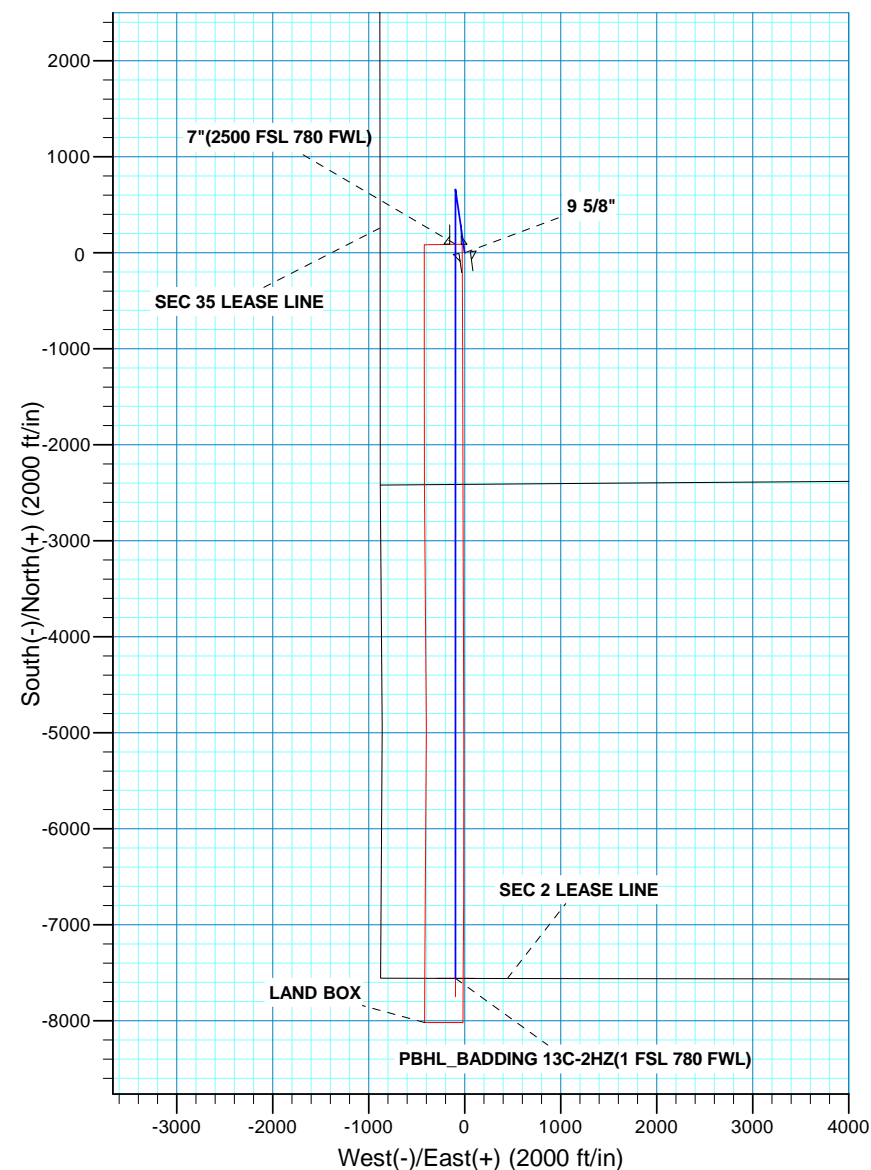
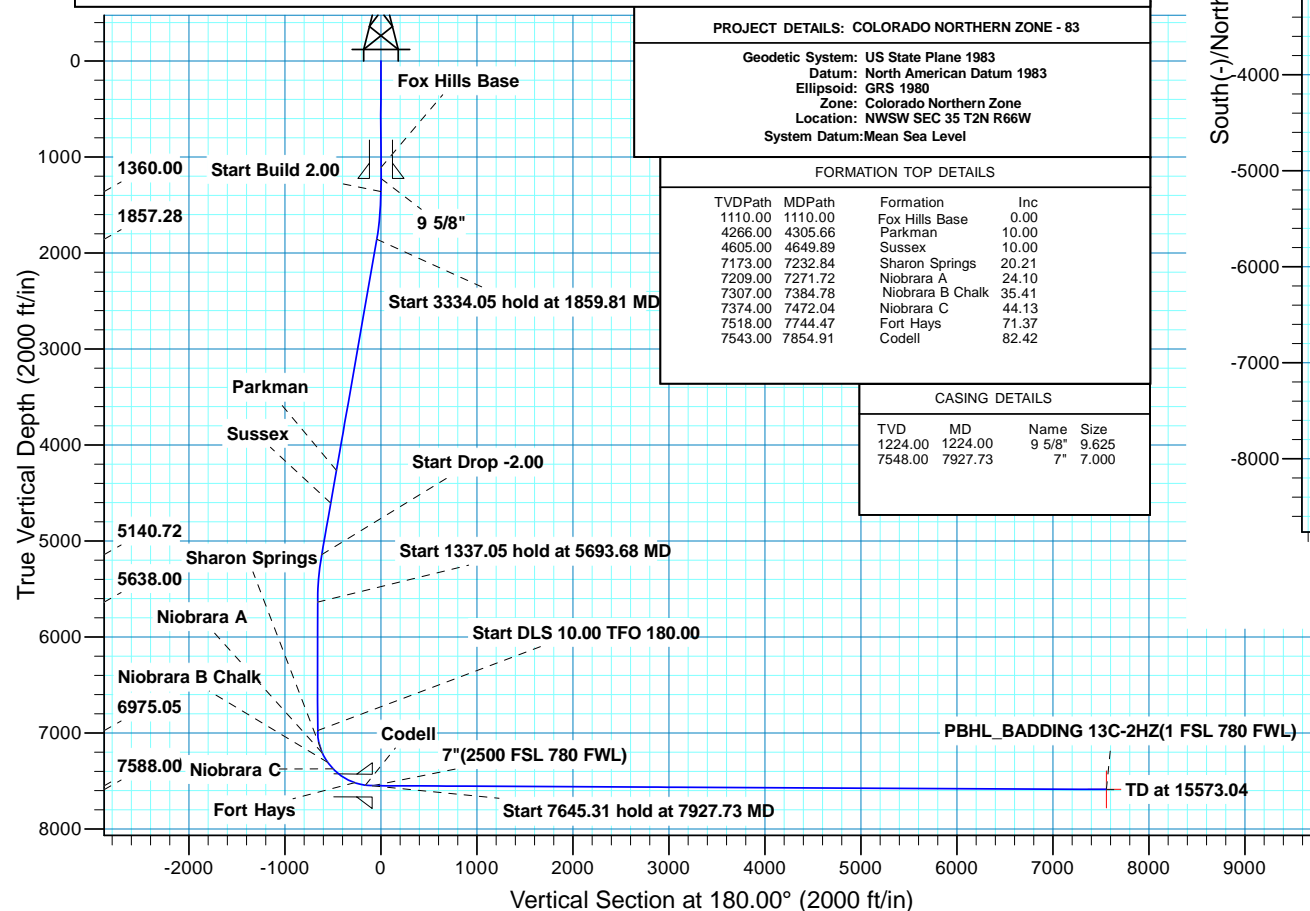


WELL DETAILS: BADDING 13C-2HZ										
GL 5102 & KB 17 @ 5119.00ft (ASSUMED)										
		+N-S 0.00	+E-W 0.00	Northing 1277944.81	Easting 3209659.39	Latitude 40.0939180	Longitude -104.7505860			
SECTION DETAILS										
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
1360.00	0.00	0.00	1360.00	0.00	0.00	0.00	0.00	0.00		Start Build 2.00
1859.81	10.00	351.83	1857.28	43.05	-6.18	2.00	351.83	-43.05		Start 3334.05 hold at 1859.81 MD
5193.87	10.00	351.83	5140.72	615.91	-88.41	0.00	0.00	-615.91		Start Drop -2.00
5693.68	0.00	0.00	5638.00	658.96	-94.59	2.00	180.00	-658.96		Start 1337.05 hold at 5693.68 MD
7030.73	0.00	0.00	6975.05	658.96	-94.59	0.00	0.00	-658.96		Start DLS 10.00 TFO 180.00
7927.73	89.70	180.00	7548.00	89.00	-94.59	10.00	180.00	-89.00		Start 7645.31 hold at 7927.73 MD
15573.04	89.70	180.00	7588.00	-7556.20	-94.59	0.00	0.00	7556.20	PBHL_BADDING 13C-2HZ	TD at 15573.04
DESIGN TARGET DETAILS										
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape		
PBHL	7588.00	-7556.20	-94.59	1270388.09	3209628.66	40.0731750	-104.7509240	Point		
- plan hits target center										





Scientific Drilling

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

BADDING 11-35HZ PAD

BADDING 13C-2HZ

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

21 August, 2013

Database:	Denver Sales	Local Co-ordinate Reference:	Well BADDING 13C-2HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5102 & KB 17 @ 5119.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5102 & KB 17 @ 5119.00ft (ASSUMED)
Site:	BADDING 11-35HZ PAD	North Reference:	True
Well:	BADDING 13C-2HZ	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		BADDING 11-35HZ PAD, NWSW SEC 35 T2N R66W			
Site Position:		Northing:	1,277,944.82 usft	Latitude:	40.0939180
From:	Lat/Long	Easting:	3,209,659.39 usft	Longitude:	-104.7505860
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.48

Well	BADDING 13C-2HZ, 2411 FSL 881 FWL					
Well Position	+N/-S	-0.01 ft	Northing:	1,277,944.81 usft	Latitude:	40.0939180
	+E/-W	0.00 ft	Easting:	3,209,659.39 usft	Longitude:	-104.7505860
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	5,102.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	8/14/2013	8.57	66.72	52,671

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	180.00

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,360.00	0.00	0.00	1,360.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,859.81	10.00	351.83	1,857.28	43.05	-6.18	2.00	2.00	0.00	351.83	
5,193.87	10.00	351.83	5,140.72	615.91	-88.41	0.00	0.00	0.00	0.00	
5,693.68	0.00	0.00	5,638.00	658.96	-94.59	2.00	-2.00	0.00	180.00	
7,030.73	0.00	0.00	6,975.05	658.96	-94.59	0.00	0.00	0.00	0.00	
7,927.73	89.70	180.00	7,548.00	89.00	-94.59	10.00	10.00	-20.07	180.00	
15,573.04	89.70	180.00	7,588.00	-7,556.20	-94.59	0.00	0.00	0.00	0.00	PBHL_BADDING 13C

Database:	Denver Sales	Local Co-ordinate Reference:	Well BADDING 13C-2HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5102 & KB 17 @ 5119.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5102 & KB 17 @ 5119.00ft (ASSUMED)
Site:	BADDING 11-35HZ PAD	North Reference:	True
Well:	BADDING 13C-2HZ	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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
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
1,110.00	0.00	0.00	1,110.00	0.00	0.00	0.00	0.00	0.00	0.00
Fox Hills Base									
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,224.00	0.00	0.00	1,224.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,360.00	0.00	0.00	1,360.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
1,400.00	0.80	351.83	1,400.00	0.28	-0.04	-0.28	2.00	2.00	0.00
1,500.00	2.80	351.83	1,499.94	3.39	-0.49	-3.39	2.00	2.00	0.00
1,600.00	4.80	351.83	1,599.72	9.95	-1.43	-9.95	2.00	2.00	0.00
1,700.00	6.80	351.83	1,699.20	19.95	-2.86	-19.95	2.00	2.00	0.00
1,800.00	8.80	351.83	1,798.27	33.38	-4.79	-33.38	2.00	2.00	0.00
1,859.81	10.00	351.83	1,857.28	43.05	-6.18	-43.05	2.00	2.00	0.00
Start 3334.05 hold at 1859.81 MD									
1,900.00	10.00	351.83	1,896.86	49.95	-7.17	-49.95	0.00	0.00	0.00
2,000.00	10.00	351.83	1,995.34	67.14	-9.64	-67.14	0.00	0.00	0.00
2,100.00	10.00	351.83	2,093.82	84.32	-12.10	-84.32	0.00	0.00	0.00
2,200.00	10.00	351.83	2,192.30	101.50	-14.57	-101.50	0.00	0.00	0.00
2,300.00	10.00	351.83	2,290.79	118.68	-17.04	-118.68	0.00	0.00	0.00
2,400.00	10.00	351.83	2,389.27	135.86	-19.50	-135.86	0.00	0.00	0.00
2,500.00	10.00	351.83	2,487.75	153.05	-21.97	-153.05	0.00	0.00	0.00
2,600.00	10.00	351.83	2,586.23	170.23	-24.44	-170.23	0.00	0.00	0.00
2,700.00	10.00	351.83	2,684.71	187.41	-26.90	-187.41	0.00	0.00	0.00
2,800.00	10.00	351.83	2,783.20	204.59	-29.37	-204.59	0.00	0.00	0.00
2,900.00	10.00	351.83	2,881.68	221.78	-31.83	-221.78	0.00	0.00	0.00
3,000.00	10.00	351.83	2,980.16	238.96	-34.30	-238.96	0.00	0.00	0.00
3,100.00	10.00	351.83	3,078.64	256.14	-36.77	-256.14	0.00	0.00	0.00
3,200.00	10.00	351.83	3,177.12	273.32	-39.23	-273.32	0.00	0.00	0.00
3,300.00	10.00	351.83	3,275.61	290.50	-41.70	-290.50	0.00	0.00	0.00
3,400.00	10.00	351.83	3,374.09	307.69	-44.17	-307.69	0.00	0.00	0.00
3,500.00	10.00	351.83	3,472.57	324.87	-46.63	-324.87	0.00	0.00	0.00
3,600.00	10.00	351.83	3,571.05	342.05	-49.10	-342.05	0.00	0.00	0.00
3,700.00	10.00	351.83	3,669.53	359.23	-51.57	-359.23	0.00	0.00	0.00
3,800.00	10.00	351.83	3,768.01	376.42	-54.03	-376.42	0.00	0.00	0.00
3,900.00	10.00	351.83	3,866.50	393.60	-56.50	-393.60	0.00	0.00	0.00
4,000.00	10.00	351.83	3,964.98	410.78	-58.97	-410.78	0.00	0.00	0.00
4,100.00	10.00	351.83	4,063.46	427.96	-61.43	-427.96	0.00	0.00	0.00
4,200.00	10.00	351.83	4,161.94	445.14	-63.90	-445.14	0.00	0.00	0.00
4,300.00	10.00	351.83	4,260.42	462.33	-66.36	-462.33	0.00	0.00	0.00
4,305.66	10.00	351.83	4,266.00	463.30	-66.50	-463.30	0.00	0.00	0.00
Parkman									

Database:	Denver Sales	Local Co-ordinate Reference:	Well BADDING 13C-2HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5102 & KB 17 @ 5119.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5102 & KB 17 @ 5119.00ft (ASSUMED)
Site:	BADDING 11-35HZ PAD	North Reference:	True
Well:	BADDING 13C-2HZ	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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,400.00	10.00	351.83	4,358.91	479.51	-68.83	-479.51	0.00	0.00	0.00
4,500.00	10.00	351.83	4,457.39	496.69	-71.30	-496.69	0.00	0.00	0.00
4,600.00	10.00	351.83	4,555.87	513.87	-73.76	-513.87	0.00	0.00	0.00
4,649.89	10.00	351.83	4,605.00	522.44	-74.99	-522.44	0.00	0.00	0.00
Sussex									
4,700.00	10.00	351.83	4,654.35	531.05	-76.23	-531.05	0.00	0.00	0.00
4,800.00	10.00	351.83	4,752.83	548.24	-78.70	-548.24	0.00	0.00	0.00
4,900.00	10.00	351.83	4,851.32	565.42	-81.16	-565.42	0.00	0.00	0.00
5,000.00	10.00	351.83	4,949.80	582.60	-83.63	-582.60	0.00	0.00	0.00
5,100.00	10.00	351.83	5,048.28	599.78	-86.10	-599.78	0.00	0.00	0.00
5,193.87	10.00	351.83	5,140.72	615.91	-88.41	-615.91	0.00	0.00	0.00
Start Drop -2.00									
5,200.00	9.87	351.83	5,146.76	616.96	-88.56	-616.96	2.00	-2.00	0.00
5,300.00	7.87	351.83	5,245.56	632.23	-90.75	-632.23	2.00	-2.00	0.00
5,400.00	5.87	351.83	5,344.84	644.07	-92.45	-644.07	2.00	-2.00	0.00
5,500.00	3.87	351.83	5,444.47	652.48	-93.66	-652.48	2.00	-2.00	0.00
5,600.00	1.87	351.83	5,544.34	657.44	-94.37	-657.44	2.00	-2.00	0.00
5,693.68	0.00	0.00	5,638.00	658.96	-94.59	-658.96	2.00	-2.00	0.00
Start 1337.05 hold at 5693.68 MD									
5,700.00	0.00	0.00	5,644.32	658.96	-94.59	-658.96	0.00	0.00	0.00
5,800.00	0.00	0.00	5,744.32	658.96	-94.59	-658.96	0.00	0.00	0.00
5,900.00	0.00	0.00	5,844.32	658.96	-94.59	-658.96	0.00	0.00	0.00
6,000.00	0.00	0.00	5,944.32	658.96	-94.59	-658.96	0.00	0.00	0.00
6,100.00	0.00	0.00	6,044.32	658.96	-94.59	-658.96	0.00	0.00	0.00
6,200.00	0.00	0.00	6,144.32	658.96	-94.59	-658.96	0.00	0.00	0.00
6,300.00	0.00	0.00	6,244.32	658.96	-94.59	-658.96	0.00	0.00	0.00
6,400.00	0.00	0.00	6,344.32	658.96	-94.59	-658.96	0.00	0.00	0.00
6,500.00	0.00	0.00	6,444.32	658.96	-94.59	-658.96	0.00	0.00	0.00
6,600.00	0.00	0.00	6,544.32	658.96	-94.59	-658.96	0.00	0.00	0.00
6,700.00	0.00	0.00	6,644.32	658.96	-94.59	-658.96	0.00	0.00	0.00
6,800.00	0.00	0.00	6,744.32	658.96	-94.59	-658.96	0.00	0.00	0.00
6,900.00	0.00	0.00	6,844.32	658.96	-94.59	-658.96	0.00	0.00	0.00
7,000.00	0.00	0.00	6,944.32	658.96	-94.59	-658.96	0.00	0.00	0.00
7,030.73	0.00	0.00	6,975.05	658.96	-94.59	-658.96	0.00	0.00	0.00
Start DLS 10.00 TFO 180.00									
7,100.00	6.93	180.00	7,044.15	654.78	-94.59	-654.78	10.00	10.00	0.00
7,200.00	16.93	180.00	7,141.87	634.14	-94.59	-634.14	10.00	10.00	0.00
7,232.84	20.21	180.00	7,173.00	623.68	-94.59	-623.68	10.00	10.00	0.00
Sharon Springs									
7,271.72	24.10	180.00	7,209.00	609.02	-94.59	-609.02	10.00	10.00	0.00
Niobrara A									
7,300.00	26.93	180.00	7,234.52	596.84	-94.59	-596.84	10.00	10.00	0.00
7,384.78	35.41	180.00	7,307.00	553.00	-94.59	-553.00	10.00	10.00	0.00
Niobrara B Chalk									
7,400.00	36.93	180.00	7,319.28	544.02	-94.59	-544.02	10.00	10.00	0.00
7,472.04	44.13	180.00	7,374.00	497.24	-94.59	-497.24	10.00	10.00	0.00
Niobrara C									
7,500.00	46.93	180.00	7,393.59	477.29	-94.59	-477.29	10.00	10.00	0.00
7,600.00	56.93	180.00	7,455.18	398.67	-94.59	-398.67	10.00	10.00	0.00
7,700.00	66.93	180.00	7,502.18	310.54	-94.59	-310.54	10.00	10.00	0.00
7,744.47	71.37	180.00	7,518.00	269.00	-94.59	-269.00	10.00	10.00	0.00
Fort Hays									
7,800.00	76.93	180.00	7,533.16	215.60	-94.59	-215.60	10.00	10.00	0.00

Database:	Denver Sales	Local Co-ordinate Reference:	Well BADDING 13C-2HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5102 & KB 17 @ 5119.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5102 & KB 17 @ 5119.00ft (ASSUMED)
Site:	BADDING 11-35HZ PAD	North Reference:	True
Well:	BADDING 13C-2HZ	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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,854.91	82.42	180.00	7,543.00	161.60	-94.59	-161.60	10.00	10.00	0.00
Codell									
7,900.00	86.93	180.00	7,547.19	116.72	-94.59	-116.72	10.00	10.00	0.00
7,927.73	89.70	180.00	7,548.00	89.00	-94.59	-89.00	10.00	10.00	0.00
Start 7645.31 hold at 7927.73 MD - 7"(2500 FSL 780 FWL)									
8,000.00	89.70	180.00	7,548.38	16.73	-94.59	-16.73	0.00	0.00	0.00
8,100.00	89.70	180.00	7,548.90	-83.27	-94.59	83.27	0.00	0.00	0.00
8,200.00	89.70	180.00	7,549.43	-183.27	-94.59	183.27	0.00	0.00	0.00
8,300.00	89.70	180.00	7,549.95	-283.27	-94.59	283.27	0.00	0.00	0.00
8,400.00	89.70	180.00	7,550.47	-383.26	-94.59	383.26	0.00	0.00	0.00
8,500.00	89.70	180.00	7,551.00	-483.26	-94.59	483.26	0.00	0.00	0.00
8,600.00	89.70	180.00	7,551.52	-583.26	-94.59	583.26	0.00	0.00	0.00
8,700.00	89.70	180.00	7,552.04	-683.26	-94.59	683.26	0.00	0.00	0.00
8,800.00	89.70	180.00	7,552.56	-783.26	-94.59	783.26	0.00	0.00	0.00
8,900.00	89.70	180.00	7,553.09	-883.26	-94.59	883.26	0.00	0.00	0.00
9,000.00	89.70	180.00	7,553.61	-983.26	-94.59	983.26	0.00	0.00	0.00
9,100.00	89.70	180.00	7,554.13	-1,083.25	-94.59	1,083.25	0.00	0.00	0.00
9,200.00	89.70	180.00	7,554.66	-1,183.25	-94.59	1,183.25	0.00	0.00	0.00
9,300.00	89.70	180.00	7,555.18	-1,283.25	-94.59	1,283.25	0.00	0.00	0.00
9,400.00	89.70	180.00	7,555.70	-1,383.25	-94.59	1,383.25	0.00	0.00	0.00
9,500.00	89.70	180.00	7,556.23	-1,483.25	-94.59	1,483.25	0.00	0.00	0.00
9,600.00	89.70	180.00	7,556.75	-1,583.25	-94.59	1,583.25	0.00	0.00	0.00
9,700.00	89.70	180.00	7,557.27	-1,683.25	-94.59	1,683.25	0.00	0.00	0.00
9,800.00	89.70	180.00	7,557.80	-1,783.24	-94.59	1,783.24	0.00	0.00	0.00
9,900.00	89.70	180.00	7,558.32	-1,883.24	-94.59	1,883.24	0.00	0.00	0.00
10,000.00	89.70	180.00	7,558.84	-1,983.24	-94.59	1,983.24	0.00	0.00	0.00
10,100.00	89.70	180.00	7,559.37	-2,083.24	-94.59	2,083.24	0.00	0.00	0.00
10,200.00	89.70	180.00	7,559.89	-2,183.24	-94.59	2,183.24	0.00	0.00	0.00
10,300.00	89.70	180.00	7,560.41	-2,283.24	-94.59	2,283.24	0.00	0.00	0.00
10,400.00	89.70	180.00	7,560.94	-2,383.24	-94.59	2,383.24	0.00	0.00	0.00
10,500.00	89.70	180.00	7,561.46	-2,483.24	-94.59	2,483.24	0.00	0.00	0.00
10,600.00	89.70	180.00	7,561.98	-2,583.23	-94.59	2,583.23	0.00	0.00	0.00
10,700.00	89.70	180.00	7,562.51	-2,683.23	-94.59	2,683.23	0.00	0.00	0.00
10,800.00	89.70	180.00	7,563.03	-2,783.23	-94.59	2,783.23	0.00	0.00	0.00
10,900.00	89.70	180.00	7,563.55	-2,883.23	-94.59	2,883.23	0.00	0.00	0.00
11,000.00	89.70	180.00	7,564.07	-2,983.23	-94.59	2,983.23	0.00	0.00	0.00
11,100.00	89.70	180.00	7,564.60	-3,083.23	-94.59	3,083.23	0.00	0.00	0.00
11,200.00	89.70	180.00	7,565.12	-3,183.23	-94.59	3,183.23	0.00	0.00	0.00
11,300.00	89.70	180.00	7,565.64	-3,283.22	-94.59	3,283.22	0.00	0.00	0.00
11,400.00	89.70	180.00	7,566.17	-3,383.22	-94.59	3,383.22	0.00	0.00	0.00
11,500.00	89.70	180.00	7,566.69	-3,483.22	-94.59	3,483.22	0.00	0.00	0.00
11,600.00	89.70	180.00	7,567.21	-3,583.22	-94.59	3,583.22	0.00	0.00	0.00
11,700.00	89.70	180.00	7,567.74	-3,683.22	-94.59	3,683.22	0.00	0.00	0.00
11,800.00	89.70	180.00	7,568.26	-3,783.22	-94.59	3,783.22	0.00	0.00	0.00
11,900.00	89.70	180.00	7,568.78	-3,883.22	-94.59	3,883.22	0.00	0.00	0.00
12,000.00	89.70	180.00	7,569.31	-3,983.21	-94.59	3,983.21	0.00	0.00	0.00
12,100.00	89.70	180.00	7,569.83	-4,083.21	-94.59	4,083.21	0.00	0.00	0.00
12,200.00	89.70	180.00	7,570.35	-4,183.21	-94.59	4,183.21	0.00	0.00	0.00
12,300.00	89.70	180.00	7,570.88	-4,283.21	-94.59	4,283.21	0.00	0.00	0.00
12,400.00	89.70	180.00	7,571.40	-4,383.21	-94.59	4,383.21	0.00	0.00	0.00
12,500.00	89.70	180.00	7,571.92	-4,483.21	-94.59	4,483.21	0.00	0.00	0.00
12,600.00	89.70	180.00	7,572.45	-4,583.21	-94.59	4,583.21	0.00	0.00	0.00
12,700.00	89.70	180.00	7,572.97	-4,683.21	-94.59	4,683.21	0.00	0.00	0.00
12,800.00	89.70	180.00	7,573.49	-4,783.20	-94.59	4,783.20	0.00	0.00	0.00

Database:	Denver Sales	Local Co-ordinate Reference:	Well BADDING 13C-2HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5102 & KB 17 @ 5119.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5102 & KB 17 @ 5119.00ft (ASSUMED)
Site:	BADDING 11-35HZ PAD	North Reference:	True
Well:	BADDING 13C-2HZ	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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,900.00	89.70	180.00	7,574.02	-4,883.20	-94.59	4,883.20	0.00	0.00	0.00
13,000.00	89.70	180.00	7,574.54	-4,983.20	-94.59	4,983.20	0.00	0.00	0.00
13,100.00	89.70	180.00	7,575.06	-5,083.20	-94.59	5,083.20	0.00	0.00	0.00
13,200.00	89.70	180.00	7,575.58	-5,183.20	-94.59	5,183.20	0.00	0.00	0.00
13,300.00	89.70	180.00	7,576.11	-5,283.20	-94.59	5,283.20	0.00	0.00	0.00
13,400.00	89.70	180.00	7,576.63	-5,383.20	-94.59	5,383.20	0.00	0.00	0.00
13,500.00	89.70	180.00	7,577.15	-5,483.19	-94.59	5,483.19	0.00	0.00	0.00
13,600.00	89.70	180.00	7,577.68	-5,583.19	-94.59	5,583.19	0.00	0.00	0.00
13,700.00	89.70	180.00	7,578.20	-5,683.19	-94.59	5,683.19	0.00	0.00	0.00
13,800.00	89.70	180.00	7,578.72	-5,783.19	-94.59	5,783.19	0.00	0.00	0.00
13,900.00	89.70	180.00	7,579.25	-5,883.19	-94.59	5,883.19	0.00	0.00	0.00
14,000.00	89.70	180.00	7,579.77	-5,983.19	-94.59	5,983.19	0.00	0.00	0.00
14,100.00	89.70	180.00	7,580.29	-6,083.19	-94.59	6,083.19	0.00	0.00	0.00
14,200.00	89.70	180.00	7,580.82	-6,183.18	-94.59	6,183.18	0.00	0.00	0.00
14,300.00	89.70	180.00	7,581.34	-6,283.18	-94.59	6,283.18	0.00	0.00	0.00
14,400.00	89.70	180.00	7,581.86	-6,383.18	-94.59	6,383.18	0.00	0.00	0.00
14,500.00	89.70	180.00	7,582.39	-6,483.18	-94.59	6,483.18	0.00	0.00	0.00
14,600.00	89.70	180.00	7,582.91	-6,583.18	-94.59	6,583.18	0.00	0.00	0.00
14,700.00	89.70	180.00	7,583.43	-6,683.18	-94.59	6,683.18	0.00	0.00	0.00
14,800.00	89.70	180.00	7,583.96	-6,783.18	-94.59	6,783.18	0.00	0.00	0.00
14,900.00	89.70	180.00	7,584.48	-6,883.17	-94.59	6,883.17	0.00	0.00	0.00
15,000.00	89.70	180.00	7,585.00	-6,983.17	-94.59	6,983.17	0.00	0.00	0.00
15,100.00	89.70	180.00	7,585.53	-7,083.17	-94.59	7,083.17	0.00	0.00	0.00
15,200.00	89.70	180.00	7,586.05	-7,183.17	-94.59	7,183.17	0.00	0.00	0.00
15,300.00	89.70	180.00	7,586.57	-7,283.17	-94.59	7,283.17	0.00	0.00	0.00
15,400.00	89.70	180.00	7,587.09	-7,383.17	-94.59	7,383.17	0.00	0.00	0.00
15,500.00	89.70	180.00	7,587.62	-7,483.17	-94.59	7,483.17	0.00	0.00	0.00
15,573.04	89.70	180.00	7,588.00	-7,556.20	-94.59	7,556.20	0.00	0.00	0.00
TD at 15573.04 - PBHL_BADDING 13C-2HZ(1 FSL 780 FWL)									

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_BADDING 13C-2	0.00	0.00	7,588.00	-7,556.20	-94.59	1,270,388.09	3,209,628.67	40.0731750	-104.7509240
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,224.00	1,224.00	9 5/8"	9.625	12.250	
7,927.73	7,548.00	7"(2500 FSL 780 FWL)	7.000	7.500	

Database:	Denver Sales	Local Co-ordinate Reference:	Well BADDING 13C-2HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5102 & KB 17 @ 5119.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5102 & KB 17 @ 5119.00ft (ASSUMED)
Site:	BADDING 11-35HZ PAD	North Reference:	True
Well:	BADDING 13C-2HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,110.00	1,110.00	Fox Hills Base				
4,305.66	4,266.00	Parkman				
4,649.89	4,605.00	Sussex				
7,232.84	7,173.00	Sharon Springs				
7,271.72	7,209.00	Niobrara A				
7,384.78	7,307.00	Niobrara B Chalk				
7,472.04	7,374.00	Niobrara C				
7,744.47	7,518.00	Fort Hays				
7,854.91	7,543.00	Codell				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,360.00	1,360.00	0.00	0.00	Start Build 2.00	
1,859.81	1,857.28	43.05	-6.18	Start 3334.05 hold at 1859.81 MD	
5,193.87	5,140.72	615.91	-88.41	Start Drop -2.00	
5,693.68	5,638.00	658.96	-94.59	Start 1337.05 hold at 5693.68 MD	
7,030.73	6,975.05	658.96	-94.59	Start DLS 10.00 TFO 180.00	
7,927.73	7,548.00	89.00	-94.59	Start 7645.31 hold at 7927.73 MD	
15,573.04	7,588.00	-7,556.20	-94.59	TD at 15573.04	