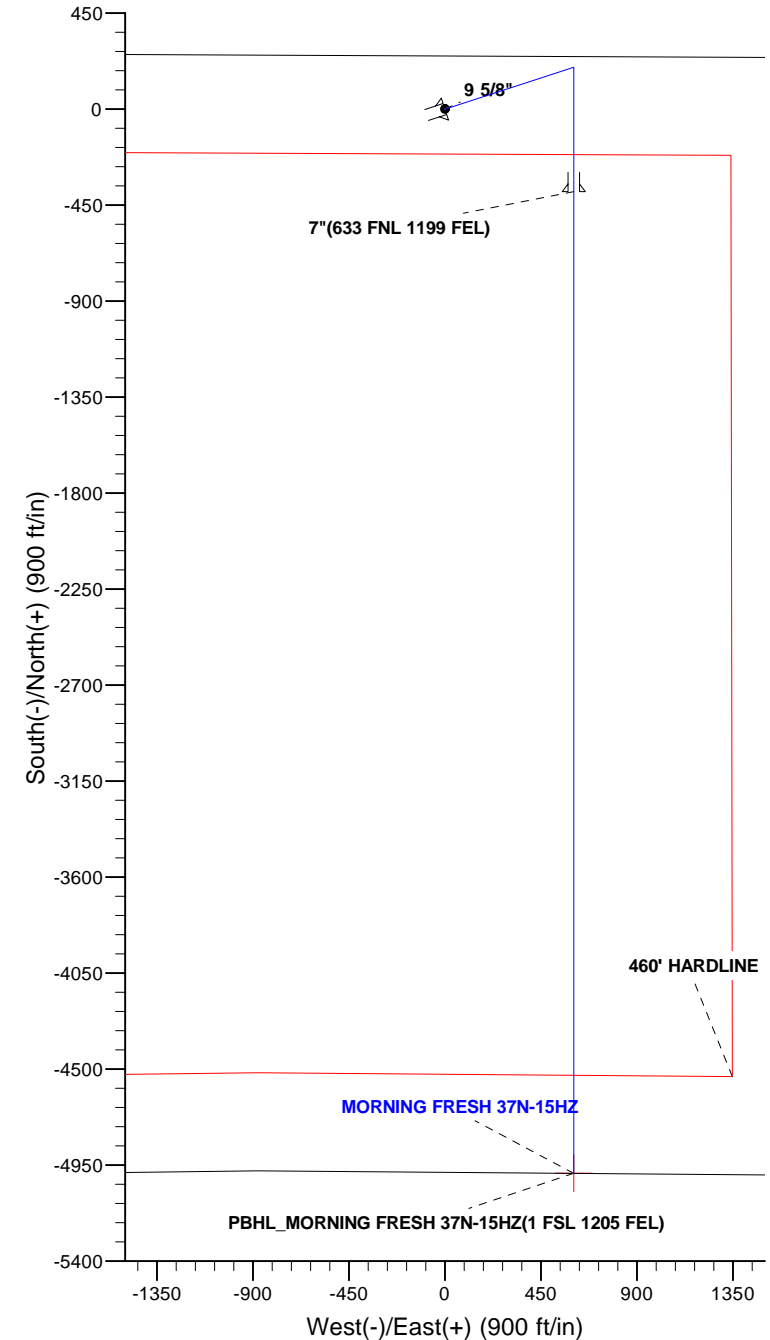
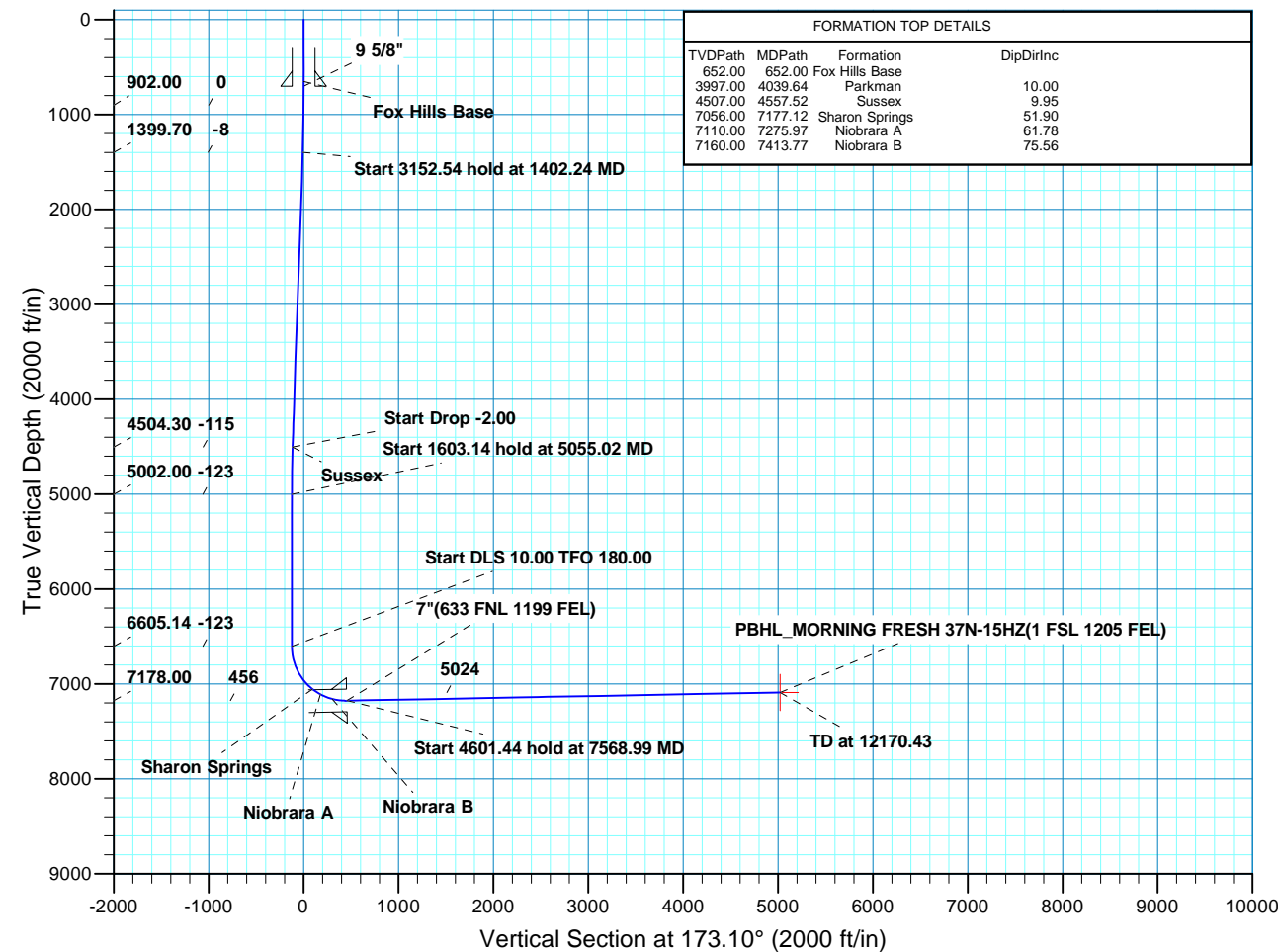


WELL DETAILS: MORNING FRESH 37N-15HZ									
GL 4885 & KB 17 @ 4902.00ft (ASSUMED)									
+N/-S 0.00		+E/-W 0.00		Northing 1328048.30	Easting 3206529.26	Latitude 40.2315260		Longitude -104.7602800	
SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
902.00	0.00	0.00	902.00	0.00	0.00	0.00	0.00	0.00	0.00
1402.24	10.00	71.92	1399.70	13.52	41.41	2.00	71.92	-8.45	
4554.78	10.00	71.92	4504.30	183.48	562.07	0.00	0.00	-114.65	
5055.02	0.00	0.00	5002.00	197.00	603.48	2.00	180.00	-123.09	
6658.16	0.00	0.00	6605.14	197.00	603.48	0.00	0.00	-123.09	
7568.99	91.08	180.00	7178.00	-386.79	603.48	10.00	180.00	456.47	
12170.43	91.08	180.00	7091.00	-4987.41	603.48	0.00	0.005023.79		PBHL_MORNING FRESH 37N-15HZ(1 FSL 1205 FEL)
DESIGN TARGET DETAILS							CASING DETAILS		
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
PBHL	7091.00	-4987.41	603.481323066.11	3207174.32	40.2178350	-104.7581190		Point	
- plan hits target center									
	TVD	MD	Name	Size					
	702.00	702.00	9 5/8"	9.625					
	7178.00	7568.99	7"	7.000					





Scientific Drilling

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

MORNING FRESH 2-15HZ

MORNING FRESH 37N-15HZ

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

04 October, 2013

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MORNING FRESH 37N-15HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4885 & KB 17 @ 4902.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4885 & KB 17 @ 4902.00ft (ASSUMED)
Site:	MORNING FRESH 2-15HZ	North Reference:	True
Well:	MORNING FRESH 37N-15HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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	MORNING FRESH 2-15HZ, NWNE SECTION 15 T3N R66W			
Site Position:		Northing:	1,328,048.20 usft	Latitude: 40.2315250
From:	Lat/Long	Easting:	3,206,559.42 usft	Longitude: -104.7601720
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence: 0.48 °

Well	MORNING FRESH 37N-15HZ, 250' FNL 1800' FEL					
Well Position	+N/-S	0.35 ft	Northing:	1,328,048.30 usft	Latitude:	40.2315260
	+E/-W	-30.15 ft	Easting:	3,206,529.26 usft	Longitude:	-104.7602800
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	4,885.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	10/03/13	8.57	66.83	52,728

Design	PLAN #1 PRELIMINARY			
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	173.10

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	
902.00	0.00	0.00	902.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,402.24	10.00	71.92	1,399.70	13.52	41.41	2.00	2.00	0.00	71.92	
4,554.78	10.00	71.92	4,504.30	183.48	562.07	0.00	0.00	0.00	0.00	
5,055.02	0.00	0.00	5,002.00	197.00	603.48	2.00	-2.00	0.00	180.00	
6,658.16	0.00	0.00	6,605.14	197.00	603.48	0.00	0.00	0.00	0.00	
7,568.99	91.08	180.00	7,178.00	-386.79	603.48	10.00	10.00	19.76	180.00	
12,170.43	91.08	180.00	7,091.00	-4,987.41	603.48	0.00	0.00	0.00	0.00	PBHL_MORNING FR

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MORNING FRESH 37N-15HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4885 & KB 17 @ 4902.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4885 & KB 17 @ 4902.00ft (ASSUMED)
Site:	MORNING FRESH 2-15HZ	North Reference:	True
Well:	MORNING FRESH 37N-15HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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
652.00	0.00	0.00	652.00	0.00	0.00	0.00	0.00	0.00	0.00
Fox Hills Base									
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
702.00	0.00	0.00	702.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
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
902.00	0.00	0.00	902.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
1,000.00	1.96	71.92	999.98	0.52	1.59	-0.32	2.00	2.00	0.00
1,100.00	3.96	71.92	1,099.84	2.12	6.50	-1.33	2.00	2.00	0.00
1,200.00	5.96	71.92	1,199.46	4.81	14.72	-3.00	2.00	2.00	0.00
1,300.00	7.96	71.92	1,298.72	8.57	26.24	-5.35	2.00	2.00	0.00
1,400.00	9.96	71.92	1,397.50	13.40	41.04	-8.37	2.00	2.00	0.00
1,402.24	10.00	71.92	1,399.70	13.52	41.41	-8.45	2.00	2.00	0.00
Start 3152.54 hold at 1402.24 MD									
1,500.00	10.00	71.92	1,495.98	18.79	57.56	-11.74	0.00	0.00	0.00
1,600.00	10.00	71.92	1,594.45	24.18	74.07	-15.11	0.00	0.00	0.00
1,700.00	10.00	71.92	1,692.93	29.57	90.59	-18.48	0.00	0.00	0.00
1,800.00	10.00	71.92	1,791.41	34.96	107.10	-21.85	0.00	0.00	0.00
1,900.00	10.00	71.92	1,889.89	40.35	123.62	-25.22	0.00	0.00	0.00
2,000.00	10.00	71.92	1,988.37	45.75	140.14	-28.58	0.00	0.00	0.00
2,100.00	10.00	71.92	2,086.85	51.14	156.65	-31.95	0.00	0.00	0.00
2,200.00	10.00	71.92	2,185.33	56.53	173.17	-35.32	0.00	0.00	0.00
2,300.00	10.00	71.92	2,283.81	61.92	189.68	-38.69	0.00	0.00	0.00
2,400.00	10.00	71.92	2,382.29	67.31	206.20	-42.06	0.00	0.00	0.00
2,500.00	10.00	71.92	2,480.77	72.70	222.71	-45.43	0.00	0.00	0.00
2,600.00	10.00	71.92	2,579.25	78.09	239.23	-48.80	0.00	0.00	0.00
2,700.00	10.00	71.92	2,677.73	83.48	255.74	-52.16	0.00	0.00	0.00
2,800.00	10.00	71.92	2,776.21	88.88	272.26	-55.53	0.00	0.00	0.00
2,900.00	10.00	71.92	2,874.69	94.27	288.77	-58.90	0.00	0.00	0.00
3,000.00	10.00	71.92	2,973.17	99.66	305.29	-62.27	0.00	0.00	0.00
3,100.00	10.00	71.92	3,071.64	105.05	321.80	-65.64	0.00	0.00	0.00
3,200.00	10.00	71.92	3,170.12	110.44	338.32	-69.01	0.00	0.00	0.00
3,300.00	10.00	71.92	3,268.60	115.83	354.84	-72.38	0.00	0.00	0.00
3,400.00	10.00	71.92	3,367.08	121.22	371.35	-75.75	0.00	0.00	0.00
3,500.00	10.00	71.92	3,465.56	126.62	387.87	-79.11	0.00	0.00	0.00
3,600.00	10.00	71.92	3,564.04	132.01	404.38	-82.48	0.00	0.00	0.00
3,700.00	10.00	71.92	3,662.52	137.40	420.90	-85.85	0.00	0.00	0.00
3,800.00	10.00	71.92	3,761.00	142.79	437.41	-89.22	0.00	0.00	0.00
3,900.00	10.00	71.92	3,859.48	148.18	453.93	-92.59	0.00	0.00	0.00
4,000.00	10.00	71.92	3,957.96	153.57	470.44	-95.96	0.00	0.00	0.00
4,039.64	10.00	71.92	3,997.00	155.71	476.99	-97.29	0.00	0.00	0.00
Parkman									
4,100.00	10.00	71.92	4,056.44	158.96	486.96	-99.33	0.00	0.00	0.00
4,200.00	10.00	71.92	4,154.92	164.35	503.47	-102.70	0.00	0.00	0.00
4,300.00	10.00	71.92	4,253.40	169.75	519.99	-106.06	0.00	0.00	0.00

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MORNING FRESH 37N-15HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4885 & KB 17 @ 4902.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4885 & KB 17 @ 4902.00ft (ASSUMED)
Site:	MORNING FRESH 2-15HZ	North Reference:	True
Well:	MORNING FRESH 37N-15HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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)
4,400.00	10.00	71.92	4,351.88	175.14	536.50	-109.43	0.00	0.00	0.00
4,500.00	10.00	71.92	4,450.35	180.53	553.02	-112.80	0.00	0.00	0.00
4,554.78	10.00	71.92	4,504.30	183.48	562.07	-114.65	0.00	0.00	0.00
Start Drop -2.00									
4,557.52	9.95	71.92	4,507.00	183.63	562.52	-114.74	2.00	-2.00	0.00
Sussex									
4,600.00	9.10	71.92	4,548.89	185.81	569.20	-116.10	2.00	-2.00	0.00
4,700.00	7.10	71.92	4,647.89	190.18	582.59	-118.83	2.00	-2.00	0.00
4,800.00	5.10	71.92	4,747.32	193.48	592.70	-120.89	2.00	-2.00	0.00
4,900.00	3.10	71.92	4,847.06	195.70	599.49	-122.28	2.00	-2.00	0.00
5,000.00	1.10	71.92	4,946.99	196.84	602.98	-122.99	2.00	-2.00	0.00
5,055.02	0.00	0.00	5,002.00	197.00	603.48	-123.09	2.00	-2.00	0.00
Start 1603.14 hold at 5055.02 MD									
5,100.00	0.00	0.00	5,046.98	197.00	603.48	-123.09	0.00	0.00	0.00
5,200.00	0.00	0.00	5,146.98	197.00	603.48	-123.09	0.00	0.00	0.00
5,300.00	0.00	0.00	5,246.98	197.00	603.48	-123.09	0.00	0.00	0.00
5,400.00	0.00	0.00	5,346.98	197.00	603.48	-123.09	0.00	0.00	0.00
5,500.00	0.00	0.00	5,446.98	197.00	603.48	-123.09	0.00	0.00	0.00
5,600.00	0.00	0.00	5,546.98	197.00	603.48	-123.09	0.00	0.00	0.00
5,700.00	0.00	0.00	5,646.98	197.00	603.48	-123.09	0.00	0.00	0.00
5,800.00	0.00	0.00	5,746.98	197.00	603.48	-123.09	0.00	0.00	0.00
5,900.00	0.00	0.00	5,846.98	197.00	603.48	-123.09	0.00	0.00	0.00
6,000.00	0.00	0.00	5,946.98	197.00	603.48	-123.09	0.00	0.00	0.00
6,100.00	0.00	0.00	6,046.98	197.00	603.48	-123.09	0.00	0.00	0.00
6,200.00	0.00	0.00	6,146.98	197.00	603.48	-123.09	0.00	0.00	0.00
6,300.00	0.00	0.00	6,246.98	197.00	603.48	-123.09	0.00	0.00	0.00
6,400.00	0.00	0.00	6,346.98	197.00	603.48	-123.09	0.00	0.00	0.00
6,500.00	0.00	0.00	6,446.98	197.00	603.48	-123.09	0.00	0.00	0.00
6,600.00	0.00	0.00	6,546.98	197.00	603.48	-123.09	0.00	0.00	0.00
6,658.16	0.00	0.00	6,605.14	197.00	603.48	-123.09	0.00	0.00	0.00
Start DLS 10.00 TFO 180.00									
6,700.00	4.18	180.00	6,646.95	195.47	603.48	-121.58	10.00	10.00	0.00
6,800.00	14.18	180.00	6,745.54	179.53	603.48	-105.75	10.00	10.00	0.00
6,900.00	24.18	180.00	6,839.87	146.71	603.48	-73.17	10.00	10.00	0.00
7,000.00	34.18	180.00	6,927.06	98.01	603.48	-24.82	10.00	10.00	0.00
7,100.00	44.18	180.00	7,004.47	34.91	603.48	37.82	10.00	10.00	0.00
7,177.12	51.90	180.00	7,056.00	-22.40	603.48	94.71	10.00	10.00	0.00
Sharon Springs									
7,200.00	54.18	180.00	7,069.75	-40.67	603.48	112.86	10.00	10.00	0.00
7,275.97	61.78	180.00	7,110.00	-105.04	603.48	176.76	10.00	10.00	0.00
Niobrara A									
7,300.00	64.18	180.00	7,120.92	-126.45	603.48	198.01	10.00	10.00	0.00
7,400.00	74.18	180.00	7,156.41	-219.80	603.48	290.69	10.00	10.00	0.00
7,413.77	75.56	180.00	7,160.00	-233.09	603.48	303.88	10.00	10.00	0.00
Niobrara B									
7,500.00	84.18	180.00	7,175.15	-317.90	603.48	388.08	10.00	10.00	0.00
7,568.99	91.08	180.00	7,178.00	-386.79	603.48	456.47	10.00	10.00	0.00
Start 4601.44 hold at 7568.99 MD - 7"(633 FNL 1199 FEL)									
7,600.00	91.08	180.00	7,177.41	-417.80	603.48	487.25	0.00	0.00	0.00
7,700.00	91.08	180.00	7,175.52	-517.78	603.48	586.51	0.00	0.00	0.00
7,800.00	91.08	180.00	7,173.63	-617.76	603.48	685.77	0.00	0.00	0.00
7,900.00	91.08	180.00	7,171.74	-717.74	603.48	785.03	0.00	0.00	0.00
8,000.00	91.08	180.00	7,169.85	-817.72	603.48	884.28	0.00	0.00	0.00

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MORNING FRESH 37N-15HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4885 & KB 17 @ 4902.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4885 & KB 17 @ 4902.00ft (ASSUMED)
Site:	MORNING FRESH 2-15HZ	North Reference:	True
Well:	MORNING FRESH 37N-15HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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)
8,100.00	91.08	180.00	7,167.96	-917.71	603.48	983.54	0.00	0.00	0.00
8,200.00	91.08	180.00	7,166.07	-1,017.69	603.48	1,082.80	0.00	0.00	0.00
8,300.00	91.08	180.00	7,164.17	-1,117.67	603.48	1,182.06	0.00	0.00	0.00
8,400.00	91.08	180.00	7,162.28	-1,217.65	603.48	1,281.32	0.00	0.00	0.00
8,500.00	91.08	180.00	7,160.39	-1,317.63	603.48	1,380.58	0.00	0.00	0.00
8,600.00	91.08	180.00	7,158.50	-1,417.62	603.48	1,479.83	0.00	0.00	0.00
8,700.00	91.08	180.00	7,156.61	-1,517.60	603.48	1,579.09	0.00	0.00	0.00
8,800.00	91.08	180.00	7,154.72	-1,617.58	603.48	1,678.35	0.00	0.00	0.00
8,900.00	91.08	180.00	7,152.83	-1,717.56	603.48	1,777.61	0.00	0.00	0.00
9,000.00	91.08	180.00	7,150.94	-1,817.55	603.48	1,876.87	0.00	0.00	0.00
9,100.00	91.08	180.00	7,149.05	-1,917.53	603.48	1,976.13	0.00	0.00	0.00
9,200.00	91.08	180.00	7,147.16	-2,017.51	603.48	2,075.39	0.00	0.00	0.00
9,300.00	91.08	180.00	7,145.27	-2,117.49	603.48	2,174.64	0.00	0.00	0.00
9,400.00	91.08	180.00	7,143.38	-2,217.47	603.48	2,273.90	0.00	0.00	0.00
9,500.00	91.08	180.00	7,141.49	-2,317.46	603.48	2,373.16	0.00	0.00	0.00
9,600.00	91.08	180.00	7,139.60	-2,417.44	603.48	2,472.42	0.00	0.00	0.00
9,700.00	91.08	180.00	7,137.71	-2,517.42	603.48	2,571.68	0.00	0.00	0.00
9,800.00	91.08	180.00	7,135.82	-2,617.40	603.48	2,670.94	0.00	0.00	0.00
9,900.00	91.08	180.00	7,133.93	-2,717.38	603.48	2,770.19	0.00	0.00	0.00
10,000.00	91.08	180.00	7,132.03	-2,817.37	603.48	2,869.45	0.00	0.00	0.00
10,100.00	91.08	180.00	7,130.14	-2,917.35	603.48	2,968.71	0.00	0.00	0.00
10,200.00	91.08	180.00	7,128.25	-3,017.33	603.48	3,067.97	0.00	0.00	0.00
10,300.00	91.08	180.00	7,126.36	-3,117.31	603.48	3,167.23	0.00	0.00	0.00
10,400.00	91.08	180.00	7,124.47	-3,217.29	603.48	3,266.49	0.00	0.00	0.00
10,500.00	91.08	180.00	7,122.58	-3,317.28	603.48	3,365.74	0.00	0.00	0.00
10,600.00	91.08	180.00	7,120.69	-3,417.26	603.48	3,465.00	0.00	0.00	0.00
10,700.00	91.08	180.00	7,118.80	-3,517.24	603.48	3,564.26	0.00	0.00	0.00
10,800.00	91.08	180.00	7,116.91	-3,617.22	603.48	3,663.52	0.00	0.00	0.00
10,900.00	91.08	180.00	7,115.02	-3,717.21	603.48	3,762.78	0.00	0.00	0.00
11,000.00	91.08	180.00	7,113.13	-3,817.19	603.48	3,862.04	0.00	0.00	0.00
11,100.00	91.08	180.00	7,111.24	-3,917.17	603.48	3,961.29	0.00	0.00	0.00
11,200.00	91.08	180.00	7,109.35	-4,017.15	603.48	4,060.55	0.00	0.00	0.00
11,300.00	91.08	180.00	7,107.46	-4,117.13	603.48	4,159.81	0.00	0.00	0.00
11,400.00	91.08	180.00	7,105.57	-4,217.12	603.48	4,259.07	0.00	0.00	0.00
11,500.00	91.08	180.00	7,103.68	-4,317.10	603.48	4,358.33	0.00	0.00	0.00
11,600.00	91.08	180.00	7,101.78	-4,417.08	603.48	4,457.59	0.00	0.00	0.00
11,700.00	91.08	180.00	7,099.89	-4,517.06	603.48	4,556.85	0.00	0.00	0.00
11,800.00	91.08	180.00	7,098.00	-4,617.04	603.48	4,656.10	0.00	0.00	0.00
11,900.00	91.08	180.00	7,096.11	-4,717.03	603.48	4,755.36	0.00	0.00	0.00
12,000.00	91.08	180.00	7,094.22	-4,817.01	603.48	4,854.62	0.00	0.00	0.00
12,100.00	91.08	180.00	7,092.33	-4,916.99	603.48	4,953.88	0.00	0.00	0.00
12,170.43	91.08	180.00	7,091.00	-4,987.41	603.48	5,023.79	0.00	0.00	0.00
TD at 12170.43 - PBHL_MORNING FRESH 37N-15HZ(1 FSL 1205 FEL)									

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MORNING FRESH 37N-15HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4885 & KB 17 @ 4902.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4885 & KB 17 @ 4902.00ft (ASSUMED)
Site:	MORNING FRESH 2-15HZ	North Reference:	True
Well:	MORNING FRESH 37N-15HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL_MORNING FRES	0.00	0.00	7,091.00	-4,987.41	603.48	1,323,066.11	3,207,174.32	40.2178350	-104.7581190
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
702.00	702.00	9 5/8"	9.625	12.250	
7,568.99	7,178.00	7"(633 FNL 1199 FEL)	7.000	7.500	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
652.00	652.00	Fox Hills Base				
4,039.64	3,997.00	Parkman				
4,557.52	4,507.00	Sussex				
7,177.12	7,056.00	Sharon Springs				
7,275.97	7,110.00	Niobrara A				
7,413.77	7,160.00	Niobrara B				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
902.00	902.00	0.00	0.00	Start Build 2.00	
1,402.24	1,399.70	13.52	41.41	Start 3152.54 hold at 1402.24 MD	
4,554.78	4,504.30	183.48	562.07	Start Drop -2.00	
5,055.02	5,002.00	197.00	603.48	Start 1603.14 hold at 5055.02 MD	
6,658.16	6,605.14	197.00	603.48	Start DLS 10.00 TFO 180.00	
7,568.99	7,178.00	-386.79	603.48	Start 4601.44 hold at 7568.99 MD	
12,170.43	7,091.00	-4,987.41	603.48	TD at 12170.43	