Summary Log **Heart Peaks DDH 96-1**

DDH HP 96-1 was collared August 18 and completed August 24, 1996. It is located in Camp Creek between the Top and Steep Zone area and Mogul Dome at 6,448,990N; 620,428 E. It is at an elevation of 1115 m, drilling on a bearing of 115° at -60°.

The hole was cased with NQ casing to 34.7 m. The casing broke at 28.6 m during removal leaving 6.1 m of casing and the shoe bit in the ground. The entire hole was drilled NQ.

0.0m-	13.2	Overburden and talus.
13.2-	52.2	Rhyolitic Flows and Phreatic Breccias: Moderately to strongly pyrophyllite altered rhyolitic flows cut by kaolin-pyrophyllite altered phreatic breccias.
52.2-	71.4	Basaltic Flow: Clay altered at base and internally weakly altered along fractures.
71.4-	85.0	Takwahoni Arenaceous Arkose: Interbedded with minor shale. Variable, minor to intense clay alteration. Minor, 5-10 cm thick sections of 10% to semi massive pyrite, probably syngenetic.
85.0	91.4	Takwahoni Shale: Moderately clay altered.
91.4	124.6	Dark Amygdaloidal Rhyolitic Flow: Weakly clay altered along fractures, moderately to intensely altered at contacts.
124.6	143.4	Rhyolitic Breccia: Monolithic, varies from fracture breccia to clast supported, slightly rotated, breccia. Breccia developed in situ with trace seams of phreatic breccia. Intensely kaolin altered. **Average 2-5% pyrite veinlets, 1-2% quartz-calcite breccia and fracture infill with trace to 5% pyrite, minor pyrite in breccia matrix.**
143.4	155.3	Dark Rhyolitic Flow: Weakly to moderately kaolin altered, locally brecciated.
155.3	159.9	Takwahoni Arkose and Shale: Interbedded with minor thin sedimentary breccia beds. Minor disseminated euhedral pyrite, probably syngenetic. Variably clay altered.
159.9	265.2	Takwahoni Siltstone: Interbedded with siltstone-sandstone. Unaltered.
	265.2	End of hole. Hole terminated due to unaltered Takwahoni sedimentary rocks.

Summary Log **Heart Peaks DDH 96-2**

DDH HP 96-2 was collared August 24, 1996. It is located near the east side of the property at 6,498,320 N; 672,485 E. It is at an elevation of 1648 m, drilling on a bearing of 090° at -60°.

The hole was cased to 106.7 m and drilled NQ to 409.0 m. NQ drilling was terminated at this point because the pipe clamp could not support the drill pipe. The NQ drill pipe was use as casing for BQ drilling from 409.0 to 524.3 m.

Drilling was terminated September 4 due to pipe breakage at the joint above the core barrel leaving the core barrel and core tube in the hole with the bit at 524.3 m. Core was recovered to the last run above the broken pipe at 521.2 m.

It is testing a clay altered zone in rhyolitic flows below rhyolitic sinter with hematite and jarosite staining. This staining may indicate the presence of sulphides.

0.0m 11.1 Overburden

10.0- 34.0 Phreatic Breccia: Comminuted, polymictic, mainly rhyolitic clasts, minor rhyolitic sinter clasts, trace Takwahoni siltstone clasts. Matrix and clasts intensely kaolin altered, locally with pyrophyllite, trace possibly alunite .

34.0- 102.4 Rhyolitic Breccia, Brecciated Rhyolitic Sinter and Sinter: Intensely kaolin altered, minor pyrophyllite patches and veinlets, commonly stained pinkish red by hematite. Rare jarosite staining.

102.2- 168.9 Massive or Porphyritic Rhyolitic Flow: Moderately to intensely kaolin altered with 15-20%, colourless secondary zeolite or possibly zeolite pseudomorphic after feldspar phenocrysts.

168.9- 224.2 Phreatic Breccia: Comminuted, polymictic, mainly kaolin altered rhyolitic clasts with variable textures, minor sinter clasts, possible trace Takwahani clasts, intensely pyrophyllite altered matrix, locally 2% topaz?

176.2- 272.3 Massive or Porphyritic Rhyolite Flow: Weakly to moderately kaolin altered, clay and possibly chlorite on fractures, 20%, colourless secondary zeolite or possibly zeolite pseudomorphic after feldspar.

272.3- 291.0 Rhyolitic Breccia: Mainly massive and sinter or ignimbritic clasts, moderately to strongly kaolin altered, minor pyrophyllite, 15% 1-3 mm colourless zeolites in both clasts and matrix indicating the zeolite is late and not pseudomorphic after feldspar. **Black, sooty, to very fine grained pyrite averaging <1%, locally 5% over 10 cm, in small patches and veinlets, locally occurring in interval 275.3-289.5 m.**

291.0- 417.2 Phreatic Breccia: Polymictic, light gray green to medium olive green, mainly subrounded to subangular clasts of rhyolitic rock, rare amygdaloidal basalt, average <1% Takwahoni siltstone, one occurrence of coal clasts. Moderately to strongly clay altered, local sections with minor fresh rhyolitic clasts. Sections with comminuted matrix and clast sorting due to fluidization. **Average <1% fine veinlet pyrite in interval 358.7-363.0 m. Trace to <1% very fine disseminated pyrite in pale, yellowish green interval 407.6-417.2 m.**

417.2- 438.6 Late, Fluidized Phreatic Breccia: Polymictic, light to medium gray, comminuted. Mainly rhyolitic clasts, mainly unaltered to intensely clay altered and common, small to 1cm Takwahoni siltstone clasts, variably clay altered. Matrix is moderately clay altered. Graded from coarse clasts at margins to fine clasts in abundant comminuted matrix with fluidization banding in center. Sections of up to 1 m of rock flour comminuted matrix with very fine banding. Breccia intrudes surrounding, intensely clay altered breccias which have dominantly rhyolitic clasts.

438.6- 480.3 Variable Phreatic and Sinter Breccia: Inhomogeneous and variable, mainly matrix supported. Mainly finely laminated rhyolitic sinter clasts, cream to pale green, intensely clay altered, minor black siltstone Takwahani clacts; in dark gray, aphanitic, intensely clay altered matrix. Intruded by patches of comminuted, fluidized breccia as at 417.2-438.6 m.

480.3- 521.2 Phreatic Sinter Breccia: Relatively homogenous, clast supported breccia. Mainly finely laminated rhyolitic sinter clasts with a fibrous appaerance, cream to pale green, intensely clay altered, <1%, translucent, relatively hard, commonly orange to less commonly pale green clasts, minor black siltstone Takwahani clacts.

521.2 End of recovered core. Hole drilled to 524.3 m.