

## DRILL HOLE RECORD

Drill Hole No.: MDH-11 Inclination: N35E 70°N?

Date: Started 11/9/1976, completed 11/13/1976

Property: Fancy Hill

Drilled By: Sprague & Henwood - Bill Deininger

Co-ordinates: North \_\_\_\_\_ East \_\_\_\_\_

Logged By: Les Farrington

Elevation: \_\_\_\_\_

Total Depth: 151'

DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO4	Cond.	
0.0	4.0	50%		2.0'			Lt. gray sandy shale, stained orange by iron oxides with med. gray shale lenses (ama .15' wide), both altered to clays.
			Step bit (3 step), 30-40 stones per carat				Heavily iron and manganese oxide stained fractures.
4.0	6.0	50%		1.0'			Lt. gray sandy shale, stained orange by iron oxides with med. gray shale lenses (ama .12' wide), both altered to clays.
							Very closely spaced, heavily iron and manganese oxide stained fractures.
6.0	12.5	23%		1.5'			Lt. gray sandy shale, stained orange by iron oxides with med. gray shale lenses (ama .08' wide), both altered to clays. Heavily iron and manganese oxide stained, quartz filled fractures
12.5	16.0	49%		1.7'			Lt. gray sandy shale, stained orange by iron oxides with lenses and clasts (ama .06' wide) dk. gray shale, both altered to clays.

5/12/77 MINERAL REFERRED TO AS SCORODITE IS CHLORITE  
BLACK COLOR TERMED "CARBON" IS INCLUSIONS IN OR DISCOLORATION OF CRYSTALLINE MATERIAL 11/70

## DRILL HOLE RECORD

 Drill Hole No.: MDDH-11 Inclination: N35E, 51N

Date: \_\_\_\_\_

 Property: Fancy Hill

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Co-ordinates: North \_\_\_\_\_ East \_\_\_\_\_

Logged By: \_\_\_\_\_

Elevation: \_\_\_\_\_

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DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO4	Cond.	
12.5	16.0						Heavily iron and manganese oxide stained, quartz filled fractures (ama .04' wide).
16.0	26.5	19%		.5'			Lt. gray sandy shale, stained orange by iron oxides with lenses and clasts dk. gray shale; altered to clay.
				1.5'			Lt. gray sandstone, stained dk. orange by iron oxides, with clasts of med. gray shale, partially altered to clay.
							Heavily iron stained fractures.
26.5	33.0	50%		.7'			Lt. gray sandstone, stained dk. orange by iron oxides, with black shale lenses and clasts (ama .02' wide).
							Heavily iron and manganese oxide stained fractures.
				2.5'			Interbedded lt. gray sandstone and med. gray sandy shale (lenses ama .5' wide) with black shale clasts (ama .01' wide). Contains isolated pyrite filled nodules (.01' diam.). Core very broken and friable.

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FROM	TO			Sp. Gr.	BaSO4	Cond.	
26.5	33.0						Heavily iron stained fractures.
33.0	41.5	26%		1.3'			Lt. gray sandstone with med. gray shale lenses and clasts (ama .03' wide).
							Heavily iron and manganese oxide stained, barite/carbon filled fractures.
				.9'			Lt. gray sandstone, very friable, with clasts (ama .04' wide) graphitic shale.
							Iron oxide stained fractures.
41.5	47.0	95%		5.2'			Dk. gray shale with black shale lenses (ama .13' wide) and med. gray sandy shale lenses (ama .1' wide). Locally high concentrations of pyrite along bedding planes.
							Closely to very closely spaced, barite filled/unmineralized fractures.
47.0	52.0	70%		.9'			Med. gray sandy shale with dk. gray to black shale lenses and clasts (ama .04' wide).
							Very closely spaced, carbon/barite filled fractures

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FROM	TO			Sp. Gr.	BaSO <sub>4</sub>	Cond.	
47.0	52.0			.8'			Med. gray sandstone. Very friable. Very closely spaced, carbon filled fractures.
				1.8'			Interbedded dk. gray and black shales with med. gray sandy shale and dk. gray claystone lenses (ama .04' wide). Approx. .3' interval containing carbon rich nodules (<.01' diam.). Core very broken. Very closely spaced, unmineralized fractures.
52.0	57.0	90%		4.5'			Interbedded dk. gray and black shales with dk. gray sandy shale lenses (ama .24' wide). Locally high concentrations of pyrite along bedding planes/ disseminated. Approx. 1.3' interval containing vermicular nodules replaced by barite (ama 5% locally). Core very broken last 2'. Closely to very closely spaced, barite crystal lines/carbon filled fractures.
57.0	63.0	60%		3.6'			Interbedded med. to dk. gray and black shales with dk. gray sandy shale lenses (ama .18' wide).



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FROM	TO			Sp. Gr.	BaSO <sub>4</sub>	Cond.	
57.0	63.0						Locally high concentrations of pyrite along bedding planes/disseminated. Approx. 1' interval containing vermicular nodules (ama .02' diam.) replaced by barite (locally ama 5%).
							Closely to very closely spaced, barite/carbon filled/unmineralized fractures. Core very broken last 1'.
63.0	69.5	82%		5.3'			Interbedded med. to dk. gray and black shales with scattered dk. gray sandy shale lenses (ama .07' wide). Locally high concentrations of pyrite, disseminated/along bedding planes/rimming nodules. Contains ama 60% carbon rich nodules (<.01' diam.) locally, nodules partially replaced by barite (1%). Core very broken last 1.5'.
							Closely to very closely spaced, barite/carbon filled fractures.
69.5	76.0	95%		3.1'			Dk. gray shale with lenses (<.01' wide) of black shale. High concentrations of barite along

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FROM	TO			Sp. Gr.	BaSO4	Cond.	
69.5	76.0						planes.
							Closely to very closely spaced, barite filled/un-mineralized fractures.
				2.6'			Med. gray sandstone with dk. gray sandy shale lenses (ama .06' wide) and dk. gray to black shale lenses (ama .1' wide). High concentrations of pyrite/barite locally along bedding planes/between contacts. Core very friable and broken.
							Closely spaced, unmineralized fractures.
				.5'			Dk. gray and black shales interbedded. High concentrations of pyrite along bedding planes.
76.0	83.5	83%		1.2'			Med. gray, very sandy shale with sporadic black shale clasts (ama .01' wide).
				2.8'			Med. to dk. gray sandy shale with med. to dk. gray and black shale lenses (ama .11' wide) and lt. gray claystone lenses (ama .03' wide). Banded appearance. Locally high concentrations disseminated pyrite. Locally high concentrations barite between contacts.
							Contains carbon rich nodules (scattered, <.01' diam

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FROM	TO			Sp. Gr.	BaSO <sub>4</sub>	Cond.	
76.0	83.5						Closely to very closely spaced, unmineralized fractures. Approx 2' interval of very closely spaced, carbon filled fractures. Offset in bedding along one of these fractures of .01'.
				2.2			Med. to dk. gray sandy shale with dk. gray to black shale lenses (ama .1' wide). Contains scattered carbon rich nodules (ama .01' diam.).
							Closely to very closely spaced, unmineralized fractures.
83.5	89.5	88%		2.7	81.5 - 84.2		Core loss interval
				5.3			Barite replacing nodules (ama .05' diam.) and nodular lenses (ama .06' wide) in med. to dk. gray sandy shale (locally silicified, barite replacement being massive in texture) with black shale lenses (ama .12' wide). Locally high concentrations of pyrite, disseminated in lenses and barite replaced nodules.
							84.2 - 84.5 15-20%
							84.5 - 84.9 <2%

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FROM	TO			Sp. Gr.	BaSO <sub>4</sub>	Cond.	
83.5	89.5						84.9 - 85.1 50-60%
							85.1 - 85.2 <5%
							85.2 - 85.4 60-65%
							85.4 - 85.5 20-30%
							85.5 - 85.8 30-40%
							85.8 - 86.1 40-50%
							86.1 - 86.3 <5%
							86.3 - 86.6 60-70%
							86.6 - 89.1 80-90%, massive. <sup>Enriched Hydrothermal</sup> Siliceous solution channel, <sup>ways</sup> .02' diam. 88.8 - 89.1.
							89.1 - 89.5 60-70%
							Closely to very closely spaced, barite crystal lined/carbon filled fractures.
89.5	97.0	81%		6.1'			Barite replacing nodules and nodular lenses (ama .05' diam/.08' wide) in med. to dk. gray sandy shale with lt. to dk gray and black shale lenses (ama .25' wide). Locally very high concentrations of pyrite, disseminated/along bedding planes.
							89.5 - 89.9 25-35%



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DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO <sub>4</sub>	Cond.	
89.5	97.0						89.9 - 91.2 2%, very friable lt.-dk. gray & black shale
							91.2 - 92.6 core loss
							92.6 - 93.3 30-40%
							93.3 - 93.5 <2%, med. gray shale
							93.5 - 94.0 40-50%
							94.0 - 94.3 55-65%
							94.3 - 94.5 10-15%
							94.5 - 94.9 <2%, black shale
							94.9 - 95.4 60-65%
							95.4 - 95.5 30-40%
							95.5 - 95.7 40-50%
							95.7 - 96.1 30-35%
							96.1 - 96.3 40-50%
							96.3 - 97.0 10-15%
							Closely to very closely spaced, barite crystal lined fractures.
97.0	100.5	100%		3.5			Barite replacing nodules (ama .05') and nodular lenses (ama .15' wide) in med to dk. gray sandy

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FROM	TO			Sp. Gr.	BaSO <sub>4</sub>	Cond.	
97.0	100.5						shale with black shale lenses (ama .09' wide). Locally high concentrations of barite along bedding planes/pyrite, disseminated/rimming nodules
							97.0 - 97.2 45-55%
							97.2 - 97.3 30-40%
							97.3 - 97.7 45-55%
							97.7 - 97.9 dk. gray and black shales
							97.9 - 98.6 45-55%
							98.6 - 98.8 35-45%
							98.8 - 98.9 70-80%
							98.9 - 99.2 <5%
							99.2 - 99.8 60-70%
							99.8 - 100.0 35-40%
							100.0 - 100.3 65-75%
							100.3 - 100.5 45-55%
							Closely to very closely spaced, barite crystal lined fractures.
100.5	111.0	28%		1.9			Barite replacing nodules (ama .02' diam.) and nodular lenses (ama .04' wide) in med. to dk.

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FROM	TO			Sp. Gr.	BaSO <sub>4</sub>	Cond.	
100.5	111.0						gray sandy shale with black shale lenses (ama .12' wide). Locally high concentrations of pyrite along bedding planes.
							100.5 - 100.8 20-30%
							100.8 - 101.0 50-60%
							101.0 - 101.1 5-10%
							101.1 - 101.3 55-65%
							101.3 - 101.4 black shale
							101.4 - 101.7 45-50%
							101.7 - 101.8 30-35%
							101.8 - 102.0 35-40%
							102.0 - 102.1 5-10%
							102.1 - 102.3 15-25%
							102.3 - 102.5 10-15%
							Very closely spaced, barite crystal lined fracts. Core loss interval
				1.1'			Med. gray shale with dk. gray shale lenses. Heavy concentrations of pyrite along bedding planes.
							Core very broken.
111.0	120.5	26%		2.5'			Interbedded med. to dk. gray and black shales

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DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BoSO4	Cond.	
11.0	120.5						with lenses dk. gray to black claystone. High concentrations disseminated pyrite.
120.5	126.0	84%		2.5'			Black unconsolidated mud with claystone particles (fault gouge).
				1.5'			Med. to dk. gray sandy shale with lt. to dk. gray and black shale lenses (ama .06' wide).
				.6'			Black graphitic shale.
126.0	132.0	75%		.4'			Interbedded med. and dk. gray shales. Heavy concentrations of pyrite, disseminated/pyrite lenses (ama .02' wide). Contains carbon rich nodules (ama .03' diam.).
				.4'			Lt. gray claystone.
							Core loss interval
				1.6'			Lt. gray sandy shale with black shale clasts (mottled appearance, clasts ama .01' wide). High concentrations of disseminated pyrite. Sporadic pyrite filled nodules (ama .03' diam.).
				1.5'			Black shale. High concentrations of pyrite



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FROM	TO			Sp. Gr.	BaSO <sub>4</sub>	Cond.	
126.0	132.0						along bedding planes. Pyrite filled channelway (.01' diam.) along plane of one fracture.
							Very closely spaced, barite/pyrite filled fractures
				.6'			Black graphitic shale with elongate nodules (ama .02' diam.), partially replaced by barite (<2%).
							Very closely spaced, unmineralized fractures.
132.0	138.0	82%		1.4'			Med. gray clayey shale with lt. gray clay lenses (<.01' wide). Contains scattered carbon rich nodules (<.01' diam.).
							Core loss interval.
				1.9'			Black clayey shale with lt. gray clay lenses (ama .02" wide). High concentrations of pyrite along bedding planes. Pyrite filled nodules (ama .02' diam.) and nodular lenses (ama .01' wide).
							Very closely spaced, barite filled fractures.
				1.6'			Med. gray clayey shale with lt. gray clay lenses (ama .01' wide). Contains scattered carbon rich nodules (ama .02' diam.), partially replaced by

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DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	Ba504	Cond.	
32.0	138.0						barite (<2%).
							Very closely spaced, barite filled fractures.
38.0	143.0	88%		.5'			Med. gray clayey shale with lenses lt. gray clay.
							Contains ama 30% carbon rich nodules (<.01' diam.)
							partially replaced by barite (<2%).
							Barite filled fracture.
				1.8'			Black shale with ama 20% carbon rich nodules (ama
							.01' diam.). Contains scattered pyrite filled
							nodules (ama .02' diam.).
							Very closely spaced, barite/carbon filled fractures
							Slickensides observed on one carbon filled
							fracture.
				.8'			Dk. gray shale with narrow black shale lenses
							(uniformly spaced, <.01'). Contains scattered,
							carbon/pyrite filled nodules (ama .02' diam.) and
							nodular pyrite lenses (ama .01' wide).
							Very closely spaced, barite filled fractures.
				1.3'			Black shale.
							Very closely spaced, barite filled fractures.

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143.0	149.0	73%		.1'			Med. gray claystone.
							Core loss interval.
				4.3'			Black shale with med. gray shale lenses (ama .24'
							wide). Locally high concentrations of pyrite/
							barite along bedding planes. Contains scattered
							pyrite filled nodules (ama .01' diam.).
							Closely spaced, unmineralized/carbon filled fract-
							ures.
149.0	151.0	65%		1.3'			Lt. to med. gray chert. Contains lenses (ama .09'
							wide) of dk. gray to black shale which have ama
							80% disseminated pyrite.
							Very closely spaced, unmineralized/carbon/pyrite
							filled fractures.
							TroParl survey at 137' 52"
Explanation: fractures							Note: Mineralized fractures are frequently
Moderately closely spaced = >3'							sealed; unmineralized fractures open.
Closely spaced = 1' - 3'							
Very closely spaced = <1'							

SAMPLE	LOG =	DEPTH	INTERVAL	A.P. SPECIFIC GRAVITY	CALCULATED % BaSO <sub>4</sub>
MDDH-11					
#1	675	84.2-87.5	3.30	3.59	60.38
#2	676	87.5-90.8	3.30	3.99	80.56
#3	677	90.8-94.2	3.40	3.57	59.26
#4	678	94.2-97.5	3.30	3.55	58.12
#5	679	97.5-100.8	3.30	3.64	63.15
#6	673	100.8-102.5	1.70	3.53	56.96
COMPOSITE	674	MEASURED		3.67	60.4
COMPOSITE		CALCULATED	18.30	3.65	63.94
*Not included in composite measured.					