

Whiting Petroleum Corporation

Rio Blanco County, CO

Boies Ranch

Boies C-27K-K3N

Wellbore #1

Plan: Preliminary Plan for APD 08/05/11

Standard Planning Report

08 August, 2011



**Whiting Petroleum Corporation
Boies C-27K-K3N
Rio Blanco County, CO**

**Geodetic System: US State Plane 1983
Zone: Colorado Northern Zone
WELL @ 6465.0ft (Original Well Elev)
Ground Level: 6435.0
Latitude: 39° 50' 45.496 N
Longitude: 108° 22' 53.407 W
Magnetic North is 10.55° East of True North (Magnetic Declination)**



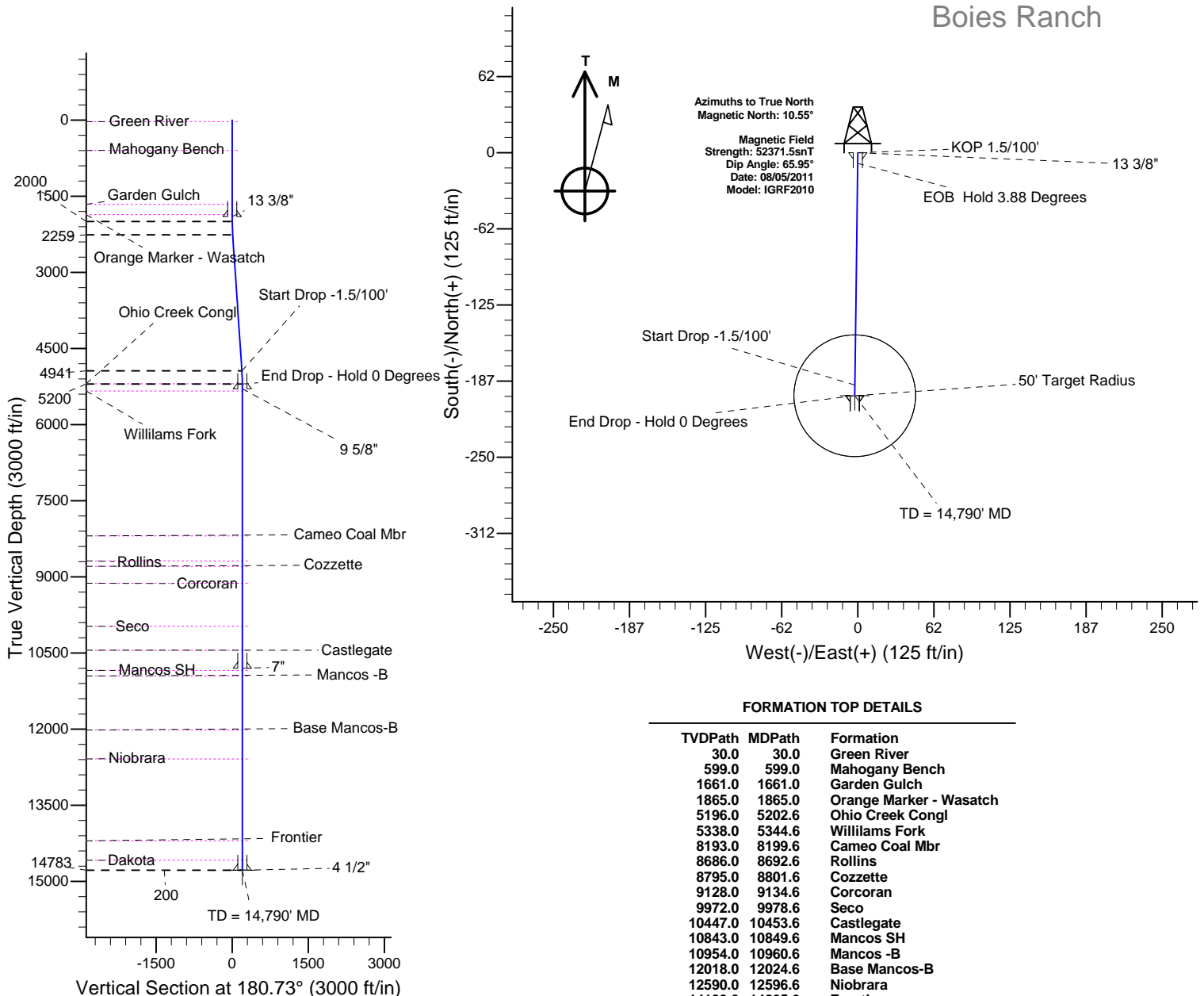
SECTION DETAILS

CASING DETAILS			
TVD	MD	Name	Size
1900.0	1900.0	13 3/8"	13-3/8
5293.4	5300.0	9 5/8"	9-5/8
10800.0	10806.6	7"	7
14783.0	14789.6	4 1/2"	4-1/2

MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0	
2258.9	3.88	180.73	2258.7	-8.8	-0.1	1.50	180.73	8.8	
4947.7	3.88	180.73	4941.3	-190.8	-2.4	0.00	0.00	190.9	
5206.6	0.00	0.00	5200.0	-199.6	-2.5	1.50	180.00	199.6	
14789.6	0.00	0.00	14783.0	-199.6	-2.5	0.00	0.00	199.6	

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Boies C-27K-K3N PBHL	14783.0	-199.6	-2.5	39° 50' 43.523 N	108° 22' 53.440 W	Circle (Radius: 50.0)



Crescent Directional Drilling, LP

Planning Report



Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well Boies C-27K-K3N
Company:	Whiting Petroleum Corporation	TVD Reference:	WELL @ 6465.0ft (Original Well Elev)
Project:	Rio Blanco County, CO	MD Reference:	WELL @ 6465.0ft (Original Well Elev)
Site:	Boies Ranch	North Reference:	True
Well:	Boies C-27K-K3N	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Preliminary Plan for APD 08/05/11		

Project	Rio Blanco County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	Boies Ranch				
Site Position:		Northing:	1,199,882.98 ft	Latitude:	39° 50' 45.496 N
From:	Lat/Long	Easting:	2,191,056.00 ft	Longitude:	108° 22' 53.407 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	-1.86 °

Well	Boies C-27K-K3N					
Well Position	+N/-S	0.0 ft	Northing:	1,199,882.97 ft	Latitude:	39° 50' 45.496 N
	+E/-W	0.0 ft	Easting:	2,191,056.00 ft	Longitude:	108° 22' 53.407 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	6,465.0 ft	Ground Level:	6,435.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	08/05/11	10.55	65.95	52,372

Design	Preliminary Plan for APD 08/05/11			
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	180.73

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	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,258.9	3.88	180.73	2,258.7	-8.8	-0.1	1.50	1.50	0.00	180.73	
4,947.7	3.88	180.73	4,941.3	-190.8	-2.4	0.00	0.00	0.00	0.00	
5,206.6	0.00	0.00	5,200.0	-199.6	-2.5	1.50	-1.50	0.00	180.00	
14,789.6	0.00	0.00	14,783.0	-199.6	-2.5	0.00	0.00	0.00	0.00	

Crescent Directional Drilling, LP

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Company:	Whiting Petroleum Corporation	TVD Reference:	WELL @ 6465.0ft (Original Well Elev)
Project:	Rio Blanco County, CO	MD Reference:	WELL @ 6465.0ft (Original Well Elev)
Site:	Boies Ranch	North Reference:	True
Well:	Boies C-27K-K3N	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Preliminary Plan for APD 08/05/11		

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
30.0	0.00	0.00	30.0	0.0	0.0	0.0	0.00	0.00	0.00
Green River									
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
599.0	0.00	0.00	599.0	0.0	0.0	0.0	0.00	0.00	0.00
Mahogany Bench									
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
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
1,661.0	0.00	0.00	1,661.0	0.0	0.0	0.0	0.00	0.00	0.00
Garden Gulch									
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
1,865.0	0.00	0.00	1,865.0	0.0	0.0	0.0	0.00	0.00	0.00
Orange Marker - Wasatch									
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
13 3/8"									
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP 1.5/100'									
2,100.0	1.50	180.73	2,100.0	-1.3	0.0	1.3	1.50	1.50	0.00
2,200.0	3.00	180.73	2,199.9	-5.2	-0.1	5.2	1.50	1.50	0.00
2,258.9	3.88	180.73	2,258.7	-8.8	-0.1	8.8	1.50	1.50	0.00
EOB Hold 3.88 Degrees									
2,300.0	3.88	180.73	2,299.7	-11.6	-0.1	11.6	0.00	0.00	0.00
2,400.0	3.88	180.73	2,399.5	-18.3	-0.2	18.3	0.00	0.00	0.00
2,500.0	3.88	180.73	2,499.2	-25.1	-0.3	25.1	0.00	0.00	0.00
2,600.0	3.88	180.73	2,599.0	-31.9	-0.4	31.9	0.00	0.00	0.00
2,700.0	3.88	180.73	2,698.8	-38.6	-0.5	38.6	0.00	0.00	0.00
2,800.0	3.88	180.73	2,798.6	-45.4	-0.6	45.4	0.00	0.00	0.00
2,900.0	3.88	180.73	2,898.3	-52.2	-0.7	52.2	0.00	0.00	0.00
3,000.0	3.88	180.73	2,998.1	-59.0	-0.7	59.0	0.00	0.00	0.00
3,100.0	3.88	180.73	3,097.9	-65.7	-0.8	65.7	0.00	0.00	0.00
3,200.0	3.88	180.73	3,197.6	-72.5	-0.9	72.5	0.00	0.00	0.00
3,300.0	3.88	180.73	3,297.4	-79.3	-1.0	79.3	0.00	0.00	0.00
3,400.0	3.88	180.73	3,397.2	-86.0	-1.1	86.0	0.00	0.00	0.00
3,500.0	3.88	180.73	3,497.0	-92.8	-1.2	92.8	0.00	0.00	0.00
3,600.0	3.88	180.73	3,596.7	-99.6	-1.3	99.6	0.00	0.00	0.00
3,700.0	3.88	180.73	3,696.5	-106.4	-1.3	106.4	0.00	0.00	0.00
3,800.0	3.88	180.73	3,796.3	-113.1	-1.4	113.1	0.00	0.00	0.00
3,900.0	3.88	180.73	3,896.0	-119.9	-1.5	119.9	0.00	0.00	0.00
4,000.0	3.88	180.73	3,995.8	-126.7	-1.6	126.7	0.00	0.00	0.00

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Wellbore:	Wellbore #1		
Design:	Preliminary Plan for APD 08/05/11		

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)
4,100.0	3.88	180.73	4,095.6	-133.4	-1.7	133.5	0.00	0.00	0.00
4,200.0	3.88	180.73	4,195.3	-140.2	-1.8	140.2	0.00	0.00	0.00
4,300.0	3.88	180.73	4,295.1	-147.0	-1.9	147.0	0.00	0.00	0.00
4,400.0	3.88	180.73	4,394.9	-153.8	-1.9	153.8	0.00	0.00	0.00
4,500.0	3.88	180.73	4,494.7	-160.5	-2.0	160.5	0.00	0.00	0.00
4,600.0	3.88	180.73	4,594.4	-167.3	-2.1	167.3	0.00	0.00	0.00
4,700.0	3.88	180.73	4,694.2	-174.1	-2.2	174.1	0.00	0.00	0.00
4,800.0	3.88	180.73	4,794.0	-180.8	-2.3	180.9	0.00	0.00	0.00
4,900.0	3.88	180.73	4,893.7	-187.6	-2.4	187.6	0.00	0.00	0.00
4,947.7	3.88	180.73	4,941.3	-190.8	-2.4	190.9	0.00	0.00	0.00
Start Drop -1.5/100'									
5,000.0	3.10	180.73	4,993.5	-194.0	-2.5	194.0	1.50	-1.50	0.00
5,100.0	1.60	180.73	5,093.4	-198.1	-2.5	198.1	1.50	-1.50	0.00
5,200.0	0.10	180.73	5,193.4	-199.6	-2.5	199.6	1.50	-1.50	0.00
5,202.6	0.06	180.73	5,196.0	-199.6	-2.5	199.6	1.50	-1.50	0.00
Ohio Creek Congl									
5,206.6	0.00	0.00	5,200.0	-199.6	-2.5	199.6	1.49	-1.49	0.00
End Drop - Hold 0 Degrees									
5,300.0	0.00	0.00	5,293.4	-199.6	-2.5	199.6	0.00	0.00	0.00
9 5/8"									
5,344.6	0.00	0.00	5,338.0	-199.6	-2.5	199.6	0.00	0.00	0.00
Williams Fork									
5,400.0	0.00	0.00	5,393.4	-199.6	-2.5	199.6	0.00	0.00	0.00
5,500.0	0.00	0.00	5,493.4	-199.6	-2.5	199.6	0.00	0.00	0.00
5,600.0	0.00	0.00	5,593.4	-199.6	-2.5	199.6	0.00	0.00	0.00
5,700.0	0.00	0.00	5,693.4	-199.6	-2.5	199.6	0.00	0.00	0.00
5,800.0	0.00	0.00	5,793.4	-199.6	-2.5	199.6	0.00	0.00	0.00
5,900.0	0.00	0.00	5,893.4	-199.6	-2.5	199.6	0.00	0.00	0.00
6,000.0	0.00	0.00	5,993.4	-199.6	-2.5	199.6	0.00	0.00	0.00
6,100.0	0.00	0.00	6,093.4	-199.6	-2.5	199.6	0.00	0.00	0.00
6,200.0	0.00	0.00	6,193.4	-199.6	-2.5	199.6	0.00	0.00	0.00
6,300.0	0.00	0.00	6,293.4	-199.6	-2.5	199.6	0.00	0.00	0.00
6,400.0	0.00	0.00	6,393.4	-199.6	-2.5	199.6	0.00	0.00	0.00
6,500.0	0.00	0.00	6,493.4	-199.6	-2.5	199.6	0.00	0.00	0.00
6,600.0	0.00	0.00	6,593.4	-199.6	-2.5	199.6	0.00	0.00	0.00
6,700.0	0.00	0.00	6,693.4	-199.6	-2.5	199.6	0.00	0.00	0.00
6,800.0	0.00	0.00	6,793.4	-199.6	-2.5	199.6	0.00	0.00	0.00
6,900.0	0.00	0.00	6,893.4	-199.6	-2.5	199.6	0.00	0.00	0.00
7,000.0	0.00	0.00	6,993.4	-199.6	-2.5	199.6	0.00	0.00	0.00
7,100.0	0.00	0.00	7,093.4	-199.6	-2.5	199.6	0.00	0.00	0.00
7,200.0	0.00	0.00	7,193.4	-199.6	-2.5	199.6	0.00	0.00	0.00
7,300.0	0.00	0.00	7,293.4	-199.6	-2.5	199.6	0.00	0.00	0.00
7,400.0	0.00	0.00	7,393.4	-199.6	-2.5	199.6	0.00	0.00	0.00
7,500.0	0.00	0.00	7,493.4	-199.6	-2.5	199.6	0.00	0.00	0.00
7,600.0	0.00	0.00	7,593.4	-199.6	-2.5	199.6	0.00	0.00	0.00
7,700.0	0.00	0.00	7,693.4	-199.6	-2.5	199.6	0.00	0.00	0.00
7,800.0	0.00	0.00	7,793.4	-199.6	-2.5	199.6	0.00	0.00	0.00
7,900.0	0.00	0.00	7,893.4	-199.6	-2.5	199.6	0.00	0.00	0.00
8,000.0	0.00	0.00	7,993.4	-199.6	-2.5	199.6	0.00	0.00	0.00
8,100.0	0.00	0.00	8,093.4	-199.6	-2.5	199.6	0.00	0.00	0.00
8,199.6	0.00	0.00	8,193.0	-199.6	-2.5	199.6	0.00	0.00	0.00
Cameo Coal Mbr									
8,200.0	0.00	0.00	8,193.4	-199.6	-2.5	199.6	0.00	0.00	0.00

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8,300.0	0.00	0.00	8,293.4	-199.6	-2.5	199.6	0.00	0.00	0.00
8,400.0	0.00	0.00	8,393.4	-199.6	-2.5	199.6	0.00	0.00	0.00
8,500.0	0.00	0.00	8,493.4	-199.6	-2.5	199.6	0.00	0.00	0.00
8,600.0	0.00	0.00	8,593.4	-199.6	-2.5	199.6	0.00	0.00	0.00
8,692.6	0.00	0.00	8,686.0	-199.6	-2.5	199.6	0.00	0.00	0.00
Rollins									
8,700.0	0.00	0.00	8,693.4	-199.6	-2.5	199.6	0.00	0.00	0.00
8,800.0	0.00	0.00	8,793.4	-199.6	-2.5	199.6	0.00	0.00	0.00
8,801.6	0.00	0.00	8,795.0	-199.6	-2.5	199.6	0.00	0.00	0.00
Cozzette									
8,900.0	0.00	0.00	8,893.4	-199.6	-2.5	199.6	0.00	0.00	0.00
9,000.0	0.00	0.00	8,993.4	-199.6	-2.5	199.6	0.00	0.00	0.00
9,100.0	0.00	0.00	9,093.4	-199.6	-2.5	199.6	0.00	0.00	0.00
9,134.6	0.00	0.00	9,128.0	-199.6	-2.5	199.6	0.00	0.00	0.00
Corcoran									
9,200.0	0.00	0.00	9,193.4	-199.6	-2.5	199.6	0.00	0.00	0.00
9,300.0	0.00	0.00	9,293.4	-199.6	-2.5	199.6	0.00	0.00	0.00
9,400.0	0.00	0.00	9,393.4	-199.6	-2.5	199.6	0.00	0.00	0.00
9,500.0	0.00	0.00	9,493.4	-199.6	-2.5	199.6	0.00	0.00	0.00
9,600.0	0.00	0.00	9,593.4	-199.6	-2.5	199.6	0.00	0.00	0.00
9,700.0	0.00	0.00	9,693.4	-199.6	-2.5	199.6	0.00	0.00	0.00
9,800.0	0.00	0.00	9,793.4	-199.6	-2.5	199.6	0.00	0.00	0.00
9,900.0	0.00	0.00	9,893.4	-199.6	-2.5	199.6	0.00	0.00	0.00
9,978.6	0.00	0.00	9,972.0	-199.6	-2.5	199.6	0.00	0.00	0.00
Seco									
10,000.0	0.00	0.00	9,993.4	-199.6	-2.5	199.6	0.00	0.00	0.00
10,100.0	0.00	0.00	10,093.4	-199.6	-2.5	199.6	0.00	0.00	0.00
10,200.0	0.00	0.00	10,193.4	-199.6	-2.5	199.6	0.00	0.00	0.00
10,300.0	0.00	0.00	10,293.4	-199.6	-2.5	199.6	0.00	0.00	0.00
10,400.0	0.00	0.00	10,393.4	-199.6	-2.5	199.6	0.00	0.00	0.00
10,453.6	0.00	0.00	10,447.0	-199.6	-2.5	199.6	0.00	0.00	0.00
Castlegate									
10,500.0	0.00	0.00	10,493.4	-199.6	-2.5	199.6	0.00	0.00	0.00
10,600.0	0.00	0.00	10,593.4	-199.6	-2.5	199.6	0.00	0.00	0.00
10,700.0	0.00	0.00	10,693.4	-199.6	-2.5	199.6	0.00	0.00	0.00
10,800.0	0.00	0.00	10,793.4	-199.6	-2.5	199.6	0.00	0.00	0.00
10,806.6	0.00	0.00	10,800.0	-199.6	-2.5	199.6	0.00	0.00	0.00
7"									
10,849.6	0.00	0.00	10,843.0	-199.6	-2.5	199.6	0.00	0.00	0.00
Mancos SH									
10,900.0	0.00	0.00	10,893.4	-199.6	-2.5	199.6	0.00	0.00	0.00
10,960.6	0.00	0.00	10,954.0	-199.6	-2.5	199.6	0.00	0.00	0.00
Mancos -B									
11,000.0	0.00	0.00	10,993.4	-199.6	-2.5	199.6	0.00	0.00	0.00
11,100.0	0.00	0.00	11,093.4	-199.6	-2.5	199.6	0.00	0.00	0.00
11,200.0	0.00	0.00	11,193.4	-199.6	-2.5	199.6	0.00	0.00	0.00
11,300.0	0.00	0.00	11,293.4	-199.6	-2.5	199.6	0.00	0.00	0.00
11,400.0	0.00	0.00	11,393.4	-199.6	-2.5	199.6	0.00	0.00	0.00
11,500.0	0.00	0.00	11,493.4	-199.6	-2.5	199.6	0.00	0.00	0.00
11,600.0	0.00	0.00	11,593.4	-199.6	-2.5	199.6	0.00	0.00	0.00
11,700.0	0.00	0.00	11,693.4	-199.6	-2.5	199.6	0.00	0.00	0.00
11,800.0	0.00	0.00	11,793.4	-199.6	-2.5	199.6	0.00	0.00	0.00

Crescent Directional Drilling, LP

Planning Report



Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well Boies C-27K-K3N
Company:	Whiting Petroleum Corporation	TVD Reference:	WELL @ 6465.0ft (Original Well Elev)
Project:	Rio Blanco County, CO	MD Reference:	WELL @ 6465.0ft (Original Well Elev)
Site:	Boies Ranch	North Reference:	True
Well:	Boies C-27K-K3N	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Preliminary Plan for APD 08/05/11		

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)
11,900.0	0.00	0.00	11,893.4	-199.6	-2.5	199.6	0.00	0.00	0.00
12,000.0	0.00	0.00	11,993.4	-199.6	-2.5	199.6	0.00	0.00	0.00
12,024.6	0.00	0.00	12,018.0	-199.6	-2.5	199.6	0.00	0.00	0.00
Base Mancos-B									
12,100.0	0.00	0.00	12,093.4	-199.6	-2.5	199.6	0.00	0.00	0.00
12,200.0	0.00	0.00	12,193.4	-199.6	-2.5	199.6	0.00	0.00	0.00
12,300.0	0.00	0.00	12,293.4	-199.6	-2.5	199.6	0.00	0.00	0.00
12,400.0	0.00	0.00	12,393.4	-199.6	-2.5	199.6	0.00	0.00	0.00
12,500.0	0.00	0.00	12,493.4	-199.6	-2.5	199.6	0.00	0.00	0.00
12,596.6	0.00	0.00	12,590.0	-199.6	-2.5	199.6	0.00	0.00	0.00
Niobrara									
12,600.0	0.00	0.00	12,593.4	-199.6	-2.5	199.6	0.00	0.00	0.00
12,700.0	0.00	0.00	12,693.4	-199.6	-2.5	199.6	0.00	0.00	0.00
12,800.0	0.00	0.00	12,793.4	-199.6	-2.5	199.6	0.00	0.00	0.00
12,900.0	0.00	0.00	12,893.4	-199.6	-2.5	199.6	0.00	0.00	0.00
13,000.0	0.00	0.00	12,993.4	-199.6	-2.5	199.6	0.00	0.00	0.00
13,100.0	0.00	0.00	13,093.4	-199.6	-2.5	199.6	0.00	0.00	0.00
13,200.0	0.00	0.00	13,193.4	-199.6	-2.5	199.6	0.00	0.00	0.00
13,300.0	0.00	0.00	13,293.4	-199.6	-2.5	199.6	0.00	0.00	0.00
13,400.0	0.00	0.00	13,393.4	-199.6	-2.5	199.6	0.00	0.00	0.00
13,500.0	0.00	0.00	13,493.4	-199.6	-2.5	199.6	0.00	0.00	0.00
13,600.0	0.00	0.00	13,593.4	-199.6	-2.5	199.6	0.00	0.00	0.00
13,700.0	0.00	0.00	13,693.4	-199.6	-2.5	199.6	0.00	0.00	0.00
13,800.0	0.00	0.00	13,793.4	-199.6	-2.5	199.6	0.00	0.00	0.00
13,900.0	0.00	0.00	13,893.4	-199.6	-2.5	199.6	0.00	0.00	0.00
14,000.0	0.00	0.00	13,993.4	-199.6	-2.5	199.6	0.00	0.00	0.00
14,100.0	0.00	0.00	14,093.4	-199.6	-2.5	199.6	0.00	0.00	0.00
14,200.0	0.00	0.00	14,193.4	-199.6	-2.5	199.6	0.00	0.00	0.00
14,205.6	0.00	0.00	14,199.0	-199.6	-2.5	199.6	0.00	0.00	0.00
Frontier									
14,300.0	0.00	0.00	14,293.4	-199.6	-2.5	199.6	0.00	0.00	0.00
14,400.0	0.00	0.00	14,393.4	-199.6	-2.5	199.6	0.00	0.00	0.00
14,500.0	0.00	0.00	14,493.4	-199.6	-2.5	199.6	0.00	0.00	0.00
14,589.6	0.00	0.00	14,583.0	-199.6	-2.5	199.6	0.00	0.00	0.00
Dakota									
14,600.0	0.00	0.00	14,593.4	-199.6	-2.5	199.6	0.00	0.00	0.00
14,700.0	0.00	0.00	14,693.4	-199.6	-2.5	199.6	0.00	0.00	0.00
14,789.5	0.00	0.00	14,782.9	-199.6	-2.5	199.6	0.00	0.00	0.00
TD = 14,790' MD									
14,789.6	0.00	0.00	14,783.0	-199.6	-2.5	199.6	0.00	0.00	0.00
4 1/2" - Boies C-27K-K3N PBHL									

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									
Boies C-27K-K3N PBI	0.00	0.00	14,783.0	-199.6	-2.5	1,199,683.55	2,191,046.99	39° 50' 43.523 N	108° 22' 53.440 W
- plan hits target center									
- Circle (radius 50.0)									

Crescent Directional Drilling, LP

Planning Report



Database:	EDM 2003.16 Single User Db	Local Co-ordinate Reference:	Well Boies C-27K-K3N
Company:	Whiting Petroleum Corporation	TVD Reference:	WELL @ 6465.0ft (Original Well Elev)
Project:	Rio Blanco County, CO	MD Reference:	WELL @ 6465.0ft (Original Well Elev)
Site:	Boies Ranch	North Reference:	True
Well:	Boies C-27K-K3N	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Preliminary Plan for APD 08/05/11		

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
1,900.0	1,900.0	13 3/8"	13-3/8	17-1/2
5,300.0	5,293.4	9 5/8"	9-5/8	12-1/4
10,806.6	10,800.0	7"	7	8-1/2
14,789.6	14,783.0	4 1/2"	4-1/2	6

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
14,205.6	14,199.0	Frontier		0.00	
12,024.6	12,018.0	Base Mancos-B		0.00	
599.0	599.0	Mahogany Bench		0.00	
9,134.6	9,128.0	Corcoran		0.00	
8,801.6	8,795.0	Cozzette		0.00	
12,596.6	12,590.0	Niobrara		0.00	
8,199.6	8,193.0	Cameo Coal Mbr		0.00	
10,453.6	10,447.0	Castlegate		0.00	
14,589.6	14,583.0	Dakota		0.00	
8,692.6	8,686.0	Rollins		0.00	
9,978.6	9,972.0	Seco		0.00	
5,202.6	5,196.0	Ohio Creek Congl		0.00	
30.0	30.0	Green River		0.00	
1,661.0	1,661.0	Garden Gulch		0.00	
10,849.6	10,843.0	Mancos SH		0.00	
1,865.0	1,865.0	Orange Marker - Wasatch		0.00	
10,960.6	10,954.0	Mancos -B		0.00	
5,344.6	5,338.0	Willilams Fork		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2,000.0	2,000.0	0.0	0.0	KOP 1.5/100'
2,258.9	2,258.7	-8.8	-0.1	EOB Hold 3.88 Degrees
4,947.7	4,941.3	-190.8	-2.4	Start Drop -1.5/100'
5,206.6	5,200.0	-199.6	-2.5	End Drop - Hold 0 Degrees
14,789.5	14,782.9	-199.6	-2.5	TD = 14,790' MD

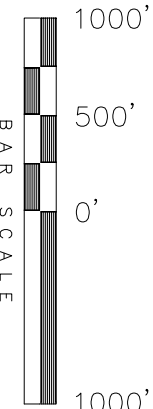
T2S, R98W, 6TH P.M.

N89°52'W - 2651.22' (G.L.O.)
2647.82' (Measured)
S88°18'57"E (Basis of Bearings)

WHITING OIL & GAS CORPORATION

WELL LOCATION, BOIES C-27K-K3N,
LOCATED AS SHOWN IN THE NE 1/4
SW 1/4 OF SECTION 27, T2S, R98W,
6TH P.M. RIO BLANCO, COLORADO.

NORTH - 2638.02' (G.L.O.)



**WELL LOCATION:
BOIES C-27K-K3N**

ELEV. EXISTING GRADED GROUND = 6436'

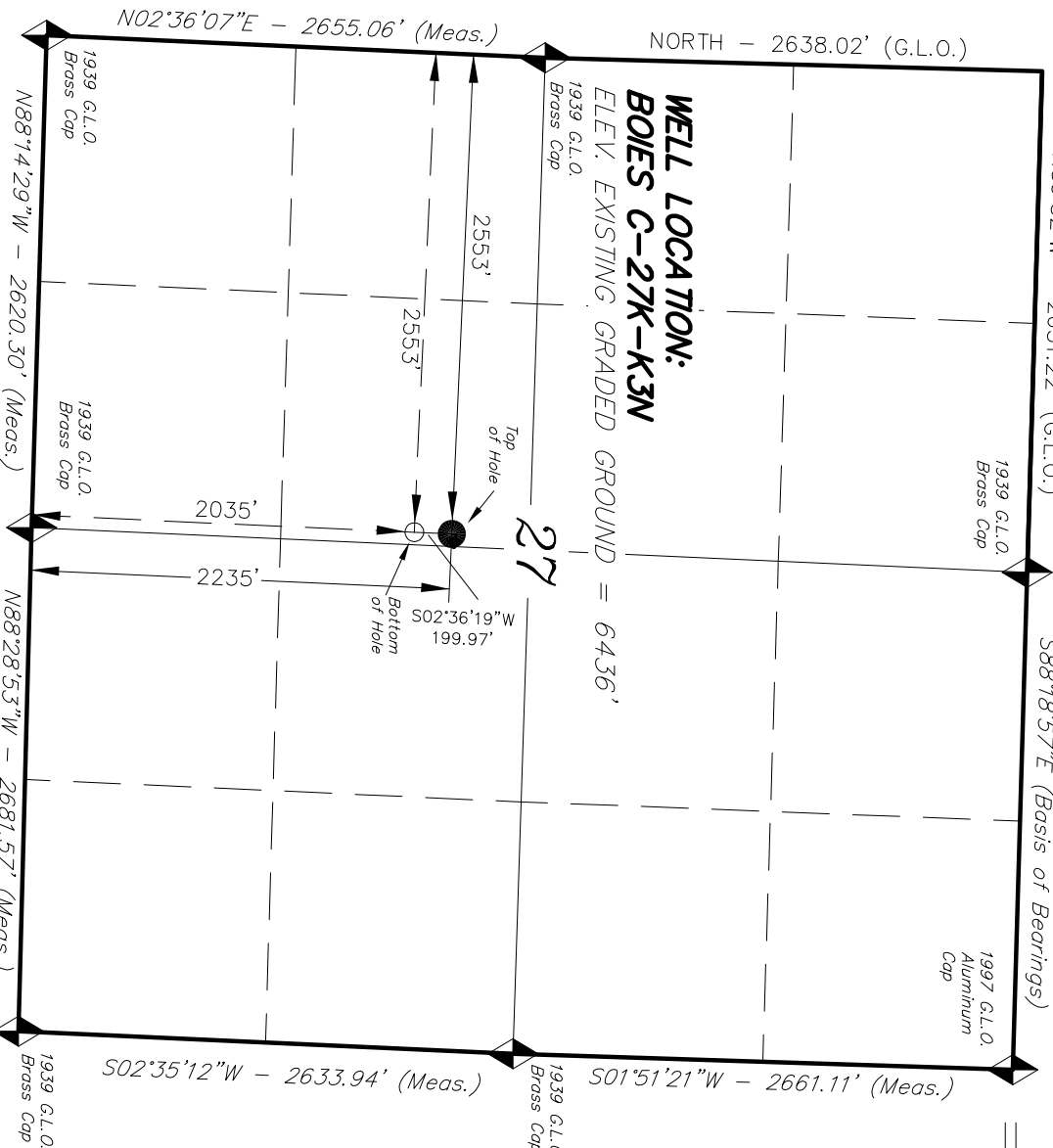
1939 G.L.O.
Brass Cap

1939 G.L.O.
Brass Cap

S01°51'21"W - 2661.11' (Meas.)

N02°36'07"E - 2655.06' (Meas.)

S02°35'12"W - 2633.94' (Meas.)

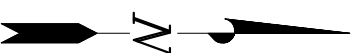


NOTES:

1. Bearings are based on Global Positioning Satellite observations.
2. G.P.S. Operator: D. Petty, (PDOP) = 1.7

IMPROVEMENT NOTE:

See addendum to legal plat (Sheet 1m)
for visible improvements within 200' of the
proposed well head.



THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS
PREPARED FROM FIELD NOTES OF REAL SURVEYS
MADE BY ME OR UNDER MY SUPERVISION. THE
LOCATION HAS BEEN SHOWN ON THE PLAT AS
SHOWN ON THE PLAT. I HAVE MADE THE
TRUE AND CORRECT TO THE BEST OF MY
KNOWLEDGE AND BELIEF.

David C. Petty
REGISTERED LAND SURVEYOR
REGISTRATION NO. 30125
STATE OF COLORADO
30125 07-29-11

TRI STATE LAND SURVEYING & CONSULTING

180 NORTH VERNAL AVE. - VERNAL, UTAH 84078
(435) 781-2501

DATE SURVEYED: 11-05-08
SURVEYED BY: D.P.

DATE DRAWN: 11-24-08
DRAWN BY: L.C.S.


REVISED: A.P.C. 07-29-11
SCALE: 1" = 1000'

SHEET
1a

= SECTION CORNERS LOCATED

BASIS OF ELEVATIONS IS MAGNOLIA TRIANGULATION STATION
LOCATED IN THE NW 1/4 OF SECTION 9, T2S, R96W, 6TH P.M.
REPORTED FROM THE NATIONAL GEODETIC SURVEY AS BEING
7529 FEET (NAD 83)
WE MEASURED IT TO BE 7526.2 FEET.

NAD 83 (SURFACE LOCATION)	
LATITUDE = 39°50'45.50" (39.845971)	
LONGITUDE = 108°22'53.41" (108.381502)	
NAD 27 (SURFACE LOCATION)	
LATITUDE = 39°50'45.59" (39.845998)	
LONGITUDE = 108°22'51.08" (108.380856)	
NAD 83 (BOTTOM HOLE LOCATION)	
LATITUDE = 39°50'43.52" (39.845423)	
LONGITUDE = 108°22'53.44" (108.381511)	
NAD 27 (BOTTOM HOLE LOCATION)	
LATITUDE = 39°50'43.62" (39.845450)	
LONGITUDE = 108°22'51.12" (108.380865)	

GEOLOGIST			WHITING OIL & GAS CORP. 1700 BROADWAY Suite 2300 Denver, CO 80290 303-837-1661
Larry Rasmussen			
REVISIONS			
1	Updated prog tops 3/2011		
2			

WELL INFORMATION			
API:		AFE:	
WELL NAME:	BOIES C-27K-K3N	ACQUISITION:	
PROSPECT:	BOIES RANCH DEEP	RESERVE CATEGORY:	Exploratory
SURFACE LOCATION:	NESW 27 T2S R98W	SURVEYED ELEVATION (GR):	6,435
SURFACE FOOTAGE:	2235 FSL 2553 FWL	HEIGHT TO DATUM:	30
SURFACE LAT, LONG:		DATUM ELEVATION (KB):	6,465
BOTTOM HOLE LOCATION:		PROPOSED TD (TVD):	14,783
BOTTOM HOLE FOOTAGE:		FORMATION AT TD:	Dakota Fm
BOTTOM HOLE LAT, LONG:		TVD (if horizontal well):	
COUNTY:	Rio Blanco	TMD (if horizontal well):	
STATE:	CO		
LOCATION MAY BE MOVED:		RIG:	

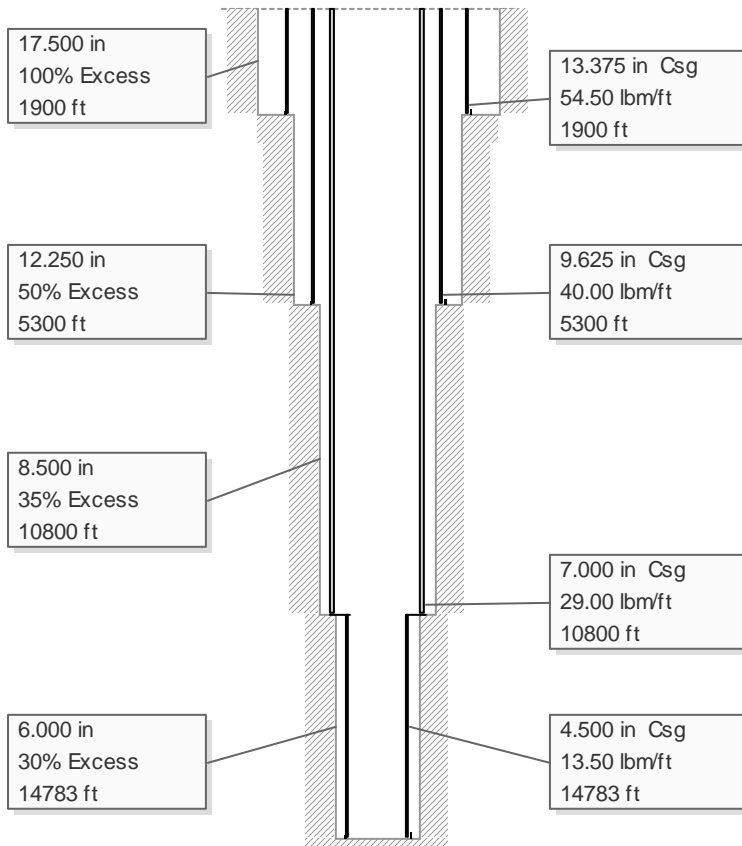
FORMATION	TOP - TVD	TOP - TVDSS	INTVL	CORE	LITHOLOGY	GEOLOGIC HAZARDS
Green River Fm @ Surface	30	6,435	569		SH-SS	
Mahogany Bench	599	5,866	1,062		Oil Shale	
Garden Gulch Mbr, Green River Fm	1,661	4,804	204		SH-SS	
Orange Marker, Wasatch Fm	1,865	4,600	3,331		SH-SS	
Ohio Creek Congl	5,196	1,269	142		SS-SH	
Williams Fork Fm	5,338	1,127	2,855		SS-SH	GAS
Cameo Coal Mbr, Williams Fork Fm	8,193	(1,728)	493		Coal-Carb SH-SS	GAS
Rollins SS Mbr, Iles Fm	8,686	(2,221)	109		Sandstone	GAS
Cozzette Mbr, Iles Fm	8,795	(2,330)	333		SS-SH-Carb SH	GAS
Corcoran Mbr, Iles Fm	9,128	(2,663)	844		SS-SH	GAS
Sego SS	9,972	(3,507)	475		SS-SH	GAS
Castlegate SS	10,447	(3,982)	396		SS-SH	GAS
Mancos SH	10,843	(4,378)	111		SH-Silt-SS	GAS
Mancos-B	10,954	(4,489)	1,064		Silt-SS	GAS
Base Mancos-B	12,018	(5,553)	572		SH-Silt	GAS
Niobrara	12,590	(6,125)	1,609	possible	Calc Silt-SH	GAS
Frontier	14,199	(7,734)	384		SS-Silt	GAS
Dakota	14,583	(8,118)	200		Sandstone	GAS
TD	14,783	(8,318)				

WIRELINE LOGS		MUDLOGGING / WELLSITE GEOLOGY	
LOGGING COMPANY:	TBD	MUDLOGGING CO:	TBD
Triple Combo + Sonic	TD-surface	MUDLOGGER/GEOLOGIST:	TBD
		PHONE:	
Sonic Scanner	TD-5,200	30' SAMPLES:	Surf csg to TD
		10' SAMPLES:	
FMI	TD-5,200	SPECIAL INSTRUCTIONS:	Ship one set of air-dried cuttings to Triple-O.
		CORING CO:	
		CORE ANALYSIS CO:	
Rho Matrix: 2.68 g/cc		CORE DEPTHS:	

COMPANY MAN	RIG PHONE	MOBILE	EMAIL
WHITING CONTACT INFO			
OFFICE			
MOBILE			
EMAIL			
GEOLOGY			
Larry Rasmussen	303-390-4093	720-272-5978	larryr@whiting.com
John Forster	303-390-4117	303-324-7690	johnfo@whiting.com
DRILLING			
Dana Greathouse	303-390-4247	303-808-3687	danag@whiting.com
Doug Walton	303-390-5574	303-519-7525	douglasw@whiting.com
FIELD OPERATIONS			
Danny Widner		970-985-8588	danny.widner@whiting.com

SPECIAL INSTRUCTIONS:

Boies C-27K-K3N
Boies Ranch Deep
NWSE 27-T2S-R98W
Rio Blanco County, Colorado
Vertical Niobrara/Dakota Test
Well Design



i-Handbook* - *a mark of Schlumberger

AFE Number:
API: