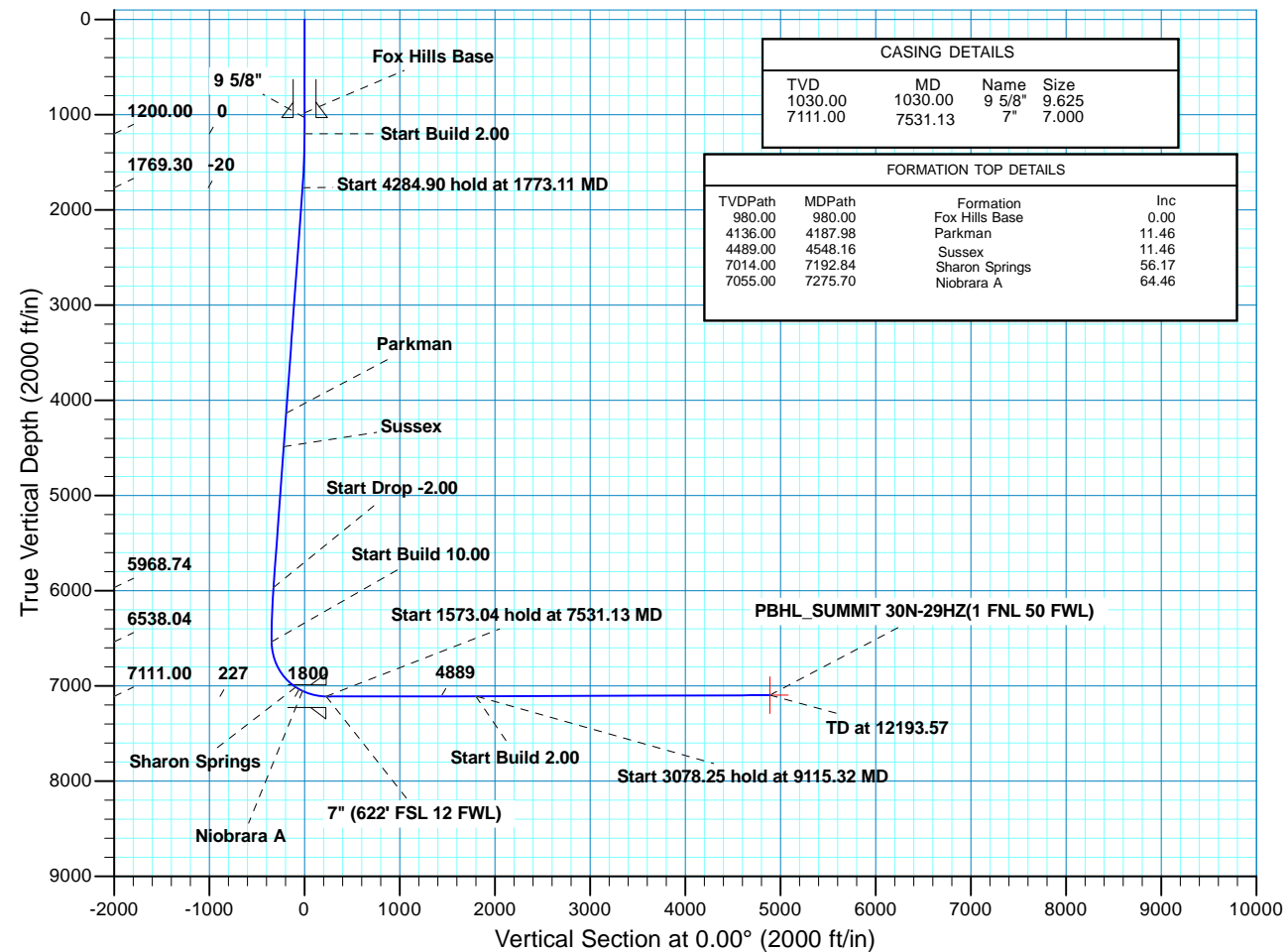
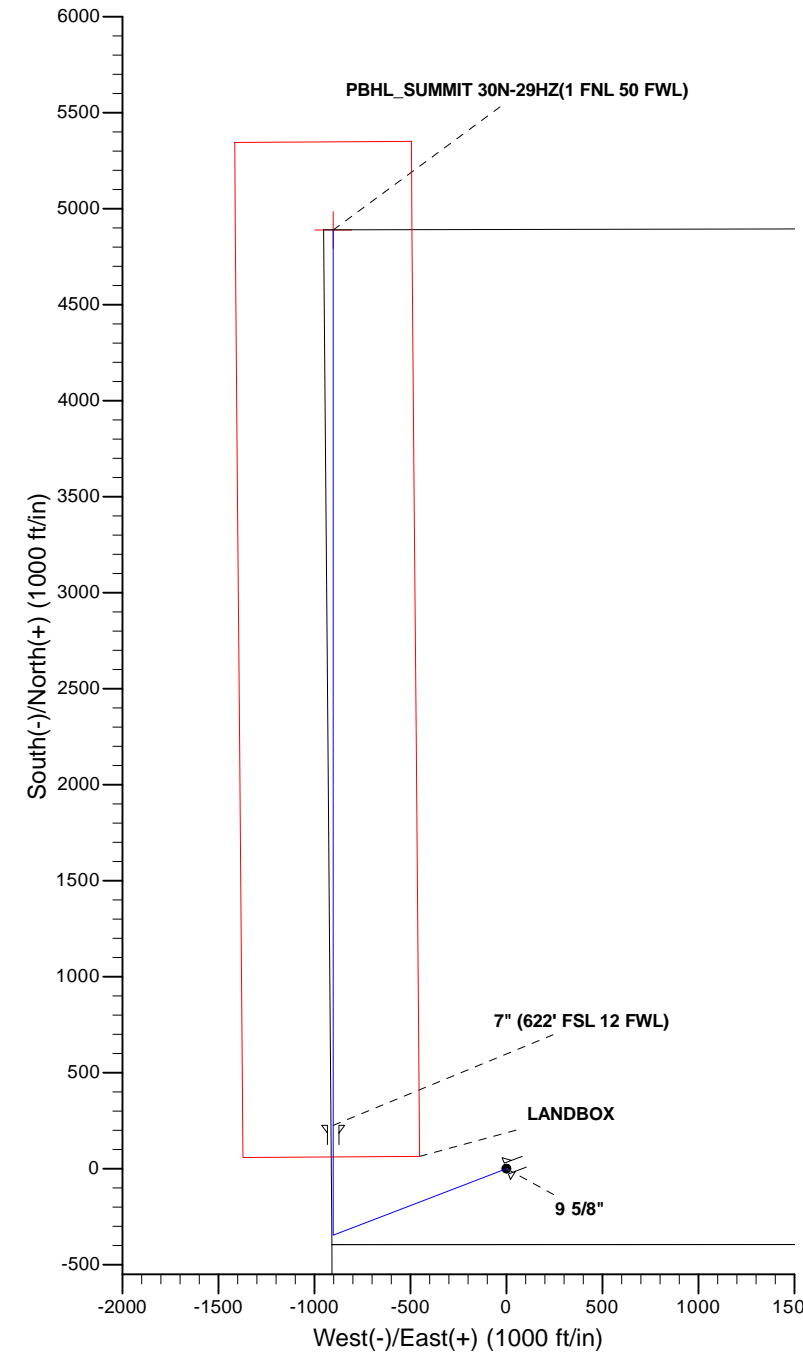


WELL DETAILS: SUMMIT 30N-29HZ									
GL 4945 & KB 17 @ 4962.00ft (ASSUMED)									
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude				
0.00	0.00	1281508.73	3225488.24	40.1033200	-104.6938940				
SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00	0.00	
1773.11	11.46	249.01	1769.30	-20.47	-53.34	2.00	249.01	-20.47	
6058.02	11.46	249.01	5968.74	-325.53	-848.33	0.00	0.00	-325.53	
6631.13	0.00	0.00	6538.04	-346.00	-901.67	2.00	180.00	-346.00	
7531.13	90.00	0.00	7111.00	226.96	-901.67	10.00	0.00	226.96	
9104.17	90.00	0.00	7111.00	1800.00	-901.67	0.00	0.00	1800.00	
9115.32	90.22	0.00	7110.98	1811.15	-901.67	2.00	0.00	1811.15	
12193.57	90.22	0.00	7099.00	4889.38	-901.67	0.00	0.00	4889.38	PBHL_SUMMIT 30N-29HZ(1 FNL 50 FWL)
DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
PBHL	7099.00	4889.38	-901.67	1286389.70	3224542.16	40.1167420	-104.6971180	Point	
- plan hits target center									



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

SUMMIT 13-29HZ PAD

SUMMIT 30N-29HZ

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

04 December, 2013

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SUMMIT 30N-29HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4945 & KB 17 @ 4962.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4945 & KB 17 @ 4962.00ft (ASSUMED)
Site:	SUMMIT 13-29HZ PAD	North Reference:	True
Well:	SUMMIT 30N-29HZ	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	SUMMIT 13-29HZ PAD, SWSW SECTION 29 T2N R65W				
Site Position:	Northing:	1,281,509.82 usft	Latitude:	40.1033200	
From:	Lat/Long	Easting:	3,225,608.24 usft	Longitude:	-104.6934650
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.52 °

Well	SUMMIT 30N-29HZ, 395 FSL 911 FWL					
Well Position	+N/-S	-0.01 ft	Northing:	1,281,508.72 usft	Latitude:	40.1033200
	+E/-W	-120.00 ft	Easting:	3,225,488.25 usft	Longitude:	-104.6938940
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	4,945.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	12/04/13	8.51	66.73	52,645

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	0.00

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	
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,773.11	11.46	249.01	1,769.30	-20.47	-53.34	2.00	2.00	0.00	249.01	
6,058.02	11.46	249.01	5,968.74	-325.53	-848.33	0.00	0.00	0.00	0.00	
6,631.13	0.00	0.00	6,538.04	-346.00	-901.67	2.00	-2.00	0.00	180.00	
7,531.13	90.00	0.00	7,111.00	226.96	-901.67	10.00	10.00	0.00	0.00	
9,104.17	90.00	0.00	7,111.00	1,800.00	-901.67	0.00	0.00	0.00	0.00	
9,115.32	90.22	0.00	7,110.98	1,811.15	-901.67	2.00	2.00	0.00	0.00	
12,193.57	90.22	0.00	7,099.00	4,889.38	-901.67	0.00	0.00	0.00	0.00	PBHL_SUMMIT 30N-

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SUMMIT 30N-29HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4945 & KB 17 @ 4962.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4945 & KB 17 @ 4962.00ft (ASSUMED)
Site:	SUMMIT 13-29HZ PAD	North Reference:	True
Well:	SUMMIT 30N-29HZ	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	
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	
980.00	0.00	0.00	980.00	0.00	0.00	0.00	0.00	0.00	0.00	
Fox Hills Base										
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,030.00	0.00	0.00	1,030.00	0.00	0.00	0.00	0.00	0.00	0.00	
9 5/8"										
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	
Start Build 2.00										
1,300.00	2.00	249.01	1,299.98	-0.63	-1.63	-0.63	2.00	2.00	0.00	
1,400.00	4.00	249.01	1,399.84	-2.50	-6.52	-2.50	2.00	2.00	0.00	
1,500.00	6.00	249.01	1,499.45	-5.62	-14.65	-5.62	2.00	2.00	0.00	
1,600.00	8.00	249.01	1,598.70	-9.99	-26.03	-9.99	2.00	2.00	0.00	
1,700.00	10.00	249.01	1,697.47	-15.59	-40.63	-15.59	2.00	2.00	0.00	
1,773.11	11.46	249.01	1,769.30	-20.47	-53.34	-20.47	2.00	2.00	0.00	
Start 4284.90 hold at 1773.11 MD										
1,800.00	11.46	249.01	1,795.65	-22.38	-58.33	-22.38	0.00	0.00	0.00	
1,900.00	11.46	249.01	1,893.65	-29.50	-76.88	-29.50	0.00	0.00	0.00	
2,000.00	11.46	249.01	1,991.66	-36.62	-95.44	-36.62	0.00	0.00	0.00	
2,100.00	11.46	249.01	2,089.67	-43.74	-113.99	-43.74	0.00	0.00	0.00	
2,200.00	11.46	249.01	2,187.67	-50.86	-132.54	-50.86	0.00	0.00	0.00	
2,300.00	11.46	249.01	2,285.68	-57.98	-151.10	-57.98	0.00	0.00	0.00	
2,400.00	11.46	249.01	2,383.68	-65.10	-169.65	-65.10	0.00	0.00	0.00	
2,500.00	11.46	249.01	2,481.69	-72.22	-188.20	-72.22	0.00	0.00	0.00	
2,600.00	11.46	249.01	2,579.69	-79.34	-206.76	-79.34	0.00	0.00	0.00	
2,700.00	11.46	249.01	2,677.70	-86.46	-225.31	-86.46	0.00	0.00	0.00	
2,800.00	11.46	249.01	2,775.70	-93.58	-243.86	-93.58	0.00	0.00	0.00	
2,900.00	11.46	249.01	2,873.71	-100.70	-262.42	-100.70	0.00	0.00	0.00	
3,000.00	11.46	249.01	2,971.72	-107.82	-280.97	-107.82	0.00	0.00	0.00	
3,100.00	11.46	249.01	3,069.72	-114.94	-299.52	-114.94	0.00	0.00	0.00	
3,200.00	11.46	249.01	3,167.73	-122.06	-318.08	-122.06	0.00	0.00	0.00	
3,300.00	11.46	249.01	3,265.73	-129.18	-336.63	-129.18	0.00	0.00	0.00	
3,400.00	11.46	249.01	3,363.74	-136.29	-355.18	-136.29	0.00	0.00	0.00	
3,500.00	11.46	249.01	3,461.74	-143.41	-373.74	-143.41	0.00	0.00	0.00	
3,600.00	11.46	249.01	3,559.75	-150.53	-392.29	-150.53	0.00	0.00	0.00	
3,700.00	11.46	249.01	3,657.75	-157.65	-410.84	-157.65	0.00	0.00	0.00	
3,800.00	11.46	249.01	3,755.76	-164.77	-429.39	-164.77	0.00	0.00	0.00	
3,900.00	11.46	249.01	3,853.77	-171.89	-447.95	-171.89	0.00	0.00	0.00	
4,000.00	11.46	249.01	3,951.77	-179.01	-466.50	-179.01	0.00	0.00	0.00	
4,100.00	11.46	249.01	4,049.78	-186.13	-485.05	-186.13	0.00	0.00	0.00	
4,187.98	11.46	249.01	4,136.00	-192.39	-501.38	-192.39	0.00	0.00	0.00	
Parkman										
4,200.00	11.46	249.01	4,147.78	-193.25	-503.61	-193.25	0.00	0.00	0.00	
4,300.00	11.46	249.01	4,245.79	-200.37	-522.16	-200.37	0.00	0.00	0.00	
4,400.00	11.46	249.01	4,343.79	-207.49	-540.71	-207.49	0.00	0.00	0.00	

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SUMMIT 30N-29HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4945 & KB 17 @ 4962.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4945 & KB 17 @ 4962.00ft (ASSUMED)
Site:	SUMMIT 13-29HZ PAD	North Reference:	True
Well:	SUMMIT 30N-29HZ	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)
4,500.00	11.46	249.01	4,441.80	-214.61	-559.27	-214.61	0.00	0.00	0.00
4,548.16	11.46	249.01	4,489.00	-218.04	-568.20	-218.04	0.00	0.00	0.00
Sussex									
4,600.00	11.46	249.01	4,539.81	-221.73	-577.82	-221.73	0.00	0.00	0.00
4,700.00	11.46	249.01	4,637.81	-228.85	-596.37	-228.85	0.00	0.00	0.00
4,800.00	11.46	249.01	4,735.82	-235.97	-614.93	-235.97	0.00	0.00	0.00
4,900.00	11.46	249.01	4,833.82	-243.09	-633.48	-243.09	0.00	0.00	0.00
5,000.00	11.46	249.01	4,931.83	-250.21	-652.03	-250.21	0.00	0.00	0.00
5,100.00	11.46	249.01	5,029.83	-257.33	-670.59	-257.33	0.00	0.00	0.00
5,200.00	11.46	249.01	5,127.84	-264.44	-689.14	-264.44	0.00	0.00	0.00
5,300.00	11.46	249.01	5,225.84	-271.56	-707.69	-271.56	0.00	0.00	0.00
5,400.00	11.46	249.01	5,323.85	-278.68	-726.24	-278.68	0.00	0.00	0.00
5,500.00	11.46	249.01	5,421.86	-285.80	-744.80	-285.80	0.00	0.00	0.00
5,600.00	11.46	249.01	5,519.86	-292.92	-763.35	-292.92	0.00	0.00	0.00
5,700.00	11.46	249.01	5,617.87	-300.04	-781.90	-300.04	0.00	0.00	0.00
5,800.00	11.46	249.01	5,715.87	-307.16	-800.46	-307.16	0.00	0.00	0.00
5,900.00	11.46	249.01	5,813.88	-314.28	-819.01	-314.28	0.00	0.00	0.00
6,000.00	11.46	249.01	5,911.88	-321.40	-837.56	-321.40	0.00	0.00	0.00
6,058.02	11.46	249.01	5,968.74	-325.53	-848.33	-325.53	0.00	0.00	0.00
Start Drop -2.00									
6,100.00	10.62	249.01	6,009.95	-328.41	-855.84	-328.41	2.00	-2.00	0.00
6,200.00	8.62	249.01	6,108.54	-334.40	-871.44	-334.40	2.00	-2.00	0.00
6,300.00	6.62	249.01	6,207.65	-339.15	-883.82	-339.15	2.00	-2.00	0.00
6,400.00	4.62	249.01	6,307.16	-342.66	-892.97	-342.66	2.00	-2.00	0.00
6,500.00	2.62	249.01	6,406.96	-344.93	-898.87	-344.93	2.00	-2.00	0.00
6,600.00	0.62	249.01	6,506.91	-345.94	-901.51	-345.94	2.00	-2.00	0.00
6,631.13	0.00	0.00	6,538.04	-346.00	-901.67	-346.00	2.00	-2.00	0.00
Start Build 10.00									
6,700.00	6.89	0.00	6,606.75	-341.87	-901.67	-341.87	10.00	10.00	0.00
6,800.00	16.89	0.00	6,704.48	-321.29	-901.67	-321.29	10.00	10.00	0.00
6,900.00	26.89	0.00	6,797.15	-284.06	-901.67	-284.06	10.00	10.00	0.00
7,000.00	36.89	0.00	6,881.95	-231.31	-901.67	-231.31	10.00	10.00	0.00
7,100.00	46.89	0.00	6,956.30	-164.62	-901.67	-164.62	10.00	10.00	0.00
7,192.84	56.17	0.00	7,014.00	-92.01	-901.67	-92.01	10.00	10.00	0.00
Sharon Springs									
7,200.00	56.89	0.00	7,017.95	-86.04	-901.67	-86.04	10.00	10.00	0.00
7,275.70	64.46	0.00	7,055.00	-20.09	-901.67	-20.09	10.00	10.00	0.00
Niobrara A									
7,300.00	66.89	0.00	7,065.01	2.05	-901.67	2.05	10.00	10.00	0.00
7,400.00	76.89	0.00	7,096.06	96.97	-901.67	96.97	10.00	10.00	0.00
7,500.00	86.89	0.00	7,110.15	195.84	-901.67	195.84	10.00	10.00	0.00
7,531.13	90.00	0.00	7,111.00	226.96	-901.67	226.96	10.00	10.00	0.00
Start 1573.04 hold at 7531.13 MD - 7" (622' FSL 12 FWL)									
7,600.00	90.00	0.00	7,111.00	295.83	-901.67	295.83	0.00	0.00	0.00
7,700.00	90.00	0.00	7,111.00	395.83	-901.67	395.83	0.00	0.00	0.00
7,800.00	90.00	0.00	7,111.00	495.83	-901.67	495.83	0.00	0.00	0.00
7,900.00	90.00	0.00	7,111.00	595.83	-901.67	595.83	0.00	0.00	0.00
8,000.00	90.00	0.00	7,111.00	695.83	-901.67	695.83	0.00	0.00	0.00
8,100.00	90.00	0.00	7,111.00	795.83	-901.67	795.83	0.00	0.00	0.00
8,200.00	90.00	0.00	7,111.00	895.83	-901.67	895.83	0.00	0.00	0.00
8,300.00	90.00	0.00	7,111.00	995.83	-901.67	995.83	0.00	0.00	0.00
8,400.00	90.00	0.00	7,111.00	1,095.83	-901.67	1,095.83	0.00	0.00	0.00
8,500.00	90.00	0.00	7,111.00	1,195.83	-901.67	1,195.83	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SUMMIT 30N-29HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4945 & KB 17 @ 4962.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4945 & KB 17 @ 4962.00ft (ASSUMED)
Site:	SUMMIT 13-29HZ PAD	North Reference:	True
Well:	SUMMIT 30N-29HZ	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)	
8,600.00	90.00	0.00	7,111.00	1,295.83	-901.67	1,295.83	0.00	0.00	0.00	
8,700.00	90.00	0.00	7,111.00	1,395.83	-901.67	1,395.83	0.00	0.00	0.00	
8,800.00	90.00	0.00	7,111.00	1,495.83	-901.67	1,495.83	0.00	0.00	0.00	
8,900.00	90.00	0.00	7,111.00	1,595.83	-901.67	1,595.83	0.00	0.00	0.00	
9,000.00	90.00	0.00	7,111.00	1,695.83	-901.67	1,695.83	0.00	0.00	0.00	
9,100.00	90.00	0.00	7,111.00	1,795.83	-901.67	1,795.83	0.00	0.00	0.00	
9,104.17	90.00	0.00	7,111.00	1,800.00	-901.67	1,800.00	0.00	0.00	0.00	
Start Build 2.00										
9,115.32	90.22	0.00	7,110.98	1,811.15	-901.67	1,811.15	2.00	2.00	0.00	
Start 3078.25 hold at 9115.32 MD										
9,200.00	90.22	0.00	7,110.65	1,895.83	-901.67	1,895.83	0.00	0.00	0.00	
9,300.00	90.22	0.00	7,110.26	1,995.83	-901.67	1,995.83	0.00	0.00	0.00	
9,400.00	90.22	0.00	7,109.87	2,095.83	-901.67	2,095.83	0.00	0.00	0.00	
9,500.00	90.22	0.00	7,109.48	2,195.83	-901.67	2,195.83	0.00	0.00	0.00	
9,600.00	90.22	0.00	7,109.09	2,295.82	-901.67	2,295.82	0.00	0.00	0.00	
9,700.00	90.22	0.00	7,108.70	2,395.82	-901.67	2,395.82	0.00	0.00	0.00	
9,800.00	90.22	0.00	7,108.31	2,495.82	-901.67	2,495.82	0.00	0.00	0.00	
9,900.00	90.22	0.00	7,107.93	2,595.82	-901.67	2,595.82	0.00	0.00	0.00	
10,000.00	90.22	0.00	7,107.54	2,695.82	-901.67	2,695.82	0.00	0.00	0.00	
10,100.00	90.22	0.00	7,107.15	2,795.82	-901.67	2,795.82	0.00	0.00	0.00	
10,200.00	90.22	0.00	7,106.76	2,895.82	-901.67	2,895.82	0.00	0.00	0.00	
10,300.00	90.22	0.00	7,106.37	2,995.82	-901.67	2,995.82	0.00	0.00	0.00	
10,400.00	90.22	0.00	7,105.98	3,095.82	-901.67	3,095.82	0.00	0.00	0.00	
10,500.00	90.22	0.00	7,105.59	3,195.82	-901.67	3,195.82	0.00	0.00	0.00	
10,600.00	90.22	0.00	7,105.20	3,295.82	-901.67	3,295.82	0.00	0.00	0.00	
10,700.00	90.22	0.00	7,104.81	3,395.82	-901.67	3,395.82	0.00	0.00	0.00	
10,800.00	90.22	0.00	7,104.42	3,495.82	-901.67	3,495.82	0.00	0.00	0.00	
10,900.00	90.22	0.00	7,104.03	3,595.82	-901.67	3,595.82	0.00	0.00	0.00	
11,000.00	90.22	0.00	7,103.64	3,695.81	-901.67	3,695.81	0.00	0.00	0.00	
11,100.00	90.22	0.00	7,103.26	3,795.81	-901.67	3,795.81	0.00	0.00	0.00	
11,200.00	90.22	0.00	7,102.87	3,895.81	-901.67	3,895.81	0.00	0.00	0.00	
11,300.00	90.22	0.00	7,102.48	3,995.81	-901.67	3,995.81	0.00	0.00	0.00	
11,400.00	90.22	0.00	7,102.09	4,095.81	-901.67	4,095.81	0.00	0.00	0.00	
11,500.00	90.22	0.00	7,101.70	4,195.81	-901.67	4,195.81	0.00	0.00	0.00	
11,600.00	90.22	0.00	7,101.31	4,295.81	-901.67	4,295.81	0.00	0.00	0.00	
11,700.00	90.22	0.00	7,100.92	4,395.81	-901.67	4,395.81	0.00	0.00	0.00	
11,800.00	90.22	0.00	7,100.53	4,495.81	-901.67	4,495.81	0.00	0.00	0.00	
11,900.00	90.22	0.00	7,100.14	4,595.81	-901.67	4,595.81	0.00	0.00	0.00	
12,000.00	90.22	0.00	7,099.75	4,695.81	-901.67	4,695.81	0.00	0.00	0.00	
12,100.00	90.22	0.00	7,099.36	4,795.81	-901.67	4,795.81	0.00	0.00	0.00	
12,193.57	90.22	0.00	7,099.00	4,889.38	-901.67	4,889.38	0.00	0.00	0.00	
TD at 12193.57 - PBHL_SUMMIT 30N-29HZ(1 FNL 50 FWL)										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
PBHL_SUMMIT 30N-29	0.00	0.00	7,099.00	4,889.38	-901.67	1,286,389.70	3,224,542.17	40.1167420	-104.6971180	
- hit/miss target										
- Shape										
- Point										

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SUMMIT 30N-29HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4945 & KB 17 @ 4962.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4945 & KB 17 @ 4962.00ft (ASSUMED)
Site:	SUMMIT 13-29HZ PAD	North Reference:	True
Well:	SUMMIT 30N-29HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,030.00	1,030.00	9 5/8"	9.625	12.250	
7,531.13	7,111.00	7" (622' FSL 12 FWL)	7.000	7.500	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
980.00	980.00	Fox Hills Base			
4,187.98	4,136.00	Parkman			
4,548.16	4,489.00	Sussex			
7,192.84	7,014.00	Sharon Springs			
7,275.70	7,055.00	Niobrara A			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
1,200.00	1,200.00	0.00	0.00	Start Build 2.00	
1,773.11	1,769.30	-20.47	-53.34	Start 4284.90 hold at 1773.11 MD	
6,058.02	5,968.74	-325.53	-848.33	Start Drop -2.00	
6,631.13	6,538.04	-346.00	-901.67	Start Build 10.00	
7,531.13	7,111.00	226.96	-901.67	Start 1573.04 hold at 7531.13 MD	
9,104.17	7,111.00	1,800.00	-901.67	Start Build 2.00	
9,115.32	7,110.98	1,811.15	-901.67	Start 3078.25 hold at 9115.32 MD	
12,193.57	7,099.00	4,889.38	-901.67	TD at 12193.57	