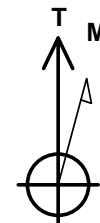


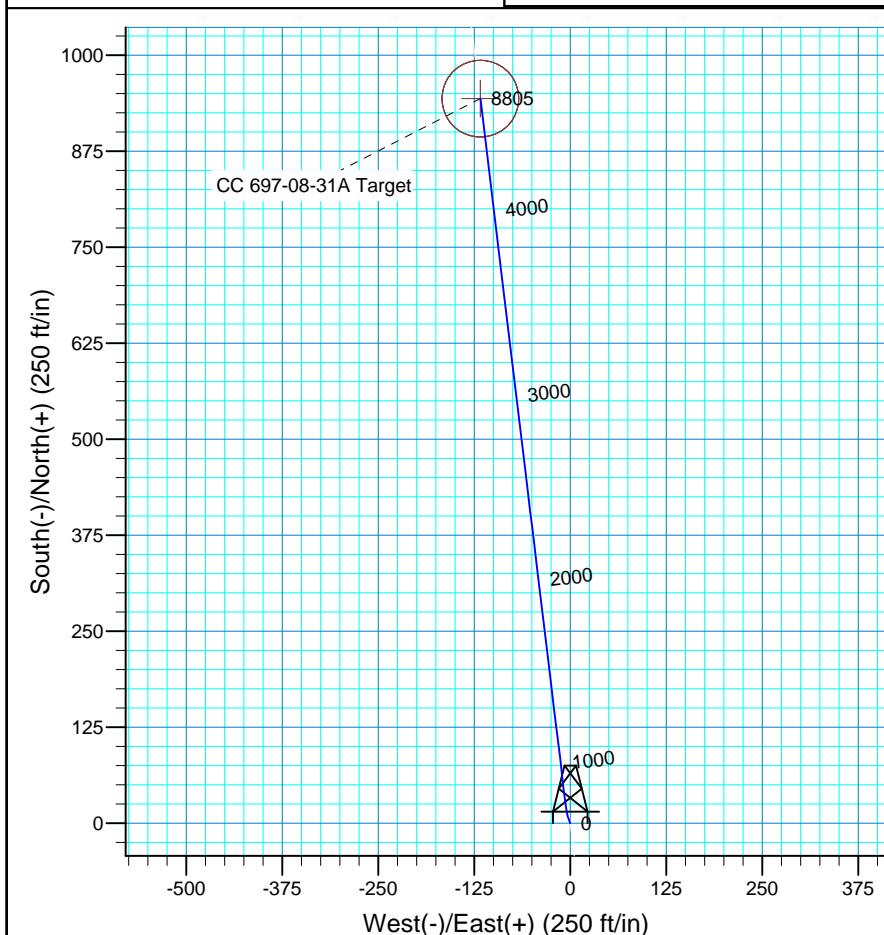
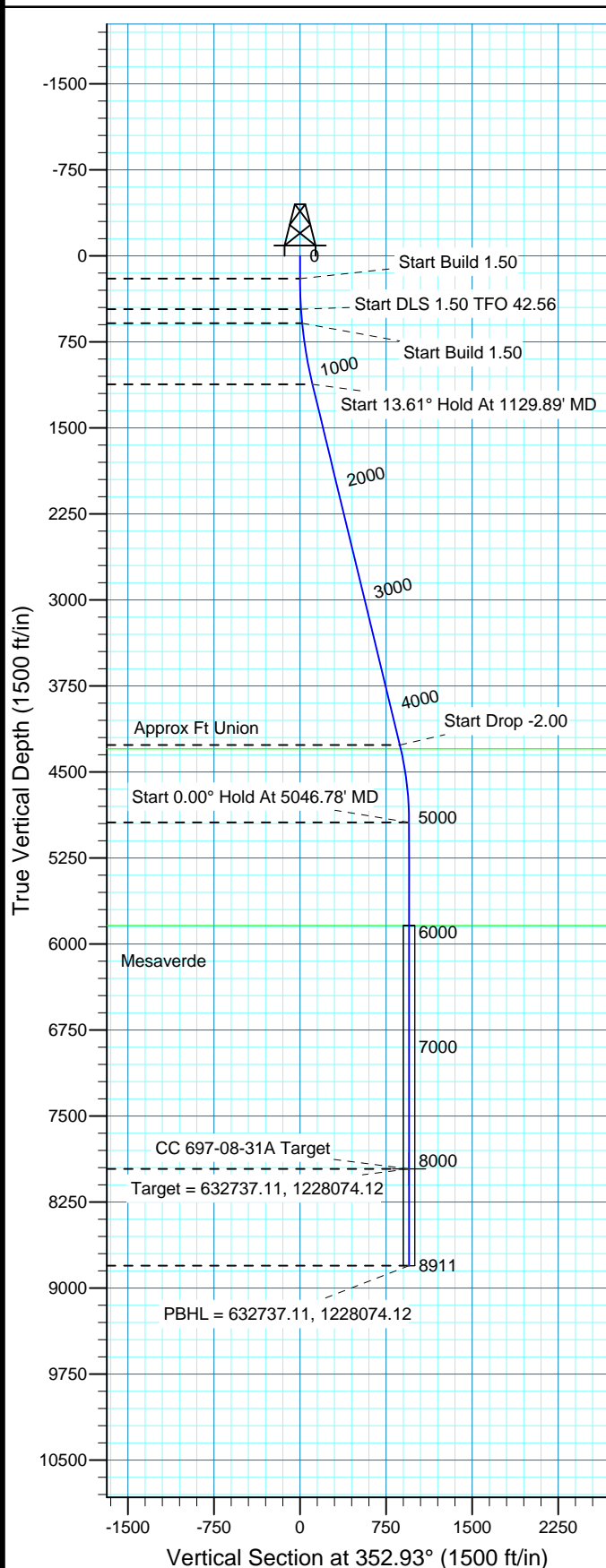
WELL DETAILS: Cascade Creek 697-08-31A

+N/-S	+E/-W	GL 8425' & RKB 30' @ 8455.00ft	8425.00	Latitude	Longitude	Slot
0.00	0.00	Northing	Easting	39° 32' 10.185 N	108° 14' 13.099 W	
		631790.75	1228162.66			



Azimuths to True North
Magnetic North: 10.77°

Magnetic Field
Strength: 52502.4snT
Dip Angle: 65.80°
Date: 2008/11/19
Model: IGRF2005-10



FORMATION TOP DETAILS						Plan: Plan #2 (Cascade Creek 697-08-31A/OH)					
TVDPath 4300.00 5841.00	MDPath 4400.31 5946.78	Formation Approx Ft Union Mesaverde				Created By: Rex Hall Date: 2010-06-15					
		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	466.67	4.00	340.00	466.45	8.74	-3.18	1.50	340.00	9.07		
4	589.50	5.50	353.11	588.87	18.61	-5.35	1.50	42.56	19.13	CC 697-08-31A Target	
5	1129.89	13.61	353.11	1121.31	107.57	-16.10	1.50	0.00	108.74		
6	4366.49	13.61	353.11	4267.09	863.46	-107.37	0.00	0.00	870.11		
7	5046.78	0.00	0.00	4941.00	943.27	-117.01	2.00	180.00	950.50		
8	8067.78	0.00	0.00	7962.00	943.27	-117.01	0.00	0.00	950.50	CC 697-08-31A Target	
9	8910.78	0.00	0.00	8805.00	943.27	-117.01	0.00	0.00	950.50		



OXY USA RMAT

**Garfield County, CO NAD27
Cascade Creek 608-43-31 Pad
Cascade Creek 697-08-31A
OH**

Plan: Plan #2

Standard Planning Report

15 June, 2010



Database:	EDM 2003.16 Multi-User Db	Local Co-ordinate Reference:	Well Cascade Creek 697-08-31A
Company:	OXY USA RMAT	TVD Reference:	GL 8425' & RKB 30' @ 8455.00ft
Project:	Garfield County, CO NAD27	MD Reference:	GL 8425' & RKB 30' @ 8455.00ft
Site:	Cascade Creek 608-43-31 Pad	North Reference:	True
Well:	Cascade Creek 697-08-31A	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

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 608-43-31 Pad, Sec 8 T6S R97W			
Site Position:		Northing:	39.54 ft	Latitude:	37° 37' 28.115 N
From:	Map	Easting:	-108.24 ft	Longitude:	112° 24' 37.715 W
Position Uncertainty:	0.00 ft	Slot Radius:	in	Grid Convergence:	-4.36 °

Well	Cascade Creek 697-08-31A,					
Well Position	+N/-S	0.00 ft	Northing:	631,790.75 ft	Latitude:	39° 32' 10.185 N
	+E/-W	0.00 ft	Easting:	1,228,162.66 ft	Longitude:	108° 14' 13.099 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	8,425.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2005-10	2008/11/19	10.77	65.80	52,502

Design	Plan #2			
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	352.93

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	
466.67	4.00	340.00	466.45	8.74	-3.18	1.50	1.50	0.00	340.00	
589.50	5.50	353.11	588.87	18.61	-5.35	1.50	1.22	10.68	42.56	CC 697-08-31A Target
1,129.89	13.61	353.11	1,121.31	107.57	-16.10	1.50	1.50	0.00	0.00	
4,366.49	13.61	353.11	4,267.09	863.46	-107.37	0.00	0.00	0.00	0.00	
5,046.78	0.00	0.00	4,941.00	943.27	-117.01	2.00	-2.00	0.00	180.00	
8,067.78	0.00	0.00	7,962.00	943.27	-117.01	0.00	0.00	0.00	0.00	CC 697-08-31A Target
8,910.78	0.00	0.00	8,805.00	943.27	-117.01	0.00	0.00	0.00	0.00	

Database:	EDM 2003.16 Multi-User Db	Local Co-ordinate Reference:	Well Cascade Creek 697-08-31A
Company:	OXY USA RMAT	TVD Reference:	GL 8425' & RKB 30' @ 8455.00ft
Project:	Garfield County, CO NAD27	MD Reference:	GL 8425' & RKB 30' @ 8455.00ft
Site:	Cascade Creek 608-43-31 Pad	North Reference:	True
Well:	Cascade Creek 697-08-31A	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

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	340.00	299.99	1.23	-0.45	1.28	1.50	1.50	0.00
400.00	3.00	340.00	399.91	4.92	-1.79	5.10	1.50	1.50	0.00
466.67	4.00	340.00	466.45	8.74	-3.18	9.07	1.50	1.50	0.00
Start DLS 1.50 TFO 42.56									
500.00	4.38	344.43	499.69	11.06	-3.92	11.46	1.50	1.14	13.29
589.50	5.50	353.11	588.87	18.61	-5.35	19.13	1.50	1.25	9.70
Start Build 1.50									
600.00	5.66	353.11	599.31	19.63	-5.48	20.15	1.50	1.50	0.00
700.00	7.16	353.11	698.68	30.71	-6.81	31.31	1.50	1.50	0.00
800.00	8.66	353.11	797.73	44.36	-8.46	45.07	1.50	1.50	0.00
900.00	10.16	353.11	896.38	60.59	-10.42	61.41	1.50	1.50	0.00
1,000.00	11.66	353.11	994.57	79.38	-12.69	80.34	1.50	1.50	0.00
1,100.00	13.16	353.11	1,092.24	100.71	-15.27	101.82	1.50	1.50	0.00
1,129.89	13.61	353.11	1,121.31	107.57	-16.10	108.74	1.50	1.50	0.00
Start 13.61° Hold At 1129.89' MD									
1,200.00	13.61	353.11	1,189.46	123.95	-18.07	125.23	0.00	0.00	0.00
1,300.00	13.61	353.11	1,286.65	147.30	-20.89	148.75	0.00	0.00	0.00
1,400.00	13.61	353.11	1,383.84	170.66	-23.71	172.28	0.00	0.00	0.00
1,500.00	13.61	353.11	1,481.04	194.01	-26.53	195.80	0.00	0.00	0.00
1,600.00	13.61	353.11	1,578.23	217.37	-29.35	219.33	0.00	0.00	0.00
1,700.00	13.61	353.11	1,675.43	240.72	-32.17	242.85	0.00	0.00	0.00
1,800.00	13.61	353.11	1,772.62	264.07	-34.99	266.37	0.00	0.00	0.00
1,900.00	13.61	353.11	1,869.81	287.43	-37.81	289.90	0.00	0.00	0.00
2,000.00	13.61	353.11	1,967.01	310.78	-40.63	313.42	0.00	0.00	0.00
2,100.00	13.61	353.11	2,064.20	334.14	-43.45	336.94	0.00	0.00	0.00
2,200.00	13.61	353.11	2,161.39	357.49	-46.27	360.47	0.00	0.00	0.00
2,300.00	13.61	353.11	2,258.59	380.85	-49.09	383.99	0.00	0.00	0.00
2,400.00	13.61	353.11	2,355.78	404.20	-51.91	407.52	0.00	0.00	0.00
2,500.00	13.61	353.11	2,452.98	427.55	-54.73	431.04	0.00	0.00	0.00
2,600.00	13.61	353.11	2,550.17	450.91	-57.56	454.56	0.00	0.00	0.00
2,700.00	13.61	353.11	2,647.36	474.26	-60.38	478.09	0.00	0.00	0.00
2,800.00	13.61	353.11	2,744.56	497.62	-63.20	501.61	0.00	0.00	0.00
2,900.00	13.61	353.11	2,841.75	520.97	-66.02	525.14	0.00	0.00	0.00
3,000.00	13.61	353.11	2,938.94	544.33	-68.84	548.66	0.00	0.00	0.00
3,100.00	13.61	353.11	3,036.14	567.68	-71.66	572.18	0.00	0.00	0.00
3,200.00	13.61	353.11	3,133.33	591.03	-74.48	595.71	0.00	0.00	0.00
3,300.00	13.61	353.11	3,230.53	614.39	-77.30	619.23	0.00	0.00	0.00
3,400.00	13.61	353.11	3,327.72	637.74	-80.12	642.75	0.00	0.00	0.00
3,500.00	13.61	353.11	3,424.91	661.10	-82.94	666.28	0.00	0.00	0.00
3,600.00	13.61	353.11	3,522.11	684.45	-85.76	689.80	0.00	0.00	0.00
3,700.00	13.61	353.11	3,619.30	707.81	-88.58	713.33	0.00	0.00	0.00
3,800.00	13.61	353.11	3,716.49	731.16	-91.40	736.85	0.00	0.00	0.00
3,900.00	13.61	353.11	3,813.69	754.51	-94.22	760.37	0.00	0.00	0.00
4,000.00	13.61	353.11	3,910.88	777.87	-97.04	783.90	0.00	0.00	0.00
4,100.00	13.61	353.11	4,008.08	801.22	-99.86	807.42	0.00	0.00	0.00
4,200.00	13.61	353.11	4,105.27	824.58	-102.68	830.94	0.00	0.00	0.00
4,300.00	13.61	353.11	4,202.46	847.93	-105.50	854.47	0.00	0.00	0.00
4,366.49	13.61	353.11	4,267.09	863.46	-107.37	870.11	0.00	0.00	0.00
Start Drop -2.00									

Database:	EDM 2003.16 Multi-User Db	Local Co-ordinate Reference:	Well Cascade Creek 697-08-31A
Company:	OXY USA RMAT	TVD Reference:	GL 8425' & RKB 30' @ 8455.00ft
Project:	Garfield County, CO NAD27	MD Reference:	GL 8425' & RKB 30' @ 8455.00ft
Site:	Cascade Creek 608-43-31 Pad	North Reference:	True
Well:	Cascade Creek 697-08-31A	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

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	12.94	353.11	4,299.70	871.10	-108.29	877.80	2.00	-2.00	0.00
4,400.31	12.93	353.11	4,300.00	871.16	-108.30	877.87	2.00	-2.00	0.00
Approx Ft Union									
4,500.00	10.94	353.11	4,397.53	891.63	-110.77	898.48	2.00	-2.00	0.00
4,600.00	8.94	353.11	4,496.03	908.76	-112.84	915.73	2.00	-2.00	0.00
4,700.00	6.94	353.11	4,595.07	922.46	-114.50	929.54	2.00	-2.00	0.00
4,800.00	4.94	353.11	4,694.53	932.73	-115.74	939.88	2.00	-2.00	0.00
4,900.00	2.94	353.11	4,794.29	939.54	-116.56	946.74	2.00	-2.00	0.00
5,000.00	0.94	353.11	4,894.22	942.89	-116.96	950.12	2.00	-2.00	0.00
5,046.78	0.00	0.00	4,941.00	943.27	-117.01	950.50	2.00	-2.00	0.00
Start 0.00° Hold At 5046.78' MD									
5,100.00	0.00	0.00	4,994.22	943.27	-117.01	950.50	0.00	0.00	0.00
5,200.00	0.00	0.00	5,094.22	943.27	-117.01	950.50	0.00	0.00	0.00
5,300.00	0.00	0.00	5,194.22	943.27	-117.01	950.50	0.00	0.00	0.00
5,400.00	0.00	0.00	5,294.22	943.27	-117.01	950.50	0.00	0.00	0.00
5,500.00	0.00	0.00	5,394.22	943.27	-117.01	950.50	0.00	0.00	0.00
5,600.00	0.00	0.00	5,494.22	943.27	-117.01	950.50	0.00	0.00	0.00
5,700.00	0.00	0.00	5,594.22	943.27	-117.01	950.50	0.00	0.00	0.00
5,800.00	0.00	0.00	5,694.22	943.27	-117.01	950.50	0.00	0.00	0.00
5,900.00	0.00	0.00	5,794.22	943.27	-117.01	950.50	0.00	0.00	0.00
5,946.78	0.00	0.00	5,841.00	943.27	-117.01	950.50	0.00	0.00	0.00
Mesaverde									
6,000.00	0.00	0.00	5,894.22	943.27	-117.01	950.50	0.00	0.00	0.00
6,100.00	0.00	0.00	5,994.22	943.27	-117.01	950.50	0.00	0.00	0.00
6,200.00	0.00	0.00	6,094.22	943.27	-117.01	950.50	0.00	0.00	0.00
6,300.00	0.00	0.00	6,194.22	943.27	-117.01	950.50	0.00	0.00	0.00
6,400.00	0.00	0.00	6,294.22	943.27	-117.01	950.50	0.00	0.00	0.00
6,500.00	0.00	0.00	6,394.22	943.27	-117.01	950.50	0.00	0.00	0.00
6,600.00	0.00	0.00	6,494.22	943.27	-117.01	950.50	0.00	0.00	0.00
6,700.00	0.00	0.00	6,594.22	943.27	-117.01	950.50	0.00	0.00	0.00
6,800.00	0.00	0.00	6,694.22	943.27	-117.01	950.50	0.00	0.00	0.00
6,900.00	0.00	0.00	6,794.22	943.27	-117.01	950.50	0.00	0.00	0.00
7,000.00	0.00	0.00	6,894.22	943.27	-117.01	950.50	0.00	0.00	0.00
7,100.00	0.00	0.00	6,994.22	943.27	-117.01	950.50	0.00	0.00	0.00
7,200.00	0.00	0.00	7,094.22	943.27	-117.01	950.50	0.00	0.00	0.00
7,300.00	0.00	0.00	7,194.22	943.27	-117.01	950.50	0.00	0.00	0.00
7,400.00	0.00	0.00	7,294.22	943.27	-117.01	950.50	0.00	0.00	0.00
7,500.00	0.00	0.00	7,394.22	943.27	-117.01	950.50	0.00	0.00	0.00
7,600.00	0.00	0.00	7,494.22	943.27	-117.01	950.50	0.00	0.00	0.00
7,700.00	0.00	0.00	7,594.22	943.27	-117.01	950.50	0.00	0.00	0.00
7,800.00	0.00	0.00	7,694.22	943.27	-117.01	950.50	0.00	0.00	0.00
7,900.00	0.00	0.00	7,794.22	943.27	-117.01	950.50	0.00	0.00	0.00
8,000.00	0.00	0.00	7,894.22	943.27	-117.01	950.50	0.00	0.00	0.00
8,067.78	0.00	0.00	7,962.00	943.27	-117.01	950.50	0.00	0.00	0.00
Target = 632737.11, 1228074.12 - CC 697-08-31A Target - CC 697-08-31A Target									
8,100.00	0.00	0.00	7,994.22	943.27	-117.01	950.50	0.00	0.00	0.00
8,200.00	0.00	0.00	8,094.22	943.27	-117.01	950.50	0.00	0.00	0.00
8,300.00	0.00	0.00	8,194.22	943.27	-117.01	950.50	0.00	0.00	0.00
8,400.00	0.00	0.00	8,294.22	943.27	-117.01	950.50	0.00	0.00	0.00
8,500.00	0.00	0.00	8,394.22	943.27	-117.01	950.50	0.00	0.00	0.00
8,600.00	0.00	0.00	8,494.22	943.27	-117.01	950.50	0.00	0.00	0.00
8,700.00	0.00	0.00	8,594.22	943.27	-117.01	950.50	0.00	0.00	0.00
8,800.00	0.00	0.00	8,694.22	943.27	-117.01	950.50	0.00	0.00	0.00

Database:	EDM 2003.16 Multi-User Db	Local Co-ordinate Reference:	Well Cascade Creek 697-08-31A
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Project:	Garfield County, CO NAD27	MD Reference:	GL 8425' & RKB 30' @ 8455.00ft
Site:	Cascade Creek 608-43-31 Pad	North Reference:	True
Well:	Cascade Creek 697-08-31A	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

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)
8,900.00	0.00	0.00	8,794.22	943.27	-117.01	950.50	0.00	0.00	0.00
8,910.78	0.00	0.00	8,805.00	943.27	-117.01	950.50	0.00	0.00	0.00
PBHL = 632737.11, 1228074.12									

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 697-08-31A Target - plan hits target center - Circle (radius 50.00)	0.00	353.38	7,962.00	943.27	-117.01	632,737.11	1,228,074.12	39° 32' 19.508 N	108° 14' 14.593 W

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,400.31	4,300.00	Approx Ft Union		0.00	
5,946.78	5,841.00	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
466.67	466.45	8.74	-3.18	Start DLS 1.50 TFO 42.56
589.50	588.87	18.61	-5.35	Start Build 1.50
1,129.89	1,121.31	107.57	-16.10	Start 13.61° Hold At 1129.89' MD
4,366.49	4,267.09	863.46	-107.37	Start Drop -2.00
5,046.78	4,941.00	943.27	-117.01	Start 0.00° Hold At 5046.78' MD
8,067.78	7,962.00	943.27	-117.01	Target = 632737.11, 1228074.12
8,910.78	8,805.00	943.27	-117.01	PBHL = 632737.11, 1228074.12