

Chesapeake Energy -Rockies District

Weld - DJ Basin

State 7-62 16-1H

State 7-62 16-1H

State 7-62 16-1H

Plan: State 7-62 16-1H

Standard Planning Report

31 August, 2011

Chesapeake Operating

Planning Report

Database:	Drilling Database	Local Co-ordinate Reference:	Well State 7-62 16-1H
Company:	Chesapeake Energy -Rockies District	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Project:	Weld - DJ Basin	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	State 7-62 16-1H	North Reference:	Grid
Well:	State 7-62 16-1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	State 7-62 16-1H		
Design:	State 7-62 16-1H		

Project	Weld - DJ Basin		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Colorado North 501		

Site	State 7-62 16-1H				
Site Position:		Northing:	452,161.35 ft	Latitude:	40° 34' 6.98339362 N
From:	Map	Easting:	2,328,039.98 ft	Longitude:	104° 19' 9.26022188 W
Position Uncertainty:	0.0 usft	Slot Radius:	13.200 in	Grid Convergence:	0.76 °

Well	State 7-62 16-1H					
Well Position	+N/-S	0.0 usft	Northing:	452,161.35 ft	Latitude:	40° 34' 6.98339362 N
	+E/-W	0.0 usft	Easting:	2,328,039.98 ft	Longitude:	104° 19' 9.26022188 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	0.0 usft

Wellbore	State 7-62 16-1H				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	8/31/2011	8.57	67.26	53,306

Design	State 7-62 16-1H			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	1.61

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
6,040.9	0.00	0.00	6,040.9	0.0	0.0	0.00	0.00	0.00	0.00	
6,938.9	89.80	1.61	6,613.8	570.7	16.1	10.00	10.00	0.00	1.61	
10,422.2	89.80	1.61	6,626.0	4,052.6	114.0	0.00	0.00	0.00	0.00	State 7-62 16-1H

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Local Co-ordinate Reference: Well State 7-62 16-1H
 TVD Reference: WELL @ 0.0usft (Original Well Elev)
 MD Reference: WELL @ 0.0usft (Original Well Elev)
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
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
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
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

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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
6,040.9	0.00	0.00	6,040.9	0.0	0.0	0.0	0.00	0.00	0.00
6,050.0	0.91	1.61	6,050.0	0.1	0.0	0.1	10.00	10.00	0.00
6,100.0	5.91	1.61	6,099.9	3.0	0.1	3.0	10.00	10.00	0.00
6,150.0	10.91	1.61	6,149.3	10.4	0.3	10.4	10.00	10.00	0.00
6,200.0	15.91	1.61	6,198.0	21.9	0.6	22.0	10.00	10.00	0.00
6,250.0	20.91	1.61	6,245.4	37.7	1.1	37.7	10.00	10.00	0.00
6,300.0	25.91	1.61	6,291.3	57.6	1.6	57.6	10.00	10.00	0.00
6,350.0	30.91	1.61	6,335.2	81.3	2.3	81.4	10.00	10.00	0.00
6,400.0	35.91	1.61	6,376.9	108.9	3.1	108.9	10.00	10.00	0.00
6,450.0	40.91	1.61	6,416.1	139.9	3.9	140.0	10.00	10.00	0.00
6,500.0	45.91	1.61	6,452.4	174.2	4.9	174.3	10.00	10.00	0.00
6,550.0	50.91	1.61	6,485.6	211.6	6.0	211.7	10.00	10.00	0.00
6,600.0	55.91	1.61	6,515.4	251.7	7.1	251.8	10.00	10.00	0.00
6,650.0	60.91	1.61	6,541.6	294.3	8.3	294.4	10.00	10.00	0.00
6,700.0	65.91	1.61	6,563.9	339.0	9.5	339.1	10.00	10.00	0.00
6,750.0	70.91	1.61	6,582.3	385.4	10.8	385.6	10.00	10.00	0.00
6,800.0	75.91	1.61	6,596.6	433.3	12.2	433.5	10.00	10.00	0.00
6,850.0	80.91	1.61	6,606.7	482.3	13.6	482.5	10.00	10.00	0.00
6,900.0	85.91	1.61	6,612.4	531.9	15.0	532.1	10.00	10.00	0.00
6,938.9	89.80	1.61	6,613.8	570.7	16.1	571.0	10.00	10.00	0.00
7,000.0	89.80	1.61	6,614.1	631.8	17.8	632.1	0.00	0.00	0.00
7,100.0	89.80	1.61	6,614.4	731.8	20.6	732.1	0.00	0.00	0.00
7,200.0	89.80	1.61	6,614.8	831.7	23.4	832.1	0.00	0.00	0.00
7,300.0	89.80	1.61	6,615.1	931.7	26.2	932.1	0.00	0.00	0.00
7,400.0	89.80	1.61	6,615.5	1,031.7	29.0	1,032.1	0.00	0.00	0.00
7,500.0	89.80	1.61	6,615.8	1,131.6	31.8	1,132.1	0.00	0.00	0.00
7,600.0	89.80	1.61	6,616.1	1,231.6	34.7	1,232.1	0.00	0.00	0.00
7,700.0	89.80	1.61	6,616.5	1,331.5	37.5	1,332.1	0.00	0.00	0.00
7,800.0	89.80	1.61	6,616.8	1,431.5	40.3	1,432.1	0.00	0.00	0.00
7,900.0	89.80	1.61	6,617.2	1,531.5	43.1	1,532.1	0.00	0.00	0.00
8,000.0	89.80	1.61	6,617.5	1,631.4	45.9	1,632.1	0.00	0.00	0.00
8,100.0	89.80	1.61	6,617.9	1,731.4	48.7	1,732.1	0.00	0.00	0.00
8,200.0	89.80	1.61	6,618.2	1,831.3	51.5	1,832.1	0.00	0.00	0.00
8,300.0	89.80	1.61	6,618.6	1,931.3	54.3	1,932.1	0.00	0.00	0.00
8,400.0	89.80	1.61	6,618.9	2,031.3	57.1	2,032.1	0.00	0.00	0.00
8,500.0	89.80	1.61	6,619.3	2,131.2	60.0	2,132.1	0.00	0.00	0.00
8,600.0	89.80	1.61	6,619.6	2,231.2	62.8	2,232.1	0.00	0.00	0.00
8,700.0	89.80	1.61	6,620.0	2,331.1	65.6	2,332.1	0.00	0.00	0.00
8,800.0	89.80	1.61	6,620.3	2,431.1	68.4	2,432.1	0.00	0.00	0.00
8,900.0	89.80	1.61	6,620.7	2,531.1	71.2	2,532.1	0.00	0.00	0.00
9,000.0	89.80	1.61	6,621.0	2,631.0	74.0	2,632.1	0.00	0.00	0.00
9,100.0	89.80	1.61	6,621.4	2,731.0	76.8	2,732.1	0.00	0.00	0.00
9,200.0	89.80	1.61	6,621.7	2,830.9	79.6	2,832.1	0.00	0.00	0.00
9,300.0	89.80	1.61	6,622.1	2,930.9	82.5	2,932.1	0.00	0.00	0.00
9,400.0	89.80	1.61	6,622.4	3,030.9	85.3	3,032.1	0.00	0.00	0.00
9,500.0	89.80	1.61	6,622.8	3,130.8	88.1	3,132.1	0.00	0.00	0.00
9,600.0	89.80	1.61	6,623.1	3,230.8	90.9	3,232.1	0.00	0.00	0.00

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Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,700.0	89.80	1.61	6,623.5	3,330.7	93.7	3,332.1	0.00	0.00	0.00
9,800.0	89.80	1.61	6,623.8	3,430.7	96.5	3,432.1	0.00	0.00	0.00
9,900.0	89.80	1.61	6,624.2	3,530.7	99.3	3,532.1	0.00	0.00	0.00
10,000.0	89.80	1.61	6,624.5	3,630.6	102.1	3,632.1	0.00	0.00	0.00
10,100.0	89.80	1.61	6,624.9	3,730.6	105.0	3,732.1	0.00	0.00	0.00
10,200.0	89.80	1.61	6,625.2	3,830.5	107.8	3,832.1	0.00	0.00	0.00
10,300.0	89.80	1.61	6,625.6	3,930.5	110.6	3,932.1	0.00	0.00	0.00
10,400.0	89.80	1.61	6,625.9	4,030.5	113.4	4,032.0	0.00	0.00	0.00
10,422.2	89.80	1.61	6,626.0	4,052.6	114.0	4,054.2	0.00	0.00	0.00

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
State 7-62 16-1H	0.00	0.00	6,626.0	4,052.6	114.0	456,214.00	2,328,154.00	0° 34' 47.01219853 N	34° 19' 7.08332337 W
- plan hits target center									
- Point									

Well: State 7-62 16-1H
 Zone of Interest: Niobrara Shale

Re-enter well.

Set cast iron bridge plug below kick off point. Perform negative pressure test. Set 7" casing whipstock.

Mill a window above whipstock.

Drill 6 1/8" curve and lateral hole to TD per attached directional plan.

Set 4-1/2" casing to surface and cement as shown below.

Suspend well and move drilling rig out in preparation for well completion

CASING AND CEMENTING PROGRAM

The proposed casing program will be as follows:

<u>Purpose</u>	<u>Interval</u>		<u>Hole Size</u>	<u>Casing Size</u>	<u>Weight</u>	<u>Grade</u>	<u>Thread</u>	<u>Condition</u>
	<u>From</u>	<u>To</u>	<u>(")</u>	<u>(")</u>	<u>Lbs/Ft</u>			
Production	0	10422	6 1/8	4 1/2	11.6	P-110	LTC	New

Casing design subject to revision based on geologic conditions encountered.

Casing Safety Factors:

Interval	Casing	Burst	Collapse	Axial
Production	4 1/2	1.32	2.26	1.63

Centralizer Program

Casing	4 1/2
# of Bow-type spring centralizer	65

Cement Program

Production Casing Cement	Slurry Volume			Weight	Yield	Mix H2O	TOC
	% Excess	(BBLs)	(Sacks)	(PPG)	(cuft/sk)	(GPS)	
Tail Slurry	20%	102	393	14.60	1.46	6.10	5841
Lead				Tail			

Production Casing Cement	Poz Type I-II 50/50	50/50 Poz Premium
	1 % Bentonite (Light Weight Additive)	2 % Bentonite (Light Weight Additive)
	3 lbm/sk Silicalite Compacted (Additive Material)	5 lbm/sk Silicalite Compacted (Light Weight Additive)
	3 % Microbond HT (Additive Material)	0.5 % Versaset (Thixotropic Additive)
	0.2 % Halad(R)-322 (Low Fluid Loss Control)	0.5 % Econolite (Cement Material)
	0.4 % Halad(R)-344 (Low Fluid Loss Control)	0.6 % HR-7 (Retarder)
	0.3 % HR-5 (Retarder)	0.5 % D-AIR 3000 (Defoamer)
		0.125 lbm/sk Poly-E-Flake (Lost Circulation Additive)
		0.25 lbm/sk Kwik Seal (Lost Circulation Additive)

MUD PROGRAM

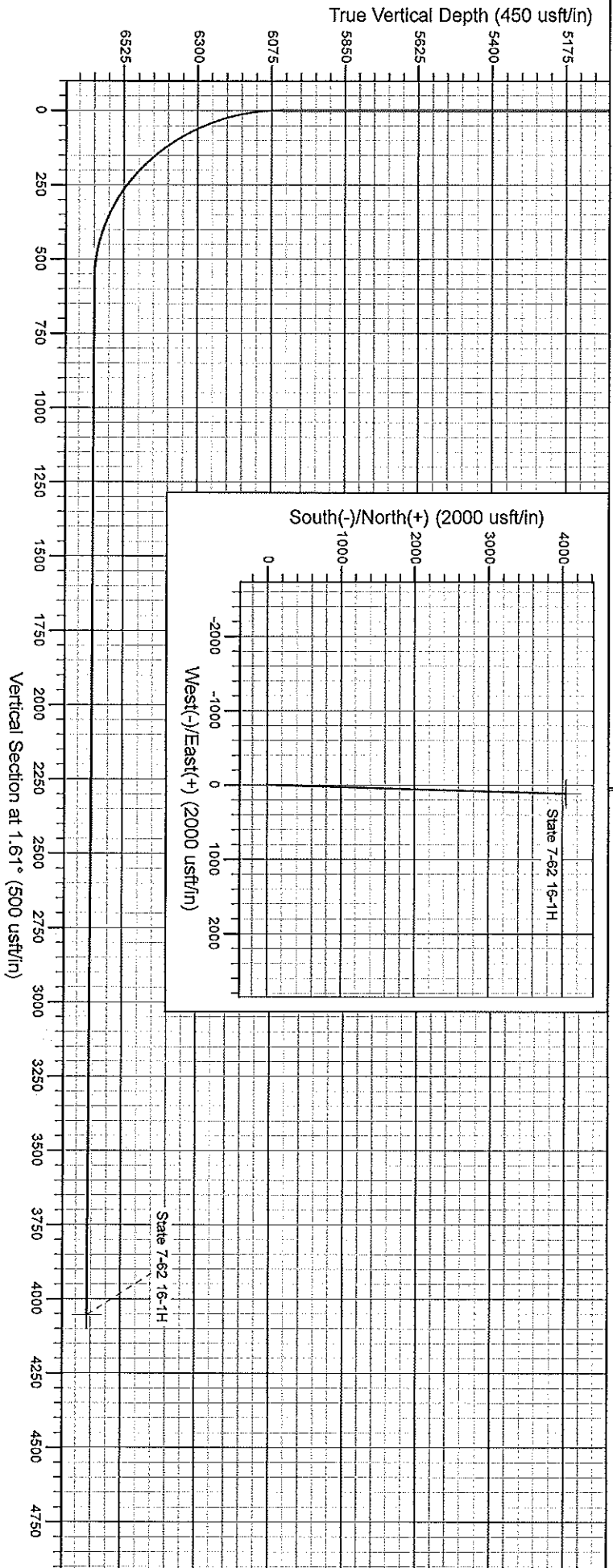
Purpose	Interval		Hole Size	Mud Type	Mud Weight	Viscosity	Fluid Loss	pH
	From	To	(")	(")	Lbs/Ft			
Production	6041'	10422'	6 1/8	WBM	8.5 - 10.0	36 - 46	4 - 6	9

WBM = Water Based Mud

Project: Weld - DJ Basin
 Site: State 7-62 16-1H
 Well: State 7-62 16-1H
 Wellbore: State 7-62 16-1H
 Design: State 7-62 16-1H

PROJECT DETAILS: Weld - DJ Basin

Geodetic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: Colorado North 501
 System Datum: Mean Sea Level



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	6040.9	0.00	0.00	6040.9	0.0	0.0	0.00	0.00	0.0	
3	6938.9	89.80	1.61	6613.8	570.7	16.1	10.00	1.61	571.0	
4	10422.2	89.80	1.61	6626.0	4052.6	114.0	0.00	0.00	4054.2	State 7-62 16-1H