

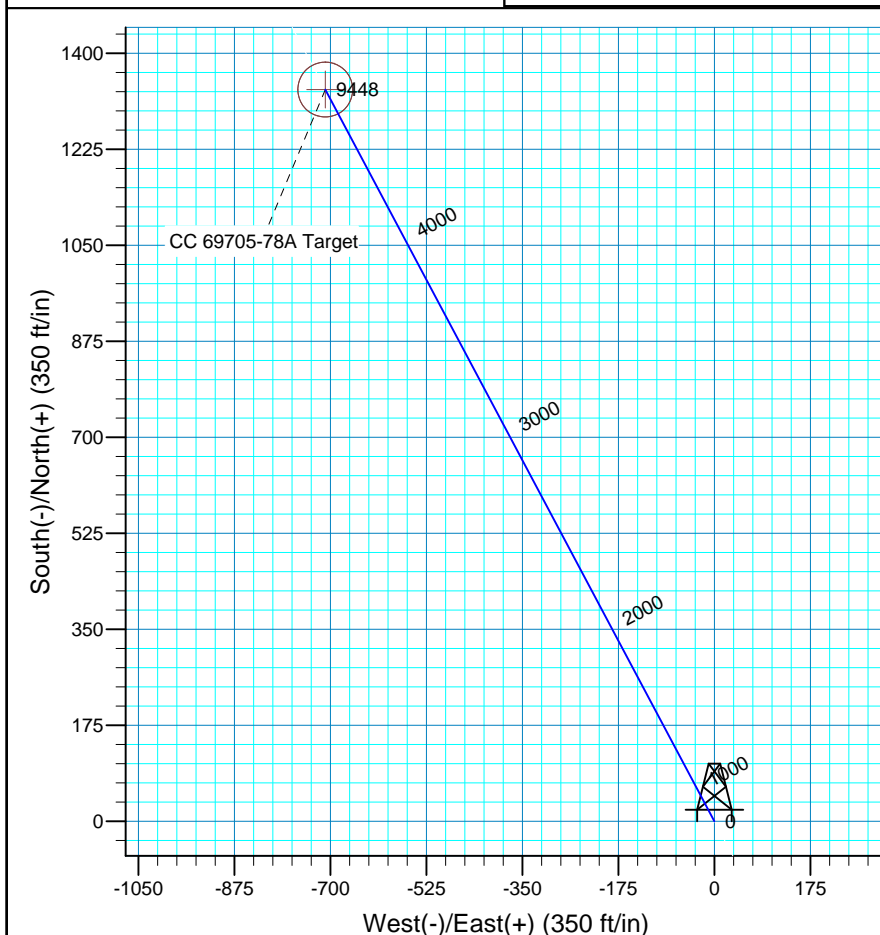
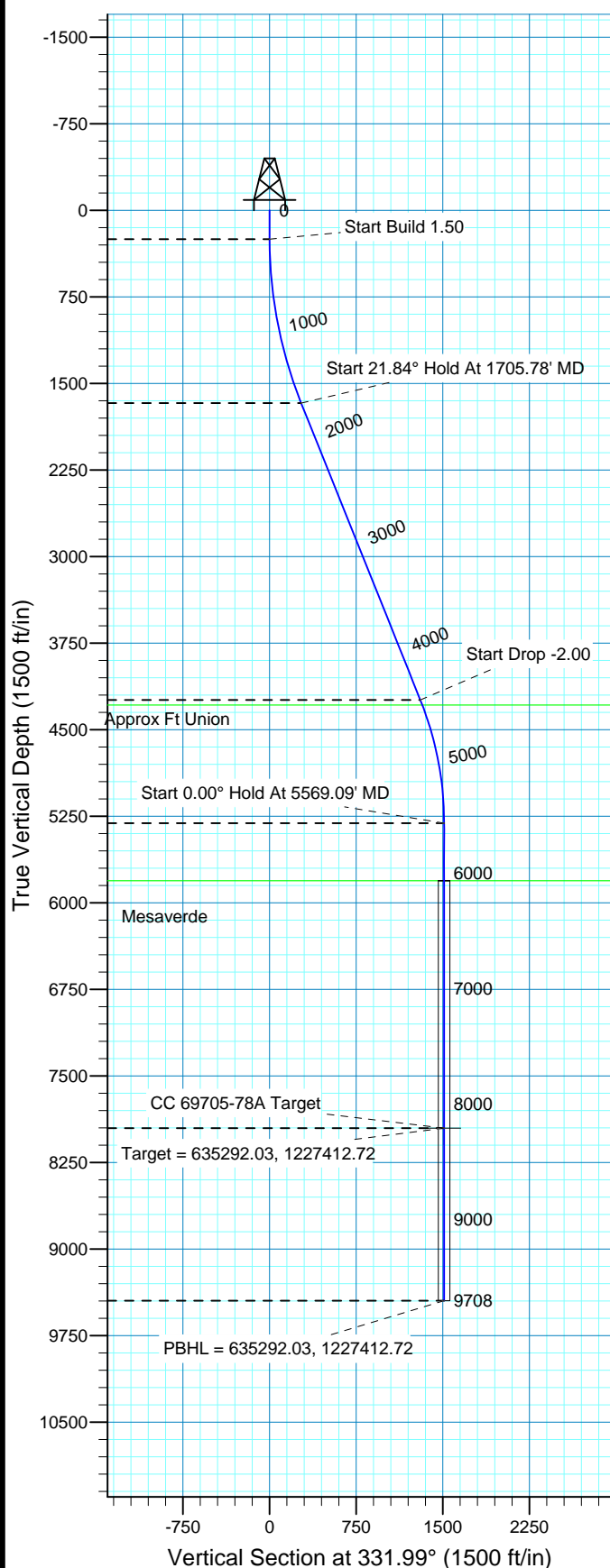
WELL DETAILS: CC 697-05-78A

+N/-S	+E/-W	GL 8411' & RKB 30' @ 8441.00ft	8411.00		
		Northing	Easting	Latitude	Longitude
0.00	0.00	633937.68	1228081.57	39° 32' 31.370 N	108° 14' 14.959 W



Azimuths to True North
Magnetic North: 10.79°

Magnetic Field
Strength: 52514.9snT
Dip Angle: 65.81°
Date: 2008/10/15
Model: IGRF2005-10



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4286.00	4523.00	Approx Ft Union
5809.00	6069.09	Mesaverde

Plan: Plan #3 (CC 697-05-78A/OH)

Created By: Rex Hall Date: 2010-06-23

PROJECT DETAILS: Garfield County, CO NAD27

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Colorado Central 502

System Datum: Mean Sea Level
Local North: No north reference data is available

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	1705.78	21.84	331.99	1670.80	241.97	-128.71	1.50	331.99	274.07	
4	4477.25	21.84	331.99	4243.40	1152.11	-612.83	0.00	0.00	1304.96	
5	5569.09	0.00	0.00	5309.00	1333.59	-709.36	2.00	180.00	1510.52	
6	8213.09	0.00	0.00	7953.00	1333.59	-709.36	0.00	0.00	1510.52	CC 69705-78A Target
7	9708.09	0.00	0.00	9448.00	1333.59	-709.36	0.00	0.00	1510.52	



OXY USA RMAT

Garfield County, CO NAD27

Cascade Creek 608-41 Pad

CC 697-05-78A

OH

Plan: Plan #3

Standard Planning Report

23 June, 2010



Database:	EDM 2003.16 Multi-User Db	Local Co-ordinate Reference:	Well CC 697-05-78A
Company:	OXY USA RMAT	TVD Reference:	GL 8411' & RKB 30' @ 8441.00ft
Project:	Garfield County, CO NAD27	MD Reference:	GL 8411' & RKB 30' @ 8441.00ft
Site:	Cascade Creek 608-41 Pad	North Reference:	True
Well:	CC 697-05-78A	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3		

Project	Garfield County, CO NAD27		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Colorado Central 502		

Site	Cascade Creek 608-41 Pad, SEction 8 T6S R97W		
Site Position:		Northing:	633,966.94 ft
From:	Map	Easting:	1,228,168.67 ft
Position Uncertainty:	0.00 ft	Slot Radius:	in
		Latitude:	39° 32' 31.685 N
		Longitude:	108° 14' 13.859 W
		Grid Convergence:	-1.73 °

Well	CC 697-05-78A,		
Well Position	+N/-S	0.00 ft	Northing:
	+E/-W	0.00 ft	Easting:
Position Uncertainty	0.00 ft		Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2005-10	2008/10/15	10.79	65.81	52,515

Design	Plan #3			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.00	0.00	0.00	331.99

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,705.78	21.84	331.99	1,670.80	241.97	-128.71	1.50	1.50	0.00	331.99	
4,477.25	21.84	331.99	4,243.40	1,152.11	-612.83	0.00	0.00	0.00	0.00	
5,569.09	0.00	0.00	5,309.00	1,333.59	-709.36	2.00	-2.00	0.00	180.00	
8,213.09	0.00	0.00	7,953.00	1,333.59	-709.36	0.00	0.00	0.00	0.00	CC 69705-78A Target
9,708.09	0.00	0.00	9,448.00	1,333.59	-709.36	0.00	0.00	0.00	0.00	

Database:	EDM 2003.16 Multi-User Db	Local Co-ordinate Reference:	Well CC 697-05-78A
Company:	OXY USA RMAT	TVD Reference:	GL 8411' & RKB 30' @ 8441.00ft
Project:	Garfield County, CO NAD27	MD Reference:	GL 8411' & RKB 30' @ 8441.00ft
Site:	Cascade Creek 608-41 Pad	North Reference:	True
Well:	CC 697-05-78A	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3		

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
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 1.50									
300.00	0.75	331.99	300.00	0.29	-0.15	0.33	1.50	1.50	0.00
400.00	2.25	331.99	399.96	2.60	-1.38	2.94	1.50	1.50	0.00
500.00	3.75	331.99	499.82	7.22	-3.84	8.18	1.50	1.50	0.00
600.00	5.25	331.99	599.51	14.15	-7.53	16.02	1.50	1.50	0.00
700.00	6.75	331.99	698.96	23.38	-12.43	26.48	1.50	1.50	0.00
800.00	8.25	331.99	798.10	34.90	-18.56	39.53	1.50	1.50	0.00
900.00	9.75	331.99	896.87	48.71	-25.91	55.17	1.50	1.50	0.00
1,000.00	11.25	331.99	995.19	64.80	-34.47	73.39	1.50	1.50	0.00
1,100.00	12.75	331.99	1,093.00	83.15	-44.23	94.19	1.50	1.50	0.00
1,200.00	14.25	331.99	1,190.24	103.76	-55.19	117.53	1.50	1.50	0.00
1,300.00	15.75	331.99	1,286.83	126.61	-67.35	143.41	1.50	1.50	0.00
1,400.00	17.25	331.99	1,382.71	151.69	-80.69	171.81	1.50	1.50	0.00
1,500.00	18.75	331.99	1,477.81	178.97	-95.20	202.71	1.50	1.50	0.00
1,600.00	20.25	331.99	1,572.07	208.44	-110.87	236.09	1.50	1.50	0.00
1,700.00	21.75	331.99	1,665.43	240.08	-127.70	271.93	1.50	1.50	0.00
1,705.78	21.84	331.99	1,670.80	241.97	-128.71	274.07	1.50	1.50	0.00
Start 21.84° Hold At 1705.78' MD									
1,800.00	21.84	331.99	1,758.25	272.91	-145.17	309.12	0.00	0.00	0.00
1,900.00	21.84	331.99	1,851.08	305.75	-162.64	346.32	0.00	0.00	0.00
2,000.00	21.84	331.99	1,943.90	338.59	-180.10	383.51	0.00	0.00	0.00
2,100.00	21.84	331.99	2,036.73	371.43	-197.57	420.71	0.00	0.00	0.00
2,200.00	21.84	331.99	2,129.55	404.27	-215.04	457.91	0.00	0.00	0.00
2,300.00	21.84	331.99	2,222.38	437.11	-232.51	495.10	0.00	0.00	0.00
2,400.00	21.84	331.99	2,315.20	469.95	-249.97	532.30	0.00	0.00	0.00
2,500.00	21.84	331.99	2,408.02	502.79	-267.44	569.49	0.00	0.00	0.00
2,600.00	21.84	331.99	2,500.85	535.63	-284.91	606.69	0.00	0.00	0.00
2,700.00	21.84	331.99	2,593.67	568.47	-302.38	643.89	0.00	0.00	0.00
2,800.00	21.84	331.99	2,686.50	601.31	-319.85	681.08	0.00	0.00	0.00
2,900.00	21.84	331.99	2,779.32	634.15	-337.31	718.28	0.00	0.00	0.00
3,000.00	21.84	331.99	2,872.15	666.99	-354.78	755.48	0.00	0.00	0.00
3,100.00	21.84	331.99	2,964.97	699.83	-372.25	792.67	0.00	0.00	0.00
3,200.00	21.84	331.99	3,057.80	732.67	-389.72	829.87	0.00	0.00	0.00
3,300.00	21.84	331.99	3,150.62	765.51	-407.19	867.07	0.00	0.00	0.00
3,400.00	21.84	331.99	3,243.45	798.35	-424.65	904.26	0.00	0.00	0.00
3,500.00	21.84	331.99	3,336.27	831.19	-442.12	941.46	0.00	0.00	0.00
3,600.00	21.84	331.99	3,429.10	864.03	-459.59	978.65	0.00	0.00	0.00
3,700.00	21.84	331.99	3,521.92	896.87	-477.06	1,015.85	0.00	0.00	0.00
3,800.00	21.84	331.99	3,614.75	929.71	-494.53	1,053.05	0.00	0.00	0.00
3,900.00	21.84	331.99	3,707.57	962.54	-511.99	1,090.24	0.00	0.00	0.00
4,000.00	21.84	331.99	3,800.40	995.38	-529.46	1,127.44	0.00	0.00	0.00
4,100.00	21.84	331.99	3,893.22	1,028.22	-546.93	1,164.64	0.00	0.00	0.00
4,200.00	21.84	331.99	3,986.05	1,061.06	-564.40	1,201.83	0.00	0.00	0.00
4,300.00	21.84	331.99	4,078.87	1,093.90	-581.87	1,239.03	0.00	0.00	0.00
4,400.00	21.84	331.99	4,171.69	1,126.74	-599.33	1,276.22	0.00	0.00	0.00
4,477.25	21.84	331.99	4,243.40	1,152.11	-612.83	1,304.96	0.00	0.00	0.00
Start Drop -2.00									
4,500.00	21.38	331.99	4,264.55	1,159.51	-616.76	1,313.34	2.00	-2.00	0.00
4,523.00	20.92	331.99	4,286.00	1,166.83	-620.66	1,321.64	2.00	-2.00	0.00

Database:	EDM 2003.16 Multi-User Db	Local Co-ordinate Reference:	Well CC 697-05-78A
Company:	OXY USA RMAT	TVD Reference:	GL 8411' & RKB 30' @ 8441.00ft
Project:	Garfield County, CO NAD27	MD Reference:	GL 8411' & RKB 30' @ 8441.00ft
Site:	Cascade Creek 608-41 Pad	North Reference:	True
Well:	CC 697-05-78A	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3		

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)
Approx Ft Union									
4,600.00	19.38	331.99	4,358.29	1,190.25	-633.12	1,348.16	2.00	-2.00	0.00
4,700.00	17.38	331.99	4,453.18	1,218.09	-647.93	1,379.70	2.00	-2.00	0.00
4,800.00	15.38	331.99	4,549.12	1,242.99	-661.17	1,407.90	2.00	-2.00	0.00
4,900.00	13.38	331.99	4,645.98	1,264.92	-672.83	1,432.74	2.00	-2.00	0.00
5,000.00	11.38	331.99	4,743.65	1,283.85	-682.90	1,454.18	2.00	-2.00	0.00
5,100.00	9.38	331.99	4,842.00	1,299.76	-691.36	1,472.20	2.00	-2.00	0.00
5,200.00	7.38	331.99	4,940.93	1,312.63	-698.21	1,486.77	2.00	-2.00	0.00
5,300.00	5.38	331.99	5,040.31	1,322.44	-703.43	1,497.89	2.00	-2.00	0.00
5,400.00	3.38	331.99	5,140.01	1,329.19	-707.02	1,505.53	2.00	-2.00	0.00
5,500.00	1.38	331.99	5,239.92	1,332.86	-708.97	1,509.68	2.00	-2.00	0.00
5,569.09	0.00	0.00	5,309.00	1,333.59	-709.36	1,510.52	2.00	-2.00	0.00
Start 0.00° Hold At 5569.09' MD									
5,600.00	0.00	0.00	5,339.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
5,700.00	0.00	0.00	5,439.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
5,800.00	0.00	0.00	5,539.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
5,900.00	0.00	0.00	5,639.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
6,000.00	0.00	0.00	5,739.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
6,069.09	0.00	0.00	5,809.00	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
Mesaverde									
6,100.00	0.00	0.00	5,839.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
6,200.00	0.00	0.00	5,939.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
6,300.00	0.00	0.00	6,039.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
6,400.00	0.00	0.00	6,139.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
6,500.00	0.00	0.00	6,239.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
6,600.00	0.00	0.00	6,339.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
6,700.00	0.00	0.00	6,439.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
6,800.00	0.00	0.00	6,539.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
6,900.00	0.00	0.00	6,639.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
7,000.00	0.00	0.00	6,739.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
7,100.00	0.00	0.00	6,839.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
7,200.00	0.00	0.00	6,939.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
7,300.00	0.00	0.00	7,039.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
7,400.00	0.00	0.00	7,139.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
7,500.00	0.00	0.00	7,239.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
7,600.00	0.00	0.00	7,339.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
7,700.00	0.00	0.00	7,439.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
7,800.00	0.00	0.00	7,539.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
7,900.00	0.00	0.00	7,639.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
8,000.00	0.00	0.00	7,739.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
8,100.00	0.00	0.00	7,839.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
8,200.00	0.00	0.00	7,939.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
8,213.09	0.00	0.00	7,953.00	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
Target = 635292.03, 1227412.72 - CC 69705-78A Target									
8,300.00	0.00	0.00	8,039.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
8,400.00	0.00	0.00	8,139.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
8,500.00	0.00	0.00	8,239.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
8,600.00	0.00	0.00	8,339.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
8,700.00	0.00	0.00	8,439.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
8,800.00	0.00	0.00	8,539.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
8,900.00	0.00	0.00	8,639.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
9,000.00	0.00	0.00	8,739.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
9,100.00	0.00	0.00	8,839.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00

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Project:	Garfield County, CO NAD27	MD Reference:	GL 8411' & RKB 30' @ 8441.00ft
Site:	Cascade Creek 608-41 Pad	North Reference:	True
Well:	CC 697-05-78A	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #3		

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)
9,200.00	0.00	0.00	8,939.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
9,300.00	0.00	0.00	9,039.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
9,400.00	0.00	0.00	9,139.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
9,500.00	0.00	0.00	9,239.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
9,600.00	0.00	0.00	9,339.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
9,700.00	0.00	0.00	9,439.91	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
9,708.09	0.00	0.00	9,448.00	1,333.59	-709.36	1,510.52	0.00	0.00	0.00
PBHL = 635292.03, 1227412.72									

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
CC 69705-78A Target	0.00	329.98	7,953.00	1,333.59	-709.36	635,292.03	1,227,412.72	39° 32' 44.551 N	108° 14' 24.015 W
- plan hits target center									
- Circle (radius 50.00)									

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,523.00	4,286.00	Approx Ft Union		0.00		
6,069.09	5,809.00	Mesaverde		0.00		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
250.00	250.00	0.00	0.00	Start Build 1.50
1,705.78	1,670.80	241.97	-128.71	Start 21.84° Hold At 1705.78' MD
4,477.25	4,243.40	1,152.11	-612.83	Start Drop -2.00
5,569.09	5,309.00	1,333.59	-709.36	Start 0.00° Hold At 5569.09' MD
8,213.09	7,953.00	1,333.59	-709.36	Target = 635292.03, 1227412.72
9,708.09	9,448.00	1,333.59	-709.36	PBHL = 635292.03, 1227412.72