

# **US ROCKIES REGION PLANNING**

**WYOMING EASTERN ZONE - 83**

**WELD\_TRUE 12-65-21-12H**

**TRUE 12-65-21-12H**

**TRUE 12-65-21-12H**

**Plan: TRUE 12-65-21-12H (wp01)**

## **Standard Planning Report**

**20 January, 2011**

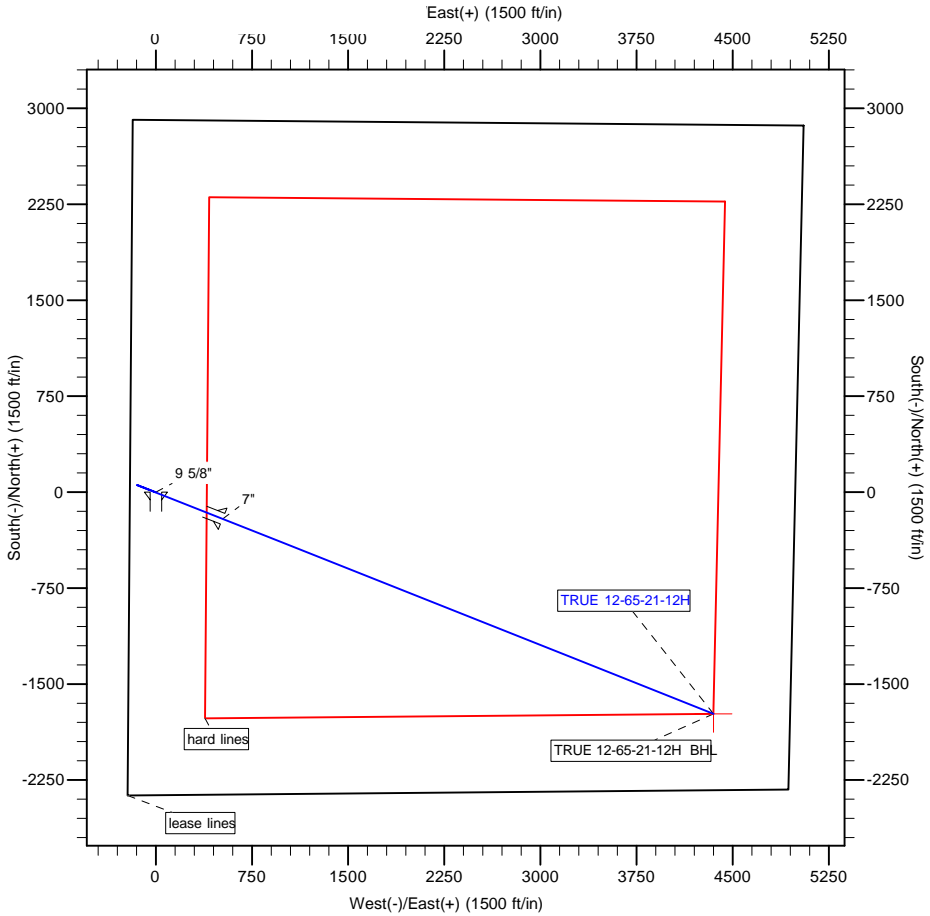




Azimuths to True North  
Magnetic North: 8.92°

Magnetic Field  
Strength: 53482.2snT  
Dip Angle: 67.56°  
Date: 1/20/2011  
Model: IGRF2010

**Project:** WYOMING EASTERN ZONE - 83  
**Site:** WELD TRUE 12-65-21-12H  
**Well:** TRUE 12-65-21-12H  
**Wellbore:** TRUE 12-65-21-12H  
**Section:** SHL:  
**Design:** TRUE 12-65-21-12H (wp01)  
**Latitude:** 40.991789  
**Longitude:** -104.675321  
**GL:** 5902.00  
**KB:** (18' RKB + 5902' GL) @ 5920.00ft



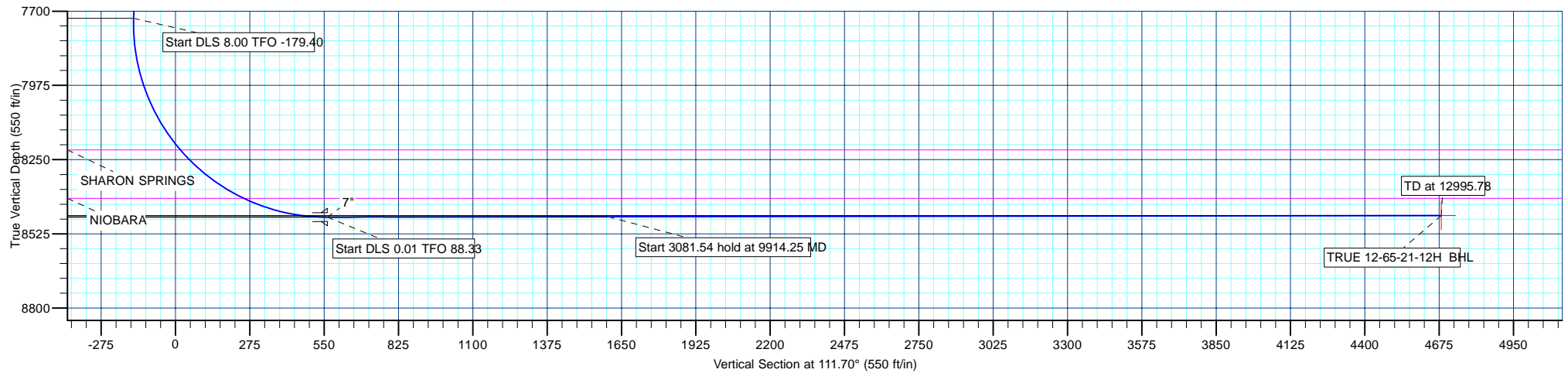
WELL DETAILS: TRUE 12-65-21-12H						
+N/-S	+E/-W	Northing	Ground Level: Easting	5902.00 Latitude	Longitude	Slot
0.00	0.00	179545.39	791803.13	40.991789	-104.675321	

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	2110.00	0.00	0.00	2110.00	0.00	0.00	0.00	0.00	0.00	
3	2189.53	1.59	291.00	2189.52	0.40	-1.03	2.00	291.00	-1.10	
4	7729.07	1.59	291.00	7726.92	55.51	-144.58	0.00	0.00	-154.86	
5	8874.96	90.08	111.60	8463.00	-208.61	521.93	8.00	-179.40	562.08	
6	9914.25	90.08	111.70	8461.51	-592.07	1487.89	0.01	88.33	1601.36	
7	12995.78	90.08	111.70	8457.00	-1731.65	4350.96	0.00	0.00	4682.89	TRUE 12-65-21-12H

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TRUE 12-65-21-12H BHL	8457.00	-1731.65	4350.96	40.987035	-104.659561	Point

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1810.00	1810.00	FOX HILLS
5193.00	5194.17	PARKMAN
5756.00	5757.38	SUSSEX
6195.00	6196.55	SHANNON
8214.00	8257.92	SHARON SPRINGS
8393.00	8554.66	NIOBARA

CASING DETAILS			
TVD	MD	Name	Size
1960.00	1960.00	9 5/8"	9-5/8
8463.00	8874.96	7"	7



<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well TRUE 12-65-21-12H
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	(18' RKB + 5902' GL) @ 5920.00ft
<b>Project:</b>	WYOMING EASTERN ZONE - 83	<b>MD Reference:</b>	(18' RKB + 5902' GL) @ 5920.00ft
<b>Site:</b>	WELD_TRUE 12-65-21-12H	<b>North Reference:</b>	True
<b>Well:</b>	TRUE 12-65-21-12H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	TRUE 12-65-21-12H		
<b>Design:</b>	TRUE 12-65-21-12H (wp01)		

<b>Project</b>	WYOMING EASTERN 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>	Wyoming Eastern Zone		

Site		WELD_TRUE 12-65-21-12H			
Site Position:		Northing:	179,545.39 ft	Latitude:	40.991789
From:	Lat/Long	Easting:	791,803.13 ft	Longitude:	-104.675321
Position Uncertainty:	0.00 ft	Slot Radius:	0 "	Grid Convergence:	0.32

Well	TRUE 12-65-21-12H					
Well Position	+N-S	0.00 ft	Northing:	179,545.39 ft	Latitude:	40.991789
	+E-W	0.00 ft	Easting:	791,803.13 ft	Longitude:	-104.675321
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,902.00 ft

<b>Wellbore</b>	TRUE 12-65-21-12H				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	1/20/2011	8.92	67.56	53,482

<b>Design</b>	TRUE 12-65-21-12H (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	111.70

<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	
2,110.00	0.00	0.00	2,110.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,189.53	1.59	291.00	2,189.52	0.40	-1.03	2.00	2.00	0.00	291.00	
7,729.07	1.59	291.00	7,726.93	55.51	-144.58	0.00	0.00	0.00	0.00	
8,874.96	90.08	111.60	8,463.00	-208.61	521.93	8.00	7.72	-15.66	-179.40	
9,914.25	90.08	111.70	8,461.51	-592.07	1,487.89	0.01	0.00	0.01	88.33	
12,995.78	90.08	111.70	8,457.00	-1,731.65	4,350.96	0.00	0.00	0.00	0.00	TRUE 12-65-21-12H

<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well TRUE 12-65-21-12H
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	(18' RKB + 5902' GL) @ 5920.00ft
<b>Project:</b>	WYOMING EASTERN ZONE - 83	<b>MD Reference:</b>	(18' RKB + 5902' GL) @ 5920.00ft
<b>Site:</b>	WELD_TRUE 12-65-21-12H	<b>North Reference:</b>	True
<b>Well:</b>	TRUE 12-65-21-12H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	TRUE 12-65-21-12H		
<b>Design:</b>	TRUE 12-65-21-12H (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
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,810.00	0.00	0.00	1,810.00	0.00	0.00	0.00	0.00	0.00	0.00
FOX HILLS									
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,960.00	0.00	0.00	1,960.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,110.00	0.00	0.00	2,110.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
2,189.53	1.59	291.00	2,189.52	0.40	-1.03	-1.10	2.00	2.00	0.00
Start 5539.54 hold at 2189.53 MD									
2,200.00	1.59	291.00	2,199.99	0.50	-1.30	-1.39	0.00	0.00	0.00
2,300.00	1.59	291.00	2,299.95	1.49	-3.89	-4.17	0.00	0.00	0.00
2,400.00	1.59	291.00	2,399.91	2.49	-6.48	-6.95	0.00	0.00	0.00
2,500.00	1.59	291.00	2,499.87	3.48	-9.08	-9.72	0.00	0.00	0.00
2,600.00	1.59	291.00	2,599.83	4.48	-11.67	-12.50	0.00	0.00	0.00
2,700.00	1.59	291.00	2,699.79	5.47	-14.26	-15.27	0.00	0.00	0.00
2,800.00	1.59	291.00	2,799.75	6.47	-16.85	-18.05	0.00	0.00	0.00
2,900.00	1.59	291.00	2,899.72	7.46	-19.44	-20.82	0.00	0.00	0.00
3,000.00	1.59	291.00	2,999.68	8.46	-22.03	-23.60	0.00	0.00	0.00
3,100.00	1.59	291.00	3,099.64	9.45	-24.62	-26.37	0.00	0.00	0.00
3,200.00	1.59	291.00	3,199.60	10.45	-27.21	-29.15	0.00	0.00	0.00
3,300.00	1.59	291.00	3,299.56	11.44	-29.81	-31.93	0.00	0.00	0.00
3,400.00	1.59	291.00	3,399.52	12.44	-32.40	-34.70	0.00	0.00	0.00
3,500.00	1.59	291.00	3,499.48	13.43	-34.99	-37.48	0.00	0.00	0.00
3,600.00	1.59	291.00	3,599.45	14.43	-37.58	-40.25	0.00	0.00	0.00
3,700.00	1.59	291.00	3,699.41	15.42	-40.17	-43.03	0.00	0.00	0.00
3,800.00	1.59	291.00	3,799.37	16.42	-42.76	-45.80	0.00	0.00	0.00
3,900.00	1.59	291.00	3,899.33	17.41	-45.35	-48.58	0.00	0.00	0.00
4,000.00	1.59	291.00	3,999.29	18.41	-47.95	-51.35	0.00	0.00	0.00
4,100.00	1.59	291.00	4,099.25	19.40	-50.54	-54.13	0.00	0.00	0.00
4,200.00	1.59	291.00	4,199.22	20.40	-53.13	-56.90	0.00	0.00	0.00
4,300.00	1.59	291.00	4,299.18	21.39	-55.72	-59.68	0.00	0.00	0.00
4,400.00	1.59	291.00	4,399.14	22.39	-58.31	-62.46	0.00	0.00	0.00
4,500.00	1.59	291.00	4,499.10	23.38	-60.90	-65.23	0.00	0.00	0.00

<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well TRUE 12-65-21-12H
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	(18' RKB + 5902' GL) @ 5920.00ft
<b>Project:</b>	WYOMING EASTERN ZONE - 83	<b>MD Reference:</b>	(18' RKB + 5902' GL) @ 5920.00ft
<b>Site:</b>	WELD_TRUE 12-65-21-12H	<b>North Reference:</b>	True
<b>Well:</b>	TRUE 12-65-21-12H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	TRUE 12-65-21-12H		
<b>Design:</b>	TRUE 12-65-21-12H (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)
4,600.00	1.59	291.00	4,599.06	24.38	-63.49	-68.01	0.00	0.00	0.00
4,700.00	1.59	291.00	4,699.02	25.37	-66.08	-70.78	0.00	0.00	0.00
4,800.00	1.59	291.00	4,798.98	26.37	-68.68	-73.56	0.00	0.00	0.00
4,900.00	1.59	291.00	4,898.95	27.36	-71.27	-76.33	0.00	0.00	0.00
5,000.00	1.59	291.00	4,998.91	28.36	-73.86	-79.11	0.00	0.00	0.00
5,100.00	1.59	291.00	5,098.87	29.35	-76.45	-81.88	0.00	0.00	0.00
5,194.17	1.59	291.00	5,193.00	30.29	-78.89	-84.50	0.00	0.00	0.00
<b>PARKMAN</b>									
5,200.00	1.59	291.00	5,198.83	30.35	-79.04	-84.66	0.00	0.00	0.00
5,300.00	1.59	291.00	5,298.79	31.34	-81.63	-87.44	0.00	0.00	0.00
5,400.00	1.59	291.00	5,398.75	32.34	-84.22	-90.21	0.00	0.00	0.00
5,500.00	1.59	291.00	5,498.71	33.33	-86.82	-92.99	0.00	0.00	0.00
5,600.00	1.59	291.00	5,598.68	34.33	-89.41	-95.76	0.00	0.00	0.00
5,700.00	1.59	291.00	5,698.64	35.32	-92.00	-98.54	0.00	0.00	0.00
5,757.39	1.59	291.00	5,756.00	35.89	-93.48	-100.13	0.00	0.00	0.00
<b>SUSSEX</b>									
5,800.00	1.59	291.00	5,798.60	36.32	-94.59	-101.31	0.00	0.00	0.00
5,900.00	1.59	291.00	5,898.56	37.31	-97.18	-104.09	0.00	0.00	0.00
6,000.00	1.59	291.00	5,998.52	38.31	-99.77	-106.86	0.00	0.00	0.00
6,100.00	1.59	291.00	6,098.48	39.30	-102.36	-109.64	0.00	0.00	0.00
6,196.55	1.59	291.00	6,195.00	40.26	-104.86	-112.32	0.00	0.00	0.00
<b>SHANNON</b>									
6,200.00	1.59	291.00	6,198.44	40.30	-104.95	-112.42	0.00	0.00	0.00
6,300.00	1.59	291.00	6,298.41	41.29	-107.55	-115.19	0.00	0.00	0.00
6,400.00	1.59	291.00	6,398.37	42.29	-110.14	-117.97	0.00	0.00	0.00
6,500.00	1.59	291.00	6,498.33	43.28	-112.73	-120.74	0.00	0.00	0.00
6,600.00	1.59	291.00	6,598.29	44.28	-115.32	-123.52	0.00	0.00	0.00
6,700.00	1.59	291.00	6,698.25	45.27	-117.91	-126.29	0.00	0.00	0.00
6,800.00	1.59	291.00	6,798.21	46.26	-120.50	-129.07	0.00	0.00	0.00
6,900.00	1.59	291.00	6,898.17	47.26	-123.09	-131.84	0.00	0.00	0.00
7,000.00	1.59	291.00	6,998.14	48.25	-125.68	-134.62	0.00	0.00	0.00
7,100.00	1.59	291.00	7,098.10	49.25	-128.28	-137.40	0.00	0.00	0.00
7,200.00	1.59	291.00	7,198.06	50.24	-130.87	-140.17	0.00	0.00	0.00
7,300.00	1.59	291.00	7,298.02	51.24	-133.46	-142.95	0.00	0.00	0.00
7,400.00	1.59	291.00	7,397.98	52.23	-136.05	-145.72	0.00	0.00	0.00
7,500.00	1.59	291.00	7,497.94	53.23	-138.64	-148.50	0.00	0.00	0.00
7,600.00	1.59	291.00	7,597.91	54.22	-141.23	-151.27	0.00	0.00	0.00
7,700.00	1.59	291.00	7,697.87	55.22	-143.82	-154.05	0.00	0.00	0.00
7,729.07	1.59	291.00	7,726.93	55.51	-144.58	-154.86	0.00	0.00	0.00
<b>Start DLS 8.00 TFO -179.40</b>									
7,800.00	4.08	111.83	7,797.81	54.92	-143.15	-153.31	8.00	3.52	-252.60
7,900.00	12.08	111.68	7,896.74	49.72	-130.10	-139.26	8.00	8.00	-0.15
8,000.00	20.08	111.65	7,992.74	39.51	-104.37	-111.58	8.00	8.00	-0.03
8,100.00	28.08	111.63	8,083.96	24.47	-66.47	-70.81	8.00	8.00	-0.01
8,200.00	36.08	111.62	8,168.62	4.91	-17.13	-17.73	8.00	8.00	-0.01
8,257.92	40.72	111.62	8,214.00	-8.34	16.31	18.23	8.00	8.00	-0.01
<b>SHARON SPRINGS</b>									
8,300.00	44.08	111.62	8,245.07	-18.79	42.68	46.61	8.00	8.00	-0.01
8,400.00	52.08	111.61	8,311.82	-46.18	111.81	120.96	8.00	8.00	0.00
8,500.00	60.08	111.61	8,367.57	-76.72	188.89	203.88	8.00	8.00	0.00
8,554.66	64.46	111.61	8,393.00	-94.54	233.87	252.25	8.00	8.00	0.00
<b>NIOBARA</b>									
8,600.00	68.08	111.61	8,411.24	-109.82	272.45	293.75	8.00	8.00	0.00

<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well TRUE 12-65-21-12H
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	(18' RKB + 5902' GL) @ 5920.00ft
<b>Project:</b>	WYOMING EASTERN ZONE - 83	<b>MD Reference:</b>	(18' RKB + 5902' GL) @ 5920.00ft
<b>Site:</b>	WELD_TRUE 12-65-21-12H	<b>North Reference:</b>	True
<b>Well:</b>	TRUE 12-65-21-12H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	TRUE 12-65-21-12H		
<b>Design:</b>	TRUE 12-65-21-12H (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)
8,700.00	76.08	111.60	8,441.98	-144.82	360.84	388.82	8.00	8.00	0.00
8,800.00	84.08	111.60	8,459.19	-181.06	452.36	487.25	8.00	8.00	0.00
8,874.96	90.08	111.60	8,463.00	-208.61	521.93	562.07	8.00	8.00	0.00
<b>Start DLS 0.01 TFO 88.33 - 7"</b>									
8,900.00	90.08	111.60	8,462.96	-217.83	545.21	587.11	0.01	0.00	0.01
9,000.00	90.08	111.61	8,462.82	-254.65	638.18	687.11	0.01	0.00	0.01
9,100.00	90.08	111.62	8,462.68	-291.49	731.15	787.11	0.01	0.00	0.01
9,200.00	90.08	111.63	8,462.54	-328.35	824.11	887.11	0.01	0.00	0.01
9,300.00	90.08	111.64	8,462.40	-365.22	917.06	987.11	0.01	0.00	0.01
9,400.00	90.08	111.65	8,462.25	-402.11	1,010.01	1,087.11	0.01	0.00	0.01
9,500.00	90.08	111.66	8,462.11	-439.02	1,102.95	1,187.11	0.01	0.00	0.01
9,600.00	90.08	111.67	8,461.96	-475.94	1,195.89	1,287.11	0.01	0.00	0.01
9,700.00	90.08	111.68	8,461.82	-512.88	1,288.81	1,387.11	0.01	0.00	0.01
9,800.00	90.08	111.69	8,461.67	-549.83	1,381.73	1,487.11	0.01	0.00	0.01
9,900.00	90.08	111.70	8,461.53	-586.80	1,474.65	1,587.11	0.01	0.00	0.01
9,914.25	90.08	111.70	8,461.51	-592.07	1,487.89	1,601.36	0.01	0.00	0.01
<b>Start 3081.54 hold at 9914.25 MD</b>									
10,000.00	90.08	111.70	8,461.38	-623.78	1,567.56	1,687.11	0.00	0.00	0.00
10,100.00	90.08	111.70	8,461.24	-660.77	1,660.47	1,787.11	0.00	0.00	0.00
10,200.00	90.08	111.70	8,461.09	-697.75	1,753.38	1,887.11	0.00	0.00	0.00
10,300.00	90.08	111.70	8,460.94	-734.73	1,846.29	1,987.11	0.00	0.00	0.00
10,400.00	90.08	111.70	8,460.80	-771.71	1,939.20	2,087.11	0.00	0.00	0.00
10,500.00	90.08	111.70	8,460.65	-808.69	2,032.11	2,187.11	0.00	0.00	0.00
10,600.00	90.08	111.70	8,460.50	-845.67	2,125.02	2,287.11	0.00	0.00	0.00
10,700.00	90.08	111.70	8,460.36	-882.65	2,217.93	2,387.11	0.00	0.00	0.00
10,800.00	90.08	111.70	8,460.21	-919.63	2,310.84	2,487.11	0.00	0.00	0.00
10,900.00	90.08	111.70	8,460.07	-956.61	2,403.76	2,587.11	0.00	0.00	0.00
11,000.00	90.08	111.70	8,459.92	-993.59	2,496.67	2,687.11	0.00	0.00	0.00
11,100.00	90.08	111.70	8,459.77	-1,030.57	2,589.58	2,787.11	0.00	0.00	0.00
11,200.00	90.08	111.70	8,459.63	-1,067.56	2,682.49	2,887.11	0.00	0.00	0.00
11,300.00	90.08	111.70	8,459.48	-1,104.54	2,775.40	2,987.11	0.00	0.00	0.00
11,400.00	90.08	111.70	8,459.33	-1,141.52	2,868.31	3,087.11	0.00	0.00	0.00
11,500.00	90.08	111.70	8,459.19	-1,178.50	2,961.22	3,187.11	0.00	0.00	0.00
11,600.00	90.08	111.70	8,459.04	-1,215.48	3,054.13	3,287.11	0.00	0.00	0.00
11,700.00	90.08	111.70	8,458.90	-1,252.46	3,147.04	3,387.11	0.00	0.00	0.00
11,800.00	90.08	111.70	8,458.75	-1,289.44	3,239.95	3,487.11	0.00	0.00	0.00
11,900.00	90.08	111.70	8,458.60	-1,326.42	3,332.86	3,587.11	0.00	0.00	0.00
12,000.00	90.08	111.70	8,458.46	-1,363.40	3,425.77	3,687.11	0.00	0.00	0.00
12,100.00	90.08	111.70	8,458.31	-1,400.38	3,518.68	3,787.11	0.00	0.00	0.00
12,200.00	90.08	111.70	8,458.16	-1,437.36	3,611.59	3,887.11	0.00	0.00	0.00
12,300.00	90.08	111.70	8,458.02	-1,474.35	3,704.50	3,987.11	0.00	0.00	0.00
12,400.00	90.08	111.70	8,457.87	-1,511.33	3,797.42	4,087.11	0.00	0.00	0.00
12,500.00	90.08	111.70	8,457.73	-1,548.31	3,890.33	4,187.11	0.00	0.00	0.00
12,600.00	90.08	111.70	8,457.58	-1,585.29	3,983.24	4,287.11	0.00	0.00	0.00
12,700.00	90.08	111.70	8,457.43	-1,622.27	4,076.15	4,387.11	0.00	0.00	0.00
12,800.00	90.08	111.70	8,457.29	-1,659.25	4,169.06	4,487.11	0.00	0.00	0.00
12,900.00	90.08	111.70	8,457.14	-1,696.23	4,261.97	4,587.11	0.00	0.00	0.00
12,995.78	90.08	111.70	8,457.00	-1,731.65	4,350.96	4,682.89	0.00	0.00	0.00
<b>TD at 12995.78 - TRUE 12-65-21-12H BHL</b>									

<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well TRUE 12-65-21-12H
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	(18' RKB + 5902' GL) @ 5920.00ft
<b>Project:</b>	WYOMING EASTERN ZONE - 83	<b>MD Reference:</b>	(18' RKB + 5902' GL) @ 5920.00ft
<b>Site:</b>	WELD_TRUE 12-65-21-12H	<b>North Reference:</b>	True
<b>Well:</b>	TRUE 12-65-21-12H	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	TRUE 12-65-21-12H		
<b>Design:</b>	TRUE 12-65-21-12H (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)		
TRUE 12-65-21-12H	0.00	0.00	8,457.00	-1,731.65	4,350.96	177,838.24	796,163.76	40.987035	-104.659561
- plan hits target center									
- Point									

Casing Points					
	Measured Depth	Vertical Depth		Casing Diameter	Hole Diameter
	(ft)	(ft)	Name	(")	(")
	1,960.00	1,960.00	9 5/8"	9-5/8	12-1/4
	8,874.96	8,463.00	7"	7	8-3/4

Formations						
	Measured Depth	Vertical Depth			Dip	Dip Direction
	(ft)	(ft)	Name	Lithology	(°)	(°)
	1,810.00	1,810.00	FOX HILLS		0.00	
	5,194.17	5,193.00	PARKMAN		0.00	
	5,757.39	5,756.00	SUSSEX		0.00	
	6,196.55	6,195.00	SHANNON		0.00	
	8,257.92	8,214.00	SHARON SPRINGS		0.00	
	8,554.66	8,393.00	NIOBARA		0.00	

Plan Annotations					
	Measured Depth	Vertical Depth	Local Coordinates		
	(ft)	(ft)	+N/-S	+E/-W	Comment
	(ft)	(ft)	(ft)	(ft)	
	2,110.00	2,110.00	0.00	0.00	Start Build 2.00
	2,189.53	2,189.52	0.40	-1.03	Start 5539.54 hold at 2189.53 MD
	7,729.07	7,726.93	55.51	-144.58	Start DLS 8.00 TFO -179.40
	8,874.96	8,463.00	-208.61	521.93	Start DLS 0.01 TFO 88.33
	9,914.25	8,461.51	-592.07	1,487.89	Start 3081.54 hold at 9914.25 MD
	12,995.78	8,457.00	-1,731.65	4,350.96	TD at 12995.78