

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_CLARK PAD

CLARK 35C-11HZ

CLARK 35C-11HZ

Plan: CLARK 35C-11HZ (wp01)

Standard Planning Report

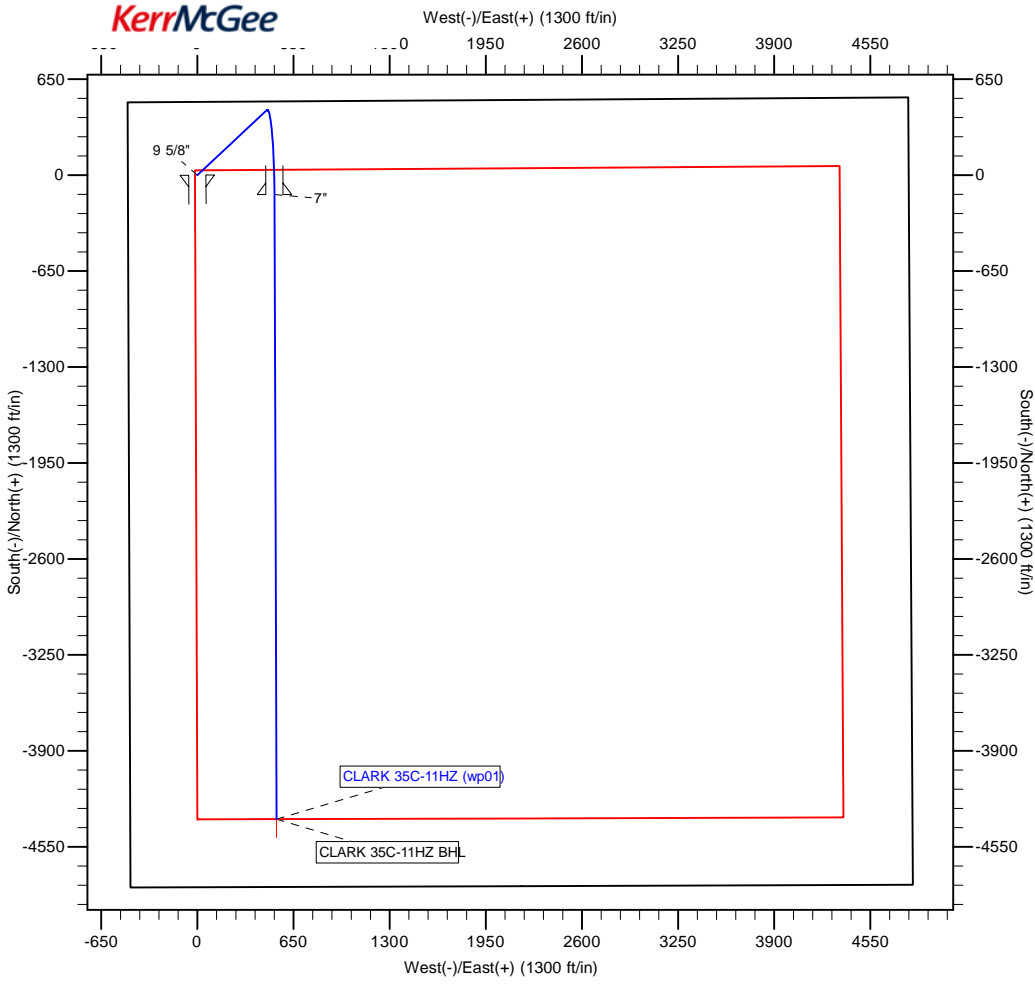
05 August, 2011





T G M
 Azimuths to Grid North
 True North: -0.48°
 Magnetic North: 8.33°
 Magnetic Field
 Strength: 52948.1snT
 Dip Angle: 66.78°
 Date: 7/18/2011
 Model: IGRF2010

Project: COLORADO NORTHERN ZONE - 83
Site: WELD_CLARK PAD
Well: CLARK 35C-11HZ
Wellbore: CLARK 35C-11HZ
Section:
SHL:
Design: CLARK 35C-11HZ (wp01)
Latitude: 40.071813
Longitude: -104.752041
GL: 5106.00
KB: 17' rkb + 5106' GL @ 5123.00ft



WELL DETAILS: CLARK 35C-11HZ

+N/-S	+E/-W	Northing	Ground Level: Easting	5106.00 Latitude	Longitude	Slot
0.00	0.00	1269889.31	3209320.26	40.071813	-104.752041	

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

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
CLARK 35C-11HZ BHL	7597.00	-4362.24	535.97	40.059826	-104.750258	Point

SECTION DETAILS

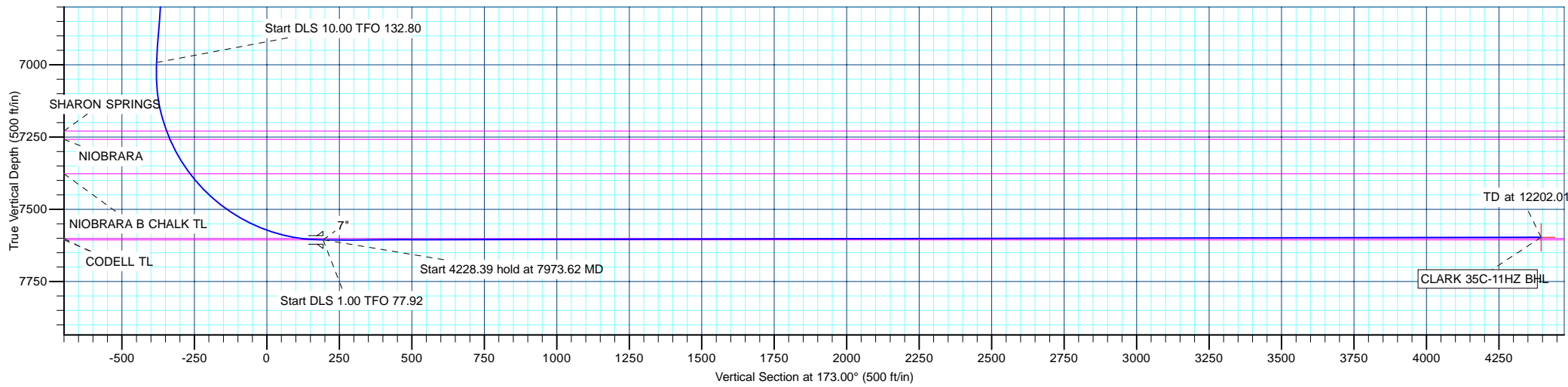
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1000.00	0.00	359.52	1000.00	0.00	0.00	0.00	359.52	0.00	
1314.81	6.30	46.80	1314.18	11.83	12.60	2.00	46.80	-10.21	
7027.30	6.30	46.80	6992.21	440.71	469.25	0.00	0.00	-380.20	
7971.35	90.12	179.78	7606.00	-131.61	521.13	10.00	132.80	194.18	
7973.62	90.12	179.80	7606.00	-133.88	521.14	1.00	77.92	196.44	
12202.01	90.12	179.80	7597.00	-4362.24	535.97	0.00	0.00	4395.04	CLARK 35C-11HZ BHL

FORMATION TOP DETAILS

TVDPATH	MDPATH	FORMATION
3114.00	3125.56	PARKMAN
4683.00	4704.08	SUSSEX
7229.00	7268.86	SHARON SPRINGS
7258.00	7300.12	NIOBRARA
7377.00	7438.17	NIOBRARA B CHALK TL
7601.00	7894.29	CODELL
7606.00	7971.35	CODELL TL

CASING DETAILS

TVD	MD	Name	Size
850.00	850.00	9 5/8"	9-5/8"
7606.00	7971.30	7"	7"



Database:	edm5000p	Local Co-ordinate Reference:	Well CLARK 35C-11HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' rkb + 5106' GL @ 5123.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' rkb + 5106' GL @ 5123.00ft
Site:	WELD_CLARK PAD	North Reference:	Grid
Well:	CLARK 35C-11HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	CLARK 35C-11HZ		
Design:	CLARK 35C-11HZ (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_CLARK PAD				
Site Position:	Northing:	1,259,836.49 ft	Latitude:	40.041869	
From: Lat/Long	Easting:	3,293,768.15 ft	Longitude:	-104.450735	
Position Uncertainty:	0.00 ft	Slot Radius:	0 "	Grid Convergence:	0.68 °

Well	CLARK 35C-11HZ					
Well Position	+N/-S	10,052.82 ft	Northing:	1,269,889.30 ft	Latitude:	40.071813
	+E/-W	-84,447.88 ft	Easting:	3,209,320.27 ft	Longitude:	-104.752041
Position Uncertainty	0.00 ft	Wellhead Elevation:		Ground Level:	5,106.00 ft	

Wellbore	CLARK 35C-11HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/18/2011	8.82	66.78	52,948

Design	CLARK 35C-11HZ (wp01)			
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	173.00

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	
1,000.00	0.00	359.52	1,000.00	0.00	0.00	0.00	0.00	0.00	359.52	
1,314.81	6.30	46.80	1,314.18	11.83	12.60	2.00	2.00	0.00	46.80	
7,027.30	6.30	46.80	6,992.21	440.71	469.25	0.00	0.00	0.00	0.00	
7,971.35	90.12	179.78	7,606.00	-131.61	521.13	10.00	8.88	14.09	132.80	
7,973.62	90.12	179.80	7,606.00	-133.88	521.14	1.00	0.21	0.98	77.92	
12,202.01	90.12	179.80	7,597.00	-4,362.24	535.97	0.00	0.00	0.00	0.00	CLARK 35C-11HZ Bf

Database:	edm5000p	Local Co-ordinate Reference:	Well CLARK 35C-11HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' rkb + 5106' GL @ 5123.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' rkb + 5106' GL @ 5123.00ft
Site:	WELD_CLARK PAD	North Reference:	Grid
Well:	CLARK 35C-11HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	CLARK 35C-11HZ		
Design:	CLARK 35C-11HZ (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	359.52	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	359.52	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	359.52	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	359.52	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	359.52	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	359.52	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	359.52	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	359.52	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
850.00	0.00	359.52	850.00	0.00	0.00	0.00	0.00	0.00	0.00	
9 5/8"										
900.00	0.00	359.52	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	359.52	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
Start Build 2.00										
1,100.00	2.00	46.80	1,099.98	1.19	1.27	-1.03	2.00	2.00	0.00	
1,200.00	4.00	46.80	1,199.84	4.78	5.09	-4.12	2.00	2.00	0.00	
1,300.00	6.00	46.80	1,299.45	10.74	11.44	-9.27	2.00	2.00	0.00	
1,314.81	6.30	46.80	1,314.18	11.83	12.60	-10.21	2.00	2.00	0.00	
Start 5712.49 hold at 1314.81 MD										
1,400.00	6.30	46.80	1,398.85	18.23	19.41	-15.72	0.00	0.00	0.00	
1,500.00	6.30	46.80	1,498.25	25.73	27.40	-22.20	0.00	0.00	0.00	
1,600.00	6.30	46.80	1,597.65	33.24	35.39	-28.68	0.00	0.00	0.00	
1,700.00	6.30	46.80	1,697.04	40.75	43.39	-35.15	0.00	0.00	0.00	
1,800.00	6.30	46.80	1,796.44	48.26	51.38	-41.63	0.00	0.00	0.00	
1,900.00	6.30	46.80	1,895.84	55.76	59.38	-48.11	0.00	0.00	0.00	
2,000.00	6.30	46.80	1,995.23	63.27	67.37	-54.58	0.00	0.00	0.00	
2,100.00	6.30	46.80	2,094.63	70.78	75.36	-61.06	0.00	0.00	0.00	
2,200.00	6.30	46.80	2,194.03	78.29	83.36	-67.54	0.00	0.00	0.00	
2,300.00	6.30	46.80	2,293.42	85.80	91.35	-74.02	0.00	0.00	0.00	
2,400.00	6.30	46.80	2,392.82	93.30	99.35	-80.49	0.00	0.00	0.00	
2,500.00	6.30	46.80	2,492.22	100.81	107.34	-86.97	0.00	0.00	0.00	
2,600.00	6.30	46.80	2,591.61	108.32	115.33	-93.45	0.00	0.00	0.00	
2,700.00	6.30	46.80	2,691.01	115.83	123.33	-99.92	0.00	0.00	0.00	
2,800.00	6.30	46.80	2,790.41	123.34	131.32	-106.40	0.00	0.00	0.00	
2,900.00	6.30	46.80	2,889.81	130.84	139.32	-112.88	0.00	0.00	0.00	
3,000.00	6.30	46.80	2,989.20	138.35	147.31	-119.35	0.00	0.00	0.00	
3,100.00	6.30	46.80	3,088.60	145.86	155.30	-125.83	0.00	0.00	0.00	
3,125.56	6.30	46.80	3,114.00	147.78	157.35	-127.49	0.00	0.00	0.00	
PARKMAN										
3,200.00	6.30	46.80	3,188.00	153.37	163.30	-132.31	0.00	0.00	0.00	
3,300.00	6.30	46.80	3,287.39	160.87	171.29	-138.79	0.00	0.00	0.00	
3,400.00	6.30	46.80	3,386.79	168.38	179.29	-145.26	0.00	0.00	0.00	
3,500.00	6.30	46.80	3,486.19	175.89	187.28	-151.74	0.00	0.00	0.00	
3,600.00	6.30	46.80	3,585.58	183.40	195.27	-158.22	0.00	0.00	0.00	
3,700.00	6.30	46.80	3,684.98	190.91	203.27	-164.69	0.00	0.00	0.00	
3,800.00	6.30	46.80	3,784.38	198.41	211.26	-171.17	0.00	0.00	0.00	
3,900.00	6.30	46.80	3,883.77	205.92	219.26	-177.65	0.00	0.00	0.00	
4,000.00	6.30	46.80	3,983.17	213.43	227.25	-184.12	0.00	0.00	0.00	
4,100.00	6.30	46.80	4,082.57	220.94	235.24	-190.60	0.00	0.00	0.00	
4,200.00	6.30	46.80	4,181.96	228.45	243.24	-197.08	0.00	0.00	0.00	
4,300.00	6.30	46.80	4,281.36	235.95	251.23	-203.55	0.00	0.00	0.00	
4,400.00	6.30	46.80	4,380.76	243.46	259.23	-210.03	0.00	0.00	0.00	
4,500.00	6.30	46.80	4,480.15	250.97	267.22	-216.51	0.00	0.00	0.00	
4,600.00	6.30	46.80	4,579.55	258.48	275.21	-222.99	0.00	0.00	0.00	

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Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' rkb + 5106' GL @ 5123.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' rkb + 5106' GL @ 5123.00ft
Site:	WELD_CLARK PAD	North Reference:	Grid
Well:	CLARK 35C-11HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	CLARK 35C-11HZ		
Design:	CLARK 35C-11HZ (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)
4,700.00	6.30	46.80	4,678.95	265.98	283.21	-229.46	0.00	0.00	0.00
4,704.08	6.30	46.80	4,683.00	266.29	283.53	-229.73	0.00	0.00	0.00
SUSSEX									
4,800.00	6.30	46.80	4,778.35	273.49	291.20	-235.94	0.00	0.00	0.00
4,900.00	6.30	46.80	4,877.74	281.00	299.20	-242.42	0.00	0.00	0.00
5,000.00	6.30	46.80	4,977.14	288.51	307.19	-248.89	0.00	0.00	0.00
5,100.00	6.30	46.80	5,076.54	296.02	315.18	-255.37	0.00	0.00	0.00
5,200.00	6.30	46.80	5,175.93	303.52	323.18	-261.85	0.00	0.00	0.00
5,300.00	6.30	46.80	5,275.33	311.03	331.17	-268.32	0.00	0.00	0.00
5,400.00	6.30	46.80	5,374.73	318.54	339.17	-274.80	0.00	0.00	0.00
5,500.00	6.30	46.80	5,474.12	326.05	347.16	-281.28	0.00	0.00	0.00
5,600.00	6.30	46.80	5,573.52	333.56	355.15	-287.75	0.00	0.00	0.00
5,700.00	6.30	46.80	5,672.92	341.06	363.15	-294.23	0.00	0.00	0.00
5,800.00	6.30	46.80	5,772.31	348.57	371.14	-300.71	0.00	0.00	0.00
5,900.00	6.30	46.80	5,871.71	356.08	379.14	-307.19	0.00	0.00	0.00
6,000.00	6.30	46.80	5,971.11	363.59	387.13	-313.66	0.00	0.00	0.00
6,100.00	6.30	46.80	6,070.50	371.09	395.12	-320.14	0.00	0.00	0.00
6,200.00	6.30	46.80	6,169.90	378.60	403.12	-326.62	0.00	0.00	0.00
6,300.00	6.30	46.80	6,269.30	386.11	411.11	-333.09	0.00	0.00	0.00
6,400.00	6.30	46.80	6,368.69	393.62	419.11	-339.57	0.00	0.00	0.00
6,500.00	6.30	46.80	6,468.09	401.13	427.10	-346.05	0.00	0.00	0.00
6,600.00	6.30	46.80	6,567.49	408.63	435.09	-352.52	0.00	0.00	0.00
6,700.00	6.30	46.80	6,666.88	416.14	443.09	-359.00	0.00	0.00	0.00
6,800.00	6.30	46.80	6,766.28	423.65	451.08	-365.48	0.00	0.00	0.00
6,900.00	6.30	46.80	6,865.68	431.16	459.08	-371.96	0.00	0.00	0.00
7,000.00	6.30	46.80	6,965.08	438.67	467.07	-378.43	0.00	0.00	0.00
7,027.30	6.30	46.80	6,992.21	440.71	469.25	-380.20	0.00	0.00	0.00
Start DLS 10.00 TFO 132.80									
7,100.00	5.49	122.69	7,064.62	441.57	475.09	-380.33	10.00	-1.10	104.40
7,200.00	13.77	160.53	7,163.21	427.73	483.11	-365.62	10.00	8.27	37.83
7,268.86	20.38	167.21	7,229.00	408.29	488.50	-345.67	10.00	9.60	9.71
SHARON SPRINGS									
7,300.00	23.42	169.02	7,257.89	396.92	490.88	-334.10	10.00	9.76	5.81
7,300.12	23.42	169.02	7,258.00	396.88	490.89	-334.05	0.00	0.00	0.00
NIORARA									
7,400.00	33.27	172.70	7,345.80	350.09	498.17	-286.73	10.01	9.86	3.68
7,438.17	37.05	173.63	7,377.00	328.28	500.77	-264.76	10.00	9.90	2.43
NIORARA B CHALK TL									
7,500.00	43.18	174.83	7,424.27	288.65	504.75	-224.95	10.00	9.92	1.95
7,600.00	53.12	176.30	7,490.90	214.48	510.43	-150.63	10.00	9.94	1.46
7,700.00	63.08	177.42	7,543.68	129.81	515.04	-66.04	10.00	9.95	1.12
7,800.00	73.04	178.36	7,581.00	37.24	518.42	26.26	10.00	9.96	0.94
7,894.29	82.44	179.15	7,601.00	-54.78	520.41	117.83	10.00	9.97	0.84
CODELL									
7,900.00	83.01	179.20	7,601.72	-60.44	520.49	123.46	10.00	9.97	0.82
7,971.30	90.11	179.78	7,606.00	-131.56	521.13	194.13	10.00	9.97	0.81
7"									
7,971.35	90.12	179.78	7,606.00	-131.61	521.13	194.18	10.00	9.97	0.80
Start DLS 1.00 TFO 77.92 - CODELL TL									
7,973.62	90.12	179.80	7,606.00	-133.88	521.14	196.44	1.00	0.21	0.98
Start 4228.39 hold at 7973.62 MD									
8,000.00	90.12	179.80	7,605.94	-160.26	521.23	222.63	0.00	0.00	0.00
8,100.00	90.12	179.80	7,605.73	-260.26	521.58	321.93	0.00	0.00	0.00

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Site:	WELD_CLARK PAD	North Reference:	Grid
Well:	CLARK 35C-11HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	CLARK 35C-11HZ		
Design:	CLARK 35C-11HZ (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)
8,200.00	90.12	179.80	7,605.51	-360.26	521.93	421.22	0.00	0.00	0.00
8,300.00	90.12	179.80	7,605.30	-460.26	522.28	520.52	0.00	0.00	0.00
8,400.00	90.12	179.80	7,605.09	-560.26	522.63	619.81	0.00	0.00	0.00
8,500.00	90.12	179.80	7,604.88	-660.26	522.98	719.11	0.00	0.00	0.00
8,600.00	90.12	179.80	7,604.66	-760.26	523.33	818.40	0.00	0.00	0.00
8,700.00	90.12	179.80	7,604.45	-860.26	523.69	917.70	0.00	0.00	0.00
8,800.00	90.12	179.80	7,604.24	-960.26	524.04	1,017.00	0.00	0.00	0.00
8,900.00	90.12	179.80	7,604.02	-1,060.26	524.39	1,116.29	0.00	0.00	0.00
9,000.00	90.12	179.80	7,603.81	-1,160.26	524.74	1,215.59	0.00	0.00	0.00
9,100.00	90.12	179.80	7,603.60	-1,260.25	525.09	1,314.88	0.00	0.00	0.00
9,200.00	90.12	179.80	7,603.39	-1,360.25	525.44	1,414.18	0.00	0.00	0.00
9,300.00	90.12	179.80	7,603.17	-1,460.25	525.79	1,513.47	0.00	0.00	0.00
9,400.00	90.12	179.80	7,602.96	-1,560.25	526.14	1,612.77	0.00	0.00	0.00
9,500.00	90.12	179.80	7,602.75	-1,660.25	526.49	1,712.07	0.00	0.00	0.00
9,600.00	90.12	179.80	7,602.54	-1,760.25	526.84	1,811.36	0.00	0.00	0.00
9,700.00	90.12	179.80	7,602.32	-1,860.25	527.19	1,910.66	0.00	0.00	0.00
9,800.00	90.12	179.80	7,602.11	-1,960.25	527.55	2,009.95	0.00	0.00	0.00
9,900.00	90.12	179.80	7,601.90	-2,060.25	527.90	2,109.25	0.00	0.00	0.00
10,000.00	90.12	179.80	7,601.68	-2,160.25	528.25	2,208.54	0.00	0.00	0.00
10,100.00	90.12	179.80	7,601.47	-2,260.25	528.60	2,307.84	0.00	0.00	0.00
10,200.00	90.12	179.80	7,601.26	-2,360.25	528.95	2,407.13	0.00	0.00	0.00
10,300.00	90.12	179.80	7,601.05	-2,460.24	529.30	2,506.43	0.00	0.00	0.00
10,400.00	90.12	179.80	7,600.83	-2,560.24	529.65	2,605.73	0.00	0.00	0.00
10,500.00	90.12	179.80	7,600.62	-2,660.24	530.00	2,705.02	0.00	0.00	0.00
10,600.00	90.12	179.80	7,600.41	-2,760.24	530.35	2,804.32	0.00	0.00	0.00
10,700.00	90.12	179.80	7,600.20	-2,860.24	530.70	2,903.61	0.00	0.00	0.00
10,800.00	90.12	179.80	7,599.98	-2,960.24	531.05	3,002.91	0.00	0.00	0.00
10,900.00	90.12	179.80	7,599.77	-3,060.24	531.40	3,102.20	0.00	0.00	0.00
11,000.00	90.12	179.80	7,599.56	-3,160.24	531.76	3,201.50	0.00	0.00	0.00
11,100.00	90.12	179.80	7,599.34	-3,260.24	532.11	3,300.79	0.00	0.00	0.00
11,200.00	90.12	179.80	7,599.13	-3,360.24	532.46	3,400.09	0.00	0.00	0.00
11,300.00	90.12	179.80	7,598.92	-3,460.24	532.81	3,499.39	0.00	0.00	0.00
11,400.00	90.12	179.80	7,598.71	-3,560.24	533.16	3,598.68	0.00	0.00	0.00
11,500.00	90.12	179.80	7,598.49	-3,660.23	533.51	3,697.98	0.00	0.00	0.00
11,600.00	90.12	179.80	7,598.28	-3,760.23	533.86	3,797.27	0.00	0.00	0.00
11,700.00	90.12	179.80	7,598.07	-3,860.23	534.21	3,896.57	0.00	0.00	0.00
11,800.00	90.12	179.80	7,597.86	-3,960.23	534.56	3,995.86	0.00	0.00	0.00
11,900.00	90.12	179.80	7,597.64	-4,060.23	534.91	4,095.16	0.00	0.00	0.00
12,000.00	90.12	179.80	7,597.43	-4,160.23	535.26	4,194.45	0.00	0.00	0.00
12,100.00	90.12	179.80	7,597.22	-4,260.23	535.62	4,293.75	0.00	0.00	0.00
12,200.00	90.12	179.80	7,597.00	-4,360.23	535.97	4,393.05	0.00	0.00	0.00
12,202.01	90.12	179.80	7,597.00	-4,362.24	535.97	4,395.04	0.00	0.00	0.00
TD at 12202.01 - CLARK 35C-11HZ BHL									

Database:	edm5000p	Local Co-ordinate Reference:	Well CLARK 35C-11HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' rkb + 5106' GL @ 5123.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' rkb + 5106' GL @ 5123.00ft
Site:	WELD_CLARK PAD	North Reference:	Grid
Well:	CLARK 35C-11HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	CLARK 35C-11HZ		
Design:	CLARK 35C-11HZ (wp01)		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
CLARK 35C-11HZ BHL	0.00	359.52	7,597.00	-4,362.24	535.97	1,265,527.07	3,209,856.24	40.059826	-104.750258
- plan hits target center									
- Point									

Casing Points					
Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter	
(ft)	(ft)		(")	(")	
850.00	850.00	9 5/8"	9-5/8	12-1/4	
7,971.30	7,606.00	7"	7	8-3/4	

Formations					
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction
(ft)	(ft)			(°)	(°)
3,125.56	3,114.00	PARKMAN		0.00	
4,704.08	4,683.00	SUSSEX		0.00	
7,268.86	7,229.00	SHARON SPRINGS		0.00	
7,300.12	7,258.00	NIOBRARA		0.00	
7,438.17	7,377.00	NIOBRARA B CHALK TL		0.00	
7,894.29	7,601.00	CODELL		0.00	
7,971.35	7,606.00	CODELL TL		0.00	

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(ft)	(ft)	+N/-S	+E/-W		
(ft)	(ft)	(ft)	(ft)		
1,000.00	1,000.00	0.00	0.00	Start Build 2.00	
1,314.81	1,314.18	11.83	12.60	Start 5712.49 hold at 1314.81 MD	
7,027.30	6,992.21	440.71	469.25	Start DLS 10.00 TFO 132.80	
7,971.35	7,606.00	-131.61	521.13	Start DLS 1.00 TFO 77.92	
7,973.62	7,606.00	-133.88	521.14	Start 4228.39 hold at 7973.62 MD	
12,202.01	7,597.00	-4,362.24	535.97	TD at 12202.01	