



Scientific Drilling

Rocky Mountain Operations

END OF WELL REPORT

Prepared For:

Samson Resources Company

Ignacio 33-7 #16-4

AWS 507

La Plata County, CO

Prepared By:

Julie Cruse, Rockies Region Engineer

Scientific Drilling

Rocky Mountain Region

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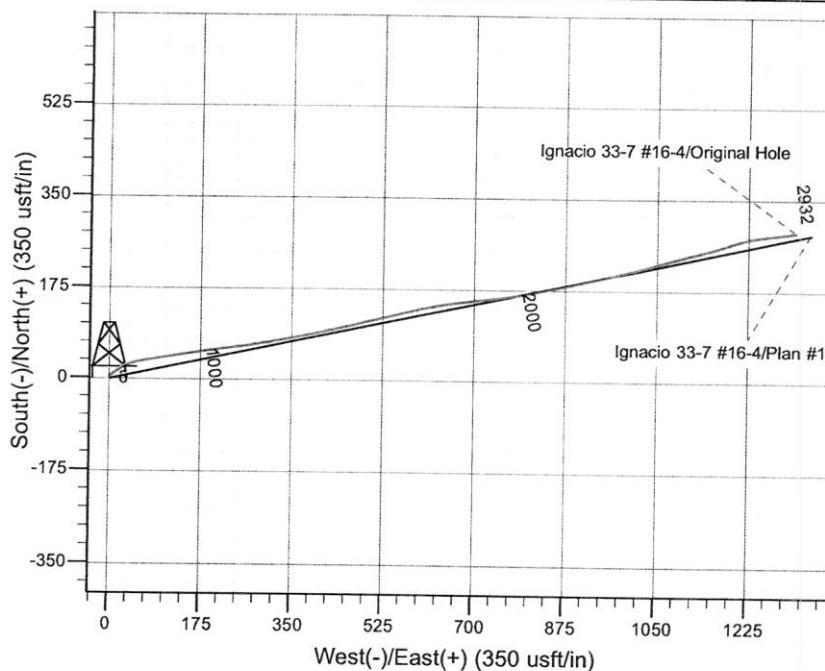
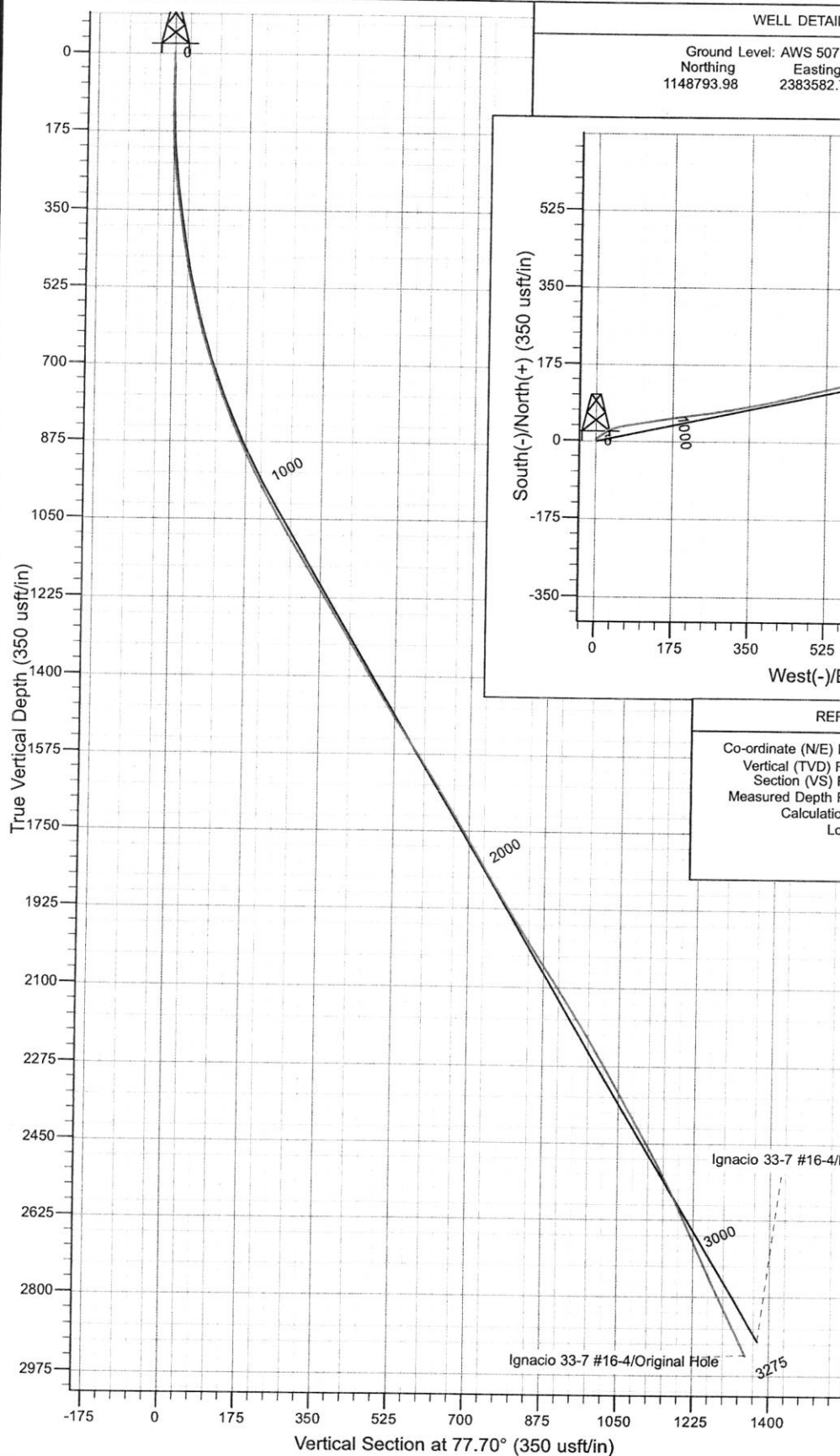
Scientific Drilling

Project: La Plata County, C.O.
Site: SEC 33-T33N-R7W
Well: Ignacio 33-7 #16-4
Wellbore: Original Hole
Design: Original Hole

Samson

WELL DETAILS: Ignacio 33-7 #16-4

Ground Level: AWS 507 @ 6289.99usft (12' DF + 6278' GL)
Northing Easting Latitude Longitude
1148793.98 2383582.76 37° 3' 22.176 N 107° 36' 44.784 W



REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Ignacio 33-7 #16-4, Grid North
Vertical (TVD) Reference: AWS 507 @ 6289.99usft (12' DF + 6278' GL)
Section (VS) Reference: Slot - (0.00N, 0.00E)
Measured Depth Reference: AWS 507 @ 6289.99usft (12' DF + 6278' GL)
Calculation Method: Minimum Curvature
Local North: Grid
Location:

PROJECT DETAILS: La Plata County, C.O.

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Southern Zone

sign: Original Hole (Ignacio 33-7 #16-4/Original Hole)

Created By: Julie Cruse Date: 2011-05-02



Scientific Drilling

Samson Resources Company

La Plata County, C.O.

SEC 33-T33N-R7W


Ignacio 33-7 #16-4

Original Hole

Design: Original Hole

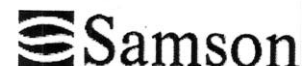
Standard Survey Report

02 May, 2011

 **Samson**



Scientific Drilling Survey Report



Company: Samson Resources Company
Project: La Plata County, C.O.
Site: SEC 33-T33N-R7W
Well: Ignacio 33-7 #16-4
Wellbore: Original Hole
Design: Original Hole

Local Co-ordinate Reference: Well Ignacio 33-7 #16-4
TVD Reference: AWS 507 @ 6289.99usft (12' DF + 6278' GL)
MD Reference: AWS 507 @ 6289.99usft (12' DF + 6278' GL)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Rockies-R5000.1

Project	La Plata County, C.O.		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Southern Zone		Using geodetic scale factor

Site	SEC 33-T33N-R7W		
Site Position:		Northing:	1,148,892.35 usft
From:	Lat/Long	Easting:	2,381,652.60 usft
Position Uncertainty:	0.00 usft	Slot Radius:	6-1/8 "
		Latitude:	37° 3' 22.716 N
		Longitude:	107° 37' 8.616 W
		Grid Convergence:	-1.30 °

Well	Ignacio 33-7 #16-4, FC Slant		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	3.50 usft	Wellhead Elevation:	usft
		Latitude:	37° 3' 22.176 N
		Longitude:	107° 36' 44.784 W
		Ground Level:	6,277.99 usft

Wellbore	Original Hole		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010	2011-03-21	(°)
			9.90
			Dip Angle
			(°)
			63.77
			Field Strength
			(nT)
			50,960

Design	Original Hole		
Audit Notes:			
Version:	1.0	Phase:	ACTUAL
Vertical Section:	Depth From (TVD)	+N/-S	Tie On Depth:
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			77.70

Survey Program	Date 2011-05-02		
From	To	Survey (Wellbore)	Tool Name
(usft)	(usft)		
53.00	307.00	Survey #1 - Surface (Original Hole)	MWD SDI
387.00	3,275.00	Survey #2 - Production (Original Hole)	MWD SDI
			Description
			MWD - Standard ver 1.0.1
			MWD - Standard ver 1.0.1

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
53.00	0.69	303.14	53.00	0.17	-0.27	-0.22	1.30	1.30	0.00
First SDI MWD Survey									
86.00	0.58	307.44	86.00	0.38	-0.57	-0.47	0.36	-0.33	13.03
115.00	0.69	342.84	115.00	0.64	-0.73	-0.58	1.38	0.38	122.07
143.00	1.25	13.41	142.99	1.10	-0.71	-0.46	2.66	2.00	109.18
174.00	2.19	32.80	173.98	1.93	-0.31	0.10	3.52	3.03	62.55
203.00	3.55	36.95	202.94	3.11	0.53	1.18	4.74	4.69	14.31
233.00	5.18	45.35	232.85	4.80	2.05	3.02	5.82	5.43	28.00
262.00	7.01	48.13	261.69	6.90	4.30	5.67	6.39	6.31	9.59

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TVD Reference: AWS 507 @ 6289.99usft (12' DF + 6278' GL)
MD Reference: AWS 507 @ 6289.99usft (12' DF + 6278' GL)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: Rockies-R5000.1

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)
291.00	8.22	51.06	290.43	9.39	7.23	9.06	4.38	4.17	10.10
307.00	8.66	53.10	306.26	10.83	9.08	11.18	3.33	2.75	12.75
Last Survey in 12 1/4" Hole									
387.00	8.61	57.10	385.35	17.70	18.92	22.26	0.75	-0.06	5.00
First Survey in 7 7/8" Hole									
417.00	9.41	58.08	414.98	20.22	22.89	26.67	2.72	2.67	3.27
448.00	10.10	62.03	445.53	22.83	27.44	31.68	3.10	2.23	12.74
479.00	10.95	66.37	476.01	25.29	32.54	37.18	3.75	2.74	14.00
509.00	11.89	68.79	505.42	27.55	38.03	43.03	3.52	3.13	8.07
540.00	12.79	71.73	535.70	29.78	44.27	49.60	3.54	2.90	9.48
571.00	13.84	75.30	565.87	31.79	51.11	56.71	4.30	3.39	11.52
602.00	14.72	78.12	595.91	33.55	58.56	64.36	3.62	2.84	9.10
633.00	15.72	80.37	625.82	35.06	66.55	72.49	3.75	3.23	7.26
663.00	16.63	81.28	654.64	36.39	74.80	80.84	3.15	3.03	3.03
694.00	17.58	80.61	684.26	37.83	83.80	89.94	3.13	3.06	-2.16
725.00	18.66	80.10	713.73	39.44	93.31	99.57	3.52	3.48	-1.65
756.00	19.72	80.09	743.00	41.20	103.35	109.75	3.42	3.42	-0.03
787.00	20.79	80.08	772.09	43.04	113.92	120.47	3.45	3.45	-0.03
818.00	21.67	80.34	800.98	44.95	124.98	131.69	2.85	2.84	0.84
849.00	22.65	81.16	829.69	46.83	136.52	143.36	3.31	3.16	2.65
880.00	23.54	81.81	858.21	48.63	148.55	155.50	2.99	2.87	2.10
911.00	24.70	81.15	886.50	50.51	161.07	168.14	3.84	3.74	-2.13
943.00	25.74	81.02	915.45	52.62	174.54	181.75	3.25	3.25	-0.41
975.00	26.76	81.61	944.15	54.76	188.54	195.87	3.29	3.19	1.84
1,006.00	27.87	82.40	971.69	56.73	202.62	210.06	3.77	3.58	2.55
1,037.00	28.97	82.58	998.96	58.66	217.25	224.76	3.56	3.55	0.58
1,069.00	29.92	82.17	1,026.82	60.75	232.84	240.44	3.03	2.97	-1.28
1,101.00	30.90	82.02	1,054.42	62.98	248.88	256.59	3.07	3.06	-0.47
1,132.00	31.28	81.95	1,080.97	65.21	264.74	272.55	1.23	1.23	-0.23
1,164.00	32.04	80.62	1,108.20	67.76	281.34	289.31	3.22	2.38	-4.16
1,195.00	32.00	79.94	1,134.49	70.53	297.54	305.73	1.17	-0.13	-2.19
1,227.00	31.76	79.52	1,161.66	73.54	314.17	322.62	1.02	-0.75	-1.31
1,258.00	31.39	79.52	1,188.07	76.50	330.13	338.85	1.19	-1.19	0.00
1,289.00	31.04	79.32	1,214.58	79.45	345.92	354.90	1.18	-1.13	-0.65
1,320.00	31.40	78.67	1,241.09	82.51	361.69	370.97	1.59	1.16	-2.10
1,352.00	31.61	78.70	1,268.38	85.79	378.09	387.69	0.66	0.66	0.09
1,383.00	31.24	77.85	1,294.83	89.08	393.92	403.85	1.86	-1.19	-2.74
1,414.00	30.70	77.39	1,321.41	92.50	409.50	419.80	1.90	-1.74	-1.48
1,445.00	31.14	77.17	1,348.00	96.01	425.03	435.73	1.47	1.42	-0.71
1,476.00	31.77	77.09	1,374.45	99.61	440.81	451.91	2.04	2.03	-0.26
1,508.00	31.53	77.08	1,401.69	103.36	457.17	468.70	0.75	-0.75	-0.03
1,540.00	31.42	76.44	1,428.98	107.19	473.44	485.40	1.10	-0.34	-2.00
1,572.00	31.95	76.63	1,456.21	111.10	489.78	502.21	1.69	1.66	0.59

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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)
1,603.00	32.97	75.77	1,482.37	115.07	505.94	518.84	3.61	3.29	-2.77
1,632.00	33.27	77.57	1,506.66	118.72	521.36	534.68	3.55	1.03	6.21
1,664.00	32.99	76.54	1,533.46	122.64	538.40	552.17	1.96	-0.88	-3.22
1,728.00	32.74	75.72	1,587.21	130.97	572.12	586.88	0.80	-0.39	-1.28
1,760.00	32.52	76.04	1,614.16	135.18	588.85	604.13	0.87	-0.69	1.00
1,791.00	32.07	77.70	1,640.37	138.94	604.98	620.69	3.21	-1.45	5.35
1,822.00	31.51	79.75	1,666.72	142.13	620.99	637.02	3.92	-1.81	6.61
1,853.00	30.93	80.93	1,693.23	144.83	636.83	653.07	2.72	-1.87	3.81
1,884.00	31.16	82.06	1,719.79	147.19	652.64	669.02	2.02	0.74	3.65
1,915.00	30.61	82.54	1,746.39	149.33	668.41	684.88	1.94	-1.77	1.55
1,946.00	30.47	82.42	1,773.09	151.39	684.03	700.58	0.49	-0.45	-0.39
1,978.00	30.74	82.55	1,800.63	153.52	700.18	716.81	0.87	0.84	0.41
2,009.00	30.60	83.20	1,827.30	155.48	715.87	732.56	1.16	-0.45	2.10
2,041.00	31.26	83.13	1,854.75	157.44	732.20	748.93	2.07	2.06	-0.22
2,072.00	32.13	82.56	1,881.12	159.47	748.36	765.15	2.97	2.81	-1.84
2,104.00	32.13	82.44	1,908.22	161.69	765.23	782.11	0.20	0.00	-0.38
2,135.00	32.52	80.95	1,934.42	164.09	781.63	798.65	2.86	1.26	-4.81
2,166.00	32.79	79.58	1,960.52	166.91	798.12	815.36	2.54	0.87	-4.42
2,197.00	32.71	78.87	1,986.59	170.05	814.59	832.12	1.27	-0.26	-2.29
2,229.00	32.56	78.64	2,013.54	173.41	831.52	849.38	0.61	-0.47	-0.72
2,261.00	33.10	78.36	2,040.43	176.87	848.52	866.72	1.75	1.69	-0.88
2,292.00	33.65	77.90	2,066.32	180.38	865.21	883.78	1.95	1.77	-1.48
2,324.00	33.60	77.63	2,092.96	184.14	882.53	901.50	0.49	-0.16	-0.84
2,355.00	33.50	77.30	2,118.80	187.86	899.25	918.63	0.67	-0.32	-1.06
2,386.00	32.93	77.16	2,144.73	191.61	915.81	935.61	1.86	-1.84	-0.45
2,418.00	32.58	77.00	2,171.64	195.48	932.69	952.92	1.13	-1.09	-0.50
2,449.00	32.13	76.76	2,197.83	199.24	948.84	969.51	1.51	-1.45	-0.77
2,481.00	31.42	76.36	2,225.03	203.16	965.23	986.36	2.31	-2.22	-1.25
2,512.00	30.64	75.88	2,251.60	206.99	980.75	1,002.33	2.64	-2.52	-1.55
2,544.00	29.79	75.20	2,279.25	211.01	996.34	1,018.42	2.86	-2.66	-2.13
2,575.00	29.58	75.57	2,306.18	214.89	1,011.20	1,033.76	0.90	-0.68	1.19
2,606.00	29.08	74.94	2,333.21	218.75	1,025.88	1,048.93	1.90	-1.61	-2.03
2,638.00	29.32	74.84	2,361.14	222.82	1,040.95	1,064.53	0.77	0.75	-0.31
2,669.00	29.46	74.45	2,388.15	226.85	1,055.62	1,079.72	0.76	0.45	-1.26
2,701.00	29.75	74.01	2,415.97	231.15	1,070.84	1,095.50	1.13	0.91	-1.38
2,732.00	29.54	74.87	2,442.92	235.26	1,085.61	1,110.80	1.53	-0.68	2.77
2,764.00	28.60	75.88	2,470.89	239.19	1,100.65	1,126.34	3.31	-2.94	3.16
2,795.00	27.20	75.76	2,498.28	242.74	1,114.71	1,140.84	4.52	-4.52	-0.39
2,826.00	26.22	75.43	2,525.97	246.21	1,128.21	1,154.76	3.20	-3.16	-1.06
2,857.00	26.01	75.13	2,553.81	249.67	1,141.41	1,168.39	0.80	-0.68	-0.97
2,889.00	25.90	73.57	2,582.58	253.45	1,154.89	1,182.37	2.16	-0.34	-4.88
2,920.00	25.34	73.61	2,610.53	257.24	1,167.75	1,195.74	1.81	-1.81	0.13
2,951.00	24.21	72.94	2,638.68	260.97	1,180.19	1,208.70	3.76	-3.65	-2.16
2,983.00	23.69	71.95	2,667.92	264.89	1,192.58	1,221.63	2.05	-1.63	-3.09

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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)
3,015.00	24.01	72.89	2,697.19	268.80	1,204.91	1,234.51	1.55	1.00	2.94
3,046.00	24.29	75.87	2,725.48	272.21	1,217.12	1,247.17	4.03	0.90	9.61
3,077.00	24.83	79.78	2,753.68	274.92	1,229.71	1,260.05	5.52	1.74	12.61
3,109.00	25.89	81.94	2,782.59	277.09	1,243.24	1,273.73	4.40	3.31	6.75
3,140.00	26.20	82.47	2,810.45	278.94	1,256.73	1,287.30	1.25	1.00	1.71
3,172.00	26.42	82.08	2,839.13	280.85	1,270.78	1,301.44	0.87	0.69	-1.22
3,221.00	26.05	82.44	2,883.08	283.76	1,292.24	1,323.03	0.82	-0.76	0.73
Last SDI MWD Survey									
3,275.00	26.05	82.44	2,931.60	286.88	1,315.75	1,346.67	0.00	0.00	0.00
Projection to TD									

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
53.00	53.00	0.17	-0.27	First SDI MWD Survey
307.00	306.26	10.83	9.08	Last Survey in 12 1/4" Hole
387.00	385.35	17.70	18.92	First Survey in 7 7/8" Hole
3,221.00	2,883.08	283.76	1,292.24	Last SDI MWD Survey
3,275.00	2,931.60	286.88	1,315.75	Projection to TD

Checked By: _____ Approved By: _____ Date: _____