



Whiting Petroleum Corporation

Weld County

Sec 36-T10N-R60W

Chalk Bluffs 36-13H

Wellbore #1

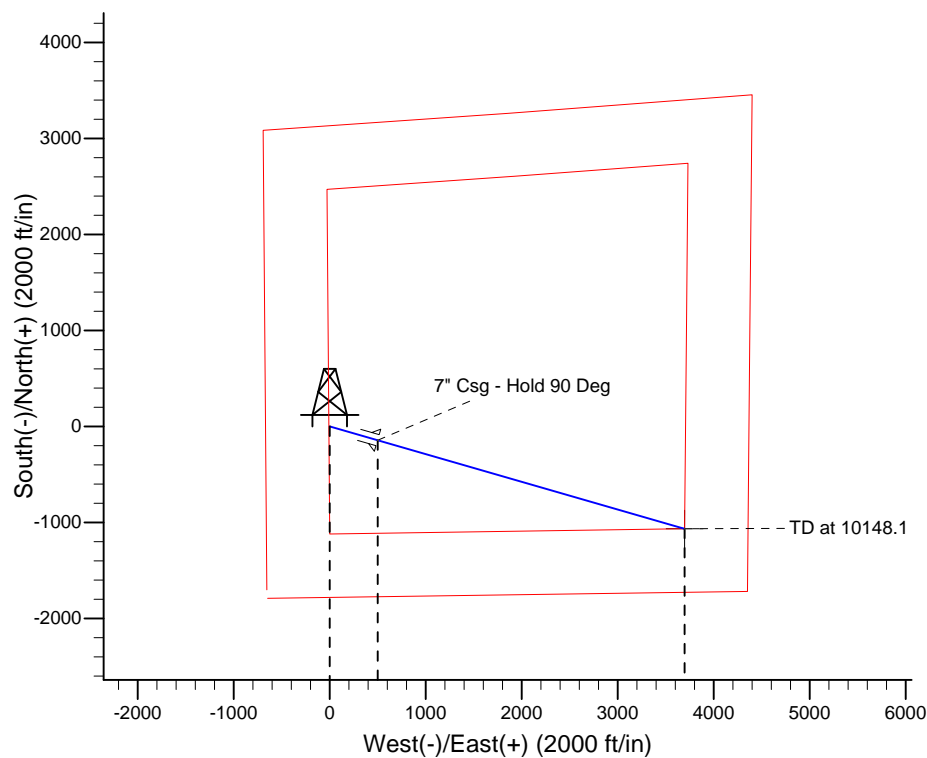
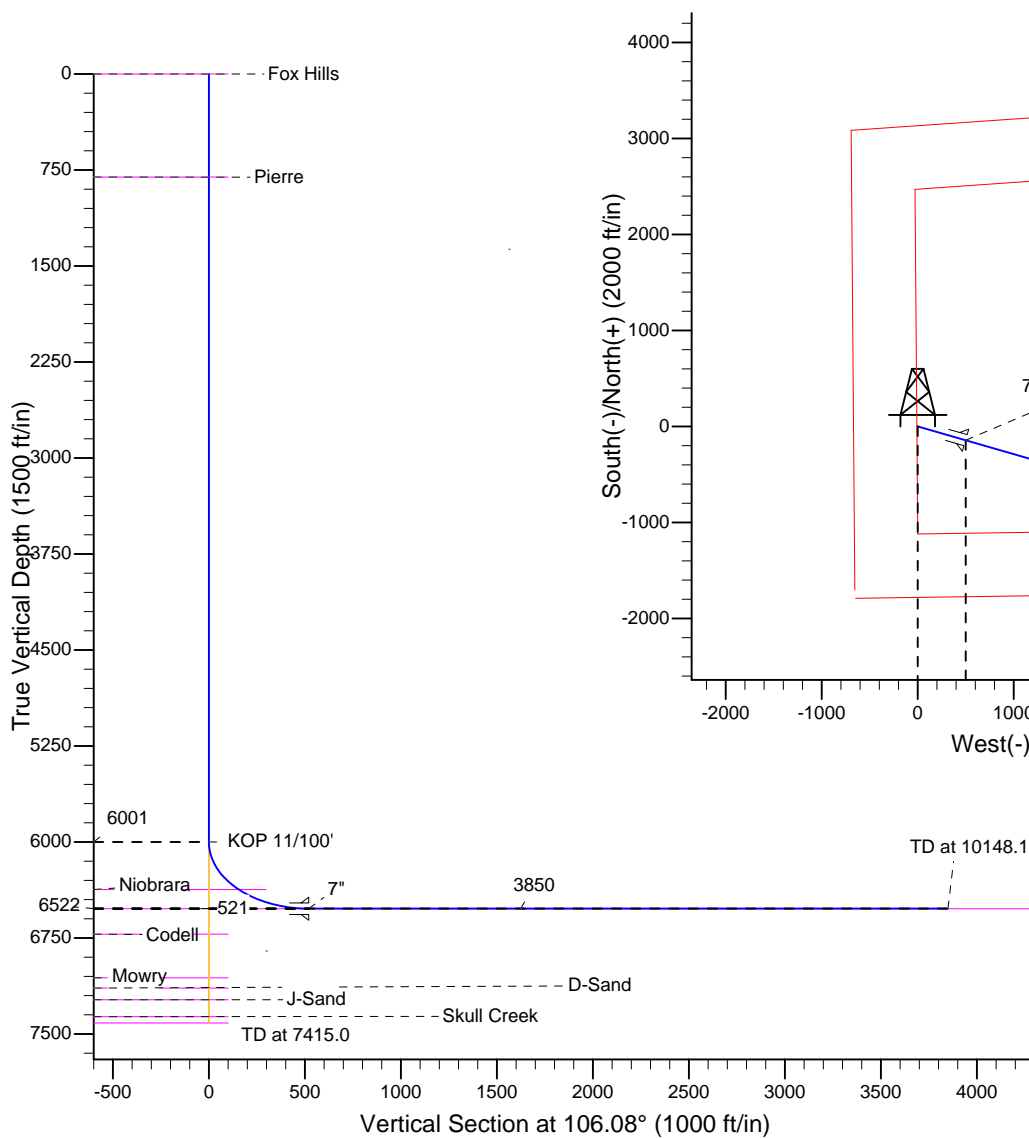
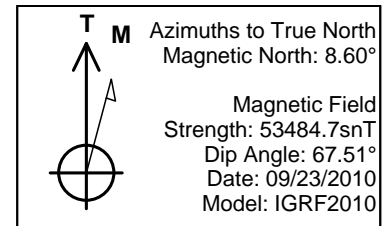
Plan: Preliminary Plan for APD

Standard Planning Report

23 September, 2010

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
6001.1	0.00	0.00	6001.1	0.0	0.0	0.00	0.00	0.0	
6819.3	90.00	106.08	6522.0	-144.3	500.5	11.00	106.08	520.9	
10148.1	90.00	106.08	6522.0	-1066.2	3699.1	0.00	0.00	3849.7	Chalk





Crescent Directional Drilling, LP

Planning Report

Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well Chalk Bluffs 36-13H
Company:	Whiting Petroleum Corporation	TVD Reference:	WELL @ 5237.0ft (Original Well Elev)
Project:	Weld County	MD Reference:	WELL @ 5237.0ft (Original Well Elev)
Site:	Sec 36-T10N-R60W	North Reference:	True
Well:	Chalk Bluffs 36-13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Preliminary Plan for APD		

Project	Weld County		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		Sec 36-T10N-R60W				
Site Position:		Northing:	1,534,356.83ft	Latitude:	40° 47' 28.104 N	
From:	Lat/Long	Easting:	3,402,438.89ft	Longitude:	104° 2' 47.688 W	
Position Uncertainty:		0.0 ft	Slot Radius:	"	Grid Convergence:	0.94 °

Well	Chalk Bluffs 36-13H					
Well Position	+N/-S	0.0 ft	Northing:	1,534,356.83 ft	Latitude:	40° 47' 28.104 N
	+E/-W	0.0 ft	Easting:	3,402,438.89 ft	Longitude:	104° 2' 47.688 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	5,237.0 ft	Ground Level:	5,224.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	09/23/10	8.60	67.51	53,485

Design	Preliminary Plan for APD			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	106.08

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
6,001.1	0.00	0.00	6,001.1	0.0	0.0	0.00	0.00	0.00	0.00	
6,819.3	90.00	106.08	6,522.0	-144.3	500.5	11.00	11.00	0.00	106.08	
10,148.1	90.00	106.08	6,522.0	-1,066.2	3,699.1	0.00	0.00	0.00	0.00	Chalk



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Well:	Chalk Bluffs 36-13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Preliminary Plan for APD		

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
Fox Hills									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
807.0	0.00	0.00	807.0	0.0	0.0	0.0	0.00	0.00	0.00
Pierre									
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00

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Well:	Chalk Bluffs 36-13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Preliminary Plan for APD		

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)
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,800.0	0.0	0.0	0.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,900.0	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	0.00	0.00	6,000.0	0.0	0.0	0.0	0.00	0.00	0.00
6,001.1	0.00	0.00	6,001.1	0.0	0.0	0.0	0.00	0.00	0.00
KOP 11/100'									
6,100.0	10.88	106.08	6,099.4	-2.6	9.0	9.4	11.00	11.00	0.00
6,200.0	21.88	106.08	6,195.2	-10.4	36.0	37.5	11.00	11.00	0.00
6,300.0	32.88	106.08	6,283.9	-23.1	80.2	83.4	11.00	11.00	0.00
6,400.0	43.88	106.08	6,362.1	-40.3	139.7	145.4	11.00	11.00	0.00
6,413.9	45.40	106.08	6,372.0	-43.0	149.1	155.2	11.00	11.00	0.00
Niobrara									
6,500.0	54.88	106.08	6,427.1	-61.3	212.6	221.2	11.00	11.00	0.00
6,600.0	65.88	106.08	6,476.5	-85.3	296.0	308.0	11.00	11.00	0.00
6,700.0	76.88	106.08	6,508.4	-111.5	386.9	402.6	11.00	11.00	0.00
6,800.0	87.88	106.08	6,521.6	-138.9	482.0	501.6	11.00	11.00	0.00
6,819.3	90.00	106.08	6,522.0	-144.3	500.5	520.9	11.00	11.00	0.00
EOB Hold 90 Deg - Horizontal Target - 7"									
6,900.0	90.00	106.08	6,522.0	-166.6	578.1	601.6	0.00	0.00	0.00
7,000.0	90.00	106.08	6,522.0	-194.3	674.1	701.6	0.00	0.00	0.00
7,100.0	90.00	106.08	6,522.0	-222.0	770.2	801.6	0.00	0.00	0.00
7,200.0	90.00	106.08	6,522.0	-249.7	866.3	901.6	0.00	0.00	0.00
7,300.0	90.00	106.08	6,522.0	-277.4	962.4	1,001.6	0.00	0.00	0.00
7,400.0	90.00	106.08	6,522.0	-305.1	1,058.5	1,101.6	0.00	0.00	0.00
7,500.0	90.00	106.08	6,522.0	-332.8	1,154.6	1,201.6	0.00	0.00	0.00
7,600.0	90.00	106.08	6,522.0	-360.5	1,250.7	1,301.6	0.00	0.00	0.00
7,700.0	90.00	106.08	6,522.0	-388.2	1,346.8	1,401.6	0.00	0.00	0.00
7,800.0	90.00	106.08	6,522.0	-415.9	1,442.8	1,501.6	0.00	0.00	0.00
7,900.0	90.00	106.08	6,522.0	-443.6	1,538.9	1,601.6	0.00	0.00	0.00
8,000.0	90.00	106.08	6,522.0	-471.3	1,635.0	1,701.6	0.00	0.00	0.00
8,100.0	90.00	106.08	6,522.0	-499.0	1,731.1	1,801.6	0.00	0.00	0.00
8,200.0	90.00	106.08	6,522.0	-526.7	1,827.2	1,901.6	0.00	0.00	0.00
8,300.0	90.00	106.08	6,522.0	-554.4	1,923.3	2,001.6	0.00	0.00	0.00
8,400.0	90.00	106.08	6,522.0	-582.1	2,019.4	2,101.6	0.00	0.00	0.00
8,500.0	90.00	106.08	6,522.0	-609.8	2,115.5	2,201.6	0.00	0.00	0.00
8,600.0	90.00	106.08	6,522.0	-637.5	2,211.6	2,301.6	0.00	0.00	0.00
8,700.0	90.00	106.08	6,522.0	-665.2	2,307.6	2,401.6	0.00	0.00	0.00
8,800.0	90.00	106.08	6,522.0	-692.9	2,403.7	2,501.6	0.00	0.00	0.00
8,900.0	90.00	106.08	6,522.0	-720.6	2,499.8	2,601.6	0.00	0.00	0.00
9,000.0	90.00	106.08	6,522.0	-748.2	2,595.9	2,701.6	0.00	0.00	0.00
9,100.0	90.00	106.08	6,522.0	-775.9	2,692.0	2,801.6	0.00	0.00	0.00
9,200.0	90.00	106.08	6,522.0	-803.6	2,788.1	2,901.6	0.00	0.00	0.00
9,300.0	90.00	106.08	6,522.0	-831.3	2,884.2	3,001.6	0.00	0.00	0.00
9,400.0	90.00	106.08	6,522.0	-859.0	2,980.3	3,101.6	0.00	0.00	0.00
9,500.0	90.00	106.08	6,522.0	-886.7	3,076.3	3,201.6	0.00	0.00	0.00

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Well:	Chalk Bluffs 36-13H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Preliminary Plan for APD		

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)
9,600.0	90.00	106.08	6,522.0	-914.4	3,172.4	3,301.6	0.00	0.00	0.00
9,700.0	90.00	106.08	6,522.0	-942.1	3,268.5	3,401.6	0.00	0.00	0.00
9,800.0	90.00	106.08	6,522.0	-969.8	3,364.6	3,501.6	0.00	0.00	0.00
9,900.0	90.00	106.08	6,522.0	-997.5	3,460.7	3,601.6	0.00	0.00	0.00
10,000.0	90.00	106.08	6,522.0	-1,025.2	3,556.8	3,701.6	0.00	0.00	0.00
10,100.0	90.00	106.08	6,522.0	-1,052.9	3,652.9	3,801.6	0.00	0.00	0.00
10,148.1	90.00	106.08	6,522.0	-1,066.2	3,699.1	3,849.7	0.00	0.00	0.00
TD = 10148' MD - Chalk									

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									
Chalk	0.00	0.00	6,522.0	-1,066.2	3,699.1	1,533,351.37	3,406,154.96	40° 47' 17.566 N	104° 1' 59.599 W
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
6,819.3	6,522.0	7"	7	8-3/4	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
	7,142.0	D-Sand		0.00	
1.0	1.0	Fox Hills		0.00	
6,819.3	6,522.0	Horizontal Target		0.00	
	7,063.0	Mowry		0.00	
	6,721.0	Codell		0.00	
	7,233.0	J-Sand		0.00	
	7,365.0	Skull Creek		0.00	
807.0	807.0	Pierre		0.00	
6,413.9	6,372.0	Niobrara		0.00	
	7,415.0	TD = 7415' MD		0.00	

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
6,001.1	6,001.1	0.0	0.0	KOP 11/100'
6,819.3	6,522.0	-144.3	500.5	EOB Hold 90 Deg
10,148.1	6,522.0	-1,066.2	3,699.1	TD = 10148' MD



CHALK BLUFFS 36-13H

NOTES

CALCULATED DIMENSIONS
ARE IN PARENTHESES

LEGEND

- (S) FIELD SURVEYED
 WELL LOCATION
 (B) FIELD SURVEYED
 BOTTOM HOLE LOCATION

 ROAD
 FENCE



SCALE: 1" = 1000'



SCALE IN FEET

P.O. BOX 442 615 SOUTH TENTH AVENUE
STERLING, CO 80751 970-522-1960

GPS OPERATOR:
DARREN VEAL

SHEET 1 OF 1

