

B; 150 E

Diamond Drill Record				HOLE NO 86-AOR-LS1	Page 1 of 4
LOCATION: LONE STAR		DIPS - collar 45 °		CONTRACTOR: ARCTIC DIAMOND DRILLING	
AZIMUTH: 200°		- 390 ft 57 °		LOGGED BY: GRUNENBERG/TOMLINSON	
ELEVATION:		- m °		DATE: SEPTEMBER 4, 1986	
LENGTH: 400 FEET		- m °		SECTION NO. LEASES AT LONE STAR	
CORE SIZE: n Q		- m °		STARTED: SEPTEMBER 1, 1986 12:00 noon	
PURPOSE: FIND EXTENSION OF THE BOULDER LODGE DOWN DIP				COMPLETED: SEPTEMBER 3, 1986 10:00 a.m.	

Section		ROCK DESCRIPTION	Interval		ALTERATION. MINERALIZATION etc.	VEINLETS		
from mft	to mft		from mft	to mft		Thickness mm	Angle to core	minerals in decreasing abundance
0	25	Casing - no core						
25	89.5	Light grey-green quartz - muscovite schist. 40% quartz in 1 to 2 mm wide bands with muscovite flakes between. Few quartz pods to 10 cm width. Schistosity to C.A.: approximately or equal to 24°. Schistosity to C.A. irregular. Recovery: 48.5/61.5	38 78	41 79	Shear zone: poor core recovery through here - fine clayey material, green grey, 20% quartz fragments, less than 1% pyrite. Core broken up - mild shear? - no alterations. Less than 1% pyrite throughout as small disseminated crystals and irregular stringers which parallel the muscovite lamellae (i.e., foliaform?). Slightly sericitic in places (alteration?) Black spottiness along some fracture planes may be manganese oxides after rhodochrosite.			
89.5	146.5	Generally more equigranular or less banded; dark green to grey with very dark green bands - chloritic muscovite quartz schist.			Crosscutting thin quartz-calcite stringers with some parallel alligning of coarse pyrite blebs and stringers.			

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Section		ROCK DESCRIPTION	Interval		ALTERATION, MINERALIZATION etc.	VEINLETS		
from Rft	to Xft		from Rft	to Xft		Thickness mm	Angle to core	minerals in decreasing abundance
		Generally less than 5% chlorite, but in some sections up to 30% chlorite lamellae. Average 20% quartz. Schistosity to C.A.: 37°. Contacts (upper and lower) are very gradational. Mottled textured in places (poorly formed porphyroblasts?).			Pyrites as fine disseminate throughout to less than 1%, but in areas stringer pyrite, blebs, and disseminate may reach to 2 or 3% of core. Recovery: 50/57 for 89.5 - 146.5			
146.5	169	Appears to be a sheared contact to above. Light green, mottled textured, <u>sericitic quartz muscovite schist</u> . Micas aligned with schistosity form coarse plates; but individual plates break down to sericite powder. Roughly 60% quartz overall convoluted schistosity.	166.3	168	Finely disseminated, blebs and stringer pyrites. Cubes up to 3 mm diameter (anhedral). Stringers (few) parallel schistosity planes. Less than 1% pyrite overall. Shear zone: moderately sheared granular, sericitic, somewhat clayey, no apparent associated secondary alteration. Less than 1% pyrite. Recovery: 21.5/22.5			
169	238	Gradational change from above by decreasing amounts of sericite and mildly increasing chlorite in places. Quartz, muscovite, ± chlorite schist. Convoluted schistosity with up to 60% quartz. Average schistosity to C.A.: 26°.			Subhedral squares of coarse to 3 mm pyrite, as well as fine grained disseminate. Globular stringers (stretched out blebs?) roughly parallel to schist. Less than 1% pyrite average through core. One or two crosscutting quartz calcite stringers to 2 mm width.			

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Section		ROCK DESCRIPTION	Interval		ALTERATION, MINERALIZATION etc.	VEINLETS		
from mft	to xft		from xft	to xft		Thickness mm	Angle to core	minerals in decreasing abundance
238	283	Recovery: 169 - 198.5 = 100% 198.5 - 209.5 = 10/11 209.5 - 220 = 10/10.5 220 - 240 = 100%	192	193	Brecciated texture with quartz fragments in a muscovite-chlorite rich matrix. Totally rehealed possibly syn-metamorphic brecciation.			
		Sericitic muscovite quartz schist. Bands of quartz, up to 2 cm wide, constitute 50% of section. Irregular sericitic/muscovitic layers between quartz. Schistosity is indistinct, convoluted. Recovery: 240 - 260 = 100% 260 - 270 = 9.5/10 270 - 280 = 5.5/10 280 - 283 = 1/3	257		1% rhodochrosite in quartz, locally up to 5%, may occur in crosscutting veinlets to 2 cm wide. Crystals are medium sized (5 mm). Pyrite occurs as small euhedral crystals, either disseminated or in narrow irregular stringers parallel schistosity. 2 cm wide crosscutting quartz vein, 10% rhodochrosite, 1% small euhedral pyrite, 1% small galena. Two small shear zones, at 265 feet (2 inches long) and at 282 feet (10 inches long). Highly altered, crushed, only muscovite-clay left.			

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Section		ROCK DESCRIPTION	Interval		ALTERATION, MINERALIZATION etc.	VEINLETS		
from ft	to ft		from ft	to ft		Thickness mm	Angle to core	minerals in decreasing abundance
283	329	Quartz muscovite schist. Quartz occurs as short irregular bands, 40% of section. Irregular muscovite lamellae. Minor chlorite. Schistosity to C.A.: variable 60 - 85° in sections, but mostly extremely convoluted. Quartz may be translucent. Core Recovery: 283 - 329 = 100%	291.5		Less than 1% pyrite, euhedral crystals to 3 mm, pyrite occurs as disseminations and stringers. Calcite occupies 1% of section, medium grained, occurs as globules in quartz. Small shear zone, 6 inches long, finely fractured, very micaceous, slightly clayey. Two pyrite-rich zones, at 313 feet and 316.5 feet, at 40° to C.A. 1 cm wide quartz band with pyrite cubes to 5 mm occurring as disseminations and globules, to 40° within band.			
329	400	Quartz chlorite muscovite schist. Irregular bands of quartz to 2 cm wide, convoluted to form elongated pods, 50% of length. Chlorite/muscovite lamellae medium sized flakes. Very convoluted schistosity, generally sub-parallel. Core Recovery: 100% over section.	386 394	388 400	Fine grained pyrite occurs as disseminations and small stringers, less than 1% of core, crystals to 5 mm. Shear zone; micaceous (sericitic), clayey, bleached, disseminated cubes of pyrite. Calcite as globules to 2 cm, medium grained, within quartz Disseminated magnetite crystals round crystals to 3 mm, less than 1%, finely laminated section with schistosity to C.A. of 58°, less convoluted. Some bands are magnetite rich.			