00	0.00	7,712.00	-769.73	-546.83	944.19	0.00	0.00	0.00
J									
7,900.00	0.00	0.00	7,741.01	-769.73	-546.83	944.19	0.00	0.00	0.00
8,000.00	0.00	0.00	7,841.01	-769.73	-546.83	944.19	0.00	0.00	0.00
8,020.99	0.00	0.00	7,862.00	-769.73	-546.83	944.19	0.00	0.00	0.00
TD at 8020.99 - REI 35-5 BHL									

Database:	edm5000p	Local Co-ordinate Reference:	Well REI 35-5
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4902.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4902.00ft (Original Well Elev)
Site:	WELD_REI 35-3 PAD	North Reference:	True
Well:	REI 35-5	Survey Calculation Method:	Minimum Curvature
Wellbore:	REI 35-5		
Design:	REI 35-5 (wp01)		

Design Targets									
Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude
	- Shape								Longitude
REI 35-5 BHL		0.00	0.00	7,862.00	-769.73	-546.83	1,333,955.10	3,225,727.48	40.247280
	- plan hits target center								-104.691329
	- Point								

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
700.00	700.00	9 5/8"	9-5/8	12-1/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,360.99	4,202.00	PK		0.00		
4,610.99	4,452.00	SX		0.00		
7,132.99	6,974.00	NIO		0.00		
7,420.99	7,262.00	CD		0.00		
7,492.99	7,334.00	GH		0.00		
7,870.99	7,712.00	J		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
850.00	850.00	0.00	0.00	Start Build 2.00	
1,980.98	1,951.83	-179.64	-127.62	Start 1309.04 hold at 1980.98 MD	
3,290.02	3,160.17	-590.08	-419.21	Start Drop -2.00	
4,420.99	4,262.00	-769.73	-546.83	Start 3600.00 hold at 4420.99 MD	
8,020.99	7,862.00	-769.73	-546.83	TD at 8020.99	