



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_WINTER 16-19 PAD

P_WINTER 24-19

P_WINTER 24-19

Plan: PLAN #1 4-22-10 RHS

Standard Planning Report

22 April, 2010





Project: COLORADO NORTHERN ZONE - 83
 Site: WELD_WINTER 16-19 PAD
 Well: P_WINTER 24-19
 Wellbore: P_WINTER 24-19
 Section: SECTION 19 T6 R64W
 SHL: 741 FSL 914 FEL
 Design: PLAN #1 4-22-10 RHS
 Latitude: 40° 27' 58.446 N
 Longitude: 104° 35' 13.157 W
 GL: 4705.00
 KB: WELL @ 4720.00ft (Original Well Elev)



Weatherford



Azimuths to True North
 Magnetic North: 8.93°

Magnetic Field
 Strength: 53307.7snT
 Dip Angle: 67.17°
 Date: 4/22/2010
 Model: IGRF2010

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3567.00	3764.01	PARKMAN
4335.00	4607.45	SUSSEX
4705.00	5013.80	SHANNON
6642.00	7002.43	NIO
6942.00	7302.43	CODELL
7013.00	7373.43	GREEN HORN

CASING DETAILS

TVD	MD	Name	Size
650.00	650.00	8 5/8"	8.62

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	0.00	Start Build 2.00
1970.90	24.42	350.94	1934.28	253.05	-40.34	2.00	350.94	256.25	Start 3210.62 hold at 1970.90 MD
5181.52	24.42	350.94	4857.72	1563.74	-249.29	0.00	0.00	1583.49	Start Drop -2.00
6402.43	0.00	0.00	6042.00	1816.79	-289.63	2.00	180.00	1839.74	Start 1060.00 hold at 6402.43 MD
7462.43	0.00	0.00	7102.00	1816.79	-289.63	0.00	0.00	1839.74	TD at 7462.43

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

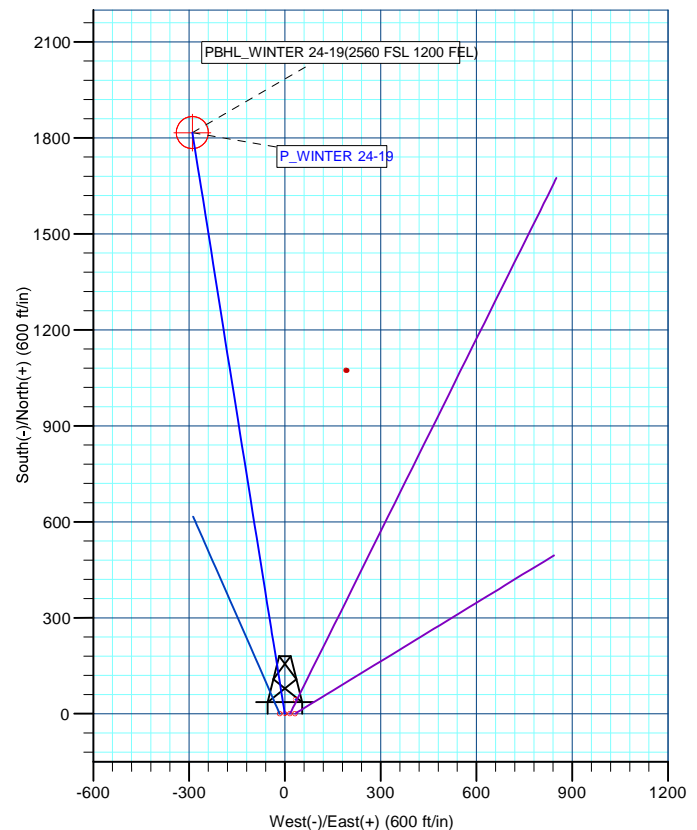
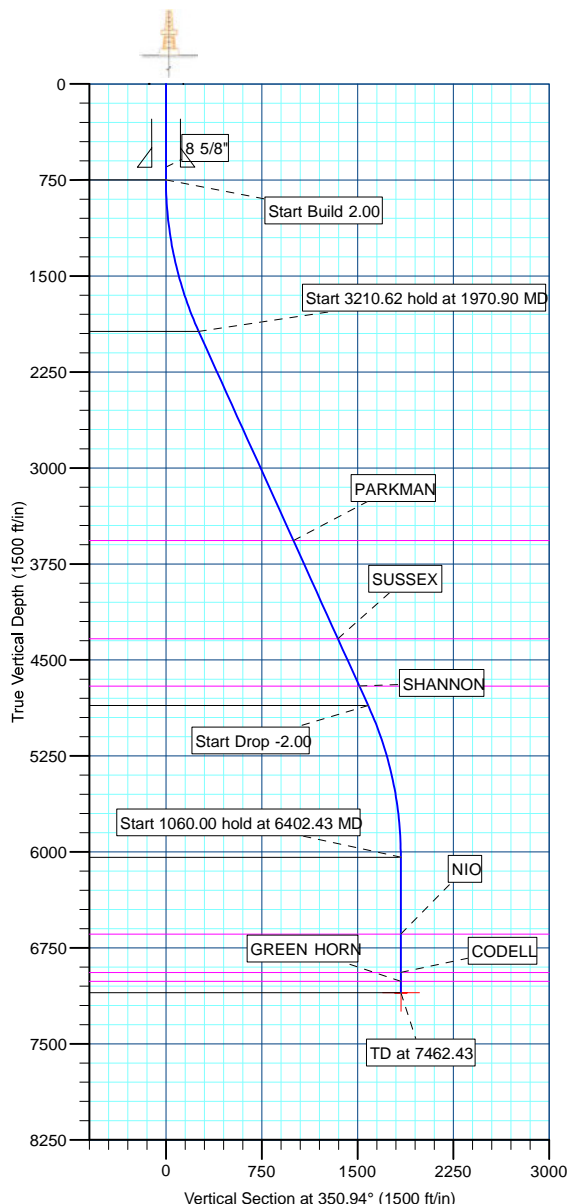
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PBHL	7102.00	1816.79	-289.63	40° 28' 16.399 N	104° 35' 16.904 W	Circle (Radius: 50.00)

WELL DETAILS: P_WINTER 24-19

+N/-S	+E/-W	Northing	Ground Level:	4705.00	Latitude	Longitude	Slot
0.00	0.00	1413997.55	Easting	3254030.37	40° 27' 58.446 N	104° 35' 13.157 W	

LEGEND

- LINDA RAE #1 EXISTING, LINDA RAE #1 EXISTING, LINDA RAE #1 EXISTING VO
- P_WINTER 20-19, P_WINTER 20-19, PLAN #1 4-22-10 RHS VO
- P_WINTER 39-19, P_WINTER 39-19, PLAN #1 4-22-10 RHS VO
- P_WINTER 40-19, P_WINTER 40-19, PLAN #1 4-22-10 RHS VO
- WINTER #9-19 EXISTING, WINTER #9-19 EXISTING, WINTER #9-19 EXISTING VO
- PLAN #1 4-22-10 RHS



Plan: PLAN #1 4-22-10 RHS (P_WINTER 24-19/P_WINTER 24-19)

Created By: Robert H. Scott Date: 14:20, April 22 2010

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_WINTER 24-19
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4720.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4720.00ft (Original Well Elev)
Site:	WELD_WINTER 16-19 PAD	North Reference:	True
Well:	P_WINTER 24-19	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_WINTER 24-19		
Design:	PLAN #1 4-22-10 RHS		

Project	COLORADO NORTHERN ZONE - 83, KERR MCGEE OIL & GAS ONSHORE LP		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		WELD_WINTER 16-19 PAD, SECTION 19 T6 R64W			
Site Position:		Northing:	1,413,997.40ft	Latitude:	40° 27' 58.446 N
From:	Lat/Long	Easting:	3,254,014.51ft	Longitude:	104° 35' 13.362 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	0.59 °

Well	P_WINTER 24-19					
Well Position	+N/-S	-0.01 ft	Northing:	1,413,997.55 ft	Latitude:	40° 27' 58.446 N
	+E/-W	15.86 ft	Easting:	3,254,030.37 ft	Longitude:	104° 35' 13.157 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,705.00 ft

Wellbore	P_WINTER 24-19				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/22/2010	8.93	67.17	53,308

Design	PLAN #1 4-22-10 RHS			
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	350.94

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	
750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,970.90	24.42	350.94	1,934.28	253.05	-40.34	2.00	2.00	0.00	350.94	
5,181.52	24.42	350.94	4,857.72	1,563.74	-249.29	0.00	0.00	0.00	0.00	
6,402.43	0.00	0.00	6,042.00	1,816.79	-289.63	2.00	-2.00	0.00	180.00	
7,462.43	0.00	0.00	7,102.00	1,816.79	-289.63	0.00	0.00	0.00	0.00	PBHL_WINTER 24-

Database:	EDM 2003.21 Single User Db	Local Co-ordinate Reference:	Well P_WINTER 24-19
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4720.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4720.00ft (Original Well Elev)
Site:	WELD_WINTER 16-19 PAD	North Reference:	True
Well:	P_WINTER 24-19	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_WINTER 24-19		
Design:	PLAN #1 4-22-10 RHS		

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)
Start Build 2.00									
750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	1.00	350.94	800.00	0.43	-0.07	0.44	2.00	2.00	0.00
900.00	3.00	350.94	899.93	3.88	-0.62	3.93	2.00	2.00	0.00
1,000.00	5.00	350.94	999.68	10.77	-1.72	10.90	2.00	2.00	0.00
1,100.00	7.00	350.94	1,099.13	21.09	-3.36	21.35	2.00	2.00	0.00
1,200.00	9.00	350.94	1,198.15	34.83	-5.55	35.27	2.00	2.00	0.00
1,300.00	11.00	350.94	1,296.63	51.98	-8.29	52.63	2.00	2.00	0.00
1,400.00	13.00	350.94	1,394.44	72.51	-11.56	73.42	2.00	2.00	0.00
1,500.00	15.00	350.94	1,491.46	96.40	-15.37	97.62	2.00	2.00	0.00
1,600.00	17.00	350.94	1,587.58	123.62	-19.71	125.18	2.00	2.00	0.00
1,700.00	19.00	350.94	1,682.68	154.13	-24.57	156.08	2.00	2.00	0.00
1,800.00	21.00	350.94	1,776.65	187.91	-29.96	190.28	2.00	2.00	0.00
1,900.00	23.00	350.94	1,869.36	224.90	-35.85	227.74	2.00	2.00	0.00
Start 3210.62 hold at 1970.90 MD									
1,970.90	24.42	350.94	1,934.28	253.05	-40.34	256.25	2.00	2.00	0.00
2,000.00	24.42	350.94	1,960.77	264.93	-42.23	268.27	0.00	0.00	0.00
2,100.00	24.42	350.94	2,051.83	305.75	-48.74	309.61	0.00	0.00	0.00
2,200.00	24.42	350.94	2,142.88	346.58	-55.25	350.95	0.00	0.00	0.00
2,300.00	24.42	350.94	2,233.94	387.40	-61.76	392.29	0.00	0.00	0.00
2,400.00	24.42	350.94	2,324.99	428.22	-68.27	433.63	0.00	0.00	0.00
2,500.00	24.42	350.94	2,416.05	469.05	-74.77	474.97	0.00	0.00	0.00
2,600.00	24.42	350.94	2,507.11	509.87	-81.28	516.31	0.00	0.00	0.00
2,700.00	24.42	350.94	2,598.16	550.69	-87.79	557.65	0.00	0.00	0.00
2,800.00	24.42	350.94	2,689.22	591.52	-94.30	598.99	0.00	0.00	0.00
2,900.00	24.42	350.94	2,780.27	632.34	-100.81	640.33	0.00	0.00	0.00
3,000.00	24.42	350.94	2,871.33	673.17	-107.31	681.67	0.00	0.00	0.00
3,100.00	24.42	350.94	2,962.38	713.99	-113.82	723.00	0.00	0.00	0.00
3,200.00	24.42	350.94	3,053.44	754.81	-120.33	764.34	0.00	0.00	0.00
3,300.00	24.42	350.94	3,144.49	795.64	-126.84	805.68	0.00	0.00	0.00
3,400.00	24.42	350.94	3,235.55	836.46	-133.34	847.02	0.00	0.00	0.00
3,500.00	24.42	350.94	3,326.60	877.28	-139.85	888.36	0.00	0.00	0.00
3,600.00	24.42	350.94	3,417.66	918.11	-146.36	929.70	0.00	0.00	0.00
3,700.00	24.42	350.94	3,508.71	958.93	-152.87	971.04	0.00	0.00	0.00
PARKMAN									
3,764.01	24.42	350.94	3,567.00	985.06	-157.03	997.50	0.00	0.00	0.00
3,800.00	24.42	350.94	3,599.77	999.76	-159.38	1,012.38	0.00	0.00	0.00
3,900.00	24.42	350.94	3,690.82	1,040.58	-165.88	1,053.72	0.00	0.00	0.00
4,000.00	24.42	350.94	3,781.88	1,081.40	-172.39	1,095.06	0.00	0.00	0.00
4,100.00	24.42	350.94	3,872.94	1,122.23	-178.90	1,136.40	0.00	0.00	0.00
4,200.00	24.42	350.94	3,963.99	1,163.05	-185.41	1,177.74	0.00	0.00	0.00
4,300.00	24.42	350.94	4,055.05	1,203.87	-191.92	1,219.08	0.00	0.00	0.00
4,400.00	24.42	350.94	4,146.10	1,244.70	-198.42	1,260.41	0.00	0.00	0.00
4,500.00	24.42	350.94	4,237.16	1,285.52	-204.93	1,301.75	0.00	0.00	0.00
4,600.00	24.42	350.94	4,328.21	1,326.34	-211.44	1,343.09	0.00	0.00	0.00
SUSSEX									
4,607.45	24.42	350.94	4,335.00	1,329.39	-211.93	1,346.17	0.00	0.00	0.00
4,700.00	24.42	350.94	4,419.27	1,367.17	-217.95	1,384.43	0.00	0.00	0.00
4,800.00	24.42	350.94	4,510.32	1,407.99	-224.46	1,425.77	0.00	0.00	0.00
4,900.00	24.42	350.94	4,601.38	1,448.82	-230.96	1,467.11	0.00	0.00	0.00
5,000.00	24.42	350.94	4,692.43	1,489.64	-237.47	1,508.45	0.00	0.00	0.00
SHANNON									
5,013.80	24.42	350.94	4,705.00	1,495.27	-238.37	1,514.15	0.00	0.00	0.00

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Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4720.00ft (Original Well Elev)
Site:	WELD_WINTER 16-19 PAD	North Reference:	True
Well:	P_WINTER 24-19	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_WINTER 24-19		
Design:	PLAN #1 4-22-10 RHS		

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)
5,100.00	24.42	350.94	4,783.49	1,530.46	-243.98	1,549.79	0.00	0.00	0.00
Start Drop -2.00									
5,181.52	24.42	350.94	4,857.72	1,563.74	-249.29	1,583.49	0.00	0.00	0.00
5,200.00	24.05	350.94	4,874.57	1,571.23	-250.48	1,591.07	2.00	-2.00	0.00
5,300.00	22.05	350.94	4,966.58	1,609.89	-256.64	1,630.22	2.00	-2.00	0.00
5,400.00	20.05	350.94	5,059.90	1,645.36	-262.30	1,666.14	2.00	-2.00	0.00
5,500.00	18.05	350.94	5,154.42	1,677.59	-267.43	1,698.77	2.00	-2.00	0.00
5,600.00	16.05	350.94	5,250.02	1,706.54	-272.05	1,728.09	2.00	-2.00	0.00
5,700.00	14.05	350.94	5,346.59	1,732.18	-276.14	1,754.05	2.00	-2.00	0.00
5,800.00	12.05	350.94	5,444.00	1,754.47	-279.69	1,776.63	2.00	-2.00	0.00
5,900.00	10.05	350.94	5,542.14	1,773.40	-282.71	1,795.79	2.00	-2.00	0.00
6,000.00	8.05	350.94	5,640.90	1,788.93	-285.18	1,811.52	2.00	-2.00	0.00
6,100.00	6.05	350.94	5,740.13	1,801.05	-287.11	1,823.79	2.00	-2.00	0.00
6,200.00	4.05	350.94	5,839.74	1,809.74	-288.50	1,832.59	2.00	-2.00	0.00
6,300.00	2.05	350.94	5,939.59	1,814.99	-289.34	1,837.90	2.00	-2.00	0.00
6,400.00	0.05	350.94	6,039.57	1,816.79	-289.63	1,839.73	2.00	-2.00	0.00
Start 1060.00 hold at 6402.43 MD									
6,402.43	0.00	0.00	6,042.00	1,816.79	-289.63	1,839.74	2.00	-2.00	0.00
6,500.00	0.00	0.00	6,139.57	1,816.79	-289.63	1,839.74	0.00	0.00	0.00
6,600.00	0.00	0.00	6,239.57	1,816.79	-289.63	1,839.74	0.00	0.00	0.00
6,700.00	0.00	0.00	6,339.57	1,816.79	-289.63	1,839.74	0.00	0.00	0.00
6,800.00	0.00	0.00	6,439.57	1,816.79	-289.63	1,839.74	0.00	0.00	0.00
6,900.00	0.00	0.00	6,539.57	1,816.79	-289.63	1,839.74	0.00	0.00	0.00
7,000.00	0.00	0.00	6,639.57	1,816.79	-289.63	1,839.74	0.00	0.00	0.00
NIO									
7,002.43	0.00	0.00	6,642.00	1,816.79	-289.63	1,839.74	0.00	0.00	0.00
7,100.00	0.00	0.00	6,739.57	1,816.79	-289.63	1,839.74	0.00	0.00	0.00
7,200.00	0.00	0.00	6,839.57	1,816.79	-289.63	1,839.74	0.00	0.00	0.00
7,300.00	0.00	0.00	6,939.57	1,816.79	-289.63	1,839.74	0.00	0.00	0.00
CODELL									
7,302.43	0.00	0.00	6,942.00	1,816.79	-289.63	1,839.74	0.00	0.00	0.00
GREEN HORN									
7,373.43	0.00	0.00	7,013.00	1,816.79	-289.63	1,839.74	0.00	0.00	0.00
7,400.00	0.00	0.00	7,039.57	1,816.79	-289.63	1,839.74	0.00	0.00	0.00
PBHL_WINTER 24-19(2560 FSL 1200 FEL)									
7,462.43	0.00	0.00	7,102.00	1,816.79	-289.63	1,839.74	0.00	0.00	0.00

Design Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
PBHL_WINTER 24-19	0.00	0.00	7,102.00	1,816.79	-289.63	1,415,811.26	3,253,722.05	40° 28' 16.399 N	104° 35' 16.904 W
- plan hits target center									
- Circle (radius 50.00)									

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Well:	P_WINTER 24-19	Survey Calculation Method:	Minimum Curvature
Wellbore:	P_WINTER 24-19		
Design:	PLAN #1 4-22-10 RHS		

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
650.00	650.00	8 5/8"	8.62	11.00

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,764.01	3,567.00	PARKMAN			
4,607.45	4,335.00	SUSSEX			
5,013.80	4,705.00	SHANNON			
7,002.43	6,642.00	NIO			
7,302.43	6,942.00	CODELL			
7,373.43	7,013.00	GREEN HORN			

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
750.00	750.00	0.00	0.00	Start Build 2.00
1,970.90	1,934.28	253.05	-40.34	Start 3210.62 hold at 1970.90 MD
5,181.52	4,857.72	1,563.74	-249.29	Start Drop -2.00
6,402.43	6,042.00	1,816.79	-289.63	Start 1060.00 hold at 6402.43 MD
7,462.43	7,102.00	1,816.79	-289.63	TD at 7462.43