

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

CAMENISCH 19-2-9F pad

Camenisch 22-2

Camenisch 22-2

Plan: Camenisch 22-2 (wp01)


Standard Planning Report

26 September, 2011

Project: COLORADO NORTHERN ZONE - 83
Site: CAMENISCH 19-2-9F pad
Well: Camenisch 22-2
Wellbore: Camenisch 22-2
Section:
SHL:
Design: Camenisch 22-2 (wp01)
Latitude: 40.075696
Longitude: -104.863679
GL: 5032.00
KB: 15' RKB + 5032' GL @ 5047.00ft

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4132.00	4286.17	PK
4592.00	4767.95	SX
7312.00	7533.03	NIO
7622.00	7843.03	CD
7710.00	7931.03	GH
8062.00	8283.03	J

CASING DETAILS
No casing data is available



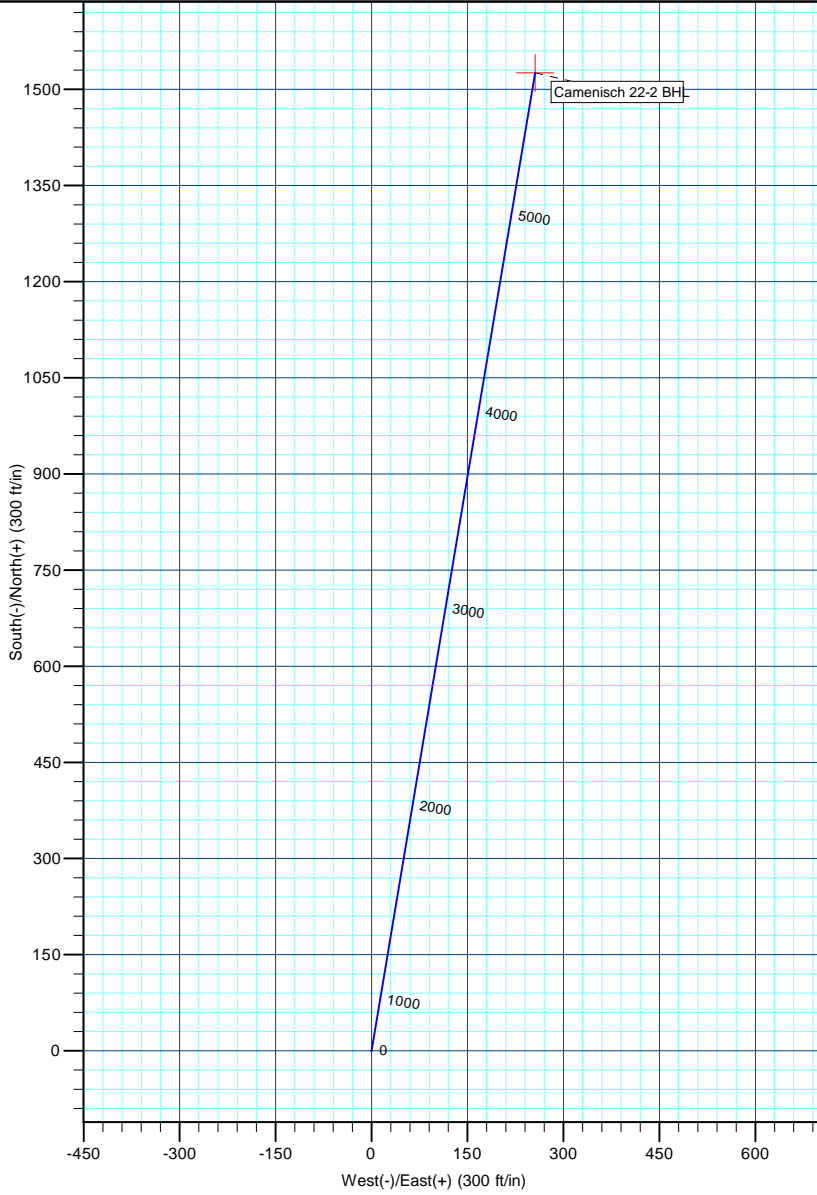
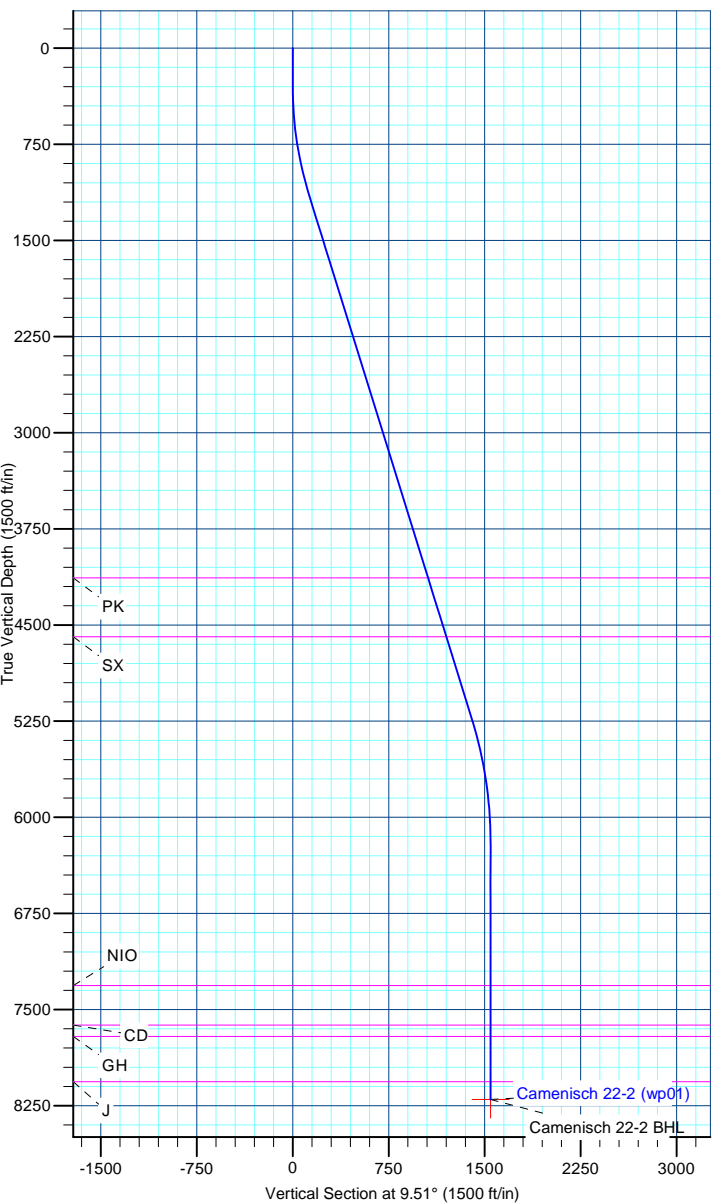
Azimuths to True North
Magnetic North: 8.85°

Magnetic Field
Strength: 52918.4snT
Dip Angle: 66.76°
Date: 9/26/2011
Model: IGRF2010

WELL DETAILS: Camenisch 22-2						
+N/-S	+E/-W	Northing	Ground Level: Easting	5032.00 Latitude	Longitude	Slot
0.00	0.00	1271059.91	3178068.22	40.075696	-104.863679	

DESIGN TARGET DETAILS								
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape Point
Camenisch 22-2 BHL	8202.00	1525.60	255.48	1272587.30	3178312.74	40.079884	-104.862766	

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
1164.65	17.29	9.51	1151.58	127.72	21.39	2.00	9.51	129.50
5434.86	17.29	9.51	5228.76	1379.64	231.04	0.00	0.00	1398.85
6423.03	0.00	0.00	6202.00	1525.60	255.48	1.75	180.00	1546.84
8423.03	0.00	0.00	8202.00	1525.60	255.48	0.00	0.00	1546.84



Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well Camenisch 22-2
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 22-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Camenisch 22-2		
Design:	Camenisch 22-2 (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 22-2			
Well Position	+N/-S	0.00 ft	Northing:	1,271,059.91 usft
	+E/-W	0.00 ft	Easting:	3,178,068.22 usft
Position Uncertainty	0.00 ft	Wellhead Elevation:		Ground Level: 5,032.00 ft

Wellbore	Camenisch 22-2				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/26/2011	8.85	66.76	52,918

Design	Camenisch 22-2 (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	9.51

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	
1,164.65	17.29	9.51	1,151.58	127.72	21.39	2.00	2.00	0.00	9.51	
5,434.86	17.29	9.51	5,228.76	1,379.64	231.04	0.00	0.00	0.00	0.00	
6,423.03	0.00	0.00	6,202.00	1,525.60	255.48	1.75	-1.75	0.00	180.00	
8,423.03	0.00	0.00	8,202.00	1,525.60	255.48	0.00	0.00	0.00	0.00	Camenisch 22-2 BHL

Anadarko Petroleum Corp

Planning Report

Database:	edmp	Local Co-ordinate Reference:	Well Camenisch 22-2
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 22-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Camenisch 22-2		
Design:	Camenisch 22-2 (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	9.51	399.98	1.72	0.29	1.75	2.00	2.00	0.00
500.00	4.00	9.51	499.84	6.88	1.15	6.98	2.00	2.00	0.00
600.00	6.00	9.51	599.45	15.48	2.59	15.69	2.00	2.00	0.00
700.00	8.00	9.51	698.70	27.50	4.60	27.88	2.00	2.00	0.00
800.00	10.00	9.51	797.47	42.92	7.19	43.52	2.00	2.00	0.00
900.00	12.00	9.51	895.62	61.74	10.34	62.60	2.00	2.00	0.00
1,000.00	14.00	9.51	993.06	83.93	14.05	85.10	2.00	2.00	0.00
1,100.00	16.00	9.51	1,089.64	109.45	18.33	110.98	2.00	2.00	0.00
1,164.65	17.29	9.51	1,151.58	127.72	21.39	129.50	2.00	2.00	0.00
Start 4270.21 hold at 1164.65 MD									
1,200.00	17.29	9.51	1,185.33	138.08	23.12	140.00	0.00	0.00	0.00
1,300.00	17.29	9.51	1,280.81	167.40	28.03	169.73	0.00	0.00	0.00
1,400.00	17.29	9.51	1,376.29	196.72	32.94	199.46	0.00	0.00	0.00
1,500.00	17.29	9.51	1,471.77	226.03	37.85	229.18	0.00	0.00	0.00
1,600.00	17.29	9.51	1,567.25	255.35	42.76	258.91	0.00	0.00	0.00
1,700.00	17.29	9.51	1,662.73	284.67	47.67	288.63	0.00	0.00	0.00
1,800.00	17.29	9.51	1,758.21	313.99	52.58	318.36	0.00	0.00	0.00
1,900.00	17.29	9.51	1,853.69	343.30	57.49	348.08	0.00	0.00	0.00
2,000.00	17.29	9.51	1,949.17	372.62	62.40	377.81	0.00	0.00	0.00
2,100.00	17.29	9.51	2,044.65	401.94	67.31	407.54	0.00	0.00	0.00
2,200.00	17.29	9.51	2,140.13	431.26	72.22	437.26	0.00	0.00	0.00
2,300.00	17.29	9.51	2,235.61	460.57	77.13	466.99	0.00	0.00	0.00
2,400.00	17.29	9.51	2,331.09	489.89	82.04	496.71	0.00	0.00	0.00
2,500.00	17.29	9.51	2,426.57	519.21	86.95	526.44	0.00	0.00	0.00
2,600.00	17.29	9.51	2,522.05	548.53	91.86	556.17	0.00	0.00	0.00
2,700.00	17.29	9.51	2,617.53	577.84	96.77	585.89	0.00	0.00	0.00
2,800.00	17.29	9.51	2,713.01	607.16	101.68	615.62	0.00	0.00	0.00
2,900.00	17.29	9.51	2,808.49	636.48	106.59	645.34	0.00	0.00	0.00
3,000.00	17.29	9.51	2,903.97	665.80	111.50	675.07	0.00	0.00	0.00
3,100.00	17.29	9.51	2,999.45	695.11	116.41	704.79	0.00	0.00	0.00
3,200.00	17.29	9.51	3,094.93	724.43	121.32	734.52	0.00	0.00	0.00
3,300.00	17.29	9.51	3,190.41	753.75	126.22	764.25	0.00	0.00	0.00
3,400.00	17.29	9.51	3,285.89	783.07	131.13	793.97	0.00	0.00	0.00
3,500.00	17.29	9.51	3,381.37	812.39	136.04	823.70	0.00	0.00	0.00
3,600.00	17.29	9.51	3,476.85	841.70	140.95	853.42	0.00	0.00	0.00
3,700.00	17.29	9.51	3,572.33	871.02	145.86	883.15	0.00	0.00	0.00
3,800.00	17.29	9.51	3,667.81	900.34	150.77	912.87	0.00	0.00	0.00
3,900.00	17.29	9.51	3,763.29	929.66	155.68	942.60	0.00	0.00	0.00
4,000.00	17.29	9.51	3,858.77	958.97	160.59	972.33	0.00	0.00	0.00
4,100.00	17.29	9.51	3,954.25	988.29	165.50	1,002.05	0.00	0.00	0.00
4,200.00	17.29	9.51	4,049.73	1,017.61	170.41	1,031.78	0.00	0.00	0.00
4,286.17	17.29	9.51	4,132.00	1,042.87	174.64	1,057.39	0.00	0.00	0.00
PK									
4,300.00	17.29	9.51	4,145.21	1,046.93	175.32	1,061.50	0.00	0.00	0.00
4,400.00	17.29	9.51	4,240.69	1,076.24	180.23	1,091.23	0.00	0.00	0.00
4,500.00	17.29	9.51	4,336.17	1,105.56	185.14	1,120.96	0.00	0.00	0.00
4,600.00	17.29	9.51	4,431.65	1,134.88	190.05	1,150.68	0.00	0.00	0.00
4,700.00	17.29	9.51	4,527.12	1,164.20	194.96	1,180.41	0.00	0.00	0.00

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Planning Report

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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 22-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Camenisch 22-2		
Design:	Camenisch 22-2 (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)
4,767.95	17.29	9.51	4,592.00	1,184.12	198.30	1,200.60	0.00	0.00	0.00
SX									
4,800.00	17.29	9.51	4,622.60	1,193.51	199.87	1,210.13	0.00	0.00	0.00
4,900.00	17.29	9.51	4,718.08	1,222.83	204.78	1,239.86	0.00	0.00	0.00
5,000.00	17.29	9.51	4,813.56	1,252.15	209.69	1,269.58	0.00	0.00	0.00
5,100.00	17.29	9.51	4,909.04	1,281.47	214.60	1,299.31	0.00	0.00	0.00
5,200.00	17.29	9.51	5,004.52	1,310.78	219.51	1,329.04	0.00	0.00	0.00
5,300.00	17.29	9.51	5,100.00	1,340.10	224.42	1,358.76	0.00	0.00	0.00
5,400.00	17.29	9.51	5,195.48	1,369.42	229.33	1,388.49	0.00	0.00	0.00
5,434.86	17.29	9.51	5,228.76	1,379.64	231.04	1,398.85	0.00	0.00	0.00
Start Drop -1.75									
5,500.00	16.15	9.51	5,291.15	1,398.12	234.13	1,417.59	1.75	-1.75	0.00
5,600.00	14.40	9.51	5,387.61	1,424.11	238.49	1,443.94	1.75	-1.75	0.00
5,700.00	12.65	9.51	5,484.84	1,447.18	242.35	1,467.33	1.75	-1.75	0.00
5,800.00	10.90	9.51	5,582.73	1,467.31	245.72	1,487.74	1.75	-1.75	0.00
5,900.00	9.15	9.51	5,681.19	1,484.49	248.60	1,505.16	1.75	-1.75	0.00
6,000.00	7.40	9.51	5,780.15	1,498.68	250.97	1,519.55	1.75	-1.75	0.00
6,100.00	5.65	9.51	5,879.50	1,509.90	252.85	1,530.92	1.75	-1.75	0.00
6,200.00	3.90	9.51	5,979.15	1,518.11	254.23	1,539.25	1.75	-1.75	0.00
6,300.00	2.15	9.51	6,079.00	1,523.32	255.10	1,544.53	1.75	-1.75	0.00
6,400.00	0.40	9.51	6,178.97	1,525.52	255.47	1,546.76	1.75	-1.75	0.00
6,423.03	0.00	0.00	6,202.00	1,525.60	255.48	1,546.84	1.75	-1.75	0.00
Start 2000.00 hold at 6423.03 MD									
6,500.00	0.00	0.00	6,278.97	1,525.60	255.48	1,546.84	0.00	0.00	0.00
6,600.00	0.00	0.00	6,378.97	1,525.60	255.48	1,546.84	0.00	0.00	0.00
6,700.00	0.00	0.00	6,478.97	1,525.60	255.48	1,546.84	0.00	0.00	0.00
6,800.00	0.00	0.00	6,578.97	1,525.60	255.48	1,546.84	0.00	0.00	0.00
6,900.00	0.00	0.00	6,678.97	1,525.60	255.48	1,546.84	0.00	0.00	0.00
7,000.00	0.00	0.00	6,778.97	1,525.60	255.48	1,546.84	0.00	0.00	0.00
7,100.00	0.00	0.00	6,878.97	1,525.60	255.48	1,546.84	0.00	0.00	0.00
7,200.00	0.00	0.00	6,978.97	1,525.60	255.48	1,546.84	0.00	0.00	0.00
7,300.00	0.00	0.00	7,078.97	1,525.60	255.48	1,546.84	0.00	0.00	0.00
7,400.00	0.00	0.00	7,178.97	1,525.60	255.48	1,546.84	0.00	0.00	0.00
7,500.00	0.00	0.00	7,278.97	1,525.60	255.48	1,546.84	0.00	0.00	0.00
7,533.03	0.00	0.00	7,312.00	1,525.60	255.48	1,546.84	0.00	0.00	0.00
NIO									
7,600.00	0.00	0.00	7,378.97	1,525.60	255.48	1,546.84	0.00	0.00	0.00
7,700.00	0.00	0.00	7,478.97	1,525.60	255.48	1,546.84	0.00	0.00	0.00
7,800.00	0.00	0.00	7,578.97	1,525.60	255.48	1,546.84	0.00	0.00	0.00
7,843.03	0.00	0.00	7,622.00	1,525.60	255.48	1,546.84	0.00	0.00	0.00
CD									
7,900.00	0.00	0.00	7,678.97	1,525.60	255.48	1,546.84	0.00	0.00	0.00
7,931.03	0.00	0.00	7,710.00	1,525.60	255.48	1,546.84	0.00	0.00	0.00
GH									
8,000.00	0.00	0.00	7,778.97	1,525.60	255.48	1,546.84	0.00	0.00	0.00
8,100.00	0.00	0.00	7,878.97	1,525.60	255.48	1,546.84	0.00	0.00	0.00
8,200.00	0.00	0.00	7,978.97	1,525.60	255.48	1,546.84	0.00	0.00	0.00
8,283.03	0.00	0.00	8,062.00	1,525.60	255.48	1,546.84	0.00	0.00	0.00
J									
8,300.00	0.00	0.00	8,078.97	1,525.60	255.48	1,546.84	0.00	0.00	0.00
8,400.00	0.00	0.00	8,178.97	1,525.60	255.48	1,546.84	0.00	0.00	0.00
8,423.03	0.00	0.00	8,202.00	1,525.60	255.48	1,546.84	0.00	0.00	0.00
TD at 8423.03 - Camenisch 22-2 BHL									

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Database:	edmp	Local Co-ordinate Reference:	Well Camenisch 22-2
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 22-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Camenisch 22-2		
Design:	Camenisch 22-2 (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 22-2 BHL	0.00	0.00	8,202.00	1,525.60	255.48	1,272,587.30	3,178,312.74	40.079884	-104.862766
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
4,286.17	4,132.00	PK				
4,767.95	4,592.00	SX				
7,533.03	7,312.00	NIO				
7,843.03	7,622.00	CD				
7,931.03	7,710.00	GH				
8,283.03	8,062.00	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
1,164.65	1,151.58	127.72	21.39	Start 4270.21 hold at 1164.65 MD
5,434.86	5,228.76	1,379.64	231.04	Start Drop -1.75
6,423.03	6,202.00	1,525.60	255.48	Start 2000.00 hold at 6423.03 MD
8,423.03	8,202.00	1,525.60	255.48	TD at 8423.03