

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_CLARK PAD**

**CLARK 35N-11HZ**

**CLARK 35N-11HZ**

**Plan: CLARK 35N-11HZ (wp01)**

## **Standard Planning Report**

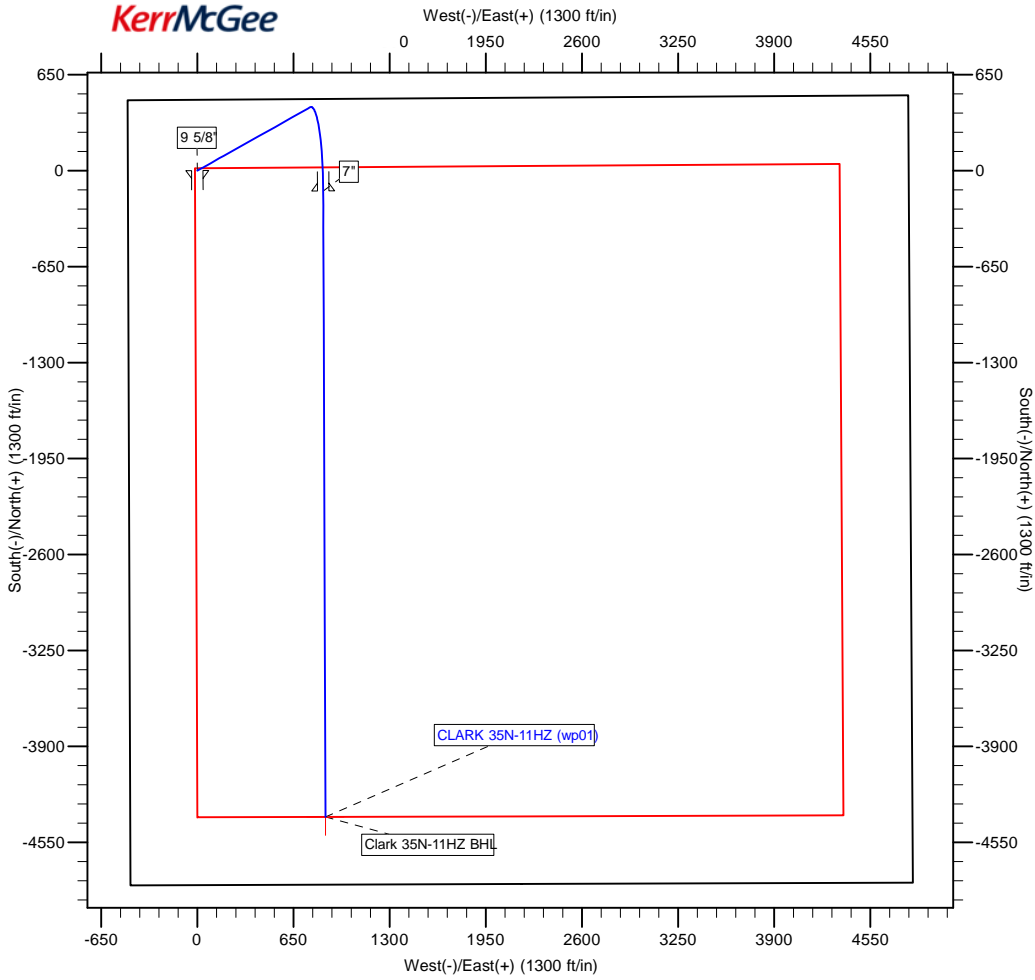
**05 August, 2011**





**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 35N-11HZ  
**Wellbore:** CLARK 35N-11HZ  
**Section:**  
**SHL:**  
**Design:** CLARK 35N-11HZ (wp01)  
**Latitude:** 40.071857  
**Longitude:** -104.752041  
**GL:** 5106.00  
**KB:** 17' RKB + 5106' GL @ 5123.00ft



**WELL DETAILS: CLARK 35N-11HZ**

+N/-S	+E/-W	Northing	Ground Level: Easting	5106.00 Latitude	40.071857 Longitude	Slot
0.00	0.00	1269905.34	3209320.13	40.071857	-104.752041	

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

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Clark 35N-11HZ BHL	7280.00	-4377.13	866.09	40.059821	-104.749079	Point

**SECTION DETAILS**

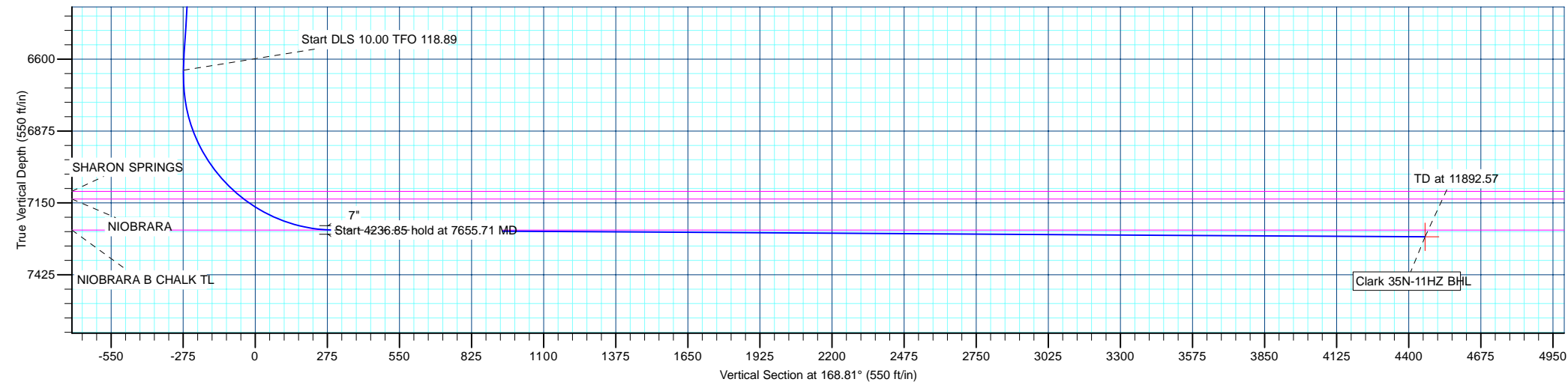
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1000.00	0.00	359.52	1000.00	0.00	0.00	0.00	359.52	0.00	
1459.57	9.19	60.62	1457.60	18.05	32.05	2.00	60.62	-11.48	
6711.87	9.19	60.62	6642.46	429.71	763.08	0.00	0.00	-273.42	
7653.16	89.66	179.78	7254.00	-137.83	851.19	10.00	118.89	300.42	
7655.71	89.65	179.80	7254.02	-140.38	851.20	1.00	121.02	302.93	
11892.57	89.65	179.80	7280.00	-4377.13	866.09	0.00	0.00	4461.99	Clark 35N-11HZ BHL

**FORMATION TOP DETAILS**

TVDPath	MDPath	Formation
4560.00	4602.32	SUSSEX
7106.00	7233.13	SHARON SPRINGS
7135.00	7278.64	NIOBRARA
7254.00	7653.16	NIOBRARA B CHALK TL

**CASING DETAILS**

TVD	MD	Name	Size
850.00	850.00	9 5/8"	9-5/8
7254.00	7653.16	7"	7



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

<b>Site</b>	WELD_CLARK PAD				
<b>Site Position:</b>	<b>Northing:</b>	1,259,836.49 ft	<b>Latitude:</b>	40.041869	
<b>From:</b> Lat/Long	<b>Easting:</b>	3,293,768.15 ft	<b>Longitude:</b>	-104.450735	
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	0 "	<b>Grid Convergence:</b>	0.68 °

<b>Well</b>	CLARK 35N-11HZ					
<b>Well Position</b>	<b>+N/-S</b>	10,068.85 ft	<b>Northing:</b>	1,269,905.34 ft	<b>Latitude:</b>	40.071857
	<b>+E/-W</b>	-84,448.02 ft	<b>Easting:</b>	3,209,320.13 ft	<b>Longitude:</b>	-104.752041
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>		<b>Ground Level:</b>	5,106.00 ft

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

<b>Design</b>	CLARK 35N-11HZ (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	168.81

<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	
1,000.00	0.00	359.52	1,000.00	0.00	0.00	0.00	0.00	0.00	359.52	
1,459.57	9.19	60.62	1,457.60	18.05	32.05	2.00	2.00	0.00	60.62	
6,711.87	9.19	60.62	6,642.46	429.71	763.08	0.00	0.00	0.00	0.00	
7,653.16	89.66	179.78	7,254.00	-137.83	851.19	10.00	8.55	12.66	118.89	
7,655.71	89.65	179.80	7,254.02	-140.38	851.20	1.00	-0.52	0.86	121.02	
11,892.57	89.65	179.80	7,280.00	-4,377.13	866.09	0.00	0.00	0.00	0.00	Clark 35N-11HZ BHL

<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well CLARK 35N-11HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	17' RKB + 5106' GL @ 5123.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	17' RKB + 5106' GL @ 5123.00ft
<b>Site:</b>	WELD_CLARK PAD	<b>North Reference:</b>	Grid
<b>Well:</b>	CLARK 35N-11HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	CLARK 35N-11HZ		
<b>Design:</b>	CLARK 35N-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	
<b>9 5/8"</b>										
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	
<b>Start Build 2.00</b>										
1,100.00	2.00	60.62	1,099.98	0.86	1.52	-0.54	2.00	2.00	0.00	
1,200.00	4.00	60.62	1,199.84	3.42	6.08	-2.18	2.00	2.00	0.00	
1,300.00	6.00	60.62	1,299.45	7.70	13.67	-4.90	2.00	2.00	0.00	
1,400.00	8.00	60.62	1,398.70	13.68	24.29	-8.70	2.00	2.00	0.00	
1,459.57	9.19	60.62	1,457.60	18.05	32.05	-11.48	2.00	2.00	0.00	
<b>Start 5252.29 hold at 1459.57 MD</b>										
1,500.00	9.19	60.62	1,497.51	21.22	37.68	-13.50	0.00	0.00	0.00	
1,600.00	9.19	60.62	1,596.23	29.05	51.60	-18.49	0.00	0.00	0.00	
1,700.00	9.19	60.62	1,694.94	36.89	65.51	-23.47	0.00	0.00	0.00	
1,800.00	9.19	60.62	1,793.66	44.73	79.43	-28.46	0.00	0.00	0.00	
1,900.00	9.19	60.62	1,892.38	52.57	93.35	-33.45	0.00	0.00	0.00	
2,000.00	9.19	60.62	1,991.09	60.41	107.27	-38.44	0.00	0.00	0.00	
2,100.00	9.19	60.62	2,089.81	68.24	121.19	-43.42	0.00	0.00	0.00	
2,200.00	9.19	60.62	2,188.52	76.08	135.11	-48.41	0.00	0.00	0.00	
2,300.00	9.19	60.62	2,287.24	83.92	149.02	-53.40	0.00	0.00	0.00	
2,400.00	9.19	60.62	2,385.96	91.76	162.94	-58.38	0.00	0.00	0.00	
2,500.00	9.19	60.62	2,484.67	99.59	176.86	-63.37	0.00	0.00	0.00	
2,600.00	9.19	60.62	2,583.39	107.43	190.78	-68.36	0.00	0.00	0.00	
2,700.00	9.19	60.62	2,682.10	115.27	204.70	-73.34	0.00	0.00	0.00	
2,800.00	9.19	60.62	2,780.82	123.11	218.62	-78.33	0.00	0.00	0.00	
2,900.00	9.19	60.62	2,879.54	130.94	232.53	-83.32	0.00	0.00	0.00	
3,000.00	9.19	60.62	2,978.25	138.78	246.45	-88.31	0.00	0.00	0.00	
3,100.00	9.19	60.62	3,076.97	146.62	260.37	-93.29	0.00	0.00	0.00	
3,200.00	9.19	60.62	3,175.68	154.46	274.29	-98.28	0.00	0.00	0.00	
3,300.00	9.19	60.62	3,274.40	162.30	288.21	-103.27	0.00	0.00	0.00	
3,400.00	9.19	60.62	3,373.12	170.13	302.13	-108.25	0.00	0.00	0.00	
3,500.00	9.19	60.62	3,471.83	177.97	316.04	-113.24	0.00	0.00	0.00	
3,600.00	9.19	60.62	3,570.55	185.81	329.96	-118.23	0.00	0.00	0.00	
3,700.00	9.19	60.62	3,669.26	193.65	343.88	-123.21	0.00	0.00	0.00	
3,800.00	9.19	60.62	3,767.98	201.48	357.80	-128.20	0.00	0.00	0.00	
3,900.00	9.19	60.62	3,866.70	209.32	371.72	-133.19	0.00	0.00	0.00	
4,000.00	9.19	60.62	3,965.41	217.16	385.64	-138.17	0.00	0.00	0.00	
4,100.00	9.19	60.62	4,064.13	225.00	399.55	-143.16	0.00	0.00	0.00	
4,200.00	9.19	60.62	4,162.84	232.83	413.47	-148.15	0.00	0.00	0.00	
4,300.00	9.19	60.62	4,261.56	240.67	427.39	-153.14	0.00	0.00	0.00	
4,400.00	9.19	60.62	4,360.28	248.51	441.31	-158.12	0.00	0.00	0.00	
4,500.00	9.19	60.62	4,458.99	256.35	455.23	-163.11	0.00	0.00	0.00	
4,600.00	9.19	60.62	4,557.71	264.18	469.15	-168.10	0.00	0.00	0.00	
4,602.32	9.19	60.62	4,560.00	264.37	469.47	-168.21	0.00	0.00	0.00	
<b>SUSSEX</b>										

<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well CLARK 35N-11HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	17' RKB + 5106' GL @ 5123.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	17' RKB + 5106' GL @ 5123.00ft
<b>Site:</b>	WELD_CLARK PAD	<b>North Reference:</b>	Grid
<b>Well:</b>	CLARK 35N-11HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	CLARK 35N-11HZ		
<b>Design:</b>	CLARK 35N-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	9.19	60.62	4,656.42	272.02	483.06	-173.08	0.00	0.00	0.00
4,800.00	9.19	60.62	4,755.14	279.86	496.98	-178.07	0.00	0.00	0.00
4,900.00	9.19	60.62	4,853.86	287.70	510.90	-183.06	0.00	0.00	0.00
5,000.00	9.19	60.62	4,952.57	295.54	524.82	-188.04	0.00	0.00	0.00
5,100.00	9.19	60.62	5,051.29	303.37	538.74	-193.03	0.00	0.00	0.00
5,200.00	9.19	60.62	5,150.00	311.21	552.66	-198.02	0.00	0.00	0.00
5,300.00	9.19	60.62	5,248.72	319.05	566.57	-203.01	0.00	0.00	0.00
5,400.00	9.19	60.62	5,347.44	326.89	580.49	-207.99	0.00	0.00	0.00
5,500.00	9.19	60.62	5,446.15	334.72	594.41	-212.98	0.00	0.00	0.00
5,600.00	9.19	60.62	5,544.87	342.56	608.33	-217.97	0.00	0.00	0.00
5,700.00	9.19	60.62	5,643.58	350.40	622.25	-222.95	0.00	0.00	0.00
5,800.00	9.19	60.62	5,742.30	358.24	636.17	-227.94	0.00	0.00	0.00
5,900.00	9.19	60.62	5,841.02	366.07	650.08	-232.93	0.00	0.00	0.00
6,000.00	9.19	60.62	5,939.73	373.91	664.00	-237.91	0.00	0.00	0.00
6,100.00	9.19	60.62	6,038.45	381.75	677.92	-242.90	0.00	0.00	0.00
6,200.00	9.19	60.62	6,137.17	389.59	691.84	-247.89	0.00	0.00	0.00
6,300.00	9.19	60.62	6,235.88	397.43	705.76	-252.88	0.00	0.00	0.00
6,400.00	9.19	60.62	6,334.60	405.26	719.68	-257.86	0.00	0.00	0.00
6,500.00	9.19	60.62	6,433.31	413.10	733.59	-262.85	0.00	0.00	0.00
6,600.00	9.19	60.62	6,532.03	420.94	747.51	-267.84	0.00	0.00	0.00
6,700.00	9.19	60.62	6,630.75	428.78	761.43	-272.82	0.00	0.00	0.00
6,711.87	9.19	60.62	6,642.46	429.71	763.08	-273.42	0.00	0.00	0.00
<b>Start DLS 10.00 TFO 118.89</b>									
6,800.00	9.13	118.33	6,729.64	429.84	775.40	-271.16	10.00	-0.07	65.48
6,900.00	16.40	151.15	6,827.22	413.67	789.23	-252.61	10.00	7.27	32.82
7,000.00	25.56	162.65	6,920.53	380.63	802.51	-217.62	10.00	9.16	11.50
7,100.00	35.16	168.26	7,006.73	331.73	814.83	-167.26	10.00	9.60	5.61
7,200.00	44.92	171.68	7,083.21	268.45	825.83	-103.04	10.00	9.76	3.42
7,233.13	48.17	172.56	7,106.00	244.63	829.12	-79.04	10.00	9.81	2.66
<b>SHARON SPRINGS</b>									
7,278.64	52.64	173.63	7,135.00	209.82	833.32	-44.08	10.00	9.83	2.36
<b>NIOBRARA</b>									
7,300.00	54.75	174.09	7,147.65	192.71	835.16	-26.94	10.00	9.85	2.15
7,400.00	64.61	175.98	7,198.07	106.82	842.54	58.76	10.00	9.87	1.89
7,500.00	74.50	177.58	7,232.96	13.38	847.76	151.43	10.00	9.89	1.60
7,600.00	84.40	179.03	7,251.25	-84.76	850.64	248.26	10.00	9.90	1.45
7,653.16	89.66	179.78	7,254.00	-137.83	851.19	300.42	10.00	9.90	1.40
<b>Start DLS 1.00 TFO 121.02 - NIOBRARA B CHALK TL - 7"</b>									
7,655.71	89.65	179.80	7,254.02	-140.38	851.20	302.93	1.00	-0.52	0.86
<b>Start 4236.85 hold at 7655.71 MD</b>									
7,700.00	89.65	179.80	7,254.29	-184.67	851.36	346.41	0.00	0.00	0.00
7,800.00	89.65	179.80	7,254.90	-284.66	851.71	444.57	0.00	0.00	0.00
7,900.00	89.65	179.80	7,255.51	-384.66	852.06	542.73	0.00	0.00	0.00
8,000.00	89.65	179.80	7,256.13	-484.66	852.41	640.90	0.00	0.00	0.00
8,100.00	89.65	179.80	7,256.74	-584.66	852.76	739.06	0.00	0.00	0.00
8,200.00	89.65	179.80	7,257.35	-684.65	853.12	837.23	0.00	0.00	0.00
8,300.00	89.65	179.80	7,257.97	-784.65	853.47	935.39	0.00	0.00	0.00
8,400.00	89.65	179.80	7,258.58	-884.65	853.82	1,033.55	0.00	0.00	0.00
8,500.00	89.65	179.80	7,259.19	-984.65	854.17	1,131.72	0.00	0.00	0.00
8,600.00	89.65	179.80	7,259.81	-1,084.64	854.52	1,229.88	0.00	0.00	0.00
8,700.00	89.65	179.80	7,260.42	-1,184.64	854.87	1,328.04	0.00	0.00	0.00
8,800.00	89.65	179.80	7,261.03	-1,284.64	855.22	1,426.21	0.00	0.00	0.00
8,900.00	89.65	179.80	7,261.65	-1,384.64	855.58	1,524.37	0.00	0.00	0.00

<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well CLARK 35N-11HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	17' RKB + 5106' GL @ 5123.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	17' RKB + 5106' GL @ 5123.00ft
<b>Site:</b>	WELD_CLARK PAD	<b>North Reference:</b>	Grid
<b>Well:</b>	CLARK 35N-11HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	CLARK 35N-11HZ		
<b>Design:</b>	CLARK 35N-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)	
9,000.00	89.65	179.80	7,262.26	-1,484.63	855.93	1,622.54	0.00	0.00	0.00	
9,100.00	89.65	179.80	7,262.87	-1,584.63	856.28	1,720.70	0.00	0.00	0.00	
9,200.00	89.65	179.80	7,263.49	-1,684.63	856.63	1,818.86	0.00	0.00	0.00	
9,300.00	89.65	179.80	7,264.10	-1,784.63	856.98	1,917.03	0.00	0.00	0.00	
9,400.00	89.65	179.80	7,264.71	-1,884.62	857.33	2,015.19	0.00	0.00	0.00	
9,500.00	89.65	179.80	7,265.33	-1,984.62	857.68	2,113.36	0.00	0.00	0.00	
9,600.00	89.65	179.80	7,265.94	-2,084.62	858.04	2,211.52	0.00	0.00	0.00	
9,700.00	89.65	179.80	7,266.55	-2,184.62	858.39	2,309.68	0.00	0.00	0.00	
9,800.00	89.65	179.80	7,267.17	-2,284.61	858.74	2,407.85	0.00	0.00	0.00	
9,900.00	89.65	179.80	7,267.78	-2,384.61	859.09	2,506.01	0.00	0.00	0.00	
10,000.00	89.65	179.80	7,268.39	-2,484.61	859.44	2,604.17	0.00	0.00	0.00	
10,100.00	89.65	179.80	7,269.01	-2,584.61	859.79	2,702.34	0.00	0.00	0.00	
10,200.00	89.65	179.80	7,269.62	-2,684.60	860.14	2,800.50	0.00	0.00	0.00	
10,300.00	89.65	179.80	7,270.23	-2,784.60	860.50	2,898.67	0.00	0.00	0.00	
10,400.00	89.65	179.80	7,270.85	-2,884.60	860.85	2,996.83	0.00	0.00	0.00	
10,500.00	89.65	179.80	7,271.46	-2,984.60	861.20	3,094.99	0.00	0.00	0.00	
10,600.00	89.65	179.80	7,272.07	-3,084.59	861.55	3,193.16	0.00	0.00	0.00	
10,700.00	89.65	179.80	7,272.69	-3,184.59	861.90	3,291.32	0.00	0.00	0.00	
10,800.00	89.65	179.80	7,273.30	-3,284.59	862.25	3,389.49	0.00	0.00	0.00	
10,900.00	89.65	179.80	7,273.91	-3,384.59	862.61	3,487.65	0.00	0.00	0.00	
11,000.00	89.65	179.80	7,274.53	-3,484.58	862.96	3,585.81	0.00	0.00	0.00	
11,100.00	89.65	179.80	7,275.14	-3,584.58	863.31	3,683.98	0.00	0.00	0.00	
11,200.00	89.65	179.80	7,275.75	-3,684.58	863.66	3,782.14	0.00	0.00	0.00	
11,300.00	89.65	179.80	7,276.37	-3,784.58	864.01	3,880.30	0.00	0.00	0.00	
11,400.00	89.65	179.80	7,276.98	-3,884.57	864.36	3,978.47	0.00	0.00	0.00	
11,500.00	89.65	179.80	7,277.59	-3,984.57	864.71	4,076.63	0.00	0.00	0.00	
11,600.00	89.65	179.80	7,278.21	-4,084.57	865.07	4,174.80	0.00	0.00	0.00	
11,700.00	89.65	179.80	7,278.82	-4,184.57	865.42	4,272.96	0.00	0.00	0.00	
11,800.00	89.65	179.80	7,279.43	-4,284.56	865.77	4,371.12	0.00	0.00	0.00	
11,892.57	89.65	179.80	7,280.00	-4,377.13	866.09	4,461.99	0.00	0.00	0.00	
TD at 11892.57 - Clark 35N-11HZ BHL										

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Clark 35N-11HZ BHL - hit/miss target - Shape - plan hits target center - Point	0.00	359.51	7,280.00	-4,377.13	866.09	1,265,528.21	3,210,186.23	40.059821	-104.749079

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)		Name	Casing Diameter (")	Hole Diameter (")
850.00	850.00	9 5/8"		9-5/8	12-1/4
7,653.16	7,254.00	7"		7	8-3/4

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

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,602.32	4,560.00	SUSSEX		0.00	
7,233.13	7,106.00	SHARON SPRINGS		0.00	
7,278.64	7,135.00	NIOBRARA		0.00	
7,653.16	7,254.00	NIOBRARA B CHALK TL		0.00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
1,000.00	1,000.00	0.00	0.00	Start Build 2.00	
1,459.57	1,457.60	18.05	32.05	Start 5252.29 hold at 1459.57 MD	
6,711.87	6,642.46	429.71	763.08	Start DLS 10.00 TFO 118.89	
7,653.16	7,254.00	-137.83	851.19	Start DLS 1.00 TFO 121.02	
7,655.71	7,254.02	-140.38	851.20	Start 4236.85 hold at 7655.71 MD	
11,892.57	7,280.00	-4,377.13	866.09	TD at 11892.57	