

DRILL HOLE RECORD

 Drill Hole No.: MDDH-15 Inclination: 39 N N30 E assumed

 Date: Started 11/25/1976 ; COMPLETED 12/4/1976

 Property: Fancy Hill

 Drilled By: Sprague & Henwood - Bill Deininger

Co-ordinates: North _____ East _____

 Logged By: Les Farrington

Elevation: _____

 Total Depth: 155.0

DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	Ba\$04	Cond.	
0.0	8.0	9%		.5'			Alluvium; chert (to 3.0 ?).
				.2'			Lt. gray sandstone, stained orange by iron oxides.
							Heavily iron oxide stained, sealed fracture.
8.0	12.0	53%		2.1'			Lt. gray sandstone, locally stained dk. orange by iron oxides.
							Heavily iron/manganese oxide stained, quartz/carbon filled/coated, sealed/open fractures.
12.0	17.5	0%					No recovery. Lt. gray to dk. orange sandy sludge.
17.5	25.5	9%		.7'			Lt. gray sandstone, locally stained orange by iron oxides.
							Very closely spaced, sealed, carbon/quartz filled fractures.
25.5	32.0	28%		1.8'			Lt. gray sandstone, locally stained dk. orange by iron oxides.
de corrd. 628	804.41		1,451,075.30			1012.93	Very closely spaced, sealed, carbon filled fracture heavily iron/manganese oxide stained. Open, barite

5/12/1977 MINERAL TERMED SCORODITE IS CHLORITE



MINERAL DIVISION

FANCY HILL, ARKANSAS

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DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
25.5	32.0						coated fractures.
32.0	43.0	68%		7.5'			Lt. gray sandstone, locally stained dk. orange/ purple by iron oxides. Very closely spaced, mostly sealed, carbon/barite/ quartz filled fractures (some heavily iron/man- ganese oxide stained, ama .01' wide). Displace- ments in bedding along some fractures ama .04'.
43.0	53.0	88%		5.0'			Med. gray sandstone, mottled by lt. gray sandstone lenses (ama .03' wide). Scattered intervals ama .3' long stained dk. orange by iron oxides. Isolated pyrite filled nodules (ama .04' diam.). Closely to very closely spaced, sealed, barite/ carbon filled/barite crystal lined fractures (bar- ite crystal lined fractures ama .03' wide), some heavily iron/manganese oxide stained.
				3.6'			Med. to dk. gray sandstone with dk. gray to black shale lenses and clasts (ama .1' wide) and scatter- ed lt. gray sandstone clasts (ama .02' wide). Ama

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FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
43.0	53.0						1% pyrite along bedding planes in shale. Isolated pyrite filled nodules (ama .02' diam.). Closely to very closely spaced, mostly sealed, barite/carbon filled/barite crystal lined fractures (barite crystal lined fractures ama .02' wide) some heavily iron oxide stained.
				.2'			Med. gray sandstone
53.0	60.0	91%		4.1'			Med. gray sandstone, mottled by lt. gray lenses and clasts, with sporadic clasts black shale and dk. gray sandstone. Locally ama 1-2% pyrite/barite along bedding planes. Core locally friable. Closely to very closely spaced, mostly sealed barite/carbon filled fractures.
				2.0'			Dk. gray sandstone, gradational to sandy shale, with lt. gray sandstone clasts (ama .08' wide) and black shale clasts (ama .03' wide). <1% dissem- inated pyrite.
				.3'			Black shale. Ama 2-3% pyrite along bedding planes.

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DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO4	Cond.	
60.0	70.0	84%		3.1'			Dk. gray sandstone, gradational locally to sandy shale, with dk. gray to black shale lenses and clasts (ama .08' wide). 1' interval very friable and broken.
							Very closely spaced, mostly sealed, carbon/barite filled fractures.
				5.3'			Dk. gray very sandy shale with dk. gray sandy shale lenses (ama .4' wide), med. and lt. gray sandstone clasts (ama .07' wide), and dk. gray to black shale lenses (ama .14' wide).
							Closely to very closely spaced, open/sealed barite/barite and pyrite filled fractures.
70.0	75.0	80%		1.5'			Dk. gray sandy shale, locally very sandy, with lt. and med. gray sandstone clasts and dk. gray to black shale lenses (ama .12' wide).
							Closely to very closely spaced, open/sealed barite barite and pyrite filled fractures.
				2.5'			Med. gray sandstone, mottled by lt. gray lenses, with one lens (.5' wide) med. gray sandy shale

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DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	Barium	Cond.	
70.0	75.0						(containing black shale clasts ama .02' wide and scattered, pyrite filled nodules .01' diam.) and scattered clasts (ama .02' wide) of black shale. Core locally very friable and broken. Closely to very closely spaced, mostly sealed, barite/barite and pyrite/carbon filled fractures.
75.0	81.0	65%		3.9'			Med. gray sandstone, mottled by lt. gray lenses. Contains scattered pyrite filled nodules (ama .01' diam.)/locally concentrations disseminated pyrite ama 3-4%. Closely to very closely spaced, mostly sealed, barite/barite and carbon/carbon filled fractures.
81.0	91.0	89%		2.0'			Med. gray sandstone with lt. gray lenses. Iso-lated dk. gray sandy shale clasts (ama .01' wide). Closely to very closely spaced, open and sealed barite/carbon filled fractures.
				.9'			Dk. gray sandstone mottled by med. gray lenses. Locally ama 1-2% disseminated pyrite/pyrite filled

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FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
81.0	91.0						nodules (ama .01' diam.). Very friable and broken.
				4.9'			Med. gray sandstone, mottled by lt. gray lenses,
							with scattered clasts (ama .02' wide) dk. gray
							to black shale.
							Closely to very closely spaced, mostly sealed,
							barite crystal lined/carbon/barite and carbon
							filled fractures (ama .01' wide).
				1.1'			Dk. gray sandy shale with black shale lenses (ama
							.08' wide). Locally ama 2-3% pyrite along bedding
							planes/between contacts/lenses <.01' wide/pyrite.
							filled nodules (ama .05' diam.).
91.0	100.0	97%		4.1'			Med. to dk. gray sandy shale with dk. gray to black
							shale lenses and clasts (ama .2' wide). Ama 4-5%
							pyrite locally, mostly nodules (ama .03' diam.)/
							between contacts.
							Closely to very closely spaced, mostly open,
							barite/barite and pyrite/carbon coated fractures.
				4.6'			Dk. gray and black shale with med. to dk. gray
							sandy shale lenses (ama .13' wide). Lenses contain

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Total Depth: _____

DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
91.0	100.0						carbon rich nodules and nodular lenses (ama .04' diam./ .01' wide) partially replaced by barite (ama 15%, mostly 2-3%).
							96.7 - 96.8 5-10%
							97.0 - 97.1 5-10%
							97.2 - 97.5 10-15%
							Locally ama 1-2% pyrite, disseminated/rimming nodules/along bedding planes/between contacts. Closely to very closely spaced, mostly open, carbon/barite/pyrite coated fractures.
100.0	108.5	99%		8.0'			Dk. gray and black shale with ama 15-20% carbon rich nodules and nodular lenses (ama .03' diam/.01' wide) partially to completely replaced by barite (2-3% locally except as noted). Locally ama 1-2% pyrite, disseminated/between contacts/rimming nodules/lenses <.01' wide.
							101.9 - 102.6 10-20%
							103.6 - 104.1 5-10%
							106.2 - 107.0 5-10%

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FROM	TO			Sp. Gr.	Ba\$04	Cond.	
100.0	108.5						Moderately closely spaced, sealed; carbon filled fractures.
				.4'			Med. to dk. gray sandy shale with dk. gray to black shale lenses (ama .07' wide).
108.5	114.5	100%		.2'			Med. to dk. gray sandy shale.
				.8'			Dk. gray and black shale with med. gray sandy shale lenses (ama .02' wide). Ama 1-2% pyrite, finely disseminated/along bedding planes.
				1.0'			Med. to dk. gray sandy shale with isolated black shale clasts (<.01' wide).
							Very closely spaced, sealed, intersecting, barite crystal lined fractures. Displacements of ama .03' along fractures.
				2.7'			Dk. gray and black shale (lenses mostly uniform in width) with lt. to med. gray sandy shale lenses (.01' - 1.2' wide). Banded appearance. Sandy shale lenses contain ama 5-10% carbon rich nodules (<.01' diam.). Ama 2-3% pyrite, finely disseminated/between contacts/along bedding.

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DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
114.5	125.0						121.7 - 121.9 50-60%
							121.9 - 122.3 dk. gray and black shales.
							122.3 - 122.6 25-35%
							122.6 - 122.8 dk. gray and black shales.
							122.8 - 123.7 65-75%
							123.7 - 123.8 15-20%
							123.8 - 124.0 dk. gray and black shales.
							124.0 - 124.3 60-65%
							124.3 - 124.4 15-20%
							124.4 - 124.8 60-65%
							124.8 - 125.0 20-30%
							sealed, Moderately closely spaced, barite crystal lined fractures.
125.0	128.5	80%		2.7'			Barite replacing nodules (ama .03' diam.) and nodular lenses (ama .07' wide) in med. gray sandy shale and black shales (shale lenses ama .1' wide)
							125.0 - 125.1 30-40%
							125.1 - 125.2 <3%
							125.2 - 125.3 50-60%

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FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
125.0	128.5						125.3 - 125.5 <5%
							125.5 - 125.6 25-35%
							125.6 - 125.8 70-80%
							125.8 - 126.3 65-75%
							126.3 - 127.7 10-20%, very friable and broken.
				.1'			Dk. gray clay. Core loss interval.
128.5	138.5	96%		9.6'			Barite replacing nodules (ama .05' diam.) and
							nodular lenses (ama .04' wide) in dk. gray and
							black shales and med. and dk. gray sandy shale
							(shale lenses ama .29' wide). Locally ama 2-3%
							pyrite, lenses(ama .01' wide)/disseminated/rimming
							nodules.
							Core loss interval (?)
							.4' <5%, very friable and broken.
							.6' 25-35%
							.6' 5-15%
							130.5 - 131.3 Med. and dk. gray sandy shale with
							med. gray and black shale lenses
							(ama .15' wide). Locally hydro-

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FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
128.5	138.5						thermally altered to clays (lt. to dk. orange in color, widths approx .2' wide.
							131.3 - 132.4 40-50%
							132.4 - 132.8 <2%
							132.8 - 132.9 50-60%
							132.9 - 133.6 10-20%
							133.6 - 134.3 <2%
							134.3 - 134.8 30-40%
							134.8 - 134.9 black shale
							134.9 - 135.1 10-20%
							135.1 - 135.3 med. and dk. gray shales
							135.3 - 135.9 30-40%
							135.9 - 136.0 50-60%
							136.0 - 136.2 <5%
							136.2 - 136.5 dk. gray and black shales
							136.5 - 136.8 25-35%
							136.8 - 138.5 <2%, med. to dk. gray, slightly sandy shale and dk. gray to black shales.
							Very closely spaced, mostly sealed, barite crystal, carbon and barite crystal lined fractures. Offset

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FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
128.5	138.5						in bedding of .01' along fracture at 134.7.
138.5	145.0	100%		6.5'			Interbedded med. to dk. gray, slightly sandy shale and dk. gray to black shales (shale lenses ama 1' wide). Locally contains carbon rich nodules (ama 5-15%, ama .04' diam.) partially replaced by barite. Locally ama 3-4% pyrite, finely disseminated/along bedding planes/between contacts/lenses ama .02' wide/pyrite filled nodules ama .02' diam. 139.0 - 139.2.
							138.9 - 139.9 5-10%
							141.4 - 141.7 5%
							Moderately closely spaced, unmineralized fractures.
							Very closely spaced, sealed, lt. yellow barite filled fractures, mostly subparallel to bedding
							142.0 - 145.0.
145.0	151.5	85%		5.1'			Interbedded lt. to dk. gray, slightly sandy shales and dk. gray to black shales (lenses ama .7' wide). Locally ama 2-3% pyrite, disseminated/lenses .01'

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FROM	TO			Sp. Gr.	Ba\$04	Cond.	
145.0	151.5						wide/along bedding planes. Closely to very closely spaced, sealed, lt. yellow barite filled fractures. Moderately closely spaced unmineralized fractures.
151.5	155.0	89%		2.8'			Interbedded dk. gray and black shales (lenses ama 1' wide). Locally ama 3-4% pyrite, disseminated/ along bedding/ama 1-2% pyrite filled nodules last .2'. Closely spaced, unmineralized fractures. First .2' shale fragments containing quartz filled, sealed fractures (ama .02' wide). .3' Lt. to med. gray chert. Ama 3-4% pyrite, dissem- inated/pyrite filled sealed fractures.
							TroPari survey at 141' 39°
							Explanation: fractures
							Moderately closely spaced = >3'
							Closely spaced = 1' - 3'
							Very closely spaced = <1'

SAMPLE	LOG #	DEPTH	INTERVAL	CALCULATED SPECIFIC GRAVITY	X-RAY % BaSO ₄
MDDH-15					
#1A		*95.6-100.7	5.10	3.040	23.94
#2A		*100.7-107.0	6.30	3.193	35.33
-	-	107.0-113.2	6.20	2.761	0.00
#1	691	113.2-115.6	2.40	3.335	45.0
#2	692	115.6-118.0	2.40	3.455	52.5
#3	693	118.0-120.4	2.40	3.522	56.5
#4	694	120.4-122.8	2.40	3.471	53.5
#5	695	122.8-125.2	2.40	3.502	55.3
#6	696	125.2-127.6	2.40	3.393	48.7
#7	697	127.6-130.0	2.40	3.493	54.8
#8	698	130.0-132.4	2.40	3.588	60.3
#9	699	132.4-134.9	2.50	3.223	37.5
#10	700	134.9-136.8	1.90	3.320	44.0
COMPOSITE	702	MEASURED		3.46	51.4
COMPOSITE		CALCULATED	41.20	3.246	39.04
*Not included in composite measured.					