

DRILL HOLE RECORD

Drill Hole No.: MDDH-12 Inclination: 76° N25E

Date: Started 1/21/1977, completed 2/2/1977

Property: Fancy Hill

Drilled By: Sprague & Henwood - Sam Grathler
Joe Halaburda

Co-ordinates: North _____ East _____

Logged By: Les Farrington

Elevation: _____

Total Depth: 312.5'

DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO4	Cond.	
0.0	5.0	18%		.9'			Sandy shale (?), altered to clays, stained lt. yellow to dk. orange by iron oxides.
5.0	7.5	12%		.3'			Sandy shale (?), altered to clays, stained lt. yellow to dk. orange by iron oxides.
7.5	12.5	0					No recovery.
12.5	15.0	0					No recovery.
15.0	24.0	17%		1.5'			Sandstone, locally stained lt. yellow to dk. orange by iron oxides, with lenses and clasts (ama .03' wide) med. gray shale. Locally ama 3-4% pyrite filled nodules (ama .09' diam.), pyrite oxidized.
							Very closely spaced, sealed, carbon filled, heavily iron and manganese oxide stained fractures.
24.0	29.0	94%		4.7'			Sandstone, stained lt. yellow to dk. orange and

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DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
24.0	29.0						purple by iron oxides, with lenses dk. gray shale. Locally ama 4-6% pyrite filled nodules (ama .05' diam.), pyrite oxidized.
							Closely to very closely spaced, mostly sealed, iron/manganese oxide stained fractures. Locally very closely spaced, sealed, carbon filled fractures.
29.0	37.0	100%		8.0'			Med. gray sandstone, mottled by lt. gray lenses locally stained dk. orange by iron oxides, with lenses and clasts (ama .03' wide 29.0 - 31.5, isolated clasts <.01' wide 31.5 - 34.5). Locally ama 8-10% pyrite filled nodules (ama .05' diam.), pyrite locally highly oxidized.
							Very closely spaced, mostly sealed, iron/manganese oxide stained fractures, some barite/quartz (?) filled.
37.0	47.0	89%		8.9'			Med. gray sandstone, mottled by lt. gray lenses, with isolated clasts (ama .03' wide, some highly



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FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
37.0	47.0						graphitic) black shale. First 6.5' locally ama 8-10% pyrite filled nodules (ama .07' diam.), pyrite slightly oxidized. Closely to very closely spaced, mostly sealed, barite/barite and pyrite/carbon/carbon and pyrite filled fractures (pyrite partially oxidize first 4.5').
47.0	55.5	91%		7.7'			Med. gray sandstone, mottled by lt. gray lenses, with isolated clasts (ama .03' wide) dk. gray to black shale. Locally ama 1-2% pyrite filled nodules (ama .02' diam.). Core locally very friable. Closely to very closely spaced, sealed and open, carbon/carbon and pyrite filled/coated fractures.
55.5	65.5	88%		.7'			Med. gray sandstone, mottled by lt. gray lenses, with isolated clasts dk. gray to black shale.
				8.1'			Interbedded lt. and med. gray sandstone (med. gray sandstone mottled by lt. gray lenses) with



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FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
55.5	65.5						lenses and clasts (ama .07' wide) med. to dk. gray sandy shale and dk. gray and black shales. Locally ama 4-6% pyrite, disseminated/between contacts/along bedding planes/isolated nodules (ama .02' diam.). Closely to very closely spaced, sealed and open, carbon/carbon, barite crystal, and pyrite/barite and pyrite/barite filled fractures. Adjacent to fracture at approx. 61.0 sandstone appears to be bleached.
65.5	74.0	100%		8.5'			Med. gray sandstone, gradational to very sandy shale and mottled by lt. gray lenses, with lenses and clasts (ama .05' wide) dk. gray sandy shale and dk. gray and black shales. Locally ama 1-3% pyrite, disseminated/between contacts/along bedding planes. Very closely spaced, sealed and open, carbon/carbon and barite/carbon, barite, and pyrite filled fractures.
Lost circulation this interval.							



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FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
74.0	83.0	98%		8.8'			Med. gray, very sandy shale, gradational to sandstone, mottled by lt. gray lenses, with scattered clasts (ama .02' wide) dk. gray and black shale. Locally ama 1% pyrite, disseminated /isolated nodules (ama .01' diam.)/between contacts.
							Very closely spaced, open and sealed, carbon/carbon and barite filled/coated fractures (ama .01' wide).
83.0	86.5	90%		1.9'			Med. gray, very sandy shale, gradational to sandstone, mottled by lt. gray lenses, with scattered clasts dk. gray and black shale.
							Closely spaced, open, carbon coated fractures.
				1.2'			Med. gray, very sandy shale with lenses (ama .13' wide) black shale. Locally ama 2-3% pyrite, along bedding planes/between contacts.
							Core very broken.
86.5	90.5	98%		3.2'			Black shale with lenses (ama .15' wide) med. to



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DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
86.5	90.5						dk. gray sandy shale. Locally am ^a 4-6% pyrite, scattered nodules (ama .03' diam.)/lenses (<.01' wide)/between contacts/along bedding.
				.7'			Dk. gray sandy shale.
90.5	93.0	96%		2.4'			Dk. gray sandy shale with lenses (ama .19' wide) black shale. Locally am ^a 2-3% pyrite, along bedding planes/between contacts/ lenses <.01' wide. Core very broken.
93.0	103.0	100%		5.9'			Dk. gray sandy shale with lenses and clasts (ama .03' wide) dk. gray and black shale. Locally am ^a 6-8% pyrite, disseminated/between contacts/along bedding planes.
							Moderately closely to closely spaced, sealed, barite filled fractures.
				4.1'			Dk. gray and black shales with lenses (ama .09' wide) med. to dk. gray sandy shale. Locally lenses contain nodules (ama .02' diam.) and nodular lenses (ama .01' wide) partially re-

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FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
93.0	103.0						placed by barite. Locally ama 10-12% pyrite, disseminated/rimming nodules/along bedding planes/between contacts. 99.9 - 100.3 <2% 101.1 - 103.0 <1% Moderately closely to closely spaced, sealed, filled fractures, barite
103.0	112.0	100%		9.0'			Interbedded dk. gray and black shales with lenses (ama .13' wide) med. to dk. gray sandy shale. Lenses contain nodules (ama .03' diam.) partial- ly to completely replaced by barite. Locally ama 4-6% pyrite, disseminated/along bedding planes/between contacts. 103.0 - 103.3 <1% 103.3 - 103.6 5-15% 103.6 - 104.5 2-4% 104.5 - 105.1 5-7% 105.1 - 105.4 <1% 105.4 - 106.0 5-15%



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FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
103.0	112.0						106.0 - 106.5
							106.5 - 107.4 3-5%
							107.4 - 108.6 5-15%
							108.6 - 109.1
							109.1 - 109.6 5-8%
							109.6 - 110.7 1-3%
							110.7 - 110.8 5-10%
							110.8 - 110.9 <1%
							110.9 - 111.0 3-5%
							111.0 - 111.2 <1%
							111.2 - 111.4 5-10%
							111.4 - 111.8 1-2%
							111.8 - 112.0 5-7%
							Moderately closely spaced, sealed, barite filled fractures (ama .02' wide).
112.0	122.5	100%		10.5			Interbedded dk. gray and black shales with lenses (ama .13' wide) med. to dk. gray sandy shale. Locally lenses contain ^{barite} nodules (ama .05' diam.) and nodular lenses (ama .02' wide).

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DRILL HOLE RECORD

Drill Hole No.: WDDH-12 Inclination: _____

Date: _____

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Drilled By: _____

Co-ordinates: North _____ East _____

Logged By: _____

Elevation: _____

Total Depth: _____

DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
112.0	122.5						120.4 - 120.5 5-10%
							120.5 - 120.8 <2%
							120.8 - 121.1 10-20%
							121.1 - 121.4 <3%
							121.4 - 121.5 30-35%
							121.5 - 121.9 5-10%
							121.9 - 122.0 20-30%
							122.0 - 122.3 5-10%
							122.3 - 122.5 30-35%
							Moderately closely to closely spaced, sealed, barite filled fractures (ama .03' wide).
122.5	133.0	100%		10.5'			Interbedded dk. gray and black shales with len- ses (ama .19' wide) med. to dk. gray sandy shale. Locally lenses contain barite nodules (ama .04' diam.) and nodular lenses (ama .03' wide). Locally ama 2-3% pyrite, disseminated/ along bedding planes/between contacts/rimming nodules.
							122.5 - 122.9 10-15%



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DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
139.5	145.5						Closely to very closely spaced, mostly sealed, barite/barite and pyrite filled fractures. Fractures mostly subparallel to bedding.
145.5	153.0	100%		4.2'			Med. to dk. gray sandy shale with dk. gray and black shale lenses (ama .11' wide) and lt. gray sandy shale lenses (ama .11' wide, partial- ly replaced by barite). Banded appearance. Locally ama 2-3% pyrite, disseminated/along bedding planes/between contacts. Very closely spaced, sealed, barite filled fractures. Offsets in bedding along fractures ama .03' 145.5 - 146.5. Barite nodules (ama .03' diam.) and nodular lenses (ama .02' wide) in med. to dk. gray sandy shale with dk. gray and black shale lenses (ama .28' wide). Locally ama 2-4% pyrite, rimming nodules/along bedding planes/ between contacts. 149.8 - 150.0 40-50%
				3.3'			

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FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
153.0	163.0						155.7 - 156.1 55-65%
							156.1 - 156.8 45-55%
							156.8 - 156.9 25-35%
							156.9 - 157.0 5-10%
							157.0 - 157.6 20-30%
							157.6 - 158.3 5-10%
							158.3 - 158.7 2-5%
							158.7 - 159.9 40-50%
							159.9 - 160.2 15-20%
							160.2 - 161.0 40-50%
							161.0 - 161.4 4-8%
							161.4 - 163.0 shale
							Closely to very closely spaced, mostly sealed, barite filled fractures.
163.0	173.0	100%		10.0'			Barite nodules (ama .04' diam.) and nodular lenses (ama .02' wide) in med. to dk. gray sandy shale with dk. gray and black shale len- ses (ama .12' wide). Locally ama 2-4% pyrite, disseminated/lenses <.01' wide/between contacts

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DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
173.0	180.5						174.3 - 174.6 60-70%
							174.6 - 175.0 45-55%
							175.0 - 175.3 55-65%
							175.3 - 175.5 20-25%
							175.5 - 175.8 <3%
							175.8 - 176.6 15-20%
							176.6 - 177.0 60-70%
							177.0 - 177.5 55-65%
							177.5 - 177.7 15-20%
							177.7 - 178.1 45-55%
							178.1 - 178.7 60-70%
							178.7 - 179.0 5-10%
							179.0 - 179.3 45-55%
							179.3 - 179.5 5-10%
							179.5 - 179.9 45-55%
							179.9 - 180.1 15-20%
							180.1 - 180.3 55-65%
							Closely to very closely spaced, sealed and
							open, barite/barite, carbon, and pyrite filled
							fractures (ama .03' wide). Slickensides on

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DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
173.0	180.5						some of fractures.
180.5	184.5	100%		4.0'			Barite nodules (ama .03' diam.) and nodular lenses (ama .05' wide) in med. to dk. gray sandy shale with dk. gray and black shale lenses (ama .17' wide). Locally ama 2-4% pyrite, rimming nodules/disseminated/lenses <.01' wide/along bedding planes/between contacts. 180.3 - 180.6 60-70% 180.6 - 180.7 15-25% 180.7 - 180.8 20-30% 180.8 - 181.2 15-20% 181.2 - 181.4 40-45% 181.4 - 181.6 25-30% 181.6 - 182.6 60-65% 182.6 - 183.0 45-55% 183.0 - 183.1 55-65% 183.1 - 183.3 20-30% 183.3 - 183.4 5-10% 183.4 - 184.1 shales

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DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
184.5	193.0						186.3 - 186.5 45-55%
							186.5 - 186.7 5-15%
							186.7 - 187.2 20-30%
							187.2 - 187.5 50-60%
							187.5 - 187.9 25-35%
							187.9 - 188.2 50-60%
							188.2 - 188.3 5-10%
							188.3 - 188.4 45-55%
							188.4 - 188.6 20-30%
							188.6 - 188.7 3-5%
							188.7 - 189.1 30-40%
							189.1 - 189.3 60-70%
							189.3 - 189.7 5-15%, silicified
							189.7 - 190.2 10-20%
							190.2 - 190.3 30-40%
							190.3 - 190.4 5-10%
							190.4 - 190.5 30-40%
							190.5 - 190.7 5-15%
							190.7 - 190.9 25-35%
							190.9 - 191.1 5-10%

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FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
193.0	201.5						.1' 50-60%
							.1' 10-20%
							.2' 1-2%
							.3' 15-20%
							.5' 20-30%
							.4' 30-40%
							1.1' 1-3%
							.4' 15-25%
							.3' 1-2%
							.3' 5-10%
							.5' 15-20%
							.7' 10-20%
							.2' 2-4%
							Core loss interval (?)
							.1' 65-75%
							.1' 50-60%
							.2' 25-35%
							.1' 50-55%
							Closely spaced, mostly sealed, barite filled
							fractures. Slickensides on fracture at



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FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
193.0	201.5						with barite, carbon and pyrite.
201.5	203.0	100%		1.5'			Barite nodules (ama .02' diam.) and nodular lenses (ama .02' wide) in med. gray sandy shale with dk. gray and black shale lenses (ama .12' wide). Locally ama 1% pyrite, disseminated/along bedding planes.
							201.3 - 201.4 15-25%
							201.4 - 201.6 10-20%
							201.6 - 201.7 40-50%
							201.7 - 201.9 10-20%
							201.9 - 202.2 35-45%
							202.2 - 202.5 45-55%
							202.5 - 202.6 30-40%
							202.6 - 202.8 5-10%
							202.8 - 202.9 shale
							202.9 - 203.1 50-60%
							Locally very closely spaced, sealed, barite filled fractures. Unmineralized fracture.

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DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaS04	Cond.	
203.0	208.0			1.2'			Barite nodules (ama .01' diam.) and nodular lenses (ama .02' wide) in dk. gray and black shales with med. gray sandy shale lenses (ama .15' wide). Locally ama 1-2% pyrite, disseminated/along bedding planes. Core very broken. 206.8 - 206.9 15-20% 206.9 - 207.6 <2% 207.6 - 207.7 5-10% 207.7 - 207.9 25-35% 207.9 - 208.0 shale Sealed, barite crystal lined fracture.
208.0	210.0	100%		2.0'			Barite nodules (ama .02' diam.) and nodular lenses (<.01' wide) in dk. gray and black shales with dk. gray sandy shale lenses (ama .06' wide) Locally ama 2-3% pyrite, disseminated/between contacts. Core very broken. 208.0 - 208.1 shale 208.1 - 208.2 35-45% 208.2 - 208.6 10-20%



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FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
208.0	210.0						208.6 - 209.3 2-4%
							209.3 - 209.4 10-20%
							209.4 - 209.9 25-35%
							209.9 - 210.1 45-55%
							Very closely spaced, sealed, barite filled fractures. Slickensides coated with barite and pyrite, subparallel to bedding 208.0 - 208.5.
210.0	211.5	80%		1.2'			Dk. gray and black shales with med. to dk. gray sandy shale lenses. Locally ama 1-2% pyrite along bedding planes/between contacts. Core very broken.
211.5	214.0	100%		2.5'			Interbedded dk. gray and black shales with dk. gray sandy shale lenses (ama .12' wide). Locally contain barite nodules (ama .04' diam.) and nodular lenses (ama .01' wide). Locally ama 4-6% pyrite, disseminated/between contacts/along bedding planes.
							210.1 - 211.3 shales and sandy shale



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FANCY HILL, ARKANSAS

DRILL HOLE RECORD

Drill Hole No.: MDDH-12 Inclination: _____

Date: _____

Property: Fancy Hill

Drilled By: _____

Co-ordinates: North _____ East _____

Logged By: _____

Elevation: _____

Total Depth: _____

DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO4	Cond.	
211.5	214.0						211.3 - 211.4 30-40%
							211.4 - 212.3 5-15%
							212.3 - 212.9 shale
							212.9 - 213.4 2-4%
							213.4 - 214.0 shale and sandy shale
							Very closely spaced, sealed and open, barite/ carbon and barite filled fractures.
214.0	218.0	80%		3.2'			Interbedded dk. gray and black shales with lenses dk. gray sandy shale. Locally contain barite nodules (ama .03' diam.) and nodular lenses (<.01' wide). Locally ama 2-3% pyrite along bedding planes.
							.5' shale
							.2' 3-5%
							1.2' shale
							.3' 5-15%
							1.1' <2%
							Very closely spaced, sealed and open fractures, some with slickensides (subparallel to bedding).

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Date: _____

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Co-ordinates: North _____ East _____

Logged By: _____

Elevation: _____

Total Depth: _____

[illegible]

DRILL HOLE RECORD

Drill Hole No.: WDDH-12 Inclination:

Date: _____

Property: Fancy Hill

Drilled By: _____

Co-ordinates: North _____ East _____

Logged By: _____

Elevation: _____

Total Depth: _____

[illegible]



MINERAL DIVISION

FANCY HILL, ARKANSAS

DRILL HOLE RECORD

Drill Hole No. MDDH-12 Inclination: _____

Date: _____

Property: Fancy Hill

Drilled By: _____

Co-ordinates: North _____ East _____

Logged By: _____

Elevation: _____

Total Depth: _____

DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	Ba504	Cond.	
223.0	228.5						225.4 - 225.5 25-35%
							225.5 - 225.7 3-5%
							225.7 - 225.9 30-40%
							225.9 - 227.0 5-10%
							227.0 - 227.3 shale
							227.3 - 227.5 10-20%
							227.5 - 227.7 5-15%
							227.7 - 228.0 20-30%
							228.0 - 228.5 shale
							Very closely spaced, mostly sealed, barite
							filled fractures (ama .03' wide). Change (?)
							in bedding attitude along fracture at 224.0.
							Offsets in bedding along fractures at 228.0.
							ama .02'.
228.5	235.5	100%		1.3'			Interbedded med. to dk. gray and black shales.
							Locally ama 3-4% pyrite, disseminated/between
							contacts/lenses <.01' wide.
				5.7'			Barite nodules (ama .03' diam.) and nodular
							lenses (ama .06' wide) in med. to dk. gray

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Logged By: _____

Elevation: _____

Total Depth: _____

[illegible]

DRILL HOLE RECORD

Drill Hole No.: 10DDH-12 Inclination: _____

Date: _____

Property: Fancy Hill

Drilled By: _____

Co-ordinates: North _____ East _____

Logged By: _____

Elevation: _____

Total Depth: _____

[illegible]

DRILL HOLE RECORD

Drill Hole No.: MDDH-12 Inclination:

Date: _____

Property: Fancy Hill

Drilled By: _____

Co-ordinates: North _____ East _____

Logged By: _____

Elevation: _____

Total Depth: _____

DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	Ba\$04	Cond.	
235.5	243.0						242.1 - 242.4 15-20%
							242.4 - 242.5 10-15%
							242.5 - 243.0 5-10%
							Closely to very closely spaced, mostly sealed, barite/barite and carbon filled/and unmineraliz- ed fractures.
243.0	253.0	100%		10.0'			Barite nodules (ama .05' diam.) and nodular lenses (ama .02' wide) in med. to dk. gray sandy shale with dk. gray and black shale len- ses (ama .16' wide). Locally ama 3-5% pyrite, disseminated/lenses (ama .01' wide/between con- tacts/rimming nodules/along bedding planes. 243.0 - 243.2 5-8% 243.2 - 243.6 25-35% 243.6 - 243.9 <2% 243.9 - 244.3 25-35% 244.3 - 244.5 10-20% 244.5 - 244.8 4-7% 244.8 - 245.1 30-40%

DRILL HOLE RECORD

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Total Depth: _____

[illegible]

DRILL HOLE RECORD

Drill Hole No.: MDDH-12 Inclination: _____

Date: _____

Property: Fancy Hill

Drilled By: _____

Co-ordinates: North _____ East _____

Logged By: _____

Elevation: _____

Total Depth: _____

DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
243.0	253.0						252.6 - 253.0 10-20% Moderately closely (locally very closely) spaced sealed, barite filled fractures.
253.0	261.0	88%		1.4'			Barite nodules (ama .01' diam.) and nodular lenses (<.01' wide) in med. to dk. gray sandy shales with dk. gray and black shale lenses (ama .08' wide). Locally ama 1-2% disseminated pyrite.
							253.0 - 253.2 10-20%
							253.2 - 253.7 <5%
							253.7 - 254.1 1-3%
				.2'			Med. and dk. gray clays.
							Core loss interval.
				5.0'			Med. to dk. gray sandy shale with dk. gray and black shale lenses. Locally barite nodules (ama .02' diam.) and nodular lenses (ama .01' wide) in lenses. Locally ama 1-3% pyrite, disseminat- ed/lenses <.01' wide/between contacts.
							.2' shale



MINERAL DIVISION

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Logged By: _____

Elevation: _____

Total Depth: _____

DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
253.0	261.0						.3' 5-15%
							.5' shale
							.2' 5-15%
							.4' shale
							.2' 10-20%
							.2' 15-25%
							.5' 5-10%
							.4' <5%
							.3' 10-20%
							.2' shale
							.1' 5-10%
							1.5' sandy shale and shale
							Closely to very closely spaced, mostly sealed,
							barite filled/and unmineralized fractures.
				.4'			Dk. gray clays. Core loss interval.
261.0	264.5	83%		2.9'			Interbedded med. to dk. gray and black sandy
							shales and dk. gray and black shales. Locally
							lenses contain . nodules (ama .01' diam.)
							and nodular lenses (ama .03' wide) partially to

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Total Depth: _____

DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
261.0	264.5						completely replaced by barite. Locally ama 3-5%
							pyrite, disseminated/between contacts. Core
							very broken locally.
							.5' 5-10%
							.6' <2%
							core loss interval
							.4' 5-15%
							core loss interval
							1.4' <2%
							Very closely spaced, open and sealed, carbon/ carbon and barite/quartz, barite, and pyrite filled fractures.
264.5	268.5	100%		4.0'			Interbedded med. to dk. gray sandy shales and dk. gray to black shales. Locally lenses cont- ain scattered nodules (ama .03' diam.) partially to completely replaced by barite. Locally ama 3-4% pyrite, lenses <.01' wide/between contacts/ rimming nodules. 265.5 - 265.8 3-5%



MINERAL DIVISION

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Co-ordinates: North _____ East _____

Logged By: _____

Elevation: _____

Total Depth: _____

DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
264.5	268.5						266.0 - 266.3 5-10%
							268.3 - 268.4 5-10%
							Very closely spaced, mostly sealed, barite/ quartz and pyrite (ama .03' wide) filled fract- ures. Locally offsets in bedding along fract- ures ama .01'.
268.5	275.0	86%		4.6'			Interbedded med. gray sandy shale and dk. gray and black shales. Locally lenses contain nod- ules (ama .02' diam.) partially replaced by barite. Locally ama 2-4% pyrite, between con- tacts/along bedding planes.
							268.4 - 268.8 4-6%
							271.4 - 271.6 2-4%
							Closely to very closely spaced, open and sealed, barite filled fractures.
				1.0'			Interbedded dk. gray and black shales, locally graphitic. Very friable and broken.
275.0	278.5	100%		3.5'			Interbedded med. and dk. gray shales.



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DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO4	Cond.	
275.0	278.5						Very closely spaced, mostly sealed, barite filled fractures, generally subparallel to bedding.
278.5	287.0	100%		8.5'			Interbedded med. to dk. gray and black shales. Closely to very closely spaced, mostly sealed, lt. yellow barite filled fractures, generally subparallel to bedding.
287.0	294.0	100%		7.0'			Interbedded med. to dk. gray and black shales with med. to dk. gray sandy shale lenses (ama .08' wide). Locally ama 3-4% pyrite, lenses (ama .01' wide)/scattered nodules (ama .02' diam.)/between contacts/along bedding planes. Sealed, quartz and pyrite filled fracture at 290.5.
294.0	304.5	100%		10.5'			Med. gray, very sandy shale (locally gradational to sandstone), mottled by lt. gray lenses, with scattered dk. gray and black shale clasts (ama .05' wide, angular 294.0 - 294.5). Locally ama

DRILL HOLE RECORD

Drill Hole No.: UDDH-12 Inclination: _____

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Total Depth: _____

DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO ₄	Cond.	
294.0	304.5						5-10% pyrite, nodules (ama .03' diam.)/disseminated/between contacts.
							Moderately closely spaced, unmineralized fractures. Closely spaced, sealed, barite filled fractures 294.0 - 298.0.
304.5	312.5	96%		5.3'			Med. to dk. gray very sandy shale, locally gradational to sandstone, with scattered dk. gray and black shale clasts (ama .03' wide).
				2.1'			Interbedded med. and dk. gray clayey shales. Ama 10-15% pyrite, disseminated/along bedding planes/nodules (ama .02' diam.).
				.3'			Dk. gray chert.
EXPLANATION: FRACTURES							
VERY CLOSELY SPACED = < 1'							
CLOSELY SPACED = 1'-3'							
MODERATELY CLOSELY SPACED = > 3'							

SAMPLE	LOG #	DEPTH	INTERVAL	CALCULATED SPECIFIC GRAVITY	X-RAY % BaSO ₄
MDDH-12					
#1A		*99.9-103.3	3.40	2.943	16.12
#2A		*103.3-110.1	6.80	3.082	27.23
#3A		*110.1-114.7	4.60	3.074	26.62
#4A		*114.7-122.0	7.30	3.102	28.71
#5A		*122.0-126.2	4.20	3.422	50.53
#6A		*126.2-134.4	8.20	3.161	33.07
#7A		*134.4-144.4	10.00	2.833	6.59
#8A		*144.4-149.8	5.40	2.859	8.95
#1	703	149.8-157.0	7.20	3.275	41.0
#2	704	157.0-164.2	7.20	3.266	40.4
#3	705	164.2-171.4	7.20	3.327	44.5
#4	706	171.4-178.6	7.20	3.513	56.0
#5	707	178.6-185.0	6.40	3.369	47.2
#6	708	185.0-193.0	8.00	3.368	47.1
#7	709	193.0-200.3	7.30	3.312	43.5
#8	710	200.3-207.5	7.20	3.508	55.7
#9	711	207.5-214.7	7.20	3.087	27.6
#10	712	214.7-221.9	7.20	2.883	11.0
#11	713	221.9-229.1	7.20	3.067	26.1
#12	714	229.1-236.3	7.20	3.355	46.3
#13	715	236.3-243.5	7.20	3.311	43.4
#14	716	243.5-245.4	1.90	3.232	38.1
		245.4-250.7	5.30	3.232	38.1
#9	*25017	250.7-253.1	2.40	3.16	29.01