

Marshall & Winston, Inc

Lea County, NM (NAD27 NME)

TJG Federal Com 3 #1H

TJG Federal Com 3 #1H

OH

Plan: Plan #1 - 8-3/4" Curve, 6-1/8" Lateral

Standard Planning Report

07 June, 2011

Oil Conservation Division

Case No. 13

Exhibit No. 13



Scientific Drilling
Directional Drilling Operations

Scientific Drilling

Planning Report



Database:	EDM-Julio	Local Co-ordinate Reference:	Site TJG Federal Com 3 #1H.
Company:	Marshall & Winston, Inc	TVD Reference:	GL Elev @ 3674.00usft.
Project:	Lea County, NM (NAD27 NME)	MD Reference:	GL Elev @ 3674.00usft.
Site:	TJG Federal Com 3 #1H	North Reference:	Grid
Well:	TJG Federal Com 3 #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 - 8-3/4" Curve, 6-1/8" Lateral		

Project	Lea County, NM (NAD27 NME)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site:	TJG Federal Com 3 #1H		
Site Position:	Map	Northing:	612,736.00 usft
From:		Easting:	680,681.30 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 40' 59.290 N
		Longitude:	103° 44' 45.921 W
		Grid Convergence:	0.32 "

Well:	TJG Federal Com 3 #1H		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	Ground Level:
			3,674.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2010	2011/06/07	(°)	(°)	(nT)
			7.70	60.58	48,875

Design:	Plan #1 - 8-3/4" Curve, 6-1/8" Lateral			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	269.83

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,785.42	90.00	269.83	9,500.00	-1.51	-499.99	11.46	11.46	0.00	269.83	
13,909.95	90.00	269.83	9,500.00	-14.00	-4,624.50	0.00	0.00	0.00	0.00	PBHL-TJG #1H

Scientific Drilling Planning Report



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Project:	Lea County, NM (NAD27 NME)	MD Reference:	GL Elev @ 3674.00usft
Site:	TJG Federal Com 3 #1H	North Reference:	Grid
Well:	TJG Federal Com 3 #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 - 8-3/4" Curve, 6-1/8" Lateral		

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
South HL-TJG #1H									
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP Start Build 11.46°/100'									
9,100.00	11.46	269.83	9,099.33	-0.03	-9.97	9.97	11.46	11.46	0.00
9,200.00	22.92	269.83	9,194.71	-0.12	-39.47	39.47	11.46	11.46	0.00
9,300.00	34.38	269.83	9,282.32	-0.26	-87.33	87.33	11.46	11.46	0.00
9,400.00	45.84	269.83	9,358.68	-0.46	-151.64	151.64	11.46	11.46	0.00
9,500.00	57.29	269.83	9,420.74	-0.70	-229.84	229.84	11.46	11.46	0.00
9,600.00	68.75	269.83	9,466.03	-0.97	-318.81	318.81	11.46	11.46	0.00
9,700.00	80.21	269.83	9,492.74	-1.26	-415.01	415.01	11.46	11.46	0.00
9,785.42	90.00	269.83	9,500.00	-1.51	-499.99	500.00	11.46	11.46	0.00
EOC hold 90.00°									
9,800.00	90.00	269.83	9,500.00	-1.56	-514.57	514.57	0.00	0.00	0.00
9,900.00	90.00	269.83	9,500.00	-1.86	-614.57	614.57	0.00	0.00	0.00
10,000.00	90.00	269.83	9,500.00	-2.16	-714.57	714.57	0.00	0.00	0.00
10,100.00	90.00	269.83	9,500.00	-2.47	-814.57	814.57	0.00	0.00	0.00
10,200.00	90.00	269.83	9,500.00	-2.77	-914.57	914.57	0.00	0.00	0.00
10,300.00	90.00	269.83	9,500.00	-3.07	-1,014.57	1,014.57	0.00	0.00	0.00
10,400.00	90.00	269.83	9,500.00	-3.37	-1,114.57	1,114.57	0.00	0.00	0.00
10,500.00	90.00	269.83	9,500.00	-3.68	-1,214.57	1,214.57	0.00	0.00	0.00
10,600.00	90.00	269.83	9,500.00	-3.98	-1,314.57	1,314.57	0.00	0.00	0.00
10,700.00	90.00	269.83	9,500.00	-4.28	-1,414.57	1,414.57	0.00	0.00	0.00
10,800.00	90.00	269.83	9,500.00	-4.59	-1,514.57	1,514.57	0.00	0.00	0.00
10,900.00	90.00	269.83	9,500.00	-4.89	-1,614.57	1,614.57	0.00	0.00	0.00
11,000.00	90.00	269.83	9,500.00	-5.19	-1,714.57	1,714.57	0.00	0.00	0.00
11,100.00	90.00	269.83	9,500.00	-5.49	-1,814.57	1,814.57	0.00	0.00	0.00
11,200.00	90.00	269.83	9,500.00	-5.80	-1,914.56	1,914.57	0.00	0.00	0.00
11,300.00	90.00	269.83	9,500.00	-6.10	-2,014.56	2,014.57	0.00	0.00	0.00
11,400.00	90.00	269.83	9,500.00	-6.40	-2,114.56	2,114.57	0.00	0.00	0.00
11,500.00	90.00	269.83	9,500.00	-6.70	-2,214.56	2,214.57	0.00	0.00	0.00
11,600.00	90.00	269.83	9,500.00	-7.01	-2,314.56	2,314.57	0.00	0.00	0.00
11,700.00	90.00	269.83	9,500.00	-7.31	-2,414.56	2,414.57	0.00	0.00	0.00
11,800.00	90.00	269.83	9,500.00	-7.61	-2,514.56	2,514.57	0.00	0.00	0.00
11,900.00	90.00	269.83	9,500.00	-7.92	-2,614.56	2,614.57	0.00	0.00	0.00
12,000.00	90.00	269.83	9,500.00	-8.22	-2,714.56	2,714.57	0.00	0.00	0.00
12,100.00	90.00	269.83	9,500.00	-8.52	-2,814.56	2,814.57	0.00	0.00	0.00
12,200.00	90.00	269.83	9,500.00	-8.82	-2,914.56	2,914.57	0.00	0.00	0.00
12,300.00	90.00	269.83	9,500.00	-9.13	-3,014.56	3,014.57	0.00	0.00	0.00
12,400.00	90.00	269.83	9,500.00	-9.43	-3,114.56	3,114.57	0.00	0.00	0.00
12,500.00	90.00	269.83	9,500.00	-9.73	-3,214.56	3,214.57	0.00	0.00	0.00
12,600.00	90.00	269.83	9,500.00	-10.03	-3,314.56	3,314.57	0.00	0.00	0.00
12,700.00	90.00	269.83	9,500.00	-10.34	-3,414.56	3,414.57	0.00	0.00	0.00
12,800.00	90.00	269.83	9,500.00	-10.64	-3,514.56	3,514.57	0.00	0.00	0.00
12,900.00	90.00	269.83	9,500.00	-10.94	-3,614.56	3,614.57	0.00	0.00	0.00
13,000.00	90.00	269.83	9,500.00	-11.25	-3,714.56	3,714.57	0.00	0.00	0.00
13,100.00	90.00	269.83	9,500.00	-11.55	-3,814.56	3,814.57	0.00	0.00	0.00
13,200.00	90.00	269.83	9,500.00	-11.85	-3,914.56	3,914.57	0.00	0.00	0.00
13,300.00	90.00	269.83	9,500.00	-12.15	-4,014.55	4,014.57	0.00	0.00	0.00
13,400.00	90.00	269.83	9,500.00	-12.46	-4,114.55	4,114.57	0.00	0.00	0.00
13,500.00	90.00	269.83	9,500.00	-12.76	-4,214.55	4,214.57	0.00	0.00	0.00
13,600.00	90.00	269.83	9,500.00	-13.06	-4,314.55	4,314.57	0.00	0.00	0.00
13,700.00	90.00	269.83	9,500.00	-13.36	-4,414.55	4,414.57	0.00	0.00	0.00

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Project:	Lea County, NM, (NAD27, NME)	MD Reference:	GL Elev. @ 3674.00usft
Site:	TJG Federal Com 3 #1H	North Reference:	Grid
Well:	TJG Federal Com 3 #1H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 - 8-3/4" Curve, 6-1/8" Lateral		

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)
13,800.00	90.00	269.83	9,500.00	-13.67	-4,514.55	4,514.57	0.00	0.00	0.00
13,900.00	90.00	269.83	9,500.00	-13.97	-4,614.55	4,614.57	0.00	0.00	0.00
13,909.95	90.00	269.83	9,500.00	-14.00	-4,624.50	4,624.52	0.00	0.00	0.00
PBHL-TJG #1H									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
South HL-TJG #1H	0.00	0.00	0.00	-84.00	-4,624.50	612,652.00	676,056.80	32° 40' 58.709 N	103° 45' 40.034 W
- plan misses target center by 4625.26usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1			0.00	0.00	0.00	612,652.00	676,056.80		
Point 2			0.00	14.00	4,624.50	612,666.00	680,681.30		
PBHL-TJG #1H	0.00	0.00	9,500.00	-14.00	-4,624.50	612,722.00	676,056.80	32° 40' 59.402 N	103° 45' 40.029 W
- plan hits target center									
- Point									

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,000.00	9,000.00	0.00	0.00	KOP Start Build 11.46°/100'
9,785.42	9,500.00	-1.51	-499.99	EOC hold 90.00°

Marshall & Winston, Inc

Scientific Drilling for Marshall & Winston, Inc
 Site: Lea County, NM (NAD27 NME)
 Well: TJG Federal Com 3 #1H
 Wellbore: OH
 Design: Plan #1 - 8-3/4" Curve, 6-1/8" Lateral



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	9000.00	0.00	0.00	9000.00	0.00	0.00	0.00	0.00	0.00	
3	9785.42	90.00	269.83	9500.00	-1.51	-499.99	11.48	269.83	500.00	
4	3909.95	90.00	269.83	9500.00	-14.00	-4624.50	0.00	0.00	4624.52	PBHL-TJG #1H

Plan: Plan #1 - 8-3/4" Curve, 6-1/8" Lateral (TJG Federal Com 3 #1H/OH)

Created By: Julio Pina Date: 07-Jun-11
 Checked: _____ Date: _____
 Reviewed: _____ Date: _____

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Shape
0.00	-84.00	-4624.50	612652.00	676056.80	32°40' 58.709 N	103°45' 40.034 W	Polygon
9500.00	-14.00	-4624.50	612722.00	676056.80	32°40' 59.402 N	103°45' 40.029 W	Point

AZIMUTH CORRECTIONS

ALL AZIMUTHS MUST BE CORRECTED TO GRID
 GRID CORRECTIONS MUST BE APPLIED BEFORE PLOTTING
 To convert a Magnetic Direction to a Grid Direction, Add 7.39°
 To convert a True Direction to a Grid Direction, Subtract 0.32°

PROJECT DETAILS: Lea County, NM (NAD27 NME)

Geodetic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: New Mexico East 3001
 System Datum: Mean Sea Level

WELL DETAILS: TJG Federal Com 3 #1H

Ground Level:	3674.00	Latitude	Longitude	Slot
+N-S	0.00	+E-W	0.00	
Northing	612736.00	Easting	680681.30	32°40' 59.290 N 103°44' 45.921 W

