

Tekton

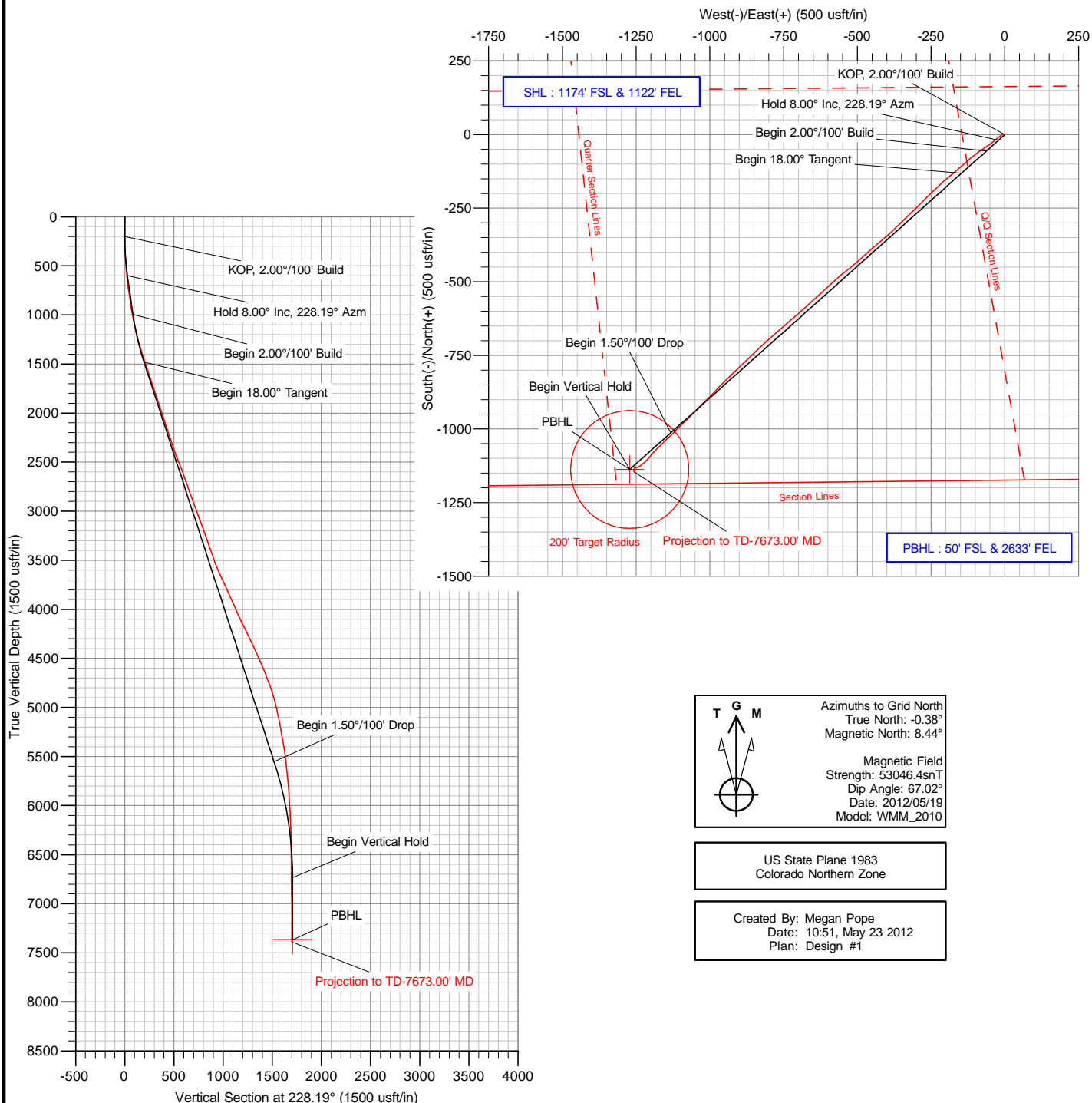
Company: Tekton
Site: Frye Farms
Well: 9-5-32
Project: Weld County, Colorado (NAD83)
Rig Name: Cade 22

MS Energy Services
WWW.MSENERGYSERVICES.COM

Planning: 936.442.2510 Fax: 936.442.2515
Operations: 936.442.2500 Fax: 936.442.2599

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	V Sect	Departure	Annotation
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	KOP, 2.00°/100' Build
600.00	8.00	228.19	598.70	-18.59	-20.78	27.88	27.88	Hold 8.00° Inc, 228.19° Azm
1000.00	8.00	228.19	994.81	-55.70	-62.28	83.55	83.55	Begin 2.00°/100' Build
1500.14	18.00	228.19	1481.51	-130.61	-146.04	195.92	195.92	Begin 18.00° Tangent
5780.67	18.00	228.19	5552.47	-1012.56	-1132.13	1518.88	1518.88	Begin 1.50°/100' Drop
6980.85	0.00	0.00	6733.00	-1137.23	-1271.52	1705.88	1705.88	Begin Vertical Hold
7614.85	0.00	0.00	7367.00	-1137.23	-1271.52	1705.88	1705.88	PBHL



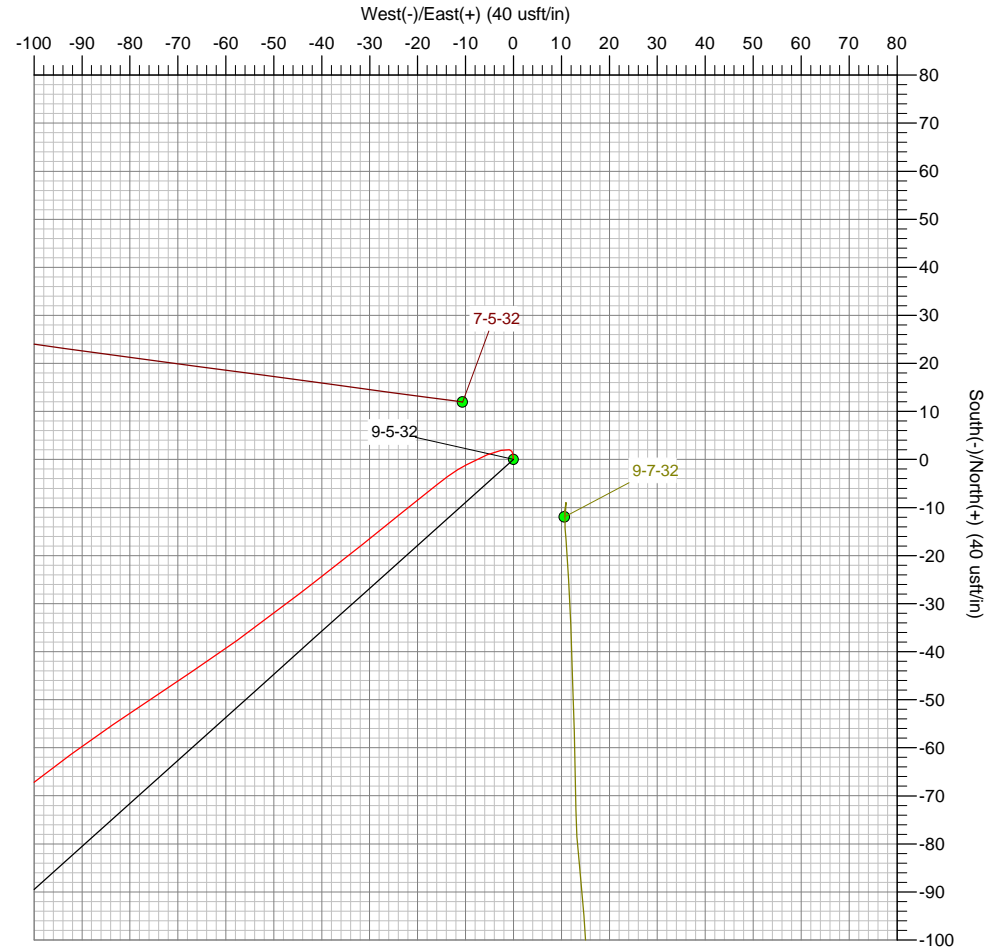
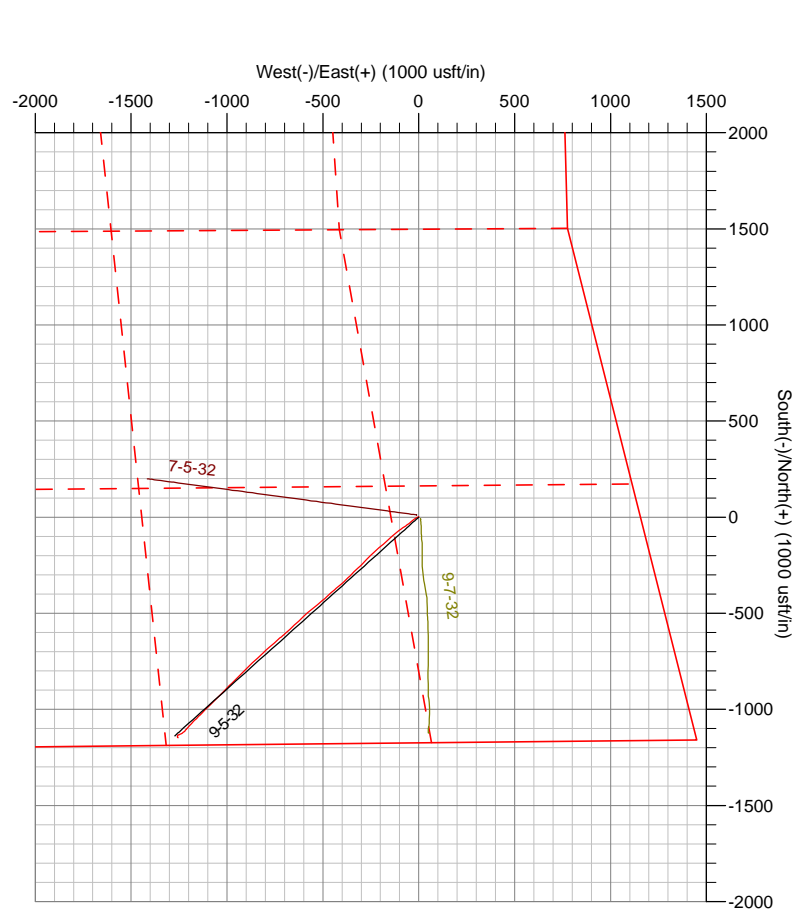
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Tekton

Company: Tekton
Site: Frye Farms
Project: Weld County, Colorado (NAD83)
Rig Name: Cade 22



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Tekton

Weld County, Colorado (NAD83)

Frye Farms

9-5-32

Wellbore #1

Survey: MS MWD

Standard Survey Report

23 May, 2012

Company:	Tekton	Local Co-ordinate Reference:	Well 9-5-32
Project:	Weld County, Colorado (NAD83)	TVD Reference:	WELL @ 4897.00usft (Cade 22)
Site:	Frye Farms	MD Reference:	WELL @ 4897.00usft (Cade 22)
Well:	9-5-32	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	Southern Region

Project	Weld County, Colorado (NAD83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Well	9-5-32					
Well Position	+N/-S	0.00 usft	Northing:	1,403,397.97 usft	Latitude:	40° 26' 21.2347 N
	+E/-W	0.00 usft	Easting:	3,164,094.02 usft	Longitude:	104° 54' 37.692 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	4,881.00 usft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	WMM_2010	2012/05/19	8.82	67.02	53,046

Design	Surveys				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00		228.19

Survey Program	Date	2012/05/23			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
81.00	7,673.00	MS MWD (Wellbore #1)	MWD	MWD - Standard	

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	
81.00	1.30	354.70	80.99	0.91	-0.08	-0.55	1.60	1.60	0.00	
171.00	0.80	277.30	170.98	2.01	-0.80	-0.74	1.52	-0.56	-86.00	
261.00	1.50	260.40	260.96	1.89	-2.59	0.67	0.86	0.78	-18.78	
352.00	2.40	247.90	351.91	0.98	-5.53	3.47	1.09	0.99	-13.74	
443.00	3.60	242.50	442.78	-1.06	-9.83	8.03	1.35	1.32	-5.93	
534.00	5.70	231.70	533.48	-5.18	-15.91	15.31	2.49	2.31	-11.87	
626.00	5.90	230.90	625.01	-10.99	-23.16	24.59	0.23	0.22	-0.87	
717.00	7.60	231.60	715.38	-17.68	-31.51	35.27	1.87	1.87	0.77	
813.00	7.90	232.10	810.50	-25.68	-41.69	48.19	0.32	0.31	0.52	
842.00	8.10	233.00	839.22	-28.13	-44.89	52.21	0.81	0.69	3.10	
917.00	8.60	233.30	913.42	-34.66	-53.61	63.07	0.67	0.67	0.40	
1,013.00	11.20	236.30	1,007.98	-44.12	-67.12	79.45	2.76	2.71	3.13	
1,109.00	12.70	235.90	1,101.90	-55.21	-83.62	99.14	1.56	1.56	-0.42	
1,203.00	14.20	232.00	1,193.32	-68.11	-101.26	120.88	1.86	1.60	-4.15	

Company:	Tekton	Local Co-ordinate Reference:	Well 9-5-32
Project:	Weld County, Colorado (NAD83)	TVD Reference:	WELL @ 4897.00usft (Cade 22)
Site:	Frye Farms	MD Reference:	WELL @ 4897.00usft (Cade 22)
Well:	9-5-32	North Reference:	Grid
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	Southern Region

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)
1,299.00	14.90	228.50	1,286.24	-83.53	-119.79	144.97	1.17	0.73	-3.65
1,394.00	17.10	228.40	1,377.56	-100.90	-139.38	171.16	2.32	2.32	-0.11
1,489.00	18.20	229.40	1,468.09	-119.83	-161.09	199.96	1.20	1.16	1.05
1,584.00	18.50	230.20	1,558.25	-139.13	-183.93	229.85	0.41	0.32	0.84
1,679.00	18.90	229.20	1,648.24	-158.83	-207.16	260.30	0.54	0.42	-1.05
1,775.00	18.80	226.30	1,739.09	-179.68	-230.11	291.31	0.98	-0.10	-3.02
1,870.00	17.50	225.60	1,829.36	-200.25	-251.39	320.87	1.39	-1.37	-0.74
1,965.00	18.60	224.90	1,919.69	-220.98	-272.29	350.27	1.18	1.16	-0.74
2,061.00	18.80	224.30	2,010.62	-242.89	-293.90	380.99	0.29	0.21	-0.63
2,156.00	17.80	226.30	2,100.82	-263.88	-315.09	410.77	1.24	-1.05	2.11
2,251.00	17.80	226.10	2,191.27	-283.98	-336.05	439.80	0.06	0.00	-0.21
2,346.00	18.30	226.60	2,281.59	-304.30	-357.35	469.22	0.55	0.53	0.53
2,440.00	19.30	225.10	2,370.58	-325.40	-379.07	499.48	1.18	1.06	-1.60
2,535.00	21.70	229.40	2,459.56	-347.92	-403.54	532.72	2.98	2.53	4.53
2,631.00	21.40	231.00	2,548.85	-370.49	-430.62	567.96	0.69	-0.31	1.67
2,726.00	18.60	228.20	2,638.11	-391.50	-455.39	600.43	3.11	-2.95	-2.95
2,821.00	19.20	227.30	2,727.99	-412.20	-478.17	631.20	0.70	0.63	-0.95
2,916.00	20.70	229.90	2,817.29	-433.61	-502.49	663.61	1.83	1.58	2.74
3,012.00	20.50	230.80	2,907.15	-455.16	-528.50	697.36	0.39	-0.21	0.94
3,107.00	19.60	230.10	2,996.39	-475.89	-553.61	729.90	0.98	-0.95	-0.74
3,202.00	20.10	228.70	3,085.75	-496.89	-578.10	762.15	0.73	0.53	-1.47
3,297.00	19.80	226.50	3,175.05	-518.74	-602.04	794.56	0.85	-0.32	-2.32
3,392.00	19.00	227.20	3,264.65	-540.32	-625.05	826.10	0.88	-0.84	0.74
3,487.00	19.60	228.20	3,354.32	-561.45	-648.28	857.50	0.72	0.63	1.05
3,582.00	19.40	227.90	3,443.87	-582.65	-671.86	889.21	0.24	-0.21	-0.32
3,676.00	20.90	228.00	3,532.11	-604.33	-695.91	921.59	1.60	1.60	0.11
3,771.00	23.90	229.40	3,619.93	-628.20	-723.12	957.78	3.21	3.16	1.47
3,867.00	24.40	228.40	3,707.53	-654.02	-752.71	997.05	0.67	0.52	-1.04
3,962.00	24.80	229.50	3,793.91	-679.99	-782.54	1,036.60	0.64	0.42	1.16
4,056.00	23.60	227.70	3,879.65	-705.46	-811.45	1,075.12	1.50	-1.28	-1.91
4,152.00	24.30	226.40	3,967.38	-732.01	-839.97	1,114.08	0.91	0.73	-1.35
4,246.00	24.30	226.30	4,053.05	-758.71	-867.95	1,152.75	0.04	0.00	-0.11
4,341.00	25.60	225.80	4,139.19	-786.53	-896.80	1,192.79	1.39	1.37	-0.53
4,436.00	25.90	225.90	4,224.75	-815.28	-926.42	1,234.03	0.32	0.32	0.11
4,532.00	26.70	224.70	4,310.82	-845.20	-956.64	1,276.51	1.00	0.83	-1.25
4,627.00	24.40	223.40	4,396.52	-874.63	-985.14	1,317.37	2.49	-2.42	-1.37
4,723.00	24.30	225.60	4,483.98	-902.86	-1,012.88	1,356.86	0.95	-0.10	2.29
4,817.00	22.70	224.50	4,570.18	-929.33	-1,039.41	1,394.29	1.76	-1.70	-1.17
4,913.00	22.20	224.60	4,658.91	-955.45	-1,065.13	1,430.87	0.52	-0.52	0.10
5,008.00	20.50	225.70	4,747.39	-979.85	-1,089.64	1,465.41	1.84	-1.79	1.16
5,103.00	18.30	225.90	4,836.99	-1,001.85	-1,112.26	1,496.93	2.32	-2.32	0.21
5,198.00	14.60	225.50	4,928.08	-1,020.63	-1,131.52	1,523.80	3.90	-3.89	-0.42
5,293.00	12.70	227.00	5,020.39	-1,036.15	-1,147.69	1,546.21	2.03	-2.00	1.58
5,389.00	11.20	223.70	5,114.31	-1,050.09	-1,161.85	1,566.05	1.72	-1.56	-3.44

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Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Surveys	Database:	Southern Region

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)	
5,484.00	10.20	227.10	5,207.66	-1,062.48	-1,174.39	1,583.66	1.24	-1.05	3.58	
5,578.00	9.60	223.90	5,300.26	-1,073.80	-1,185.92	1,599.80	0.87	-0.64	-3.40	
5,673.00	9.10	219.30	5,394.00	-1,085.32	-1,196.17	1,615.12	0.95	-0.53	-4.84	
5,768.00	9.10	222.00	5,487.80	-1,096.71	-1,205.96	1,630.01	0.45	0.00	2.84	
5,864.00	6.30	218.60	5,582.93	-1,106.47	-1,214.33	1,642.76	2.95	-2.92	-3.54	
5,959.00	5.20	232.10	5,677.45	-1,113.19	-1,220.98	1,652.19	1.83	-1.16	14.21	
6,055.00	4.70	230.10	5,773.10	-1,118.39	-1,227.43	1,660.46	0.55	-0.52	-2.08	
6,150.00	4.40	234.20	5,867.80	-1,123.02	-1,233.37	1,667.98	0.47	-0.32	4.32	
6,245.00	4.20	241.10	5,962.53	-1,126.83	-1,239.37	1,674.99	0.58	-0.21	7.26	
6,435.00	2.50	254.70	6,152.20	-1,131.29	-1,249.46	1,685.48	0.98	-0.89	7.16	
6,624.00	0.90	256.50	6,341.11	-1,132.72	-1,254.88	1,690.48	0.85	-0.85	0.95	
6,910.00	0.60	172.90	6,627.09	-1,134.73	-1,256.88	1,693.31	0.36	-0.10	-29.23	
7,196.00	1.70	188.90	6,913.03	-1,140.41	-1,257.35	1,697.44	0.40	0.38	5.59	
7,387.00	0.70	153.60	7,103.99	-1,144.25	-1,257.27	1,699.95	0.63	-0.52	-18.48	
7,576.00	0.40	131.70	7,292.98	-1,145.72	-1,256.26	1,700.18	0.19	-0.16	-11.59	
7,622.00	0.50	115.10	7,338.98	-1,145.92	-1,255.96	1,700.08	0.36	0.22	-36.09	
7,673.00	0.50	115.10	7,389.98	-1,146.11	-1,255.56	1,699.91	0.00	0.00	0.00	
Projection to TD-7673.00' MD										

Survey Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,673.00	7,389.98	-1,146.11	-1,255.56	Projection to TD-7673.00' MD