

Drill Hole No. MH-64  
 Bearing: N 22 E. Fancy Hill East Pit  
 Coordinates: North 626,291.8 East 1,456,359.7  
 Elevation: 924.52

Date: December, 1978  
 Drilled By: Boyles Brothers, Vest, Wright  
 Logged By: Ferryl C. Gale  
 Total Depth: 335.0 ft. 0.0-335.0 Core

DEPTH		%	SAMPLE	SAMPLE	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO	RECOVERY	NUMBER	INTERVAL	Sp. Gr.	BoSO <sub>4</sub>		
					Acid	Test	Survey	MH-64
						Dip	AZ	
				Surface		60 N		N.22E.
				100.0'		58 N		"
				222.0'		56½ N		"
				332.0'		54 N		"
0.0	2.0							Set casing no core recovery.
2.0	13.5							Light gray sandstone, high R.Q.D. Highly fractured 5.0 to 6.0 ft.
13.5	25.0							Sandstone as before, occasional shale lamina bedding dip at 20.0 72 S.
25.0	37.0							Sandstone as above High R.Q.D.
37.0	48.0							" " " " "
48.0	59.0							Sandstone, occasional wisp of black shale.
59.0	69.0							As above.
69.0	80.0							Sandstone as before, abundant graphite in fractures. Occasional qtz. and calcite in fractures. Bedding dip at 70.0 ft. is 70 S.
80.0	91.0							As above.
91.0	102.0							As above High R.Q.D.
102.0	110.0							Sandstone as above

## DRILL HOLE LOG

Drill Hole No. MH-64

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

Bearing: \_\_\_\_\_ Inclination: \_\_\_\_\_

Drilled By: \_\_\_\_\_

Coordinates: North \_\_\_\_\_ East \_\_\_\_\_

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

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

Total Depth: \_\_\_\_\_

DEPTH		% RECOVERY	SAMPLE NUMBER	SAMPLE INTERVAL	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO				Sp. Gr.	BaSO <sub>4</sub>		
110.0	113.0							Highly broken and fractured, Brecciated graphitic shales in fracture fillings.
113.0	124.0							Sandstone, graphitic and marcasite filling fractures. Highly broken.
124.0	136.0							Sandstone, High R.Q.D.
136.0	146.0							Sandstone highly broken, soft sediment deformation. Small veinlets qtz. and calcite along fractures.
146.0	157.0							Interbedded sandstone and black shales, highly broken also qtz. and calcite fracture fillings
157.0	169.0							As above, highly broken.
169.0	180.0							As above, green chlorite clays (alteration product of calcite.) filling fractures.
180.0	191.0							As above locally Brecciated and recemmented.
191.0	201.0							As above.
201.0	211.0							Sandstone, qtz. veins at 204.0 -206.0 and 208.0-210.0.
211.0	222.0							Sandstone, locally shale lenses.
222.0	230.0							Interbedded gray and black sandy shales and gray sandstone.

# DRILL HOLE LOG

MH-64

Drill Hole No. \_\_\_\_\_

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Bearing: \_\_\_\_\_ Inclination: \_\_\_\_\_

Drilled By: \_\_\_\_\_

Coordinates: North \_\_\_\_\_ East \_\_\_\_\_

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

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

Total Depth: \_\_\_\_\_

DEPTH		%	SAMPLE	SAMPLE	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO	RECOVERY	NUMBER	INTERVAL	Sp. Gr.	BaSO <sub>4</sub>		
230.0	232.6		8120	2.6'				Barite zone, low grade, 40% BaSO <sub>4</sub> , laminated barite in a host rock of gray shales.
232.6	236.8		8121	4.2'				Barite zone, medium grade, 50% BaSO <sub>4</sub> , nodular, with bedding. Bedding dip at 234ft. is 85 S.
236.8	240.8		8122	4.0'				Barite zone, High grade, approx. 60% BaSO <sub>4</sub> . Massive to nodular.
240.8	244.0		8123	3.2'				Barite zone, medium grade, approx. 50% BaSO <sub>4</sub> .
244.0	248.0		8124	4.0'				Barite zone, medium grade, approx. 50% BaSO <sub>4</sub> , locally large well developed nodules, approx. 3cm in diameter.
248.0	251.0		8125	3.0'				Barite zone, high grade approx. 60% BaSO <sub>4</sub> , (Tabilt with slicken sides 248.0-250.0 striking east-west and dipping 70 N.
251.0	253.6		8126	2.6				Barite zone, medium grade, approx. 50% BaSO <sub>4</sub> .
253.6	256.0		8127	2.4				Barite zone, low grade, 20% BaSO <sub>4</sub> .
256.0	260.0		8128	4.0				Barite zone, medium grade, 50% BaSO <sub>4</sub> , well defined and formed nodules.
260.0	266.0		8129	6.0				Barite zone, medium grade, approx. 50% BaSO <sub>4</sub> , scattered large nodules in black shale. Bedding dip at 265 is 86 S.

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Drilled By: \_\_\_\_\_

Coordinates: North \_\_\_\_\_ East \_\_\_\_\_

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

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

Total Depth: \_\_\_\_\_

DEPTH		% RECOVERY	SAMPLE NUMBER	SAMPLE INTERVAL	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO				Sp. Gr.	BaSO <sub>4</sub>		
266.0	269.0		8130	3.0				Barite zone, low grade 15% BaSO <sub>4</sub> , sparsely barite nodules.
269.0	271.0		8131	2.0				Barite zone, medium grade 45% BaSO <sub>4</sub> well formed barite nodules.
271.0	277.0		8132	6.0				Barite zone, high grade 60% BaSO <sub>4</sub> , massive to laminated barite.
277.0	280.0		8133	3.0				Barite zone, medium grade 50% BaSO <sub>4</sub> , bedding dip at 278.0 is 83 N.
280.0	281.6							Sandstone, numerous qtz. and calcite filled tension fractures, fault at 281.5 the rest of section is a repeat.
281.6	284.0		8134	2.4				Barite zone, bedding dip is 55 N. medium grade barite approx 50% BaSO <sub>4</sub> .
284.0	286.3		8135	2.3				Barite zone, medium grade approx. 50% BaSO <sub>4</sub>
286.3	287.9		8136	1.6				Barite zone, high grade approx. 60% BaSO <sub>4</sub> .
287.9	291.0							Sandstone, fault zone 290.8
291.0	294.2		8137	3.2				Barite zone, low grade 30% BaSO <sub>4</sub> , massive to laminate. Bedding dip 55 N. This core has a high percentage of calcite, but has nodular appearances of Barite.

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

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

Total Depth: \_\_\_\_\_

DEPTH		%	SAMPLE	SAMPLE	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO	RECOVERY	NUMBER	INTERVAL	Sp. Gr.	BaSO <sub>4</sub>		
294.2	299.0		8138	4.8				Barite zone low grade as above.
299.0	302.5		8139	3.5				Barite zone low grade.
302.5	306.0		8140	3.5				Barite zone, low grade sparce well developed
								barite nodules (1cm in diamater)
306.0	310.0		8141	4.0				Barite zone, low grade 40% BaSO <sub>4</sub>
310.0	312.6		8142	2.6				Barite zone, low grade
312.6	324.0							Black shale locally sandy, occasional calcite
								and qtz. veinlets.
324.0	332.0							As above, at 331.0-332.0 carbon rich.
332.0	334.0							Light gray sandstone, with scattered qtz. and
								calcite veinlets.
334.0	335.0							Contact Arkansas Novaculite
								Hole Bottomed on Novaculite
								Total Depth 335.0 ft.

# INTEROFFICE MEMORANDUM

**TO:** Bruce Templeton

**DATE:** December 29, 1978

**FROM:** Ferryl C. Gale

**SUBJECT:** Barite interval from  
Drill Hole MH-64

**CC:** Vic Prostack  
Rod Haper  
Rich Reyburn  
File

SAMPLE #	FOOTAGE	SPECIFIC GRAVITY	% BaSO4
8120	230.0 - 232.6		
8121	232.6 - 236.8		
8122	236.8 - 240.8		
8123	240.8 - 244.0		
8124	244.0 - 248.0		
8125	248.0 - 251.0		
8126	251.0 - 253.6		
8127	253.6 - 256.0		
8128	256.0 - 260.0		
8129	260.0 - 266.0		
8130	266.0 - 269.0		
8131	269.0 - 271.0		
8132	271.0 - 277.0		
8133	277.0 - 280.0		
8134	281.6 - 284.0		
8135	284.0 - 286.3		
8136	286.3 - 287.9		
8137	291.0 - 294.2		
8138	294.2 - 299.0		
8139	299.0 - 302.5		
8140	302.5 - 306.0		
8141	306.0 - 310.0		
8142	310.0 - 312.6		

MINERAL DIVISION  
JAN 2 1979  
MILCHEM INCORPORATED

MH-64

Bearing N22E  
T.D. 335.0

Dip  
Surface  
100'  
222'  
332'

60°N  
58°N  
56 1/2°N  
54°N

*Ferryl C. Gale*



## Barite Intervals for MH-64

<u>Sample</u>	<u>Footage</u>	<u>%BaSO<sub>4</sub></u>	<u>Specific Gravity</u>
8120	230.0-232.6		
8121	232.6-236.8		
8122	236.8-240.8		
8123	240.8-244.0		
8124	244.0-248.0		
8125	248.0-251.0		
8126	251.0-253.6		
8127	253.6-256.0		
8128	256.0-260.0		
8129	260.0-266.0		
8130	266.0-269.0		
8131	269.0-271.0		
8132	271.0-277.0		
8133	277.0-280.0		
8134	281.6-284.0		
8135	284.0-286.3		
8136	286.3-287.9		
8137	291.0-294.2		
8138	294.2-299.0		
8139	299.0-302.5		
8140	302.5-306.0		
8141	306.0-310.0		
8142	310.0-312.6		

## FANCY HILL - DIAMOND DRILL HOLES - PHASE I

INDIVIDUAL CORE ANALYSES BY INTERVALS

Collar 626, 291.82

1,456, 359.48

924.52

SAMPLE	LOG #	DEPTH	INTERVAL	SPECIFIC GRAVITY	% BaSO <sub>4</sub>
MH-64					
	8120	230.0-232.6	2.6	3.289	41.97
	8121	232.6-236.8	4.2	3.454	52.46
	8122	236.8-240.8	4.0	3.311	43.43
	8123	240.8-244.0	3.2	3.101	28.65
	8124	244.0-248.0	4.0	3.172	33.87
	8125	248.0-251.0	3.0	3.477	53.84
	8126	251.0-253.6	2.6	2.997	20.57
	8127	253.6-256.0	2.4	2.955	17.14
	8128	256.0-260.0	4.0	3.112	29.48
	8129	260.0-266.0	6.0	3.174	34.01
	8130	266.0-269.0	3.0	3.000	20.81
	8131	269.0-271.0	2.0	3.366	46.99
	8132	271.0-277.0	6.0	3.502	55.33
	8133	277.0-280.0	3.0	3.263	40.22
		280.0-281.6	1.6	No Sample	0.00
	8134	281.6-284.0	2.4	3.066	25.99
	8135	284.0-286.3	2.3	3.502	55.33
	8136	286.3-287.9	1.5	3.215	36.91
	8137	291.0-294.2	3.2	3.117	29.85
	8138	294.2-299.0	4.8	2.993	20.25
	8139	299.0-302.5	3.5	3.066	25.99
	8140	302.5-306.0	3.5	2.946	16.40
	8141	306.0-310.0	4.0	2.923	14.47
	8142	310.0-312.6	2.6	2.861	9.11
		Total*	77.80		
		Weighted Average*		3.175	34.07
		*Excludes 280-281.6			
Bottom Hole Core	626, 464.51	1,456, 429.53		645.11	

46.69

31.21

47.40

20.94