

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_CAMP PAD

CAMP 27C-25HZ

CAMP 27C-25HZ

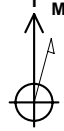
Plan: CAMP 27C-25HZ (wp01)

Standard Planning Report

16 August, 2011



West(-)/East(+) (1300 ft/in)



Project: COLORADO NORTHERN ZONE - 83
Site: WELD_CAMP PAD
Well: CAMP 27C-25HZ
Wellbore: CAMP 27C-25HZ
Section: SHL:
Design: CAMP 27C-25HZ (wp01)
Latitude: 40.190457
Longitude: -104.718228
GL: 4964.00
KB: 17' RKB + 4964' GL @ 4981.00ft

Azimuths to True North:
 Magnetic North: 8.81°
Magnetic Field:
 Strength: 53015.6nT
 Dip Angle: 66.89°
 Date: 7/18/2011
 Model: IGRF2010

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GL: 4964.00
KB: 17' RKB + 4964' GL @ 4981.00ft

WELL DETAILS: CAMP 27C-25HZ						
+N/-S	+E/-W	Northing	Ground Level: Easting	4964.00 Latitude	Longitude	Slot
0.00	0.00	1313188.83	3218401.75	40.190457	-104.718228	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
CAMP 27C-25HZ BHL	7381.00	4324.91	-568.09	40.202329	-104.720262	Point

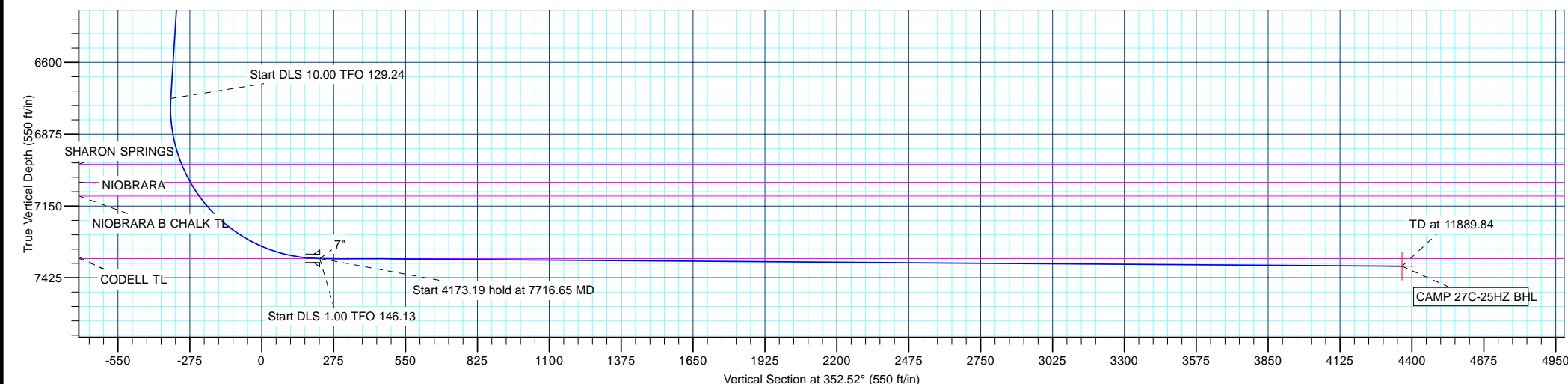
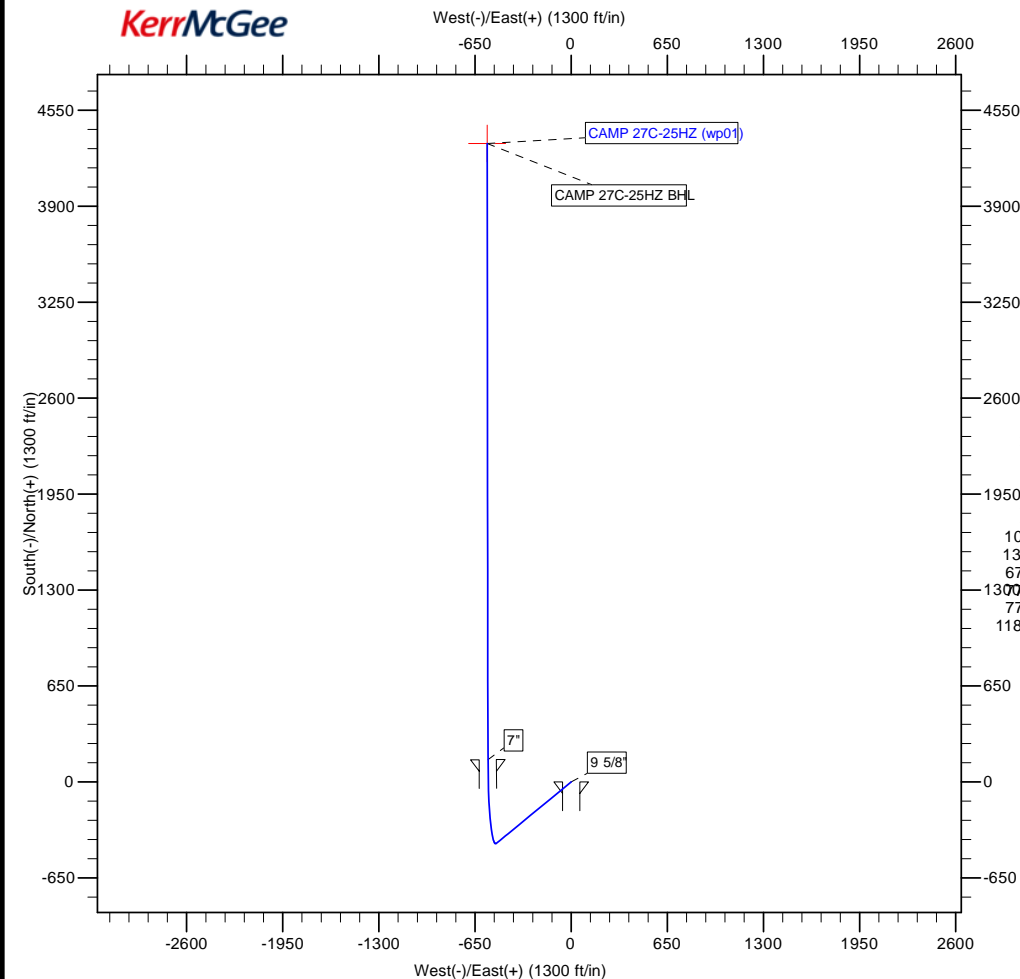
SECTION DETAILS								
Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00	
6.72	230.53	1335.34	-12.52	-15.20	2.00	230.53	-10.43	
6.72	230.53	6737.99	-417.34	-506.76	0.00	0.00	-347.79	
89.60	359.92	7351.00	150.00	-563.00	10.00	129.24	222.05	
89.59	359.93	7351.01	151.83	-563.00	1.00	146.12	223.86	
89.59	359.93	7381.00	4324.91	-568.09	0.00	0.00	4362.06	CAMP 27C-25HZ BHL

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3198.00	3211.66	PARKMAN
4423.00	4445.14	SUSSEX
5143.00	5170.13	SHANNON
6990.00	7034.30	SHARON SPRINGS
7059.00	7111.04	NIOBRARA
7112.00	7174.09	NIOBRARA B CHALK TL
7346.00	7642.79	CODELL
7351.00	7714.82	CODELL TL

CASING DETAILS			
TVD	MD	Name	Size
850.00	850.00	9 5/8"	9-5/8"
7351.00	7714.82	7"	7"



Weatherford®



Database:	edm5000p	Local Co-ordinate Reference:	Well CAMP 27C-25HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' RKB + 4964' GL @ 4981.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + 4964' GL @ 4981.00ft
Site:	WELD_CAMP PAD	North Reference:	True
Well:	CAMP 27C-25HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	CAMP 27C-25HZ		
Design:	CAMP 27C-25HZ (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_CAMP PAD			
Site Position:		Northing:	1,313,189.35 ft	Latitude:	40.190458
From:	Lat/Long	Easting:	3,218,417.67 ft	Longitude:	-104.718171
Position Uncertainty:	0.00 ft	Slot Radius:	0 "	Grid Convergence:	0.51 °

Well	CAMP 27C-25HZ					
Well Position	+N/-S	-0.39 ft	Northing:	1,313,188.83 ft	Latitude:	40.190457
	+E/-W	-15.92 ft	Easting:	3,218,401.75 ft	Longitude:	-104.718228
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,964.00 ft

Wellbore	CAMP 27C-25HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/18/2011	8.81	66.89	53,016

Design	CAMP 27C-25HZ (wp01)			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.00	0.00	0.00	352.52

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	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,336.11	6.72	230.53	1,335.34	-12.52	-15.20	2.00	2.00	0.00	230.53	
6,776.16	6.72	230.53	6,737.99	-417.34	-506.76	0.00	0.00	0.00	0.00	
7,714.82	89.60	359.92	7,351.00	150.00	-563.00	10.00	8.83	13.78	129.24	
7,716.65	89.59	359.93	7,351.01	151.83	-563.00	1.00	-0.83	0.56	146.12	
11,889.84	89.59	359.93	7,381.00	4,324.91	-568.09	0.00	0.00	0.00	0.00	CAMP 27C-25HZ BHI

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Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' RKB + 4964' GL @ 4981.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + 4964' GL @ 4981.00ft
Site:	WELD_CAMP PAD	North Reference:	True
Well:	CAMP 27C-25HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	CAMP 27C-25HZ		
Design:	CAMP 27C-25HZ (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
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
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
Start Build 2.00									
1,100.00	2.00	230.53	1,099.98	-1.11	-1.35	-0.92	2.00	2.00	0.00
1,200.00	4.00	230.53	1,199.84	-4.44	-5.39	-3.70	2.00	2.00	0.00
1,300.00	6.00	230.53	1,299.45	-9.98	-12.11	-8.31	2.00	2.00	0.00
1,336.11	6.72	230.53	1,335.34	-12.52	-15.20	-10.43	2.00	2.00	0.00
Start 5440.05 hold at 1336.11 MD									
1,400.00	6.72	230.53	1,398.79	-17.27	-20.98	-14.40	0.00	0.00	0.00
1,500.00	6.72	230.53	1,498.10	-24.72	-30.01	-20.60	0.00	0.00	0.00
1,600.00	6.72	230.53	1,597.42	-32.16	-39.05	-26.80	0.00	0.00	0.00
1,700.00	6.72	230.53	1,696.73	-39.60	-48.08	-33.00	0.00	0.00	0.00
1,800.00	6.72	230.53	1,796.04	-47.04	-57.12	-39.20	0.00	0.00	0.00
1,900.00	6.72	230.53	1,895.35	-54.48	-66.15	-45.40	0.00	0.00	0.00
2,000.00	6.72	230.53	1,994.67	-61.92	-75.19	-51.60	0.00	0.00	0.00
2,100.00	6.72	230.53	2,093.98	-69.37	-84.23	-57.81	0.00	0.00	0.00
2,200.00	6.72	230.53	2,193.29	-76.81	-93.26	-64.01	0.00	0.00	0.00
2,300.00	6.72	230.53	2,292.60	-84.25	-102.30	-70.21	0.00	0.00	0.00
2,400.00	6.72	230.53	2,391.92	-91.69	-111.33	-76.41	0.00	0.00	0.00
2,500.00	6.72	230.53	2,491.23	-99.13	-120.37	-82.61	0.00	0.00	0.00
2,600.00	6.72	230.53	2,590.54	-106.57	-129.41	-88.81	0.00	0.00	0.00
2,700.00	6.72	230.53	2,689.85	-114.01	-138.44	-95.01	0.00	0.00	0.00
2,800.00	6.72	230.53	2,789.17	-121.46	-147.48	-101.22	0.00	0.00	0.00
2,900.00	6.72	230.53	2,888.48	-128.90	-156.51	-107.42	0.00	0.00	0.00
3,000.00	6.72	230.53	2,987.79	-136.34	-165.55	-113.62	0.00	0.00	0.00
3,100.00	6.72	230.53	3,087.10	-143.78	-174.58	-119.82	0.00	0.00	0.00
3,200.00	6.72	230.53	3,186.42	-151.22	-183.62	-126.02	0.00	0.00	0.00
3,211.66	6.72	230.53	3,198.00	-152.09	-184.67	-126.74	0.00	0.00	0.00
PARKMAN									
3,300.00	6.72	230.53	3,285.73	-158.66	-192.66	-132.22	0.00	0.00	0.00
3,400.00	6.72	230.53	3,385.04	-166.11	-201.69	-138.42	0.00	0.00	0.00
3,500.00	6.72	230.53	3,484.35	-173.55	-210.73	-144.62	0.00	0.00	0.00
3,600.00	6.72	230.53	3,583.67	-180.99	-219.76	-150.83	0.00	0.00	0.00
3,700.00	6.72	230.53	3,682.98	-188.43	-228.80	-157.03	0.00	0.00	0.00
3,800.00	6.72	230.53	3,782.29	-195.87	-237.84	-163.23	0.00	0.00	0.00
3,900.00	6.72	230.53	3,881.60	-203.31	-246.87	-169.43	0.00	0.00	0.00
4,000.00	6.72	230.53	3,980.92	-210.75	-255.91	-175.63	0.00	0.00	0.00
4,100.00	6.72	230.53	4,080.23	-218.20	-264.94	-181.83	0.00	0.00	0.00
4,200.00	6.72	230.53	4,179.54	-225.64	-273.98	-188.03	0.00	0.00	0.00
4,300.00	6.72	230.53	4,278.85	-233.08	-283.01	-194.24	0.00	0.00	0.00
4,400.00	6.72	230.53	4,378.17	-240.52	-292.05	-200.44	0.00	0.00	0.00
4,445.14	6.72	230.53	4,423.00	-243.88	-296.13	-203.24	0.00	0.00	0.00
SUSSEX									

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Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + 4964' GL @ 4981.00ft
Site:	WELD_CAMP PAD	North Reference:	True
Well:	CAMP 27C-25HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	CAMP 27C-25HZ		
Design:	CAMP 27C-25HZ (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)
4,500.00	6.72	230.53	4,477.48	-247.96	-301.09	-206.64	0.00	0.00	0.00
4,600.00	6.72	230.53	4,576.79	-255.40	-310.12	-212.84	0.00	0.00	0.00
4,700.00	6.72	230.53	4,676.10	-262.85	-319.16	-219.04	0.00	0.00	0.00
4,800.00	6.72	230.53	4,775.42	-270.29	-328.19	-225.24	0.00	0.00	0.00
4,900.00	6.72	230.53	4,874.73	-277.73	-337.23	-231.44	0.00	0.00	0.00
5,000.00	6.72	230.53	4,974.04	-285.17	-346.27	-237.65	0.00	0.00	0.00
5,100.00	6.72	230.53	5,073.35	-292.61	-355.30	-243.85	0.00	0.00	0.00
5,170.13	6.72	230.53	5,143.00	-297.83	-361.64	-248.20	0.00	0.00	0.00
SHANNON									
5,200.00	6.72	230.53	5,172.67	-300.05	-364.34	-250.05	0.00	0.00	0.00
5,300.00	6.72	230.53	5,271.98	-307.49	-373.37	-256.25	0.00	0.00	0.00
5,400.00	6.72	230.53	5,371.29	-314.94	-382.41	-262.45	0.00	0.00	0.00
5,500.00	6.72	230.53	5,470.60	-322.38	-391.44	-268.65	0.00	0.00	0.00
5,600.00	6.72	230.53	5,569.92	-329.82	-400.48	-274.85	0.00	0.00	0.00
5,700.00	6.72	230.53	5,669.23	-337.26	-409.52	-281.06	0.00	0.00	0.00
5,800.00	6.72	230.53	5,768.54	-344.70	-418.55	-287.26	0.00	0.00	0.00
5,900.00	6.72	230.53	5,867.85	-352.14	-427.59	-293.46	0.00	0.00	0.00
6,000.00	6.72	230.53	5,967.17	-359.59	-436.62	-299.66	0.00	0.00	0.00
6,100.00	6.72	230.53	6,066.48	-367.03	-445.66	-305.86	0.00	0.00	0.00
6,200.00	6.72	230.53	6,165.79	-374.47	-454.70	-312.06	0.00	0.00	0.00
6,300.00	6.72	230.53	6,265.10	-381.91	-463.73	-318.26	0.00	0.00	0.00
6,400.00	6.72	230.53	6,364.42	-389.35	-472.77	-324.47	0.00	0.00	0.00
6,500.00	6.72	230.53	6,463.73	-396.79	-481.80	-330.67	0.00	0.00	0.00
6,600.00	6.72	230.53	6,563.04	-404.23	-490.84	-336.87	0.00	0.00	0.00
6,700.00	6.72	230.53	6,662.35	-411.68	-499.87	-343.07	0.00	0.00	0.00
6,776.16	6.72	230.53	6,737.99	-417.34	-506.76	-347.79	0.00	0.00	0.00
Start DLS 10.00 TFO 129.24									
6,800.00	5.53	250.05	6,761.70	-418.62	-508.91	-348.78	10.00	-5.00	81.92
6,900.00	9.63	327.52	6,861.01	-413.19	-517.96	-342.22	10.00	4.10	77.47
7,000.00	18.83	344.47	6,957.88	-390.53	-526.80	-318.60	10.00	9.19	16.95
7,034.30	22.14	347.03	6,990.00	-378.90	-529.73	-306.68	10.00	9.66	7.45
SHARON SPRINGS									
7,100.00	28.56	350.33	7,049.35	-351.32	-535.15	-278.63	10.00	9.77	5.02
7,111.04	29.64	350.75	7,059.00	-346.02	-536.04	-273.27	10.00	9.82	3.83
NIOBRARA									
7,174.09	35.86	352.72	7,112.00	-312.28	-540.89	-239.18	10.00	9.86	3.12
NIOBRARA B CHALK TL									
7,200.00	38.42	353.36	7,132.65	-296.76	-542.78	-223.54	10.00	9.89	2.49
7,300.00	48.33	355.31	7,205.25	-228.50	-549.44	-154.99	10.00	9.91	1.94
7,400.00	58.27	356.73	7,264.94	-148.61	-554.94	-75.07	10.00	9.94	1.42
7,500.00	68.21	357.87	7,309.91	-59.53	-559.10	13.79	10.00	9.95	1.14
7,600.00	78.17	358.86	7,338.79	36.04	-561.80	108.89	10.00	9.95	0.99
7,642.79	82.43	359.26	7,346.00	78.20	-562.49	150.79	10.00	9.96	0.93
CODELL									
7,700.00	88.13	359.79	7,350.71	135.19	-562.96	207.35	10.00	9.96	0.91
7,714.82	89.60	359.92	7,351.00	150.00	-563.00	222.05	10.00	9.96	0.91
Start DLS 1.00 TFO 146.13 - CODELL TL - 7"									
7,716.65	89.59	359.93	7,351.01	151.83	-563.00	223.86	1.00	-0.83	0.56
Start 4173.19 hold at 7716.65 MD									
7,800.00	89.59	359.93	7,351.61	235.18	-563.10	306.52	0.00	0.00	0.00
7,900.00	89.59	359.93	7,352.33	335.18	-563.23	405.68	0.00	0.00	0.00
8,000.00	89.59	359.93	7,353.05	435.18	-563.35	504.84	0.00	0.00	0.00
8,100.00	89.59	359.93	7,353.77	535.18	-563.47	604.00	0.00	0.00	0.00

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Site:	WELD_CAMP PAD	North Reference:	True
Well:	CAMP 27C-25HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	CAMP 27C-25HZ		
Design:	CAMP 27C-25HZ (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	89.59	359.93	7,354.49	635.17	-563.59	703.16	0.00	0.00	0.00
8,300.00	89.59	359.93	7,355.20	735.17	-563.71	802.32	0.00	0.00	0.00
8,400.00	89.59	359.93	7,355.92	835.17	-563.83	901.48	0.00	0.00	0.00
8,500.00	89.59	359.93	7,356.64	935.16	-563.96	1,000.65	0.00	0.00	0.00
8,600.00	89.59	359.93	7,357.36	1,035.16	-564.08	1,099.81	0.00	0.00	0.00
8,700.00	89.59	359.93	7,358.08	1,135.16	-564.20	1,198.97	0.00	0.00	0.00
8,800.00	89.59	359.93	7,358.80	1,235.16	-564.32	1,298.13	0.00	0.00	0.00
8,900.00	89.59	359.93	7,359.52	1,335.15	-564.44	1,397.29	0.00	0.00	0.00
9,000.00	89.59	359.93	7,360.23	1,435.15	-564.57	1,496.45	0.00	0.00	0.00
9,100.00	89.59	359.93	7,360.95	1,535.15	-564.69	1,595.62	0.00	0.00	0.00
9,200.00	89.59	359.93	7,361.67	1,635.15	-564.81	1,694.78	0.00	0.00	0.00
9,300.00	89.59	359.93	7,362.39	1,735.14	-564.93	1,793.94	0.00	0.00	0.00
9,400.00	89.59	359.93	7,363.11	1,835.14	-565.05	1,893.10	0.00	0.00	0.00
9,500.00	89.59	359.93	7,363.83	1,935.14	-565.17	1,992.26	0.00	0.00	0.00
9,600.00	89.59	359.93	7,364.55	2,035.14	-565.30	2,091.42	0.00	0.00	0.00
9,700.00	89.59	359.93	7,365.26	2,135.13	-565.42	2,190.58	0.00	0.00	0.00
9,800.00	89.59	359.93	7,365.98	2,235.13	-565.54	2,289.75	0.00	0.00	0.00
9,900.00	89.59	359.93	7,366.70	2,335.13	-565.66	2,388.91	0.00	0.00	0.00
10,000.00	89.59	359.93	7,367.42	2,435.12	-565.78	2,488.07	0.00	0.00	0.00
10,100.00	89.59	359.93	7,368.14	2,535.12	-565.91	2,587.23	0.00	0.00	0.00
10,200.00	89.59	359.93	7,368.86	2,635.12	-566.03	2,686.39	0.00	0.00	0.00
10,300.00	89.59	359.93	7,369.58	2,735.12	-566.15	2,785.55	0.00	0.00	0.00
10,400.00	89.59	359.93	7,370.29	2,835.11	-566.27	2,884.72	0.00	0.00	0.00
10,500.00	89.59	359.93	7,371.01	2,935.11	-566.39	2,983.88	0.00	0.00	0.00
10,600.00	89.59	359.93	7,371.73	3,035.11	-566.51	3,083.04	0.00	0.00	0.00
10,700.00	89.59	359.93	7,372.45	3,135.11	-566.64	3,182.20	0.00	0.00	0.00
10,800.00	89.59	359.93	7,373.17	3,235.10	-566.76	3,281.36	0.00	0.00	0.00
10,900.00	89.59	359.93	7,373.89	3,335.10	-566.88	3,380.52	0.00	0.00	0.00
11,000.00	89.59	359.93	7,374.61	3,435.10	-567.00	3,479.69	0.00	0.00	0.00
11,100.00	89.59	359.93	7,375.32	3,535.10	-567.12	3,578.85	0.00	0.00	0.00
11,200.00	89.59	359.93	7,376.04	3,635.09	-567.25	3,678.01	0.00	0.00	0.00
11,300.00	89.59	359.93	7,376.76	3,735.09	-567.37	3,777.17	0.00	0.00	0.00
11,400.00	89.59	359.93	7,377.48	3,835.09	-567.49	3,876.33	0.00	0.00	0.00
11,500.00	89.59	359.93	7,378.20	3,935.08	-567.61	3,975.49	0.00	0.00	0.00
11,600.00	89.59	359.93	7,378.92	4,035.08	-567.73	4,074.65	0.00	0.00	0.00
11,700.00	89.59	359.93	7,379.64	4,135.08	-567.85	4,173.82	0.00	0.00	0.00
11,800.00	89.59	359.93	7,380.35	4,235.08	-567.98	4,272.98	0.00	0.00	0.00
11,889.84	89.59	359.93	7,381.00	4,324.91	-568.09	4,362.06	0.00	0.00	0.00
TD at 11889.84 - CAMP 27C-25HZ BHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
CAMP 27C-25HZ BHL	0.00	0.00	7,381.00	4,324.91	-568.09	1,317,508.57	3,217,795.55	40.202329	-104.720262
- plan hits target center									
- Point									

Database:	edm5000p	Local Co-ordinate Reference:	Well CAMP 27C-25HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' RKB + 4964' GL @ 4981.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + 4964' GL @ 4981.00ft
Site:	WELD_CAMP PAD	North Reference:	True
Well:	CAMP 27C-25HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	CAMP 27C-25HZ		
Design:	CAMP 27C-25HZ (wp01)		

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	
7,714.82	7,351.00	7"	7	8-3/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,211.66	3,198.00	PARKMAN		0.00		
4,445.14	4,423.00	SUSSEX		0.00		
5,170.13	5,143.00	SHANNON		0.00		
7,034.30	6,990.00	SHARON SPRINGS		0.00		
7,111.04	7,059.00	NIOBRARA		0.00		
7,174.09	7,112.00	NIOBRARA B CHALK TL		0.00		
7,642.79	7,346.00	CODELL		0.00		
7,714.82	7,351.00	CODELL TL		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,000.00	1,000.00	0.00	0.00	Start Build 2.00	
1,336.11	1,335.34	-12.52	-15.20	Start 5440.05 hold at 1336.11 MD	
6,776.16	6,737.99	-417.34	-506.76	Start DLS 10.00 TFO 129.24	
7,714.82	7,351.00	150.00	-563.00	Start DLS 1.00 TFO 146.13	
7,716.65	7,351.01	151.83	-563.00	Start 4173.19 hold at 7716.65 MD	
11,889.84	7,381.00	4,324.91	-568.09	TD at 11889.84	