

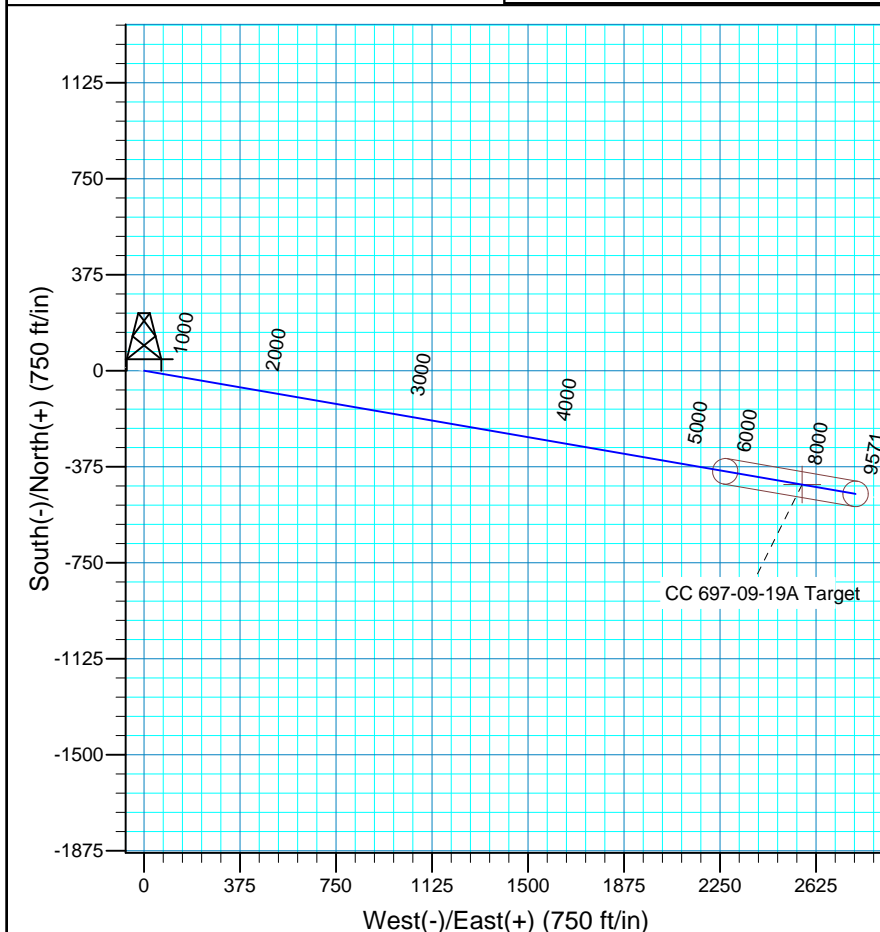
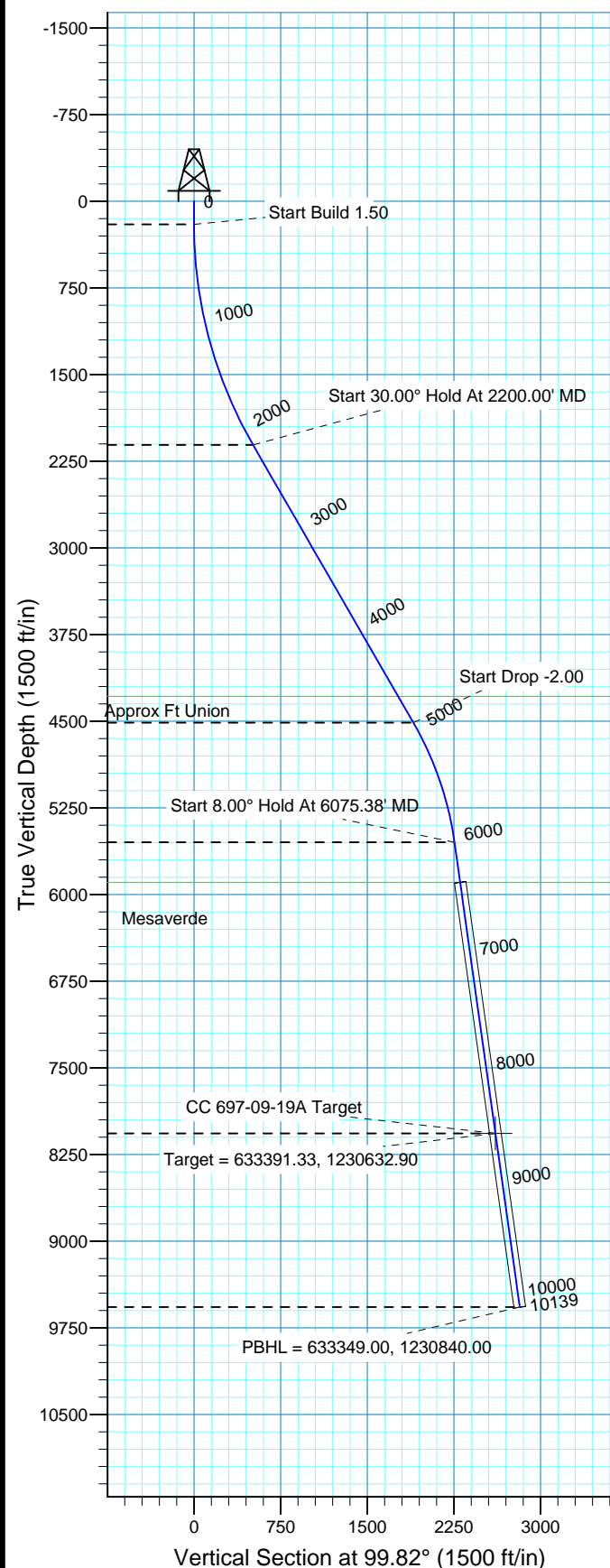
WELL DETAILS: CC 697-09-19A

GL 8411' & RKB 30' @ 8441.00ft 8411.00
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.00 0.00 633913.84 1228076.25 39° 32' 31.133 N 108° 14' 15.018 W



Azimuths to True North
Magnetic North: 10.63°

Magnetic Field
Strength: 52397.4snT
Dip Angle: 65.78°
Date: 2009/12/31
Model: IGRF2005-10



FORMATION TOP DETAILS

TVDPath MDPATH Formation
4286.00 4712.79 Approx Ft Union
5895.00 6426.70 Mesaverde

Plan: Plan #1 (CC 697-09-19A/OH)

Created By: Rex Hall Date: 2010-06-24

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	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	2200.00	30.00	99.82	2109.86	-87.32	504.24	1.50	99.82	511.75	
4	4975.38	30.00	99.82	4513.41	-324.09	1871.58	0.00	0.00	1899.44	
5	6075.38	8.00	99.82	5547.10	-384.82	2222.29	2.00	180.00	2255.36	
6	8620.04	8.00	99.82	8067.00	-445.25	2571.25	0.00	0.00	2609.51	
7	10138.82	8.00	99.82	9571.00	-481.32	2779.52	0.00	0.00	2820.89	CC 697-09-19A Target



OXY USA RMAT

**Garfield County, CO NAD27
Cascade Creek 608-41 Pad
CC 697-09-19A
OH**

Plan: Plan #1

Standard Planning Report

24 June, 2010



Database:	EDM 2003.16 Multi-User Db	Local Co-ordinate Reference:	Well CC 697-09-19A
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 697-09-19A	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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

Well	CC 697-09-19A					
Well Position	+N/-S	0.00 ft	Northing:	633,913.84 ft	Latitude:	39° 32' 31.133 N
	+E/-W	0.00 ft	Easting:	1,228,076.25 ft	Longitude:	108° 14' 15.018 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	8,411.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2005-10	2009/12/31	10.63	65.78	52,397

Design	Plan #1			
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	99.82

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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,200.00	30.00	99.82	2,109.86	-87.32	504.24	1.50	1.50	0.00	99.82	
4,975.38	30.00	99.82	4,513.41	-324.09	1,871.58	0.00	0.00	0.00	0.00	
6,075.38	8.00	99.82	5,547.10	-384.82	2,222.29	2.00	-2.00	0.00	180.00	
8,620.04	8.00	99.82	8,067.00	-445.25	2,571.25	0.00	0.00	0.00	0.00	CC 697-09-19A Target
10,138.82	8.00	99.82	9,571.00	-481.32	2,779.52	0.00	0.00	0.00	0.00	

Database:	EDM 2003.16 Multi-User Db	Local Co-ordinate Reference:	Well CC 697-09-19A
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 697-09-19A	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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
Start Build 1.50									
300.00	1.50	99.82	299.99	-0.22	1.29	1.31	1.50	1.50	0.00
400.00	3.00	99.82	399.91	-0.89	5.16	5.23	1.50	1.50	0.00
500.00	4.50	99.82	499.69	-2.01	11.60	11.77	1.50	1.50	0.00
600.00	6.00	99.82	599.27	-3.57	20.62	20.92	1.50	1.50	0.00
700.00	7.50	99.82	698.57	-5.58	32.20	32.68	1.50	1.50	0.00
800.00	9.00	99.82	797.54	-8.02	46.34	47.03	1.50	1.50	0.00
900.00	10.50	99.82	896.09	-10.91	63.02	63.96	1.50	1.50	0.00
1,000.00	12.00	99.82	994.16	-14.24	82.25	83.47	1.50	1.50	0.00
1,100.00	13.50	99.82	1,091.70	-18.01	103.99	105.54	1.50	1.50	0.00
1,200.00	15.00	99.82	1,188.62	-22.21	128.25	130.15	1.50	1.50	0.00
1,300.00	16.50	99.82	1,284.86	-26.84	154.99	157.30	1.50	1.50	0.00
1,400.00	18.00	99.82	1,380.36	-31.90	184.21	186.95	1.50	1.50	0.00
1,500.00	19.50	99.82	1,475.05	-37.38	215.88	219.09	1.50	1.50	0.00
1,600.00	21.00	99.82	1,568.86	-43.29	249.98	253.70	1.50	1.50	0.00
1,700.00	22.50	99.82	1,661.74	-49.61	286.50	290.76	1.50	1.50	0.00
1,800.00	24.00	99.82	1,753.62	-56.35	325.39	330.23	1.50	1.50	0.00
1,900.00	25.50	99.82	1,844.43	-63.49	366.64	372.10	1.50	1.50	0.00
2,000.00	27.00	99.82	1,934.12	-71.04	410.22	416.32	1.50	1.50	0.00
2,100.00	28.50	99.82	2,022.61	-78.98	456.10	462.88	1.50	1.50	0.00
2,200.00	30.00	99.82	2,109.86	-87.32	504.24	511.75	1.50	1.50	0.00
Start 30.00° Hold At 2200.00' MD									
2,300.00	30.00	99.82	2,196.46	-95.85	553.51	561.75	0.00	0.00	0.00
2,400.00	30.00	99.82	2,283.06	-104.38	602.77	611.75	0.00	0.00	0.00
2,500.00	30.00	99.82	2,369.67	-112.91	652.04	661.75	0.00	0.00	0.00
2,600.00	30.00	99.82	2,456.27	-121.44	701.31	711.75	0.00	0.00	0.00
2,700.00	30.00	99.82	2,542.87	-129.97	750.57	761.75	0.00	0.00	0.00
2,800.00	30.00	99.82	2,629.47	-138.50	799.84	811.75	0.00	0.00	0.00
2,900.00	30.00	99.82	2,716.08	-147.04	849.11	861.75	0.00	0.00	0.00
3,000.00	30.00	99.82	2,802.68	-155.57	898.38	911.75	0.00	0.00	0.00
3,100.00	30.00	99.82	2,889.28	-164.10	947.64	961.75	0.00	0.00	0.00
3,200.00	30.00	99.82	2,975.88	-172.63	996.91	1,011.75	0.00	0.00	0.00
3,300.00	30.00	99.82	3,062.49	-181.16	1,046.18	1,061.75	0.00	0.00	0.00
3,400.00	30.00	99.82	3,149.09	-189.69	1,095.44	1,111.75	0.00	0.00	0.00
3,500.00	30.00	99.82	3,235.69	-198.22	1,144.71	1,161.75	0.00	0.00	0.00
3,600.00	30.00	99.82	3,322.29	-206.75	1,193.98	1,211.75	0.00	0.00	0.00
3,700.00	30.00	99.82	3,408.90	-215.29	1,243.24	1,261.75	0.00	0.00	0.00
3,800.00	30.00	99.82	3,495.50	-223.82	1,292.51	1,311.75	0.00	0.00	0.00
3,900.00	30.00	99.82	3,582.10	-232.35	1,341.78	1,361.75	0.00	0.00	0.00
4,000.00	30.00	99.82	3,668.71	-240.88	1,391.04	1,411.75	0.00	0.00	0.00
4,100.00	30.00	99.82	3,755.31	-249.41	1,440.31	1,461.75	0.00	0.00	0.00
4,200.00	30.00	99.82	3,841.91	-257.94	1,489.58	1,511.75	0.00	0.00	0.00
4,300.00	30.00	99.82	3,928.51	-266.47	1,538.84	1,561.75	0.00	0.00	0.00
4,400.00	30.00	99.82	4,015.12	-275.01	1,588.11	1,611.75	0.00	0.00	0.00
4,500.00	30.00	99.82	4,101.72	-283.54	1,637.38	1,661.75	0.00	0.00	0.00
4,600.00	30.00	99.82	4,188.32	-292.07	1,686.64	1,711.75	0.00	0.00	0.00
4,700.00	30.00	99.82	4,274.92	-300.60	1,735.91	1,761.75	0.00	0.00	0.00
4,712.79	30.00	99.82	4,286.00	-301.69	1,742.21	1,768.14	0.00	0.00	0.00
Approx Ft Union									
4,800.00	30.00	99.82	4,361.53	-309.13	1,785.18	1,811.75	0.00	0.00	0.00

Database:	EDM 2003.16 Multi-User Db	Local Co-ordinate Reference:	Well CC 697-09-19A
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 697-09-19A	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)
4,900.00	30.00	99.82	4,448.13	-317.66	1,834.44	1,861.75	0.00	0.00	0.00
4,975.38	30.00	99.82	4,513.41	-324.09	1,871.58	1,899.44	0.00	0.00	0.00
Start Drop -2.00									
5,000.00	29.51	99.82	4,534.78	-326.18	1,883.62	1,911.65	2.00	-2.00	0.00
5,100.00	27.51	99.82	4,622.65	-334.32	1,930.65	1,959.38	2.00	-2.00	0.00
5,200.00	25.51	99.82	4,712.14	-341.94	1,974.62	2,004.01	2.00	-2.00	0.00
5,300.00	23.51	99.82	4,803.12	-349.01	2,015.49	2,045.49	2.00	-2.00	0.00
5,400.00	21.51	99.82	4,895.50	-355.54	2,053.21	2,083.77	2.00	-2.00	0.00
5,500.00	19.51	99.82	4,989.16	-361.52	2,087.73	2,118.80	2.00	-2.00	0.00
5,600.00	17.51	99.82	5,083.98	-366.94	2,119.00	2,150.54	2.00	-2.00	0.00
5,700.00	15.51	99.82	5,179.86	-371.79	2,147.00	2,178.95	2.00	-2.00	0.00
5,800.00	13.51	99.82	5,276.66	-376.06	2,171.68	2,204.00	2.00	-2.00	0.00
5,900.00	11.51	99.82	5,374.28	-379.75	2,193.02	2,225.66	2.00	-2.00	0.00
6,000.00	9.51	99.82	5,472.60	-382.87	2,210.99	2,243.89	2.00	-2.00	0.00
6,075.38	8.00	99.82	5,547.10	-384.82	2,222.29	2,255.36	2.00	-2.00	0.00
Start 8.00° Hold At 6075.38' MD									
6,100.00	8.00	99.82	5,571.48	-385.41	2,225.67	2,258.79	0.00	0.00	0.00
6,200.00	8.00	99.82	5,670.51	-387.78	2,239.38	2,272.71	0.00	0.00	0.00
6,300.00	8.00	99.82	5,769.54	-390.16	2,253.09	2,286.63	0.00	0.00	0.00
6,400.00	8.00	99.82	5,868.56	-392.53	2,266.81	2,300.54	0.00	0.00	0.00
6,426.70	8.00	99.82	5,895.00	-393.17	2,270.47	2,304.26	0.00	0.00	0.00
Mesaverde									
6,500.00	8.00	99.82	5,967.59	-394.91	2,280.52	2,314.46	0.00	0.00	0.00
6,600.00	8.00	99.82	6,066.62	-397.28	2,294.23	2,328.38	0.00	0.00	0.00
6,700.00	8.00	99.82	6,165.64	-399.66	2,307.95	2,342.30	0.00	0.00	0.00
6,800.00	8.00	99.82	6,264.67	-402.03	2,321.66	2,356.21	0.00	0.00	0.00
6,900.00	8.00	99.82	6,363.70	-404.41	2,335.37	2,370.13	0.00	0.00	0.00
7,000.00	8.00	99.82	6,462.72	-406.78	2,349.09	2,384.05	0.00	0.00	0.00
7,100.00	8.00	99.82	6,561.75	-409.15	2,362.80	2,397.96	0.00	0.00	0.00
7,200.00	8.00	99.82	6,660.78	-411.53	2,376.51	2,411.88	0.00	0.00	0.00
7,300.00	8.00	99.82	6,759.80	-413.90	2,390.23	2,425.80	0.00	0.00	0.00
7,400.00	8.00	99.82	6,858.83	-416.28	2,403.94	2,439.72	0.00	0.00	0.00
7,500.00	8.00	99.82	6,957.86	-418.65	2,417.65	2,453.63	0.00	0.00	0.00
7,600.00	8.00	99.82	7,056.88	-421.03	2,431.37	2,467.55	0.00	0.00	0.00
7,700.00	8.00	99.82	7,155.91	-423.40	2,445.08	2,481.47	0.00	0.00	0.00
7,800.00	8.00	99.82	7,254.94	-425.78	2,458.79	2,495.39	0.00	0.00	0.00
7,900.00	8.00	99.82	7,353.96	-428.15	2,472.51	2,509.30	0.00	0.00	0.00
8,000.00	8.00	99.82	7,452.99	-430.53	2,486.22	2,523.22	0.00	0.00	0.00
8,100.00	8.00	99.82	7,552.02	-432.90	2,499.93	2,537.14	0.00	0.00	0.00
8,200.00	8.00	99.82	7,651.05	-435.28	2,513.65	2,551.05	0.00	0.00	0.00
8,300.00	8.00	99.82	7,750.07	-437.65	2,527.36	2,564.97	0.00	0.00	0.00
8,400.00	8.00	99.82	7,849.10	-440.02	2,541.07	2,578.89	0.00	0.00	0.00
8,500.00	8.00	99.82	7,948.13	-442.40	2,554.79	2,592.81	0.00	0.00	0.00
8,600.00	8.00	99.82	8,047.15	-444.77	2,568.50	2,606.72	0.00	0.00	0.00
8,620.04	8.00	99.82	8,067.00	-445.25	2,571.25	2,609.51	0.00	0.00	0.00
Target = 633391.33, 1230632.90 - CC 697-09-19A Target									
8,700.00	8.00	99.82	8,146.18	-447.15	2,582.21	2,620.64	0.00	0.00	0.00
8,800.00	8.00	99.82	8,245.21	-449.52	2,595.93	2,634.56	0.00	0.00	0.00
8,900.00	8.00	99.82	8,344.23	-451.90	2,609.64	2,648.48	0.00	0.00	0.00
9,000.00	8.00	99.82	8,443.26	-454.27	2,623.35	2,662.39	0.00	0.00	0.00
9,100.00	8.00	99.82	8,542.29	-456.65	2,637.06	2,676.31	0.00	0.00	0.00
9,200.00	8.00	99.82	8,641.31	-459.02	2,650.78	2,690.23	0.00	0.00	0.00
9,300.00	8.00	99.82	8,740.34	-461.40	2,664.49	2,704.15	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 697-09-19A	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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)
9,400.00	8.00	99.82	8,839.37	-463.77	2,678.20	2,718.06	0.00	0.00	0.00
9,500.00	8.00	99.82	8,938.39	-466.15	2,691.92	2,731.98	0.00	0.00	0.00
9,600.00	8.00	99.82	9,037.42	-468.52	2,705.63	2,745.90	0.00	0.00	0.00
9,700.00	8.00	99.82	9,136.45	-470.90	2,719.34	2,759.81	0.00	0.00	0.00
9,800.00	8.00	99.82	9,235.47	-473.27	2,733.06	2,773.73	0.00	0.00	0.00
9,900.00	8.00	99.82	9,334.50	-475.64	2,746.77	2,787.65	0.00	0.00	0.00
10,000.00	8.00	99.82	9,433.53	-478.02	2,760.48	2,801.57	0.00	0.00	0.00
10,100.00	8.00	99.82	9,532.55	-480.39	2,774.20	2,815.48	0.00	0.00	0.00
10,138.82	8.00	99.82	9,571.00	-481.32	2,779.52	2,820.89	0.00	0.00	0.00

Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
CC 697-09-19A Target - plan hits target center - Circle (radius 50.00)	-8.00	99.82	8,067.00	-445.25	2,571.25	633,391.33	1,230,632.91	39° 32' 26.731 N	108° 13' 42.197 W

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,712.79	4,286.00	Approx Ft Union		0.00	
6,426.70	5,895.00	Mesaverde		0.00	

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.00	200.00	0.00	0.00	Start Build 1.50
2,200.00	2,109.86	-87.32	504.24	Start 30.00° Hold At 2200.00' MD
4,975.38	4,513.41	-324.09	1,871.58	Start Drop -2.00
6,075.38	5,547.10	-384.82	2,222.29	Start 8.00° Hold At 6075.38' MD
8,620.04	8,067.00	-445.25	2,571.25	Target = 633391.33, 1230632.90
10,138.82	9,571.00	-481.32	2,779.52	PBHL = 633349.00, 1230840.00