

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_Checketts 18-15 PAD**

**Checketts 22-15**

**Checketts 22-15**

**Plan: Checketts 22-15 (wp01)**

## **Standard Planning Report**

**02 August, 2011**



Project: COLORADO NORTHERN ZONE - 83  
Site: WELD\_Checketts 18-15 PAD  
Well: Checketts 22-15  
Wellbore: Checketts 22-15  
Section:  
SHL:  
Design: Checketts 22-15 (wp01)  
Latitude: 40.312861  
Longitude: -104.651098  
GL: 4727.00  
KB: 15' rkb + 4727' gl @ 4742.00ft

TVDPATH	MDPATH	FORMATION
4282.00	4397.05	PK Depth
4292.00	4407.05	SX Depth
6791.00	6906.05	NIO Depth
7088.00	7203.05	CD Depth
7172.00	7287.05	GH Depth
7572.00	7687.05	J Depth



Azimuths to True North  
Magnetic North: 8.78°

Magnetic Field  
Strength: 53084.9snT  
Dip Angle: 66.99°  
Date: 8/2/2011  
Model: IGRF2010

#### WELL DETAILS: Checketts 22-15

+N/-S	+E/-W	Northing	Ground Level: Easting	4727.00 Latitude	Longitude	Slot
0.00	0.00	1357949.31	3236728.28	40.312861	-104.651098	

#### CASING DETAILS

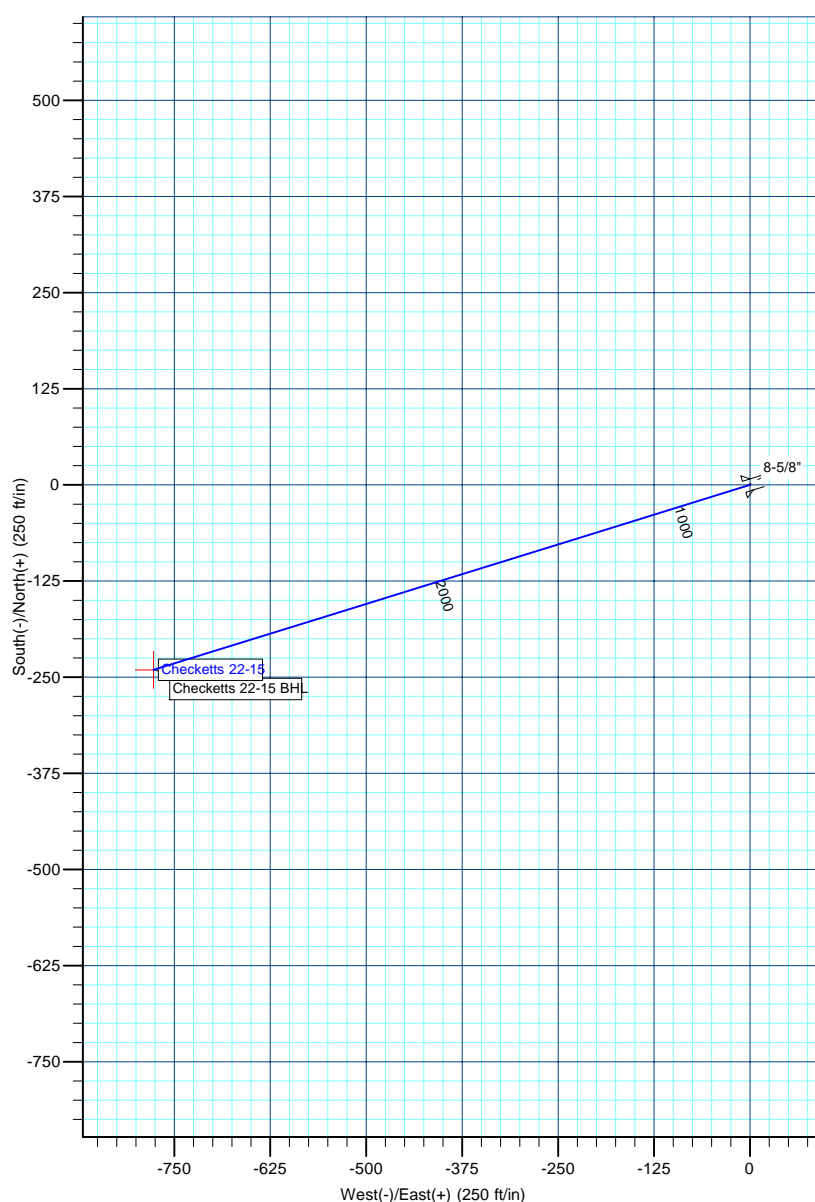
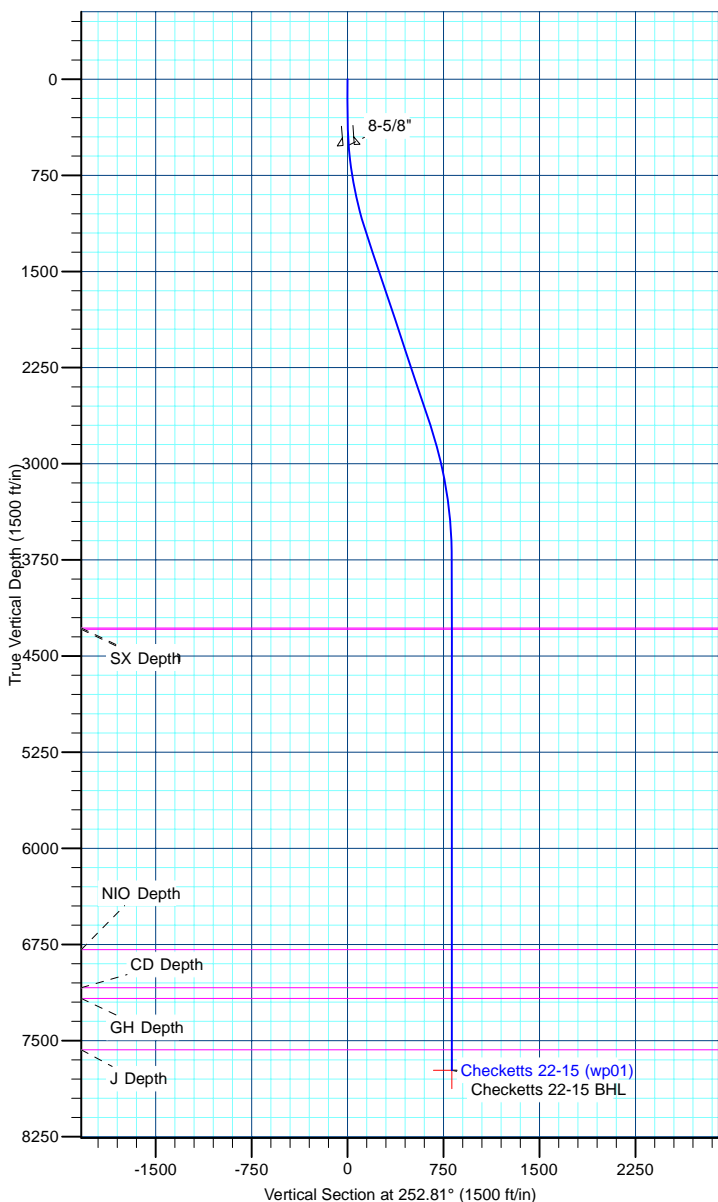
TVD	MD	Name	Size
515.00	515.20	8-5/8"	8-5/8

#### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape Point
Checketts 22-15 BHL	7732.00	-240.39	-777.21	1357701.50	3235953.40	40.312201	-104.653885	

#### 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
1224.53	18.49	252.81	1208.56	-43.70	-141.29	2.00	252.81	147.89
2790.45	18.49	252.81	2693.64	-190.44	-615.74	0.00	0.00	644.52
3847.05	0.00	0.00	3732.00	-240.39	-777.21	1.75	180.00	813.54
7847.05	0.00	0.00	7732.00	-240.39	-777.21	0.00	0.00	813.54



<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well Checketts 22-15
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	15' rkb + 4727' gl @ 4742.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	15' rkb + 4727' gl @ 4742.00ft
<b>Site:</b>	WELD_Checketts 18-15 PAD	<b>North Reference:</b>	True
<b>Well:</b>	Checketts 22-15	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Checketts 22-15		
<b>Design:</b>	Checketts 22-15 (wp01)		

<b>Project</b>	COLORADO NORTHERN ZONE - 83		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site		WELD_Checketts 18-15 PAD			
Site Position:		Northing:	1,357,949.50 ft	Latitude:	40.312861
From:	Lat/Long	Easting:	3,236,744.45 ft	Longitude:	-104.651040
Position Uncertainty:	0.00 ft	Slot Radius:	0 "	Grid Convergence:	0.55 °

Well	Checketts 22-15					
Well Position	+N/-S	-0.03 ft	Northing:	1,357,949.32 ft	Latitude:	40.312861
	+E/-W	-16.17 ft	Easting:	3,236,728.28 ft	Longitude:	-104.651098
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,727.00 ft

<b>Wellbore</b>	Checketts 22-15				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	8/2/2011	8.78	66.99	53,085

<b>Design</b>	Checketts 22-15 (wp01)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	252.81

<b>Plan Sections</b>										
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	
1,224.53	18.49	252.81	1,208.56	-43.70	-141.29	2.00	2.00	0.00	252.81	
2,790.45	18.49	252.81	2,693.64	-190.44	-615.74	0.00	0.00	0.00	0.00	
3,847.05	0.00	0.00	3,732.00	-240.39	-777.21	1.75	-1.75	0.00	180.00	
7,847.05	0.00	0.00	7,732.00	-240.39	-777.21	0.00	0.00	0.00	0.00	Checketts 22-15 BHL

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<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	15' rkb + 4727' gl @ 4742.00ft
<b>Site:</b>	WELD_Checketts 18-15 PAD	<b>North Reference:</b>	True
<b>Well:</b>	Checketts 22-15	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Checketts 22-15		
<b>Design:</b>	Checketts 22-15 (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
400.00	2.00	252.81	399.98	-0.52	-1.67	1.75	2.00	2.00	0.00
500.00	4.00	252.81	499.84	-2.06	-6.67	6.98	2.00	2.00	0.00
515.20	4.30	252.81	515.00	-2.39	-7.72	8.08	2.00	2.00	0.00
8-5/8"									
600.00	6.00	252.81	599.45	-4.64	-14.99	15.69	2.00	2.00	0.00
700.00	8.00	252.81	698.70	-8.24	-26.64	27.88	2.00	2.00	0.00
800.00	10.00	252.81	797.47	-12.86	-41.58	43.52	2.00	2.00	0.00
900.00	12.00	252.81	895.62	-18.50	-59.81	62.60	2.00	2.00	0.00
1,000.00	14.00	252.81	993.06	-25.14	-81.30	85.10	2.00	2.00	0.00
1,100.00	16.00	252.81	1,089.64	-32.79	-106.02	110.98	2.00	2.00	0.00
1,200.00	18.00	252.81	1,185.27	-41.43	-133.95	140.21	2.00	2.00	0.00
1,224.53	18.49	252.81	1,208.56	-43.70	-141.29	147.89	2.00	2.00	0.00
1,300.00	18.49	252.81	1,280.14	-50.77	-164.16	171.83	0.00	0.00	0.00
1,400.00	18.49	252.81	1,374.98	-60.14	-194.45	203.54	0.00	0.00	0.00
1,500.00	18.49	252.81	1,469.81	-69.51	-224.75	235.26	0.00	0.00	0.00
1,600.00	18.49	252.81	1,564.65	-78.89	-255.05	266.97	0.00	0.00	0.00
1,700.00	18.49	252.81	1,659.49	-88.26	-285.35	298.69	0.00	0.00	0.00
1,800.00	18.49	252.81	1,754.33	-97.63	-315.65	330.40	0.00	0.00	0.00
1,900.00	18.49	252.81	1,849.16	-107.00	-345.95	362.12	0.00	0.00	0.00
2,000.00	18.49	252.81	1,944.00	-116.37	-376.25	393.83	0.00	0.00	0.00
2,100.00	18.49	252.81	2,038.84	-125.74	-406.55	425.55	0.00	0.00	0.00
2,200.00	18.49	252.81	2,133.68	-135.11	-436.84	457.26	0.00	0.00	0.00
2,300.00	18.49	252.81	2,228.52	-144.48	-467.14	488.98	0.00	0.00	0.00
2,400.00	18.49	252.81	2,323.35	-153.85	-497.44	520.69	0.00	0.00	0.00
2,500.00	18.49	252.81	2,418.19	-163.23	-527.74	552.41	0.00	0.00	0.00
2,600.00	18.49	252.81	2,513.03	-172.60	-558.04	584.12	0.00	0.00	0.00
2,700.00	18.49	252.81	2,607.87	-181.97	-588.34	615.84	0.00	0.00	0.00
2,790.45	18.49	252.81	2,693.64	-190.44	-615.74	644.52	0.00	0.00	0.00
2,800.00	18.32	252.81	2,702.71	-191.34	-618.62	647.54	1.75	-1.75	0.00
2,900.00	16.57	252.81	2,798.10	-200.20	-647.27	677.52	1.75	-1.75	0.00
3,000.00	14.82	252.81	2,894.37	-208.19	-673.12	704.58	1.75	-1.75	0.00
3,100.00	13.07	252.81	2,991.42	-215.31	-696.14	728.68	1.75	-1.75	0.00
3,200.00	11.32	252.81	3,089.15	-221.56	-716.33	749.81	1.75	-1.75	0.00
3,300.00	9.57	252.81	3,187.49	-226.91	-733.65	767.94	1.75	-1.75	0.00
3,400.00	7.82	252.81	3,286.34	-231.38	-748.10	783.07	1.75	-1.75	0.00
3,500.00	6.07	252.81	3,385.60	-234.96	-759.66	795.16	1.75	-1.75	0.00
3,600.00	4.32	252.81	3,485.19	-237.63	-768.31	804.22	1.75	-1.75	0.00
3,700.00	2.57	252.81	3,585.00	-239.41	-774.06	810.24	1.75	-1.75	0.00
3,800.00	0.82	252.81	3,684.95	-240.29	-776.89	813.20	1.75	-1.75	0.00
3,847.05	0.00	0.00	3,732.00	-240.39	-777.21	813.54	1.75	-1.75	0.00
3,900.00	0.00	0.00	3,784.95	-240.39	-777.21	813.54	0.00	0.00	0.00
4,000.00	0.00	0.00	3,884.95	-240.39	-777.21	813.54	0.00	0.00	0.00
4,100.00	0.00	0.00	3,984.95	-240.39	-777.21	813.54	0.00	0.00	0.00
4,200.00	0.00	0.00	4,084.95	-240.39	-777.21	813.54	0.00	0.00	0.00
4,300.00	0.00	0.00	4,184.95	-240.39	-777.21	813.54	0.00	0.00	0.00
4,397.05	0.00	0.00	4,282.00	-240.39	-777.21	813.54	0.00	0.00	0.00
PK Depth									
4,400.00	0.00	0.00	4,284.95	-240.39	-777.21	813.54	0.00	0.00	0.00
4,407.05	0.00	0.00	4,292.00	-240.39	-777.21	813.54	0.00	0.00	0.00

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<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	15' rkb + 4727' gl @ 4742.00ft
<b>Site:</b>	WELD_Checketts 18-15 PAD	<b>North Reference:</b>	True
<b>Well:</b>	Checketts 22-15	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Checketts 22-15		
<b>Design:</b>	Checketts 22-15 (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)
<b>SX Depth</b>									
4,500.00	0.00	0.00	4,384.95	-240.39	-777.21	813.54	0.00	0.00	0.00
4,600.00	0.00	0.00	4,484.95	-240.39	-777.21	813.54	0.00	0.00	0.00
4,700.00	0.00	0.00	4,584.95	-240.39	-777.21	813.54	0.00	0.00	0.00
4,800.00	0.00	0.00	4,684.95	-240.39	-777.21	813.54	0.00	0.00	0.00
4,900.00	0.00	0.00	4,784.95	-240.39	-777.21	813.54	0.00	0.00	0.00
5,000.00	0.00	0.00	4,884.95	-240.39	-777.21	813.54	0.00	0.00	0.00
5,100.00	0.00	0.00	4,984.95	-240.39	-777.21	813.54	0.00	0.00	0.00
5,200.00	0.00	0.00	5,084.95	-240.39	-777.21	813.54	0.00	0.00	0.00
5,300.00	0.00	0.00	5,184.95	-240.39	-777.21	813.54	0.00	0.00	0.00
5,400.00	0.00	0.00	5,284.95	-240.39	-777.21	813.54	0.00	0.00	0.00
5,500.00	0.00	0.00	5,384.95	-240.39	-777.21	813.54	0.00	0.00	0.00
5,600.00	0.00	0.00	5,484.95	-240.39	-777.21	813.54	0.00	0.00	0.00
5,700.00	0.00	0.00	5,584.95	-240.39	-777.21	813.54	0.00	0.00	0.00
5,800.00	0.00	0.00	5,684.95	-240.39	-777.21	813.54	0.00	0.00	0.00
5,900.00	0.00	0.00	5,784.95	-240.39	-777.21	813.54	0.00	0.00	0.00
6,000.00	0.00	0.00	5,884.95	-240.39	-777.21	813.54	0.00	0.00	0.00
6,100.00	0.00	0.00	5,984.95	-240.39	-777.21	813.54	0.00	0.00	0.00
6,200.00	0.00	0.00	6,084.95	-240.39	-777.21	813.54	0.00	0.00	0.00
6,300.00	0.00	0.00	6,184.95	-240.39	-777.21	813.54	0.00	0.00	0.00
6,400.00	0.00	0.00	6,284.95	-240.39	-777.21	813.54	0.00	0.00	0.00
6,500.00	0.00	0.00	6,384.95	-240.39	-777.21	813.54	0.00	0.00	0.00
6,600.00	0.00	0.00	6,484.95	-240.39	-777.21	813.54	0.00	0.00	0.00
6,700.00	0.00	0.00	6,584.95	-240.39	-777.21	813.54	0.00	0.00	0.00
6,800.00	0.00	0.00	6,684.95	-240.39	-777.21	813.54	0.00	0.00	0.00
6,900.00	0.00	0.00	6,784.95	-240.39	-777.21	813.54	0.00	0.00	0.00
6,906.05	0.00	0.00	6,791.00	-240.39	-777.21	813.54	0.00	0.00	0.00
<b>NIO Depth</b>									
7,000.00	0.00	0.00	6,884.95	-240.39	-777.21	813.54	0.00	0.00	0.00
7,100.00	0.00	0.00	6,984.95	-240.39	-777.21	813.54	0.00	0.00	0.00
7,200.00	0.00	0.00	7,084.95	-240.39	-777.21	813.54	0.00	0.00	0.00
7,203.05	0.00	0.00	7,088.00	-240.39	-777.21	813.54	0.00	0.00	0.00
<b>CD Depth</b>									
7,287.05	0.00	0.00	7,172.00	-240.39	-777.21	813.54	0.00	0.00	0.00
<b>GH Depth</b>									
7,300.00	0.00	0.00	7,184.95	-240.39	-777.21	813.54	0.00	0.00	0.00
7,400.00	0.00	0.00	7,284.95	-240.39	-777.21	813.54	0.00	0.00	0.00
7,500.00	0.00	0.00	7,384.95	-240.39	-777.21	813.54	0.00	0.00	0.00
7,600.00	0.00	0.00	7,484.95	-240.39	-777.21	813.54	0.00	0.00	0.00
7,687.05	0.00	0.00	7,572.00	-240.39	-777.21	813.54	0.00	0.00	0.00
<b>J Depth</b>									
7,700.00	0.00	0.00	7,584.95	-240.39	-777.21	813.54	0.00	0.00	0.00
7,800.00	0.00	0.00	7,684.95	-240.39	-777.21	813.54	0.00	0.00	0.00
7,847.05	0.00	0.00	7,732.00	-240.39	-777.21	813.54	0.00	0.00	0.00
<b>Checketts 22-15 BHL</b>									

<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well Checketts 22-15
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	15' rkb + 4727' gl @ 4742.00ft
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<b>Wellbore:</b>	Checketts 22-15		
<b>Design:</b>	Checketts 22-15 (wp01)		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
Checketts 22-15 BHL	0.00	0.00	7,732.00	-240.39	-777.21	1,357,701.50	3,235,953.40	40.312201	-104.653885
- plan hits target center									
- Point									

Casing Points					
Measured Depth	Vertical Depth	Name		Casing Diameter	Hole Diameter
(ft)	(ft)			(")	(")
515.20	515.00	8-5/8"		8-5/8	11

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
4,397.05	4,282.00	PK Depth				
4,407.05	4,292.00	SX Depth				
6,906.05	6,791.00	NIO Depth				
7,203.05	7,088.00	CD Depth				
7,287.05	7,172.00	GH Depth				
7,687.05	7,572.00	J Depth				