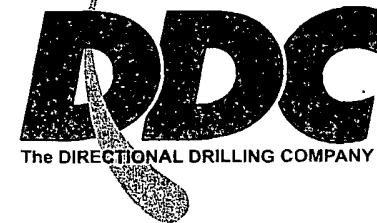


30-015-38568

Company Name: Nadel & Gussman HEYCO, LLC
Wabash 20 Com #1H
Eddy County, New Mexico
Rig: Patriot #1
Created By: Dina Chance
Date: 1/4/2012

Nadel & Gussman Heyco, LLC



Wabash 20 Com #1H
Eddy County, New Mexico
Q110845 & WT-11736

ANNOTATIONS

MD	Inc	Azi	TVD	+N-S	+E-W	V-Sect	Departure	Annotation
6675.0	06.60	268.20	2492.7	-7.0	-4562.9	4562.9	4561.9	TD @ 6875' MD / 2493' TVD

WELL DETAILS: Wabash 20 Com #1H

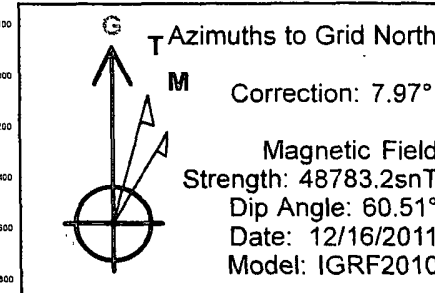
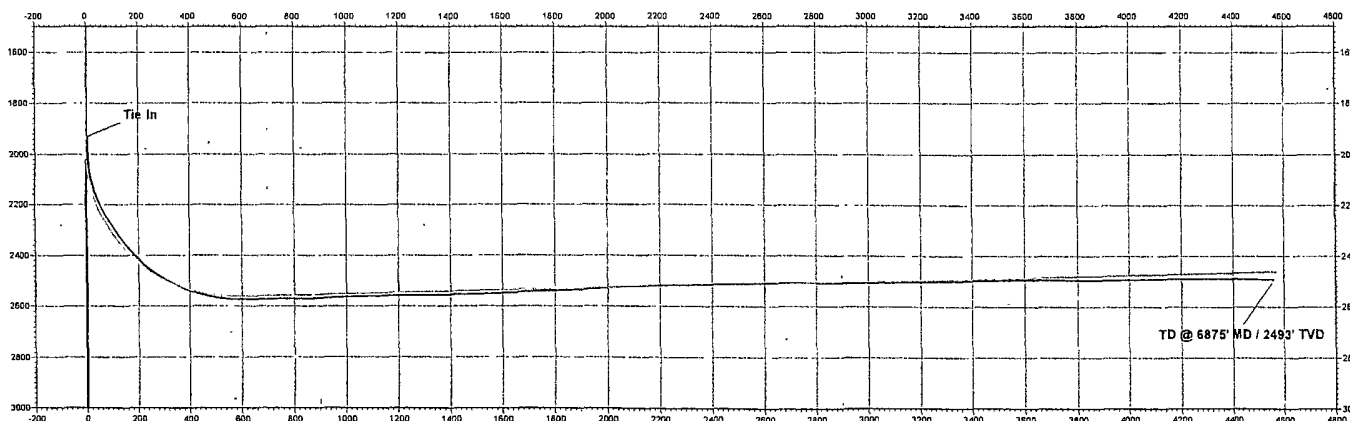
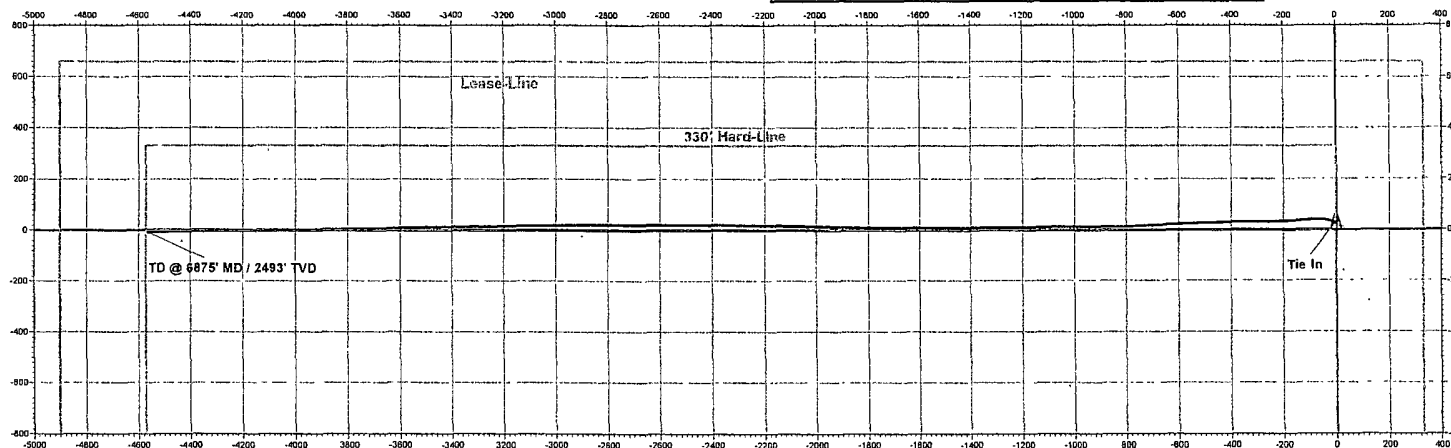
+N-S	+E-W	Ground Level	North	East	Latitude	Longitude
0.0	0.0	3398.0	632471.90	480686.30	32° 44' 19.480 N	104° 23' 46.124 W

DESIGN TARGET DETAILS

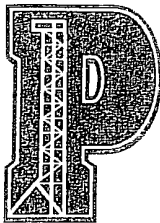
Name	TVD	+N-S	+E-W	North	East	Latitude	Longitude
Tie In	1929.7	27.0	-5.7	632498.91	480680.56	32° 44' 19.747 N	104° 23' 46.191 W
- plan misses target center by 27.6usft at 1929.7usft MD (1929.7 TVD, 0.0 N, 0.0 E)							
PBHL Wabash 20 Com #1H	2463.0	-0.5	-4571.7	632471.40	476114.60	32° 44' 19.445 N	104° 24' 39.649 W
- plan hits target center							

PROJECT DETAILS: Eddy County, New Mexico

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



Vertical Section at 269.99° (200 usft/in)



PATRIOT DRILLING, LLC

OPERATOR: Nadel & Gussman HEYCO. LLC.
WELL/LEASE: Wabash 20 Com # 1-H
COUNTY: Eddy Co., New Mexico
Sec. 20, T18S, R26E

**STATE OF NEW MEXICO
DEVIATION REPORT**

<u>Depth</u>	<u>Deviation</u>	<u>Depth</u>	<u>Deviation</u>
348	1/2	1,811	2 3/4
605	3/4	1,976	1 3/4
837	1	2,008	2 3/4
1,304	1 3/4		

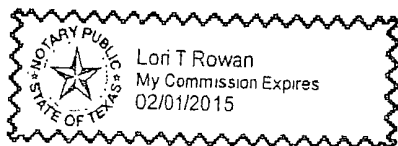
Patriot Drilling, LLC

M. Leroy Peterson, Executive Vice-
President

The foregoing instrument was acknowledged before me on this 9th day of January 2012, by M. Leroy Peterson, Executive Vice-President of Patriot Drilling, LLC.

My Commission Expires: 02/01/2015

Lori T. Rowan
Notary Public for Ector Co., Texas



Nadel & Gussman HEYCO, LLC

Eddy County, New Mexico

Sec 20, T18-S, R26E

Wabash 20 Com #1H

Wellbore #1

Survey: MWD

DDC Survey Report

04 January, 2012



Company: Nadel & Gussman HEYCO, LLC
Project: Eddy County, New Mexico
Site: Sec 20, T18-S, R26E
Well: Wabash 20 Com #1H
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Wabash 20 Com #1H
TVD Reference: WELL @ 3398.0usft (Patriot #1)
MD Reference: WELL @ 3398.0usft (Patriot #1)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

Project	Eddy County, New Mexico		
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	Sec 20, T18-S, R26E		
Site Position:		Northing:	632,471.90 usft
From:	Map	Easting:	480,686.30 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 44' 19.480 N
		Longitude:	104° 23' 46.124 W
		Grid Convergence:	-0.03 °

Well	Wabash 20 Com #1H		
Well Position	+N/-S	0.0 usft	Northing:
	+E/-W	0.0 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	usft
		Latitude:	32° 44' 19.480 N
		Longitude:	104° 23' 46.124 W
		Ground Level:	3,398.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010	12/16/2011	7.94
			Dip Angle
			(°)
			60.51
			Field Strength
			(nT)
			48,783

Design	Wellbore #1		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			(°)
			269.64

Survey Program	Date 1/4/2012		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
1,976.0	6,875.0	MWD (Wellbore #1)	MWD default
			Description
			MWD - Standard

Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn
Depth	(°)	(°)	Depth	(usft)	(usft)	Section	Rate	Rate	Rate
(usft)			(usft)			(usft)	(°/100usft)	(°/100usft)	(°/100usft)
Tie In									
1,930.0	1.45	2.82	1,929.7	27.0	-5.7	5.6	0.00	0.00	0.00
1,976.0	1.60	7.50	1,975.7	28.2	-5.6	5.5	0.42	0.33	10.17
2,008.0	2.70	313.80	2,007.6	29.2	-6.1	5.9	6.80	3.44	-167.81
2,040.0	6.20	291.50	2,039.5	30.3	-8.3	8.1	12.00	10.94	-69.69
2,072.0	9.90	286.50	2,071.2	31.8	-12.5	12.3	11.76	11.56	-15.63
2,103.0	13.80	285.80	2,101.5	33.5	-18.6	18.4	12.59	12.58	-2.26
2,134.0	17.60	284.80	2,131.4	35.7	-26.7	26.5	12.29	12.26	-3.23
2,166.0	21.40	282.20	2,161.5	38.2	-37.1	36.9	12.18	11.88	-8.13
2,198.0	24.70	275.60	2,191.0	40.1	-49.5	49.2	13.08	10.31	-20.63
2,230.0	27.40	271.50	2,219.7	40.9	-63.5	63.2	10.14	8.44	-12.81

Company: Nadel & Gussman HEYCO, LLC
Project: Eddy County, New Mexico
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North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 5000.1 Single User Db

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)
2,261.0	29.60	268.00	2,247.0	40.9	-78.3	78.0	8.91	7.10	-11.29
2,293.0	31.30	264.90	2,274.6	39.8	-94.5	94.2	7.23	5.31	-9.69
2,325.0	33.50	264.80	2,301.6	38.3	-111.5	111.3	6.88	6.88	-0.31
2,357.0	35.70	265.70	2,327.9	36.8	-129.6	129.4	7.06	6.88	2.81
2,389.0	38.20	266.70	2,353.5	35.5	-148.8	148.6	8.03	7.81	3.13
2,420.0	40.70	267.80	2,377.4	34.6	-168.5	168.3	8.37	8.06	3.55
2,452.0	43.60	268.30	2,401.2	33.9	-190.0	189.7	9.12	9.06	1.56
2,484.0	46.80	268.20	2,423.7	33.2	-212.7	212.4	10.00	10.00	-0.31
2,516.0	50.10	268.40	2,444.9	32.5	-236.6	236.4	10.32	10.31	0.63
2,547.0	53.80	268.40	2,464.0	31.8	-261.0	260.8	11.94	11.94	0.00
2,579.0	56.70	268.80	2,482.3	31.1	-287.3	287.1	9.12	9.06	1.25
2,610.0	59.40	269.50	2,498.7	30.7	-313.6	313.4	8.92	8.71	2.26
2,642.0	63.00	270.10	2,514.1	30.7	-341.6	341.4	11.37	11.25	1.88
2,674.0	67.20	269.90	2,527.6	30.7	-370.6	370.4	13.14	13.13	-0.63
2,706.0	70.30	269.50	2,539.1	30.5	-400.4	400.2	9.76	9.69	-1.25
2,737.0	72.20	269.10	2,549.1	30.1	-429.8	429.6	6.25	6.13	-1.29
2,831.0	82.80	267.50	2,569.4	27.4	-521.4	521.2	11.40	11.28	-1.70
2,862.0	86.60	267.10	2,572.3	25.9	-552.2	552.0	12.33	12.26	-1.29
2,894.0	89.50	267.40	2,573.4	24.4	-584.2	584.0	9.11	9.06	0.94
2,925.0	89.90	267.40	2,573.5	23.0	-615.1	615.0	1.29	1.29	0.00
2,956.0	90.90	267.60	2,573.3	21.6	-646.1	646.0	3.29	3.23	0.65
2,988.0	91.50	268.00	2,572.7	20.4	-678.1	677.9	2.25	1.88	1.25
3,020.0	91.10	267.10	2,571.9	19.0	-710.0	709.9	3.08	-1.25	-2.81
3,051.0	90.60	266.10	2,571.5	17.2	-741.0	740.8	3.61	-1.61	-3.23
3,083.0	90.60	267.60	2,571.1	15.5	-772.9	772.8	4.69	0.00	4.69
3,114.0	90.20	268.50	2,570.9	14.4	-803.9	803.8	3.18	-1.29	2.90
3,146.0	90.10	268.80	2,570.8	13.6	-835.9	835.8	0.99	-0.31	0.94
3,178.0	92.60	269.70	2,570.1	13.2	-867.9	867.8	8.30	7.81	2.81
3,209.0	92.90	269.80	2,568.6	13.1	-898.8	898.7	1.02	0.97	0.32
3,241.0	92.80	269.50	2,567.0	12.9	-930.8	930.7	0.99	-0.31	-0.94
3,272.0	93.20	269.20	2,565.4	12.5	-961.8	961.7	1.61	1.29	-0.97
3,304.0	92.60	270.30	2,563.8	12.4	-993.7	993.6	3.91	-1.88	3.44
3,335.0	91.80	270.40	2,562.6	12.6	-1,024.7	1,024.6	2.60	-2.58	0.32
3,367.0	91.30	269.80	2,561.7	12.6	-1,056.7	1,056.6	2.44	-1.56	-1.88
3,398.0	91.10	269.40	2,561.1	12.4	-1,087.7	1,087.6	1.44	-0.65	-1.29
3,430.0	91.00	269.10	2,560.5	12.0	-1,119.7	1,119.6	0.99	-0.31	-0.94
3,462.0	91.00	269.00	2,559.9	11.5	-1,151.7	1,151.6	0.31	0.00	-0.31
3,493.0	91.30	269.60	2,559.3	11.1	-1,182.6	1,182.6	2.16	0.97	1.94
3,525.0	91.30	269.60	2,558.6	10.9	-1,214.6	1,214.5	0.00	0.00	0.00
3,556.0	91.30	269.60	2,557.9	10.7	-1,245.6	1,245.5	0.00	0.00	0.00
3,588.0	90.70	269.10	2,557.3	10.3	-1,277.6	1,277.5	2.44	-1.88	-1.56
3,619.0	90.20	268.50	2,557.1	9.7	-1,308.6	1,308.5	2.52	-1.61	-1.94
3,651.0	91.00	269.90	2,556.7	9.2	-1,340.6	1,340.5	5.04	2.50	4.38

Company: Nadel & Gussman HEYCO, LLC
Project: Eddy County, New Mexico
Site: Sec 20, T18-S, R26E
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Design: Wellbore #1

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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)
3,682.0	91.10	270.20	2,556.2	9.2	-1,371.6	1,371.5	1.02	0.32	0.97
3,713.0	91.70	270.40	2,555.4	9.4	-1,402.6	1,402.5	2.04	1.94	0.65
3,745.0	91.10	270.20	2,554.6	9.6	-1,434.6	1,434.5	1.98	-1.88	-0.63
3,776.0	91.00	270.00	2,554.0	9.6	-1,465.6	1,465.5	0.72	-0.32	-0.65
3,808.0	90.90	269.40	2,553.5	9.4	-1,497.6	1,497.5	1.90	-0.31	-1.88
3,840.0	92.70	270.20	2,552.5	9.3	-1,529.6	1,529.5	6.15	5.63	2.50
3,871.0	92.30	269.60	2,551.2	9.3	-1,560.5	1,560.4	2.32	-1.29	-1.94
3,903.0	92.40	269.50	2,549.8	9.0	-1,592.5	1,592.4	0.44	0.31	-0.31
3,934.0	93.60	270.60	2,548.2	9.1	-1,623.5	1,623.4	5.25	3.87	3.55
3,966.0	93.30	270.80	2,546.3	9.4	-1,655.4	1,655.3	1.13	-0.94	0.63
3,997.0	93.50	270.50	2,544.5	9.8	-1,686.3	1,686.2	1.16	0.65	-0.97
4,029.0	93.10	270.20	2,542.6	10.0	-1,718.3	1,718.2	1.56	-1.25	-0.94
4,061.0	92.20	270.20	2,541.1	10.1	-1,750.2	1,750.1	2.81	-2.81	0.00
4,093.0	91.30	270.00	2,540.2	10.2	-1,782.2	1,782.1	2.88	-2.81	-0.63
4,124.0	91.70	270.30	2,539.4	10.2	-1,813.2	1,813.1	1.61	1.29	0.97
4,156.0	92.70	271.00	2,538.1	10.6	-1,845.2	1,845.1	3.81	3.13	2.19
4,187.0	94.20	271.70	2,536.3	11.3	-1,876.1	1,876.0	5.34	4.84	2.26
4,219.0	93.90	271.90	2,534.0	12.3	-1,908.0	1,907.9	1.13	-0.94	0.63
4,250.0	93.50	271.70	2,532.0	13.3	-1,939.0	1,938.8	1.44	-1.29	-0.65
4,282.0	93.40	271.50	2,530.1	14.2	-1,970.9	1,970.8	0.70	-0.31	-0.63
4,313.0	93.50	271.40	2,528.2	15.0	-2,001.8	2,001.7	0.46	0.32	-0.32
4,345.0	92.00	271.30	2,526.7	15.7	-2,033.8	2,033.6	4.70	-4.69	-0.31
4,377.0	91.70	271.10	2,525.6	16.4	-2,065.7	2,065.6	1.13	-0.94	-0.63
4,408.0	91.20	270.50	2,524.9	16.8	-2,096.7	2,096.6	2.52	-1.61	-1.94
4,440.0	91.60	270.50	2,524.1	17.1	-2,128.7	2,128.6	1.25	1.25	0.00
4,471.0	92.50	271.10	2,523.0	17.6	-2,159.7	2,159.5	3.49	2.90	1.94
4,503.0	92.90	271.50	2,521.5	18.3	-2,191.7	2,191.5	1.77	1.25	1.25
4,534.0	92.80	271.30	2,519.9	19.0	-2,222.6	2,222.4	0.72	-0.32	-0.65
4,566.0	91.10	270.40	2,518.8	19.5	-2,254.6	2,254.4	6.01	-5.31	-2.81
4,597.0	90.70	270.10	2,518.3	19.6	-2,285.6	2,285.4	1.61	-1.29	-0.97
4,629.0	90.60	270.10	2,518.0	19.7	-2,317.6	2,317.4	0.31	-0.31	0.00
4,660.0	91.60	270.10	2,517.4	19.8	-2,348.6	2,348.4	3.23	3.23	0.00
4,692.0	91.90	270.10	2,516.4	19.8	-2,380.6	2,380.4	0.94	0.94	0.00
4,724.0	91.70	270.20	2,515.4	19.9	-2,412.5	2,412.4	0.70	-0.63	0.31
4,755.0	91.80	270.20	2,514.5	20.0	-2,443.5	2,443.4	0.32	0.32	0.00
4,787.0	91.80	270.20	2,513.4	20.1	-2,475.5	2,475.3	0.00	0.00	0.00
4,818.0	91.90	270.20	2,512.4	20.2	-2,506.5	2,506.3	0.32	0.32	0.00
4,850.0	91.60	270.60	2,511.5	20.4	-2,538.5	2,538.3	1.56	-0.94	1.25
4,882.0	91.10	270.60	2,510.7	20.8	-2,570.5	2,570.3	1.56	-1.56	0.00
4,913.0	90.90	270.60	2,510.2	21.1	-2,601.5	2,601.3	0.65	-0.65	0.00
4,945.0	90.80	270.40	2,509.7	21.4	-2,633.5	2,633.3	0.70	-0.31	-0.63
4,977.0	90.60	270.50	2,509.3	21.6	-2,665.5	2,665.3	0.70	-0.63	0.31
5,008.0	89.90	270.30	2,509.2	21.9	-2,696.5	2,696.3	2.35	-2.26	-0.65

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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)
6,412.0	91.00	269.50	2,491.2	0.5	-4,100.0	4,100.0	1.29	-1.25	-0.31
6,443.0	90.80	269.60	2,490.7	0.3	-4,131.0	4,130.9	0.72	-0.65	0.32
6,475.0	90.80	269.80	2,490.3	0.1	-4,163.0	4,162.9	0.62	0.00	0.63
6,507.0	90.70	269.50	2,489.9	-0.1	-4,195.0	4,194.9	0.99	-0.31	-0.94
6,538.0	90.30	269.50	2,489.6	-0.4	-4,226.0	4,225.9	1.29	-1.29	0.00
6,570.0	90.40	269.30	2,489.4	-0.7	-4,258.0	4,257.9	0.70	0.31	-0.63
6,602.0	89.80	269.40	2,489.3	-1.1	-4,290.0	4,289.9	1.90	-1.88	0.31
6,632.0	89.60	269.20	2,489.5	-1.4	-4,320.0	4,319.9	0.94	-0.67	-0.67
6,663.0	89.60	269.00	2,489.7	-1.9	-4,351.0	4,350.9	0.65	0.00	-0.65
6,695.0	89.60	269.10	2,489.9	-2.5	-4,383.0	4,382.9	0.31	0.00	0.31
6,726.0	89.70	268.90	2,490.1	-3.0	-4,414.0	4,413.9	0.72	0.32	-0.65
6,758.0	89.40	268.80	2,490.4	-3.6	-4,446.0	4,445.9	0.99	-0.94	-0.31
6,790.0	88.80	268.40	2,490.9	-4.4	-4,478.0	4,477.9	2.25	-1.88	-1.25
6,820.0	88.80	268.20	2,491.5	-5.3	-4,508.0	4,507.9	0.67	0.00	-0.67
TD @ 6875' MD / 2493' TVD									
6,875.0	88.80	268.20	2,492.7	-7.0	-4,562.9	4,562.9	0.00	0.00	0.00

Survey Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,930.0	1,929.7	27.0	-5.7	Tie In
6,875.0	2,492.7	-7.0	-4,562.9	TD @ 6875' MD / 2493' TVD

Checked By: _____ Approved By: _____ Date: _____