

Project: COLORADO NORTHERN ZONE - 83
 Site: WELD_STREAR 17-10
 Well: STREAR 17-10
 Wellbore: OH
 Section: SECTION 10 T2N R67W
 SHL:
 Design: STREAR 17-10(wp01)
 Latitude: 40° 9' 25.376 N
 Longitude: 104° 52' 16.471 W
 GL: 4924.00
 KB: GL 4924' & KB 15' @ 4939.00ft (ASSUMED)

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
4264.00	4330.73	PARKMAN
4369.00	4435.75	SUSSEX
7217.00	7283.75	NIOBRARA
7474.00	7540.75	CODELL
7557.00	7623.75	GREENHORN



Azimuths to Grid North
 True North: -0.41°
 Magnetic North: 8.53°
 Magnetic Field
 Strength: 53017.1snT
 Dip Angle: 66.84°
 Date: 03/17/2011
 Model: IGRF2010

WELL DETAILS: STREAR 17-10

+N/-S	+E/-W	Northing	Ground Level: Easting	4924.00 Latitude	Longitude	Slot
0.00	0.00	1300679.25	3175741.69	40° 9' 25.376 N	104° 52' 16.471 W	

CASING DETAILS

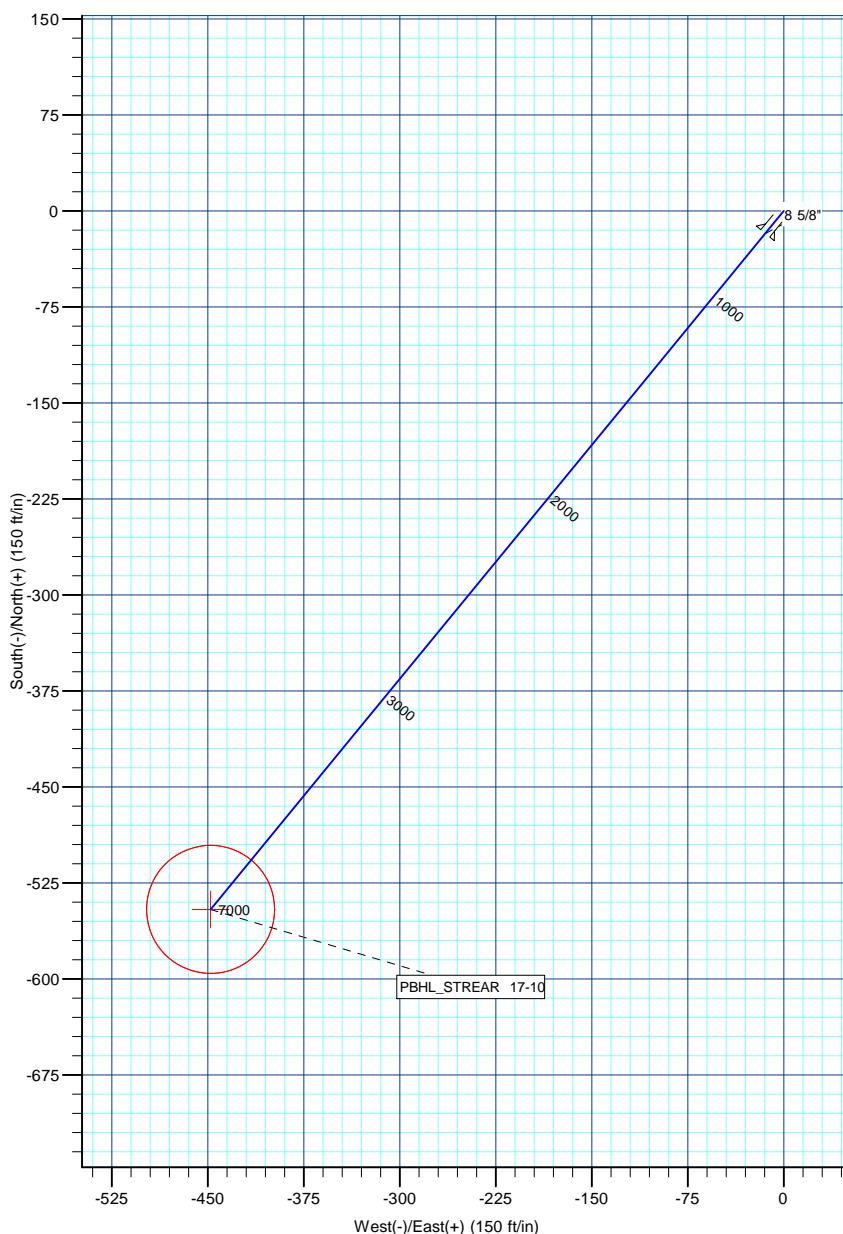
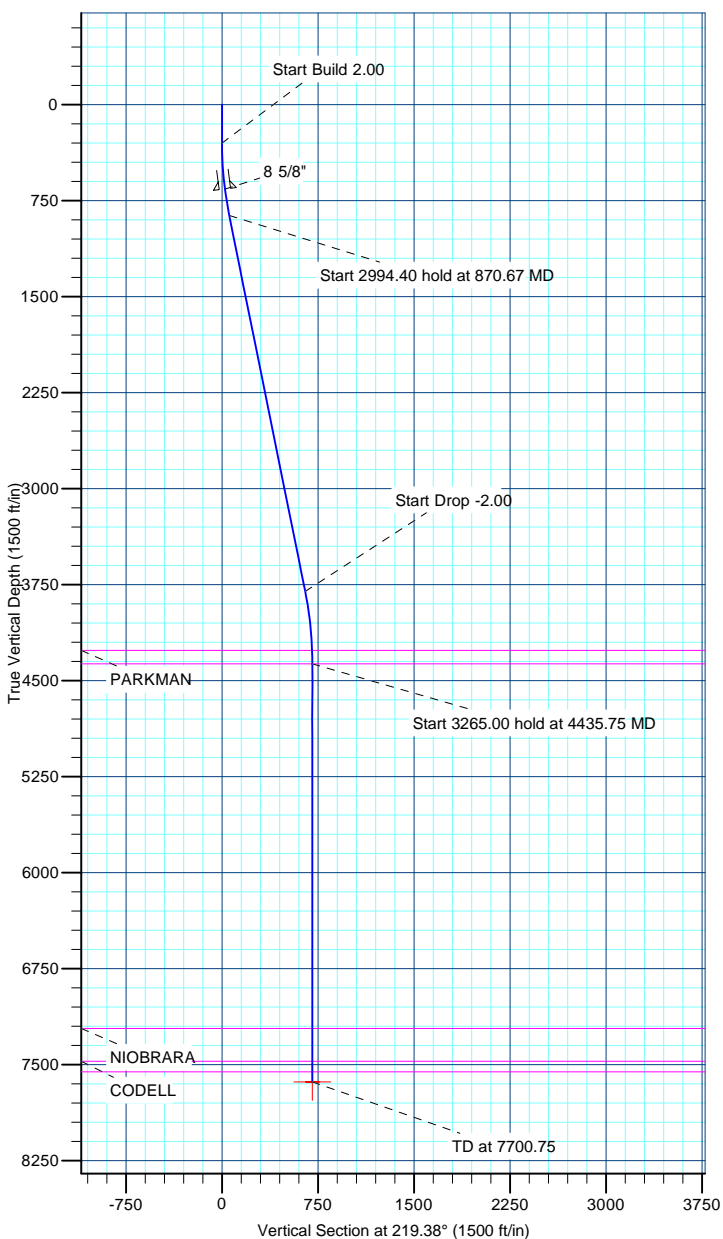
TVD	MD	Name	Size
660.00	660.95	8 5/8"	8.625

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL_STREAR 17-10	7634.00	-545.60	-447.84	1300133.65	3175293.85	40° 9' 20.016 N	104° 52' 22.289 W	Circle (Radius: 50.00)

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00
870.67	11.41	219.38	866.91	-43.79	-35.94	2.00	219.38	56.65
3865.07	11.41	219.38	3802.09	-501.81	-411.90	0.00	0.00	649.21
4435.75	0.00	0.00	4369.00	-545.60	-447.84	2.00	180.00	705.86
7700.75	0.00	0.00	7634.00	-545.60	-447.84	0.00	0.00	705.86



US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_STREAR 17-10

STREAR 17-10

OH

Plan: STREAR 17-10(wp01)

Standard Planning Report

17 March, 2011

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well STREAR 17-10
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4924' & KB 15' @ 4939.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4924' & KB 15' @ 4939.00ft (ASSUMED)
Site:	WELD_STREAR 17-10	North Reference:	Grid
Well:	STREAR 17-10	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	STREAR 17-10(wp01)		

Project	COLORADO NORTHERN ZONE - 83, KERR MCGEE OIL & GAS ONSHORE LP		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		WELD_STREAR 17-10, SECTION 10 T2N R67W			
Site Position:		Northing:	1,300,679.25 usft	Latitude:	40° 9' 25.376 N
From:	Lat/Long	Easting:	3,175,741.69 usft	Longitude:	104° 52' 16.471 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	0.41 °

Well	STREAR 17-10					
Well Position	+N/-S	0.00 ft	Northing:	1,300,679.25 usft	Latitude:	40° 9' 25.376 N
	+E/-W	0.00 ft	Easting:	3,175,741.69 usft	Longitude:	104° 52' 16.471 W
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,924.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	03/17/2011	8.93	66.84	53,017

Design	STREAR 17-10(wp01)			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	219.38

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
870.67	11.41	219.38	866.91	-43.79	-35.94	2.00	2.00	0.00	219.38	
3,865.07	11.41	219.38	3,802.09	-501.81	-411.90	0.00	0.00	0.00	0.00	
4,435.75	0.00	0.00	4,369.00	-545.60	-447.84	2.00	-2.00	0.00	180.00	
7,700.75	0.00	0.00	7,634.00	-545.60	-447.84	0.00	0.00	0.00	0.00	PBHL_STREAR 17-1

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well STREAR 17-10
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4924' & KB 15' @ 4939.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4924' & KB 15' @ 4939.00ft (ASSUMED)
Site:	WELD_STREAR 17-10	North Reference:	Grid
Well:	STREAR 17-10	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	STREAR 17-10(wp01)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
400.00	2.00	219.38	399.98	-1.35	-1.11	1.75	2.00	2.00	0.00
500.00	4.00	219.38	499.84	-5.39	-4.43	6.98	2.00	2.00	0.00
600.00	6.00	219.38	599.45	-12.13	-9.96	15.69	2.00	2.00	0.00
660.95	7.22	219.38	660.00	-17.55	-14.41	22.71	2.00	2.00	0.00
8 5/8"									
700.00	8.00	219.38	698.70	-21.55	-17.69	27.88	2.00	2.00	0.00
800.00	10.00	219.38	797.47	-33.64	-27.61	43.52	2.00	2.00	0.00
870.67	11.41	219.38	866.91	-43.79	-35.94	56.65	2.00	2.00	0.00
Start 2994.40 hold at 870.67 MD									
900.00	11.41	219.38	895.65	-48.28	-39.63	62.46	0.00	0.00	0.00
1,000.00	11.41	219.38	993.68	-63.57	-52.18	82.24	0.00	0.00	0.00
1,100.00	11.41	219.38	1,091.70	-78.87	-64.74	102.03	0.00	0.00	0.00
1,200.00	11.41	219.38	1,189.72	-94.16	-77.29	121.82	0.00	0.00	0.00
1,300.00	11.41	219.38	1,287.74	-109.46	-89.85	141.61	0.00	0.00	0.00
1,400.00	11.41	219.38	1,385.77	-124.75	-102.40	161.40	0.00	0.00	0.00
1,500.00	11.41	219.38	1,483.79	-140.05	-114.96	181.19	0.00	0.00	0.00
1,600.00	11.41	219.38	1,581.81	-155.35	-127.51	200.98	0.00	0.00	0.00
1,700.00	11.41	219.38	1,679.83	-170.64	-140.07	220.77	0.00	0.00	0.00
1,800.00	11.41	219.38	1,777.86	-185.94	-152.62	240.55	0.00	0.00	0.00
1,900.00	11.41	219.38	1,875.88	-201.23	-165.18	260.34	0.00	0.00	0.00
2,000.00	11.41	219.38	1,973.90	-216.53	-177.73	280.13	0.00	0.00	0.00
2,100.00	11.41	219.38	2,071.92	-231.83	-190.29	299.92	0.00	0.00	0.00
2,200.00	11.41	219.38	2,169.95	-247.12	-202.84	319.71	0.00	0.00	0.00
2,300.00	11.41	219.38	2,267.97	-262.42	-215.40	339.50	0.00	0.00	0.00
2,400.00	11.41	219.38	2,365.99	-277.71	-227.95	359.29	0.00	0.00	0.00
2,500.00	11.41	219.38	2,464.01	-293.01	-240.51	379.08	0.00	0.00	0.00
2,600.00	11.41	219.38	2,562.04	-308.31	-253.06	398.87	0.00	0.00	0.00
2,700.00	11.41	219.38	2,660.06	-323.60	-265.62	418.65	0.00	0.00	0.00
2,800.00	11.41	219.38	2,758.08	-338.90	-278.17	438.44	0.00	0.00	0.00
2,900.00	11.41	219.38	2,856.10	-354.19	-290.73	458.23	0.00	0.00	0.00
3,000.00	11.41	219.38	2,954.13	-369.49	-303.28	478.02	0.00	0.00	0.00
3,100.00	11.41	219.38	3,052.15	-384.79	-315.84	497.81	0.00	0.00	0.00
3,200.00	11.41	219.38	3,150.17	-400.08	-328.39	517.60	0.00	0.00	0.00
3,300.00	11.41	219.38	3,248.19	-415.38	-340.95	537.39	0.00	0.00	0.00
3,400.00	11.41	219.38	3,346.21	-430.67	-353.50	557.18	0.00	0.00	0.00
3,500.00	11.41	219.38	3,444.24	-445.97	-366.06	576.96	0.00	0.00	0.00
3,600.00	11.41	219.38	3,542.26	-461.26	-378.62	596.75	0.00	0.00	0.00
3,700.00	11.41	219.38	3,640.28	-476.56	-391.17	616.54	0.00	0.00	0.00
3,800.00	11.41	219.38	3,738.30	-491.86	-403.73	636.33	0.00	0.00	0.00
3,865.07	11.41	219.38	3,802.09	-501.81	-411.90	649.21	0.00	0.00	0.00
Start Drop -2.00									
3,900.00	10.71	219.38	3,836.37	-506.99	-416.15	655.91	2.00	-2.00	0.00
4,000.00	8.71	219.38	3,934.93	-520.03	-426.85	672.78	2.00	-2.00	0.00
4,100.00	6.71	219.38	4,034.02	-530.41	-435.37	686.21	2.00	-2.00	0.00
4,200.00	4.71	219.38	4,133.52	-538.11	-441.69	696.17	2.00	-2.00	0.00
4,300.00	2.71	219.38	4,233.30	-543.11	-445.80	702.65	2.00	-2.00	0.00
4,330.73	2.10	219.38	4,264.00	-544.11	-446.62	703.94	2.00	-2.00	0.00
PARKMAN									
4,400.00	0.71	219.38	4,333.25	-545.43	-447.70	705.64	2.00	-2.00	0.00

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Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4924' & KB 15' @ 4939.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4924' & KB 15' @ 4939.00ft (ASSUMED)
Site:	WELD_STREAR 17-10	North Reference:	Grid
Well:	STREAR 17-10	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	STREAR 17-10(wp01)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,435.75	0.00	0.00	4,369.00	-545.60	-447.84	705.86	2.00	-2.00	0.00
Start 3265.00 hold at 4435.75 MD - SUSSEX									
4,500.00	0.00	0.00	4,433.25	-545.60	-447.84	705.86	0.00	0.00	0.00
4,600.00	0.00	0.00	4,533.25	-545.60	-447.84	705.86	0.00	0.00	0.00
4,700.00	0.00	0.00	4,633.25	-545.60	-447.84	705.86	0.00	0.00	0.00
4,800.00	0.00	0.00	4,733.25	-545.60	-447.84	705.86	0.00	0.00	0.00
4,900.00	0.00	0.00	4,833.25	-545.60	-447.84	705.86	0.00	0.00	0.00
5,000.00	0.00	0.00	4,933.25	-545.60	-447.84	705.86	0.00	0.00	0.00
5,100.00	0.00	0.00	5,033.25	-545.60	-447.84	705.86	0.00	0.00	0.00
5,200.00	0.00	0.00	5,133.25	-545.60	-447.84	705.86	0.00	0.00	0.00
5,300.00	0.00	0.00	5,233.25	-545.60	-447.84	705.86	0.00	0.00	0.00
5,400.00	0.00	0.00	5,333.25	-545.60	-447.84	705.86	0.00	0.00	0.00
5,500.00	0.00	0.00	5,433.25	-545.60	-447.84	705.86	0.00	0.00	0.00
5,600.00	0.00	0.00	5,533.25	-545.60	-447.84	705.86	0.00	0.00	0.00
5,700.00	0.00	0.00	5,633.25	-545.60	-447.84	705.86	0.00	0.00	0.00
5,800.00	0.00	0.00	5,733.25	-545.60	-447.84	705.86	0.00	0.00	0.00
5,900.00	0.00	0.00	5,833.25	-545.60	-447.84	705.86	0.00	0.00	0.00
6,000.00	0.00	0.00	5,933.25	-545.60	-447.84	705.86	0.00	0.00	0.00
6,100.00	0.00	0.00	6,033.25	-545.60	-447.84	705.86	0.00	0.00	0.00
6,200.00	0.00	0.00	6,133.25	-545.60	-447.84	705.86	0.00	0.00	0.00
6,300.00	0.00	0.00	6,233.25	-545.60	-447.84	705.86	0.00	0.00	0.00
6,400.00	0.00	0.00	6,333.25	-545.60	-447.84	705.86	0.00	0.00	0.00
6,500.00	0.00	0.00	6,433.25	-545.60	-447.84	705.86	0.00	0.00	0.00
6,600.00	0.00	0.00	6,533.25	-545.60	-447.84	705.86	0.00	0.00	0.00
6,700.00	0.00	0.00	6,633.25	-545.60	-447.84	705.86	0.00	0.00	0.00
6,800.00	0.00	0.00	6,733.25	-545.60	-447.84	705.86	0.00	0.00	0.00
6,900.00	0.00	0.00	6,833.25	-545.60	-447.84	705.86	0.00	0.00	0.00
7,000.00	0.00	0.00	6,933.25	-545.60	-447.84	705.86	0.00	0.00	0.00
7,100.00	0.00	0.00	7,033.25	-545.60	-447.84	705.86	0.00	0.00	0.00
7,200.00	0.00	0.00	7,133.25	-545.60	-447.84	705.86	0.00	0.00	0.00
7,283.75	0.00	0.00	7,217.00	-545.60	-447.84	705.86	0.00	0.00	0.00
NIOBRARA									
7,300.00	0.00	0.00	7,233.25	-545.60	-447.84	705.86	0.00	0.00	0.00
7,400.00	0.00	0.00	7,333.25	-545.60	-447.84	705.86	0.00	0.00	0.00
7,500.00	0.00	0.00	7,433.25	-545.60	-447.84	705.86	0.00	0.00	0.00
7,540.75	0.00	0.00	7,474.00	-545.60	-447.84	705.86	0.00	0.00	0.00
CODELL									
7,600.00	0.00	0.00	7,533.25	-545.60	-447.84	705.86	0.00	0.00	0.00
7,623.75	0.00	0.00	7,557.00	-545.60	-447.84	705.86	0.00	0.00	0.00
GREENHORN									
7,700.00	0.00	0.00	7,633.25	-545.60	-447.84	705.86	0.00	0.00	0.00
7,700.75	0.00	0.00	7,634.00	-545.60	-447.84	705.86	0.00	0.00	0.00
PBHL_STREAR 17-10									

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Wellbore:	OH		
Design:	STREAR 17-10(wp01)		

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL_STREAR 17-10	0.00	0.00	7,634.00	-545.60	-447.84	1,300,133.65	3,175,293.85	40° 9' 20.016 N	104° 52' 22.289 W
- plan hits target center									
- Circle (radius 50.00)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
660.95	660.00	8 5/8"	8.625	11.000	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,330.73	4,245.00	PARKMAN				
4,435.75	4,350.00	SUSSEX				
7,283.75	7,198.00	NIOBRARA				
7,540.75	7,455.00	CODELL				
7,623.75	7,538.00	GREENHORN				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
300.00	300.00	0.00	0.00	Start Build 2.00	
870.67	866.91	-43.79	-35.94	Start 2994.40 hold at 870.67 MD	
3,865.07	3,802.09	-501.81	-411.90	Start Drop -2.00	
4,435.75	4,369.00	-545.60	-447.84	Start 3265.00 hold at 4435.75 MD	
7,700.75	7,634.00	-545.60	-447.84	TD at 7700.75	