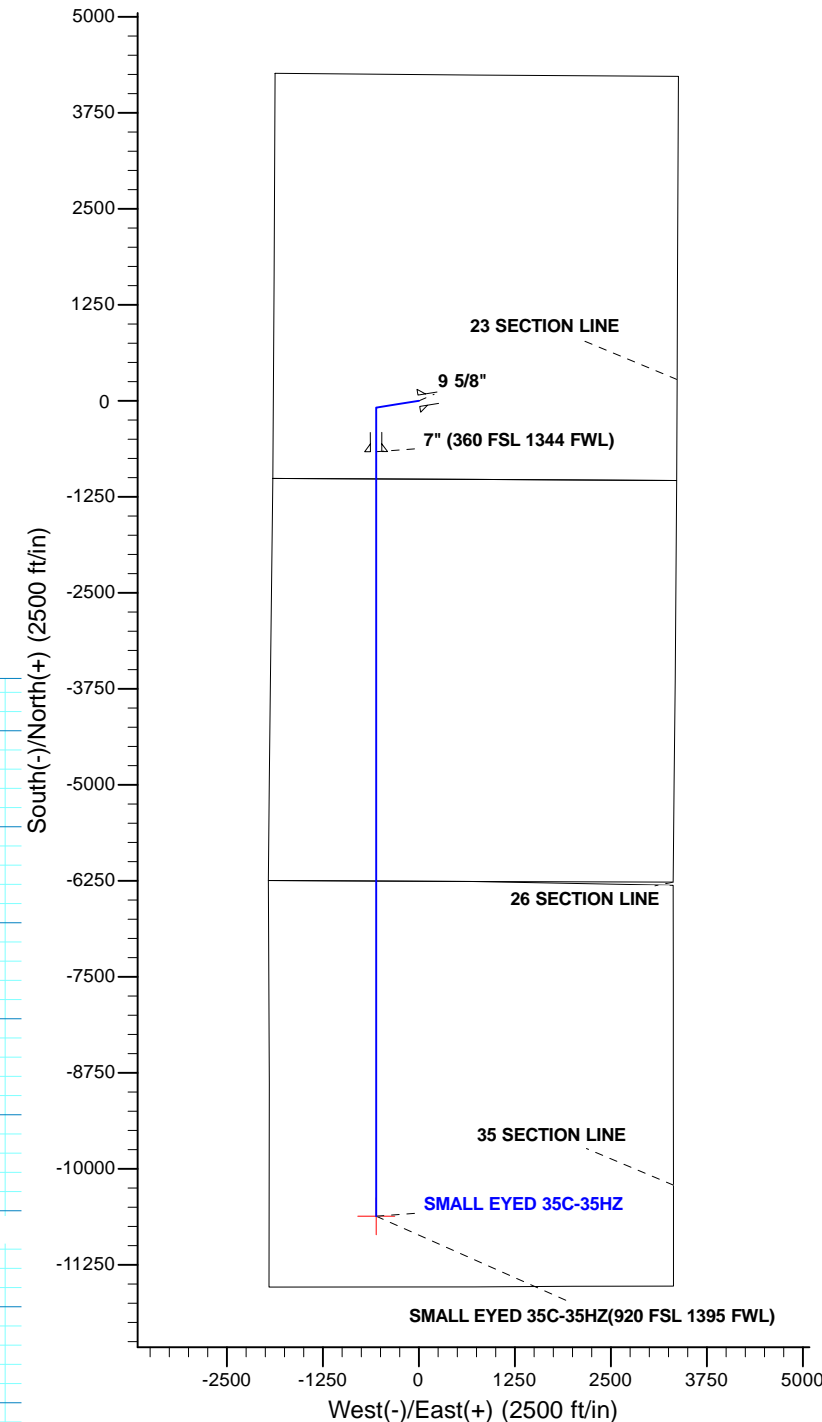
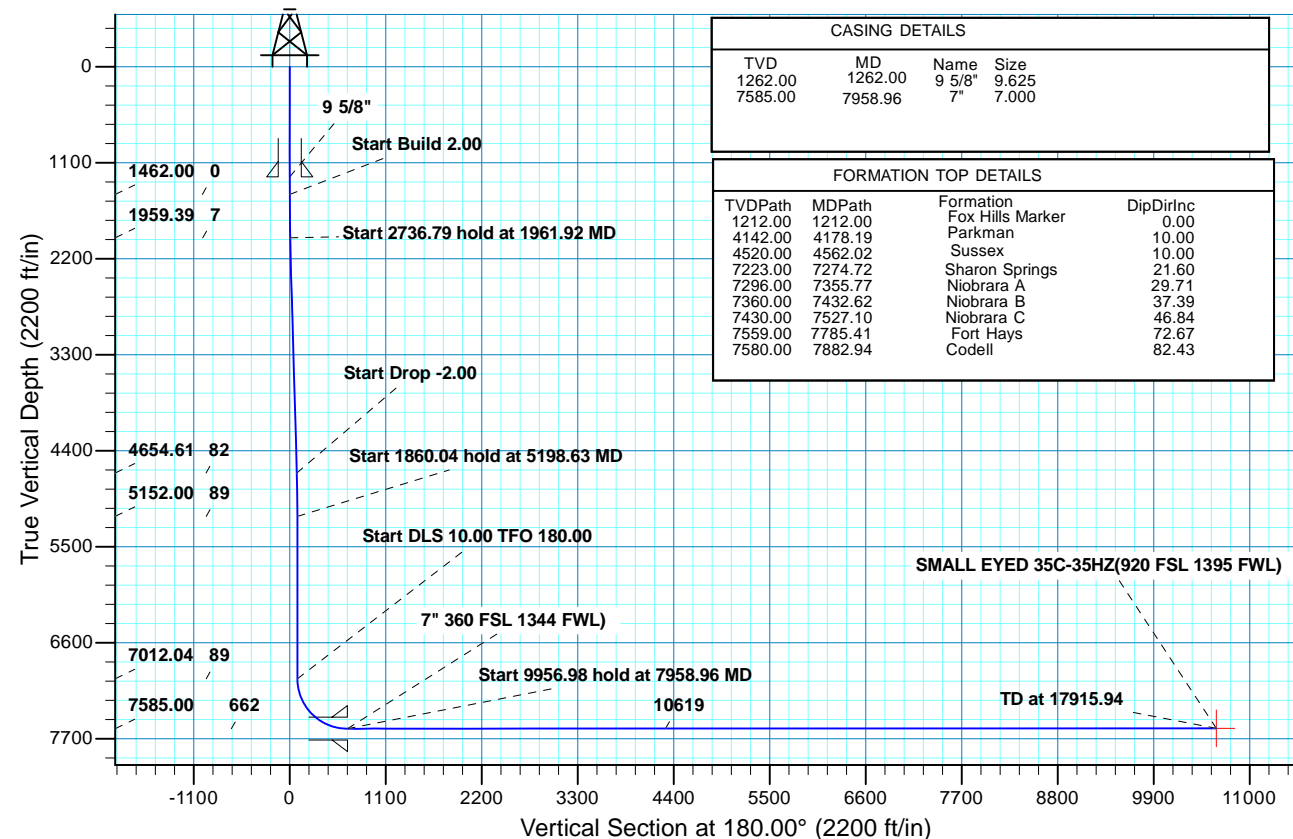


WELL DETAILS: SMALL EYED 35C-35HZ																			
WELL @ 4980.00ft (Original Well Elev)																			
+N/-S 0.00		+E/-W 0.00		Northing 1286907.59		Easting 3178789.59		Latitude 40.1191850		Longitude -104.8606930									
SECTION DETAILS																			
MD		Inc		Azi		TVD		+N/-S		+E/-W		Dleg		TFace		V Sect		Target	
0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00		0.00			
1462.00		0.00		0.00		1462.00		0.00		0.00		0.00		0.00		0.00			
1961.92		10.00		260.91		1959.39		-6.88		-42.96		2.00		260.91		6.88			
4698.71		10.00		260.91		4654.61		-81.98		-512.16		0.00		0.00		81.98			
5198.63		0.00		0.00		5152.00		-88.86		-555.12		2.00		180.00		88.86			
7058.67		0.00		0.00		7012.04		-88.86		-555.12		0.00		0.00		88.86			
7958.96		90.03		180.00		7585.00		-662.10		-555.12		10.00		180.00		662.10			
17915.94		90.03		180.00		7580.00		-10619.08		-555.09		0.00		0.00		10619.08		SMALL EYED 35C-35HZ(920 FSL 1395 FWL)	





Scientific Drilling

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

SMALL EYED 23-23HZ

SMALL EYED 35C-35HZ

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

18 February, 2014

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SMALL EYED 35C-35HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4980.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4980.00ft (Original Well Elev)
Site:	SMALL EYED 23-23HZ	North Reference:	True
Well:	SMALL EYED 35C-35HZ	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	SMALL EYED 23-23HZ, SECTION 23 T2N R67W			
Site Position:		Northing:	1,286,907.66 usft	Latitude: 40.1191840
From:	Lat/Long	Easting:	3,178,849.72 usft	Longitude: -104.8604780
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence: 0.41 °

Well	SMALL EYED 35C-35HZ, 1020' FSL 1895' FWL			
Well Position	+N/-S	0.36 ft	Northing:	1,286,907.59 usft
	+E/-W	-60.13 ft	Easting:	3,178,789.59 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft
			Ground Level:	4,963.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	02/13/14	8.57	66.70	52,612

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 (°/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	
1,462.00	0.00	0.00	1,462.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,961.92	10.00	260.91	1,959.39	-6.88	-42.96	2.00	2.00	0.00	260.91	
4,698.71	10.00	260.91	4,654.61	-81.98	-512.16	0.00	0.00	0.00	0.00	
5,198.63	0.00	0.00	5,152.00	-88.86	-555.12	2.00	-2.00	0.00	180.00	
7,058.67	0.00	0.00	7,012.04	-88.86	-555.12	0.00	0.00	0.00	0.00	
7,958.96	90.03	180.00	7,585.00	-662.10	-555.12	10.00	10.00	19.99	180.00	
17,915.94	90.03	180.00	7,580.00	-10,619.08	-555.09	0.00	0.00	0.00	0.00	SMALL EYED 35C-35

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SMALL EYED 35C-35HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4980.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4980.00ft (Original Well Elev)
Site:	SMALL EYED 23-23HZ	North Reference:	True
Well:	SMALL EYED 35C-35HZ	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
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
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,212.00	0.00	0.00	1,212.00	0.00	0.00	0.00	0.00	0.00	0.00
Fox Hills Marker									
1,262.00	0.00	0.00	1,262.00	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
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,462.00	0.00	0.00	1,462.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
1,500.00	0.76	260.91	1,500.00	-0.04	-0.25	0.04	2.00	2.00	0.00
1,600.00	2.76	260.91	1,599.95	-0.53	-3.28	0.53	2.00	2.00	0.00
1,700.00	4.76	260.91	1,699.73	-1.56	-9.76	1.56	2.00	2.00	0.00
1,800.00	6.76	260.91	1,799.22	-3.15	-19.67	3.15	2.00	2.00	0.00
1,900.00	8.76	260.91	1,898.30	-5.28	-33.00	5.28	2.00	2.00	0.00
1,961.92	10.00	260.91	1,959.39	-6.88	-42.96	6.88	2.00	2.00	0.00
Start 2736.79 hold at 1961.92 MD									
2,000.00	10.00	260.91	1,996.89	-7.92	-49.49	7.92	0.00	0.00	0.00
2,100.00	10.00	260.91	2,095.37	-10.67	-66.63	10.67	0.00	0.00	0.00
2,200.00	10.00	260.91	2,193.85	-13.41	-83.78	13.41	0.00	0.00	0.00
2,300.00	10.00	260.91	2,292.33	-16.15	-100.92	16.15	0.00	0.00	0.00
2,400.00	10.00	260.91	2,390.81	-18.90	-118.07	18.90	0.00	0.00	0.00
2,500.00	10.00	260.91	2,489.29	-21.64	-135.21	21.64	0.00	0.00	0.00
2,600.00	10.00	260.91	2,587.78	-24.39	-152.35	24.39	0.00	0.00	0.00
2,700.00	10.00	260.91	2,686.26	-27.13	-169.50	27.13	0.00	0.00	0.00
2,800.00	10.00	260.91	2,784.74	-29.88	-186.64	29.88	0.00	0.00	0.00
2,900.00	10.00	260.91	2,883.22	-32.62	-203.79	32.62	0.00	0.00	0.00
3,000.00	10.00	260.91	2,981.70	-35.36	-220.93	35.36	0.00	0.00	0.00
3,100.00	10.00	260.91	3,080.18	-38.11	-238.07	38.11	0.00	0.00	0.00
3,200.00	10.00	260.91	3,178.66	-40.85	-255.22	40.85	0.00	0.00	0.00
3,300.00	10.00	260.91	3,277.14	-43.60	-272.36	43.60	0.00	0.00	0.00
3,400.00	10.00	260.91	3,375.63	-46.34	-289.51	46.34	0.00	0.00	0.00
3,500.00	10.00	260.91	3,474.11	-49.08	-306.65	49.08	0.00	0.00	0.00
3,600.00	10.00	260.91	3,572.59	-51.83	-323.79	51.83	0.00	0.00	0.00
3,700.00	10.00	260.91	3,671.07	-54.57	-340.94	54.57	0.00	0.00	0.00
3,800.00	10.00	260.91	3,769.55	-57.32	-358.08	57.32	0.00	0.00	0.00
3,900.00	10.00	260.91	3,868.03	-60.06	-375.23	60.06	0.00	0.00	0.00
4,000.00	10.00	260.91	3,966.51	-62.81	-392.37	62.81	0.00	0.00	0.00
4,100.00	10.00	260.91	4,064.99	-65.55	-409.51	65.55	0.00	0.00	0.00
4,178.19	10.00	260.91	4,142.00	-67.70	-422.92	67.70	0.00	0.00	0.00
Parkman									
4,200.00	10.00	260.91	4,163.48	-68.29	-426.66	68.29	0.00	0.00	0.00
4,300.00	10.00	260.91	4,261.96	-71.04	-443.80	71.04	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SMALL EYED 35C-35HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4980.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4980.00ft (Original Well Elev)
Site:	SMALL EYED 23-23HZ	North Reference:	True
Well:	SMALL EYED 35C-35HZ	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	260.91	4,360.44	-73.78	-460.94	73.78	0.00	0.00	0.00
4,500.00	10.00	260.91	4,458.92	-76.53	-478.09	76.53	0.00	0.00	0.00
4,562.02	10.00	260.91	4,520.00	-78.23	-488.72	78.23	0.00	0.00	0.00
Sussex									
4,600.00	10.00	260.91	4,557.40	-79.27	-495.23	79.27	0.00	0.00	0.00
4,698.71	10.00	260.91	4,654.61	-81.98	-512.16	81.98	0.00	0.00	0.00
Start Drop -2.00									
4,700.00	9.97	260.91	4,655.88	-82.01	-512.38	82.01	2.00	-2.00	0.00
4,800.00	7.97	260.91	4,754.65	-84.48	-527.78	84.48	2.00	-2.00	0.00
4,900.00	5.97	260.91	4,853.91	-86.40	-539.76	86.40	2.00	-2.00	0.00
5,000.00	3.97	260.91	4,953.53	-87.77	-548.32	87.77	2.00	-2.00	0.00
5,100.00	1.97	260.91	5,053.39	-88.59	-553.44	88.59	2.00	-2.00	0.00
5,198.63	0.00	0.00	5,152.00	-88.86	-555.12	88.86	2.00	-2.00	0.00
Start 1860.04 hold at 5198.63 MD									
5,200.00	0.00	0.00	5,153.37	-88.86	-555.12	88.86	0.00	0.00	0.00
5,300.00	0.00	0.00	5,253.37	-88.86	-555.12	88.86	0.00	0.00	0.00
5,400.00	0.00	0.00	5,353.37	-88.86	-555.12	88.86	0.00	0.00	0.00
5,500.00	0.00	0.00	5,453.37	-88.86	-555.12	88.86	0.00	0.00	0.00
5,600.00	0.00	0.00	5,553.37	-88.86	-555.12	88.86	0.00	0.00	0.00
5,700.00	0.00	0.00	5,653.37	-88.86	-555.12	88.86	0.00	0.00	0.00
5,800.00	0.00	0.00	5,753.37	-88.86	-555.12	88.86	0.00	0.00	0.00
5,900.00	0.00	0.00	5,853.37	-88.86	-555.12	88.86	0.00	0.00	0.00
6,000.00	0.00	0.00	5,953.37	-88.86	-555.12	88.86	0.00	0.00	0.00
6,100.00	0.00	0.00	6,053.37	-88.86	-555.12	88.86	0.00	0.00	0.00
6,200.00	0.00	0.00	6,153.37	-88.86	-555.12	88.86	0.00	0.00	0.00
6,300.00	0.00	0.00	6,253.37	-88.86	-555.12	88.86	0.00	0.00	0.00
6,400.00	0.00	0.00	6,353.37	-88.86	-555.12	88.86	0.00	0.00	0.00
6,500.00	0.00	0.00	6,453.37	-88.86	-555.12	88.86	0.00	0.00	0.00
6,600.00	0.00	0.00	6,553.37	-88.86	-555.12	88.86	0.00	0.00	0.00
6,700.00	0.00	0.00	6,653.37	-88.86	-555.12	88.86	0.00	0.00	0.00
6,800.00	0.00	0.00	6,753.37	-88.86	-555.12	88.86	0.00	0.00	0.00
6,900.00	0.00	0.00	6,853.37	-88.86	-555.12	88.86	0.00	0.00	0.00
7,000.00	0.00	0.00	6,953.37	-88.86	-555.12	88.86	0.00	0.00	0.00
7,058.67	0.00	0.00	7,012.04	-88.86	-555.12	88.86	0.00	0.00	0.00
Start DLS 10.00 TFO 180.00									
7,100.00	4.13	180.00	7,053.33	-90.35	-555.12	90.35	10.00	10.00	0.00
7,200.00	14.13	180.00	7,151.94	-106.20	-555.12	106.20	10.00	10.00	0.00
7,274.72	21.60	180.00	7,223.00	-129.11	-555.12	129.11	10.00	10.00	0.00
Sharon Springs									
7,300.00	24.13	180.00	7,246.30	-138.93	-555.12	138.93	10.00	10.00	0.00
7,355.77	29.71	180.00	7,296.00	-164.17	-555.12	164.17	10.00	10.00	0.00
Niobrara A									
7,400.00	34.13	180.00	7,333.53	-187.55	-555.12	187.55	10.00	10.00	0.00
7,432.62	37.39	180.00	7,360.00	-206.62	-555.12	206.62	10.00	10.00	0.00
Niobrara B									
7,500.00	44.13	180.00	7,411.00	-250.59	-555.12	250.59	10.00	10.00	0.00
7,527.10	46.84	180.00	7,430.00	-269.91	-555.12	269.91	10.00	10.00	0.00
Niobrara C									
7,600.00	54.13	180.00	7,476.35	-326.11	-555.12	326.11	10.00	10.00	0.00
7,700.00	64.13	180.00	7,527.59	-411.84	-555.12	411.84	10.00	10.00	0.00
7,785.41	72.67	180.00	7,559.00	-491.18	-555.12	491.18	10.00	10.00	0.00
Fort Hays									
7,800.00	74.13	180.00	7,563.17	-505.16	-555.12	505.16	10.00	10.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SMALL EYED 35C-35HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4980.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4980.00ft (Original Well Elev)
Site:	SMALL EYED 23-23HZ	North Reference:	True
Well:	SMALL EYED 35C-35HZ	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)
7,882.94	82.43	180.00	7,580.00	-586.30	-555.12	586.30	10.00	10.00	0.00
Codell									
7,900.00	84.13	180.00	7,582.00	-603.24	-555.12	603.24	10.00	10.00	0.00
7,958.96	90.03	180.00	7,585.00	-662.10	-555.12	662.10	10.00	10.00	0.00
Start 9956.98 hold at 7958.96 MD - 7" 360 FSL 1344 FWL)									
8,000.00	90.03	180.00	7,584.98	-703.14	-555.12	703.14	0.00	0.00	0.00
8,100.00	90.03	180.00	7,584.93	-803.14	-555.12	803.14	0.00	0.00	0.00
8,200.00	90.03	180.00	7,584.88	-903.14	-555.12	903.14	0.00	0.00	0.00
8,300.00	90.03	180.00	7,584.83	-1,003.14	-555.12	1,003.14	0.00	0.00	0.00
8,400.00	90.03	180.00	7,584.78	-1,103.14	-555.12	1,103.14	0.00	0.00	0.00
8,500.00	90.03	180.00	7,584.73	-1,203.14	-555.12	1,203.14	0.00	0.00	0.00
8,600.00	90.03	180.00	7,584.68	-1,303.14	-555.11	1,303.14	0.00	0.00	0.00
8,700.00	90.03	180.00	7,584.63	-1,403.14	-555.11	1,403.14	0.00	0.00	0.00
8,800.00	90.03	180.00	7,584.58	-1,503.14	-555.11	1,503.14	0.00	0.00	0.00
8,900.00	90.03	180.00	7,584.53	-1,603.14	-555.11	1,603.14	0.00	0.00	0.00
9,000.00	90.03	180.00	7,584.48	-1,703.14	-555.11	1,703.14	0.00	0.00	0.00
9,100.00	90.03	180.00	7,584.43	-1,803.14	-555.11	1,803.14	0.00	0.00	0.00
9,200.00	90.03	180.00	7,584.37	-1,903.14	-555.11	1,903.14	0.00	0.00	0.00
9,300.00	90.03	180.00	7,584.32	-2,003.14	-555.11	2,003.14	0.00	0.00	0.00
9,400.00	90.03	180.00	7,584.27	-2,103.14	-555.11	2,103.14	0.00	0.00	0.00
9,500.00	90.03	180.00	7,584.22	-2,203.14	-555.11	2,203.14	0.00	0.00	0.00
9,600.00	90.03	180.00	7,584.17	-2,303.14	-555.11	2,303.14	0.00	0.00	0.00
9,700.00	90.03	180.00	7,584.12	-2,403.14	-555.11	2,403.14	0.00	0.00	0.00
9,800.00	90.03	180.00	7,584.07	-2,503.14	-555.11	2,503.14	0.00	0.00	0.00
9,900.00	90.03	180.00	7,584.02	-2,603.14	-555.11	2,603.14	0.00	0.00	0.00
10,000.00	90.03	180.00	7,583.97	-2,703.14	-555.11	2,703.14	0.00	0.00	0.00
10,100.00	90.03	180.00	7,583.92	-2,803.14	-555.11	2,803.14	0.00	0.00	0.00
10,200.00	90.03	180.00	7,583.87	-2,903.14	-555.11	2,903.14	0.00	0.00	0.00
10,300.00	90.03	180.00	7,583.82	-3,003.14	-555.11	3,003.14	0.00	0.00	0.00
10,400.00	90.03	180.00	7,583.77	-3,103.14	-555.11	3,103.14	0.00	0.00	0.00
10,500.00	90.03	180.00	7,583.72	-3,203.14	-555.11	3,203.14	0.00	0.00	0.00
10,600.00	90.03	180.00	7,583.67	-3,303.14	-555.11	3,303.14	0.00	0.00	0.00
10,700.00	90.03	180.00	7,583.62	-3,403.14	-555.11	3,403.14	0.00	0.00	0.00
10,800.00	90.03	180.00	7,583.57	-3,503.14	-555.11	3,503.14	0.00	0.00	0.00
10,900.00	90.03	180.00	7,583.52	-3,603.14	-555.11	3,603.14	0.00	0.00	0.00
11,000.00	90.03	180.00	7,583.47	-3,703.14	-555.11	3,703.14	0.00	0.00	0.00
11,100.00	90.03	180.00	7,583.42	-3,803.14	-555.11	3,803.14	0.00	0.00	0.00
11,200.00	90.03	180.00	7,583.37	-3,903.14	-555.11	3,903.14	0.00	0.00	0.00
11,300.00	90.03	180.00	7,583.32	-4,003.14	-555.11	4,003.14	0.00	0.00	0.00
11,400.00	90.03	180.00	7,583.27	-4,103.14	-555.11	4,103.14	0.00	0.00	0.00
11,500.00	90.03	180.00	7,583.22	-4,203.14	-555.11	4,203.14	0.00	0.00	0.00
11,600.00	90.03	180.00	7,583.17	-4,303.14	-555.11	4,303.14	0.00	0.00	0.00
11,700.00	90.03	180.00	7,583.12	-4,403.14	-555.11	4,403.14	0.00	0.00	0.00
11,800.00	90.03	180.00	7,583.07	-4,503.14	-555.11	4,503.14	0.00	0.00	0.00
11,900.00	90.03	180.00	7,583.02	-4,603.14	-555.11	4,603.14	0.00	0.00	0.00
12,000.00	90.03	180.00	7,582.97	-4,703.14	-555.11	4,703.14	0.00	0.00	0.00
12,100.00	90.03	180.00	7,582.92	-4,803.14	-555.11	4,803.14	0.00	0.00	0.00
12,200.00	90.03	180.00	7,582.87	-4,903.14	-555.11	4,903.14	0.00	0.00	0.00
12,300.00	90.03	180.00	7,582.82	-5,003.14	-555.11	5,003.14	0.00	0.00	0.00
12,400.00	90.03	180.00	7,582.77	-5,103.14	-555.11	5,103.14	0.00	0.00	0.00
12,500.00	90.03	180.00	7,582.72	-5,203.14	-555.11	5,203.14	0.00	0.00	0.00
12,600.00	90.03	180.00	7,582.67	-5,303.14	-555.11	5,303.14	0.00	0.00	0.00
12,700.00	90.03	180.00	7,582.62	-5,403.14	-555.10	5,403.14	0.00	0.00	0.00
12,800.00	90.03	180.00	7,582.57	-5,503.14	-555.10	5,503.14	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SMALL EYED 35C-35HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4980.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4980.00ft (Original Well Elev)
Site:	SMALL EYED 23-23HZ	North Reference:	True
Well:	SMALL EYED 35C-35HZ	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)
12,900.00	90.03	180.00	7,582.52	-5,603.14	-555.10	5,603.14	0.00	0.00	0.00
13,000.00	90.03	180.00	7,582.47	-5,703.14	-555.10	5,703.14	0.00	0.00	0.00
13,100.00	90.03	180.00	7,582.42	-5,803.14	-555.10	5,803.14	0.00	0.00	0.00
13,200.00	90.03	180.00	7,582.37	-5,903.14	-555.10	5,903.14	0.00	0.00	0.00
13,300.00	90.03	180.00	7,582.32	-6,003.14	-555.10	6,003.14	0.00	0.00	0.00
13,400.00	90.03	180.00	7,582.27	-6,103.14	-555.10	6,103.14	0.00	0.00	0.00
13,500.00	90.03	180.00	7,582.22	-6,203.14	-555.10	6,203.14	0.00	0.00	0.00
13,600.00	90.03	180.00	7,582.17	-6,303.14	-555.10	6,303.14	0.00	0.00	0.00
13,700.00	90.03	180.00	7,582.12	-6,403.14	-555.10	6,403.14	0.00	0.00	0.00
13,800.00	90.03	180.00	7,582.07	-6,503.14	-555.10	6,503.14	0.00	0.00	0.00
13,900.00	90.03	180.00	7,582.02	-6,603.14	-555.10	6,603.14	0.00	0.00	0.00
14,000.00	90.03	180.00	7,581.97	-6,703.14	-555.10	6,703.14	0.00	0.00	0.00
14,100.00	90.03	180.00	7,581.92	-6,803.14	-555.10	6,803.14	0.00	0.00	0.00
14,200.00	90.03	180.00	7,581.87	-6,903.14	-555.10	6,903.14	0.00	0.00	0.00
14,300.00	90.03	180.00	7,581.82	-7,003.14	-555.10	7,003.14	0.00	0.00	0.00
14,400.00	90.03	180.00	7,581.76	-7,103.14	-555.10	7,103.14	0.00	0.00	0.00
14,500.00	90.03	180.00	7,581.71	-7,203.14	-555.10	7,203.14	0.00	0.00	0.00
14,600.00	90.03	180.00	7,581.66	-7,303.14	-555.10	7,303.14	0.00	0.00	0.00
14,700.00	90.03	180.00	7,581.61	-7,403.14	-555.10	7,403.14	0.00	0.00	0.00
14,800.00	90.03	180.00	7,581.56	-7,503.14	-555.10	7,503.14	0.00	0.00	0.00
14,900.00	90.03	180.00	7,581.51	-7,603.14	-555.10	7,603.14	0.00	0.00	0.00
15,000.00	90.03	180.00	7,581.46	-7,703.14	-555.10	7,703.14	0.00	0.00	0.00
15,100.00	90.03	180.00	7,581.41	-7,803.14	-555.10	7,803.14	0.00	0.00	0.00
15,200.00	90.03	180.00	7,581.36	-7,903.14	-555.10	7,903.14	0.00	0.00	0.00
15,300.00	90.03	180.00	7,581.31	-8,003.14	-555.10	8,003.14	0.00	0.00	0.00
15,400.00	90.03	180.00	7,581.26	-8,103.14	-555.10	8,103.14	0.00	0.00	0.00
15,500.00	90.03	180.00	7,581.21	-8,203.14	-555.10	8,203.14	0.00	0.00	0.00
15,600.00	90.03	180.00	7,581.16	-8,303.14	-555.10	8,303.14	0.00	0.00	0.00
15,700.00	90.03	180.00	7,581.11	-8,403.14	-555.10	8,403.14	0.00	0.00	0.00
15,800.00	90.03	180.00	7,581.06	-8,503.14	-555.10	8,503.14	0.00	0.00	0.00
15,900.00	90.03	180.00	7,581.01	-8,603.14	-555.10	8,603.14	0.00	0.00	0.00
16,000.00	90.03	180.00	7,580.96	-8,703.14	-555.10	8,703.14	0.00	0.00	0.00
16,100.00	90.03	180.00	7,580.91	-8,803.14	-555.10	8,803.14	0.00	0.00	0.00
16,200.00	90.03	180.00	7,580.86	-8,903.14	-555.10	8,903.14	0.00	0.00	0.00
16,300.00	90.03	180.00	7,580.81	-9,003.14	-555.10	9,003.14	0.00	0.00	0.00
16,400.00	90.03	180.00	7,580.76	-9,103.14	-555.10	9,103.14	0.00	0.00	0.00
16,500.00	90.03	180.00	7,580.71	-9,203.14	-555.10	9,203.14	0.00	0.00	0.00
16,600.00	90.03	180.00	7,580.66	-9,303.14	-555.10	9,303.14	0.00	0.00	0.00
16,700.00	90.03	180.00	7,580.61	-9,403.14	-555.10	9,403.14	0.00	0.00	0.00
16,800.00	90.03	180.00	7,580.56	-9,503.14	-555.09	9,503.14	0.00	0.00	0.00
16,900.00	90.03	180.00	7,580.51	-9,603.14	-555.09	9,603.14	0.00	0.00	0.00
17,000.00	90.03	180.00	7,580.46	-9,703.14	-555.09	9,703.14	0.00	0.00	0.00
17,100.00	90.03	180.00	7,580.41	-9,803.14	-555.09	9,803.14	0.00	0.00	0.00
17,200.00	90.03	180.00	7,580.36	-9,903.14	-555.09	9,903.14	0.00	0.00	0.00
17,300.00	90.03	180.00	7,580.31	-10,003.14	-555.09	10,003.14	0.00	0.00	0.00
17,400.00	90.03	180.00	7,580.26	-10,103.14	-555.09	10,103.14	0.00	0.00	0.00
17,500.00	90.03	180.00	7,580.21	-10,203.14	-555.09	10,203.14	0.00	0.00	0.00
17,600.00	90.03	180.00	7,580.16	-10,303.14	-555.09	10,303.14	0.00	0.00	0.00
17,700.00	90.03	180.00	7,580.11	-10,403.14	-555.09	10,403.14	0.00	0.00	0.00
17,800.00	90.03	180.00	7,580.06	-10,503.14	-555.09	10,503.14	0.00	0.00	0.00
17,900.00	90.03	180.00	7,580.01	-10,603.14	-555.09	10,603.14	0.00	0.00	0.00
17,915.94	90.03	180.00	7,580.00	-10,619.08	-555.09	10,619.08	0.00	0.00	0.00
TD at 17915.94 - SMALL EYED 35C-35HZ(920 FSL 1395 FWL)									

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well SMALL EYED 35C-35HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	WELL @ 4980.00ft (Original Well Elev)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	WELL @ 4980.00ft (Original Well Elev)
Site:	SMALL EYED 23-23HZ	North Reference:	True
Well:	SMALL EYED 35C-35HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
SMALL EYED 35C-35HZ	0.00	0.00	7,580.00	-10,619.08	-555.09	1,276,284.80	3,178,311.07	40.0900340	-104.8626770
- plan hits target center									
- Point									

Casing Points					
Measured Depth	Vertical Depth	Name		Casing Diameter	Hole Diameter
(ft)	(ft)			(in)	(in)
1,262.00	1,262.00	9 5/8"		9.625	12.250
7,958.96	7,585.00	7" 360 FSL 1344 FWL)		7.000	7.500

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
1,212.00	1,212.00	Fox Hills Marker				
4,178.19	4,142.00	Parkman				
4,562.02	4,520.00	Sussex				
7,274.72	7,223.00	Sharon Springs				
7,355.77	7,296.00	Niobrara A				
7,432.62	7,360.00	Niobrara B				
7,527.10	7,430.00	Niobrara C				
7,785.41	7,559.00	Fort Hays				
7,882.94	7,580.00	Codell				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(ft)	(ft)	+N/-S	+E/-W	Comment	
(ft)	(ft)	(ft)	(ft)		
1,462.00	1,462.00	0.00	0.00	Start Build 2.00	
1,961.92	1,959.39	-6.88	-42.96	Start 2736.79 hold at 1961.92 MD	
4,698.71	4,654.61	-81.98	-512.16	Start Drop -2.00	
5,198.63	5,152.00	-88.86	-555.12	Start 1860.04 hold at 5198.63 MD	
7,058.67	7,012.04	-88.86	-555.12	Start DLS 10.00 TFO 180.00	
7,958.96	7,585.00	-662.10	-555.12	Start 9956.98 hold at 7958.96 MD	
17,915.94	7,580.00	-10,619.08	-555.09	TD at 17915.94	