

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

CAMENISCH 19-2-9F pad

Camenisch 36-2

Camenisch 36-2

Plan: Camenisch 36-2 (wp01)

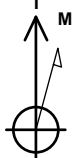
Standard Planning Report

26 September, 2011

Project: COLORADO NORTHERN ZONE - 83
Site: CAMENISCH 19-2-9F pad
Well: Camenisch 36-2
Wellbore: Camenisch 36-2
Section:
SHL:
Design: Camenisch 36-2 (wp01)
Latitude: 40.075449
Longitude: -104.863676
GL: 5032.00
KB: 15' RKB + 5032' GL @ 5047.00ft

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4131.00	4318.87	PK
4591.00	4805.94	SX
7311.00	7607.16	NIO
7621.00	7917.16	CD
7709.00	8005.16	GH
8061.00	8357.16	J

CASING DETAILS
No casing data is available



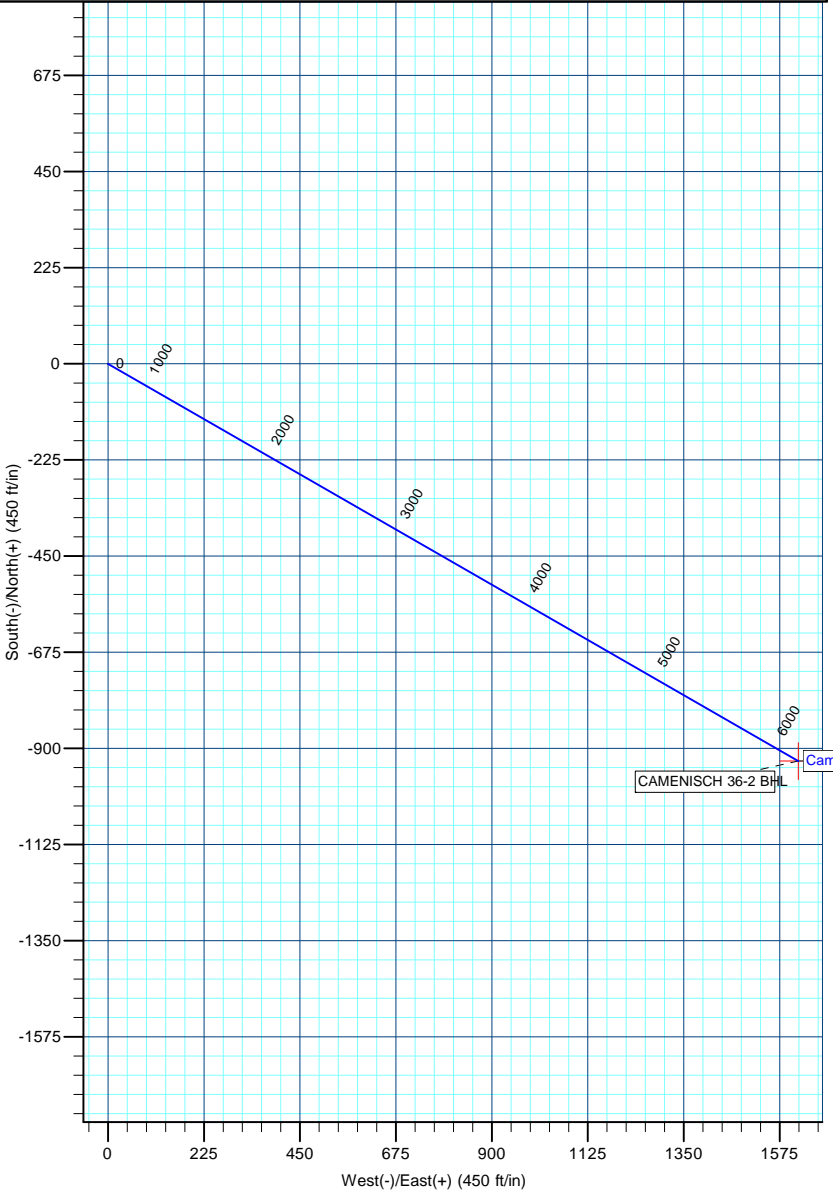
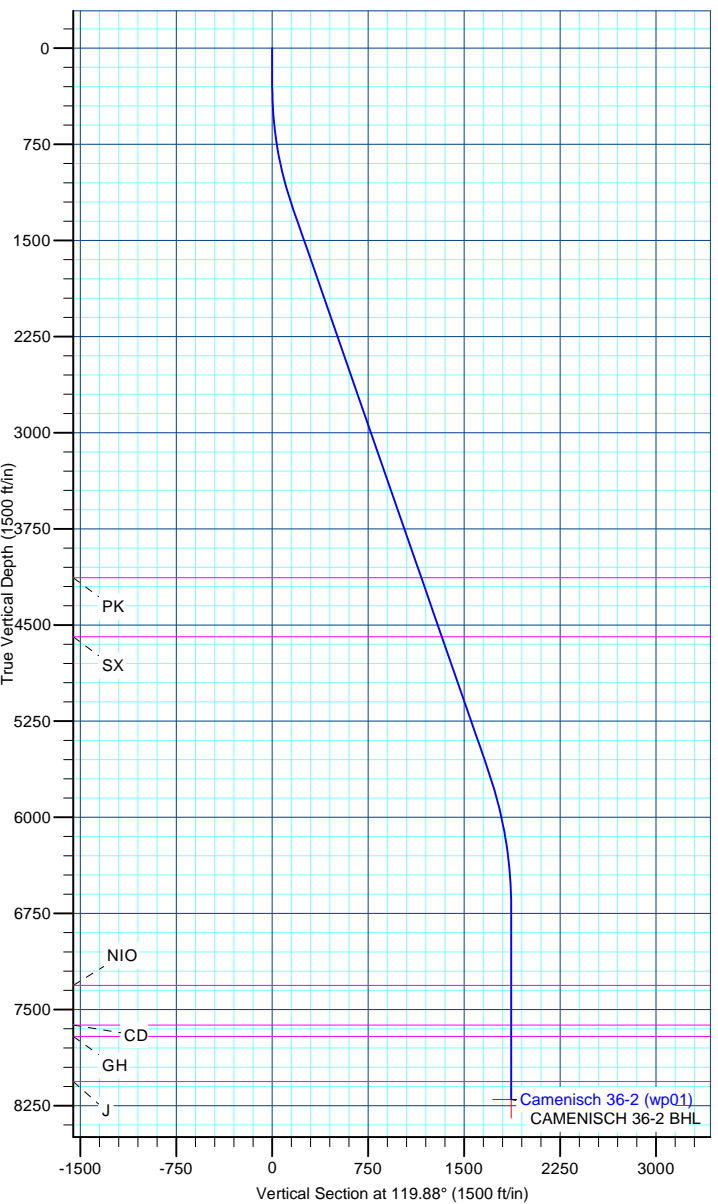
Azimuths to True North
Magnetic North: 8.85°

Magnetic Field
Strength: 52918.3snT
Dip Angle: 66.76°
Date: 9/26/2011
Model: IGRF2010

WELL DETAILS: Camenisch 36-2						
+N/-S	+E/-W	Northing	Ground Level: Easting	5032.00 Latitude	Longitude	Slot
0.00	0.00	1270969.94	3178069.70	40.075449	-104.863676	

DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape Point
CAMENISCH 36-2 BHL	8201.00	-929.94	1618.68	1270051.64	3179695.01	40.072896	-104.857892	

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
1259.60	19.19	119.88	1241.75	-79.31	138.06	2.00	119.88	159.22
5900.48	19.19	119.88	5624.71	-839.29	1460.90	0.00	0.00	1684.83
6997.16	0.00	0.00	6701.00	-929.94	1618.68	1.75	180.00	1866.79
8497.16	0.00	0.00	8201.00	-929.94	1618.68	0.00	0.00	1866.79



Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well Camenisch 36-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	15' RKB + 5032' GL @ 5047.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	15' RKB + 5032' GL @ 5047.00ft
Site:	CAMENISCH 19-2-9F pad	North Reference:	True
Well:	Camenisch 36-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Camenisch 36-2		
Design:	Camenisch 36-2 (wp01)		

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

Site	CAMENISCH 19-2-9F pad			
Site Position:		Northing:	1,271,059.92 usft	Latitude: 40.075696
From:	Lat/Long	Easting:	3,178,068.22 usft	Longitude: -104.863679
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence: 0.41 °

Well	Camenisch 36-2			
Well Position	+N/-S	-89.99 ft	Northing:	1,270,969.93 usft
	+E/-W	0.84 ft	Easting:	3,178,069.70 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	Ground Level: 5,032.00 ft

Wellbore	Camenisch 36-2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/26/2011	8.85	66.76	52,918

Design	Camenisch 36-2 (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	119.88

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	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	
1,259.60	19.19	119.88	1,241.75	-79.31	138.06	2.00	2.00	0.00	119.88	
5,900.48	19.19	119.88	5,624.71	-839.29	1,460.90	0.00	0.00	0.00	0.00	
6,997.16	0.00	0.00	6,701.00	-929.94	1,618.68	1.75	-1.75	0.00	180.00	
8,497.16	0.00	0.00	8,201.00	-929.94	1,618.68	0.00	0.00	0.00	0.00	CAMENISCH 36-2 Bt

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well Camenisch 36-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	15' RKB + 5032' GL @ 5047.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	15' RKB + 5032' GL @ 5047.00ft
Site:	CAMENISCH 19-2-9F pad	North Reference:	True
Well:	Camenisch 36-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Camenisch 36-2		
Design:	Camenisch 36-2 (wp01)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	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
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	119.88	399.98	-0.87	1.51	1.75	2.00	2.00	0.00
500.00	4.00	119.88	499.84	-3.48	6.05	6.98	2.00	2.00	0.00
600.00	6.00	119.88	599.45	-7.82	13.61	15.69	2.00	2.00	0.00
700.00	8.00	119.88	698.70	-13.89	24.17	27.88	2.00	2.00	0.00
800.00	10.00	119.88	797.47	-21.68	37.74	43.52	2.00	2.00	0.00
900.00	12.00	119.88	895.62	-31.19	54.28	62.60	2.00	2.00	0.00
1,000.00	14.00	119.88	993.06	-42.39	73.79	85.10	2.00	2.00	0.00
1,100.00	16.00	119.88	1,089.64	-55.28	96.23	110.98	2.00	2.00	0.00
1,200.00	18.00	119.88	1,185.27	-69.85	121.58	140.21	2.00	2.00	0.00
1,259.60	19.19	119.88	1,241.75	-79.31	138.06	159.22	2.00	2.00	0.00
Start 4640.89 hold at 1259.60 MD									
1,300.00	19.19	119.88	1,279.91	-85.93	149.57	172.50	0.00	0.00	0.00
1,400.00	19.19	119.88	1,374.35	-102.31	178.08	205.37	0.00	0.00	0.00
1,500.00	19.19	119.88	1,468.80	-118.68	206.58	238.25	0.00	0.00	0.00
1,600.00	19.19	119.88	1,563.24	-135.06	235.09	271.12	0.00	0.00	0.00
1,700.00	19.19	119.88	1,657.68	-151.43	263.59	303.99	0.00	0.00	0.00
1,800.00	19.19	119.88	1,752.12	-167.81	292.09	336.87	0.00	0.00	0.00
1,900.00	19.19	119.88	1,846.56	-184.18	320.60	369.74	0.00	0.00	0.00
2,000.00	19.19	119.88	1,941.01	-200.56	349.10	402.61	0.00	0.00	0.00
2,100.00	19.19	119.88	2,035.45	-216.94	377.61	435.49	0.00	0.00	0.00
2,200.00	19.19	119.88	2,129.89	-233.31	406.11	468.36	0.00	0.00	0.00
2,300.00	19.19	119.88	2,224.33	-249.69	434.61	501.23	0.00	0.00	0.00
2,400.00	19.19	119.88	2,318.78	-266.06	463.12	534.10	0.00	0.00	0.00
2,500.00	19.19	119.88	2,413.22	-282.44	491.62	566.98	0.00	0.00	0.00
2,600.00	19.19	119.88	2,507.66	-298.81	520.13	599.85	0.00	0.00	0.00
2,700.00	19.19	119.88	2,602.10	-315.19	548.63	632.72	0.00	0.00	0.00
2,800.00	19.19	119.88	2,696.55	-331.57	577.14	665.60	0.00	0.00	0.00
2,900.00	19.19	119.88	2,790.99	-347.94	605.64	698.47	0.00	0.00	0.00
3,000.00	19.19	119.88	2,885.43	-364.32	634.14	731.34	0.00	0.00	0.00
3,100.00	19.19	119.88	2,979.87	-380.69	662.65	764.22	0.00	0.00	0.00
3,200.00	19.19	119.88	3,074.31	-397.07	691.15	797.09	0.00	0.00	0.00
3,300.00	19.19	119.88	3,168.76	-413.44	719.66	829.96	0.00	0.00	0.00
3,400.00	19.19	119.88	3,263.20	-429.82	748.16	862.84	0.00	0.00	0.00
3,500.00	19.19	119.88	3,357.64	-446.20	776.66	895.71	0.00	0.00	0.00
3,600.00	19.19	119.88	3,452.08	-462.57	805.17	928.58	0.00	0.00	0.00
3,700.00	19.19	119.88	3,546.53	-478.95	833.67	961.46	0.00	0.00	0.00
3,800.00	19.19	119.88	3,640.97	-495.32	862.18	994.33	0.00	0.00	0.00
3,900.00	19.19	119.88	3,735.41	-511.70	890.68	1,027.20	0.00	0.00	0.00
4,000.00	19.19	119.88	3,829.85	-528.07	919.19	1,060.08	0.00	0.00	0.00
4,100.00	19.19	119.88	3,924.30	-544.45	947.69	1,092.95	0.00	0.00	0.00
4,200.00	19.19	119.88	4,018.74	-560.83	976.19	1,125.82	0.00	0.00	0.00
4,300.00	19.19	119.88	4,113.18	-577.20	1,004.70	1,158.70	0.00	0.00	0.00
4,318.87	19.19	119.88	4,131.00	-580.29	1,010.08	1,164.90	0.00	0.00	0.00
PK									
4,400.00	19.19	119.88	4,207.62	-593.58	1,033.20	1,191.57	0.00	0.00	0.00
4,500.00	19.19	119.88	4,302.06	-609.95	1,061.71	1,224.44	0.00	0.00	0.00
4,600.00	19.19	119.88	4,396.51	-626.33	1,090.21	1,257.32	0.00	0.00	0.00
4,700.00	19.19	119.88	4,490.95	-642.70	1,118.71	1,290.19	0.00	0.00	0.00

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well Camenisch 36-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	15' RKB + 5032' GL @ 5047.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	15' RKB + 5032' GL @ 5047.00ft
Site:	CAMENISCH 19-2-9F pad	North Reference:	True
Well:	Camenisch 36-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Camenisch 36-2		
Design:	Camenisch 36-2 (wp01)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,800.00	19.19	119.88	4,585.39	-659.08	1,147.22	1,323.06	0.00	0.00	0.00
4,805.94	19.19	119.88	4,591.00	-660.05	1,148.91	1,325.02	0.00	0.00	0.00
SX									
4,900.00	19.19	119.88	4,679.83	-675.46	1,175.72	1,355.94	0.00	0.00	0.00
5,000.00	19.19	119.88	4,774.28	-691.83	1,204.23	1,388.81	0.00	0.00	0.00
5,100.00	19.19	119.88	4,868.72	-708.21	1,232.73	1,421.68	0.00	0.00	0.00
5,200.00	19.19	119.88	4,963.16	-724.58	1,261.23	1,454.56	0.00	0.00	0.00
5,300.00	19.19	119.88	5,057.60	-740.96	1,289.74	1,487.43	0.00	0.00	0.00
5,400.00	19.19	119.88	5,152.05	-757.33	1,318.24	1,520.30	0.00	0.00	0.00
5,500.00	19.19	119.88	5,246.49	-773.71	1,346.75	1,553.18	0.00	0.00	0.00
5,600.00	19.19	119.88	5,340.93	-790.09	1,375.25	1,586.05	0.00	0.00	0.00
5,700.00	19.19	119.88	5,435.37	-806.46	1,403.76	1,618.92	0.00	0.00	0.00
5,800.00	19.19	119.88	5,529.81	-822.84	1,432.26	1,651.80	0.00	0.00	0.00
5,900.00	19.19	119.88	5,624.26	-839.21	1,460.76	1,684.67	0.00	0.00	0.00
5,900.48	19.19	119.88	5,624.71	-839.29	1,460.90	1,684.83	0.00	0.00	0.00
Start Drop -1.75									
6,000.00	17.45	119.88	5,719.18	-854.87	1,488.03	1,716.11	1.75	-1.75	0.00
6,100.00	15.70	119.88	5,815.02	-869.08	1,512.76	1,744.64	1.75	-1.75	0.00
6,200.00	13.95	119.88	5,911.69	-881.83	1,534.95	1,770.22	1.75	-1.75	0.00
6,300.00	12.20	119.88	6,009.09	-893.10	1,554.56	1,792.84	1.75	-1.75	0.00
6,400.00	10.45	119.88	6,107.14	-902.88	1,571.59	1,812.48	1.75	-1.75	0.00
6,500.00	8.70	119.88	6,205.75	-911.17	1,586.01	1,829.11	1.75	-1.75	0.00
6,600.00	6.95	119.88	6,304.81	-917.95	1,597.82	1,842.73	1.75	-1.75	0.00
6,700.00	5.20	119.88	6,404.24	-923.22	1,606.99	1,853.31	1.75	-1.75	0.00
6,800.00	3.45	119.88	6,503.96	-926.98	1,613.53	1,860.85	1.75	-1.75	0.00
6,900.00	1.70	119.88	6,603.85	-929.22	1,617.43	1,865.35	1.75	-1.75	0.00
6,997.16	0.00	0.00	6,701.00	-929.94	1,618.68	1,866.79	1.75	-1.75	0.00
Start 1500.00 hold at 6997.16 MD									
7,000.00	0.00	0.00	6,703.84	-929.94	1,618.68	1,866.79	0.00	0.00	0.00
7,100.00	0.00	0.00	6,803.84	-929.94	1,618.68	1,866.79	0.00	0.00	0.00
7,200.00	0.00	0.00	6,903.84	-929.94	1,618.68	1,866.79	0.00	0.00	0.00
7,300.00	0.00	0.00	7,003.84	-929.94	1,618.68	1,866.79	0.00	0.00	0.00
7,400.00	0.00	0.00	7,103.84	-929.94	1,618.68	1,866.79	0.00	0.00	0.00
7,500.00	0.00	0.00	7,203.84	-929.94	1,618.68	1,866.79	0.00	0.00	0.00
7,600.00	0.00	0.00	7,303.84	-929.94	1,618.68	1,866.79	0.00	0.00	0.00
7,607.16	0.00	0.00	7,311.00	-929.94	1,618.68	1,866.79	0.00	0.00	0.00
NIO									
7,700.00	0.00	0.00	7,403.84	-929.94	1,618.68	1,866.79	0.00	0.00	0.00
7,800.00	0.00	0.00	7,503.84	-929.94	1,618.68	1,866.79	0.00	0.00	0.00
7,900.00	0.00	0.00	7,603.84	-929.94	1,618.68	1,866.79	0.00	0.00	0.00
7,917.16	0.00	0.00	7,621.00	-929.94	1,618.68	1,866.79	0.00	0.00	0.00
CD									
8,000.00	0.00	0.00	7,703.84	-929.94	1,618.68	1,866.79	0.00	0.00	0.00
8,005.16	0.00	0.00	7,709.00	-929.94	1,618.68	1,866.79	0.00	0.00	0.00
GH									
8,100.00	0.00	0.00	7,803.84	-929.94	1,618.68	1,866.79	0.00	0.00	0.00
8,200.00	0.00	0.00	7,903.84	-929.94	1,618.68	1,866.79	0.00	0.00	0.00
8,300.00	0.00	0.00	8,003.84	-929.94	1,618.68	1,866.79	0.00	0.00	0.00
8,357.16	0.00	0.00	8,061.00	-929.94	1,618.68	1,866.79	0.00	0.00	0.00
J									
8,400.00	0.00	0.00	8,103.84	-929.94	1,618.68	1,866.79	0.00	0.00	0.00
8,497.16	0.00	0.00	8,201.00	-929.94	1,618.68	1,866.79	0.00	0.00	0.00
TD at 8497.16 - CAMENISCH 36-2 BHL									

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well Camenisch 36-2
Company:	US ROCKIES REGION PLANNING	TVD Reference:	15' RKB + 5032' GL @ 5047.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	15' RKB + 5032' GL @ 5047.00ft
Site:	CAMENISCH 19-2-9F pad	North Reference:	True
Well:	Camenisch 36-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Camenisch 36-2		
Design:	Camenisch 36-2 (wp01)		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
CAMENISCH 36-2 BHL	0.00	0.00	8,201.00	-929.94	1,618.68	1,270,051.64	3,179,695.01	40.072896	-104.857892
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
4,318.87	4,131.00	PK				
4,805.94	4,591.00	SX				
7,607.16	7,311.00	NIO				
7,917.16	7,621.00	CD				
8,005.16	7,709.00	GH				
8,357.16	8,061.00	J				

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
300.00	300.00	0.00	0.00	Start Build 2.00
1,259.60	1,241.75	-79.31	138.06	Start 4640.89 hold at 1259.60 MD
5,900.48	5,624.71	-839.29	1,460.90	Start Drop -1.75
6,997.16	6,701.00	-929.94	1,618.68	Start 1500.00 hold at 6997.16 MD
8,497.16	8,201.00	-929.94	1,618.68	TD at 8497.16