

INTERVAL SHEET

Page 1 of 1

VDMR Well No: 2121

Date rec'd:

Sample Interval: from 4' to: 95'

PROP: BLM A-051841

Number of samples: 35

Hole No.: T6-15A

COMP: Minerals Development Corp.

Total Depth: 95'

COUNTY: Giles

Oil or Gas: Water: Exploratory: X

From-To	From-To	From-To	From-To
4' - 7'10"	86'10" 87'5"	-	-
7'10" - 10'	87'5"- 89'10"	-	-
10' - 15'5"	89'10" 92'10"	-	-
15'5" - 18'	92'10" 93'5"	-	-
18' - 20'9"	93'5"- 95'	-	-
20'9" - 25'	-	-	-
25' - 26'6"	-	-	-
26'6" - 30'6"	-	-	-
30'6" - 31'4"	-	-	-
31'4" - 32'4"	-	-	-
32'4" - 34'2"	-	-	-
34'2" - 39'6"	-	-	-
39'6" - 47'8" (2 spls)	-	-	-
47'8" - 55'6" (2 spls)	-	-	-
55'6" - 59'	-	-	-
59' - 59'10"	-	-	-
59'10"- 61'1"	-	-	-
61'1" - 61'11"	-	-	-
61'11"- 64'2"	-	-	-
64'2" - 66'2"	-	-	-
66'2" - 67'6" (2 spls)	-	-	-
67'6" - 71'6"	-	-	-
71'6" - 75'3"	-	-	-
75'3" - 76'6"	-	-	-
76'6" - 77'9"	-	-	-
77'9" - 78'10"	-	-	-
78'10"- 80'1"	-	-	-
80'1" - 80'9"	-	-	-
80'9" - 82'9"	-	-	-
82'9" - 86'10"	-	-	-

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From-To	From-To	From-To	From-To
4' - 7'10"	86'10" - 87'5"	-	-
7'10" - 10'	87'5" - 89'10"	-	-
10' - 15'5"	89'10" - 92'10"	-	-
15'5" - 18'	92'10" - 93'5"	-	-
18' - 20'9"	93'5" - 95'	-	-
20'9" - 25'	-	-	-
25' - 26'6"	-	-	-
26'6" - 30'6"	-	-	-
30'6" - 31'4"	-	-	-
31'4" - 32'4"	-	-	-
32'4" - 34'2"	-	-	-
34'2" - 39'6"	-	-	-
39'6" - 47'8" (2 apls)	-	-	-
47'8" - 55'6" (2 apls)	-	-	-
55'6" - 59'	-	-	-
59' - 59'10"	-	-	-
59'10" - 61'1"	-	-	-
61'1" - 61'11"	-	-	-
61'11" - 64'2"	-	-	-
64'2" - 66'2"	-	-	-
66'2" - 67'6" (2 apls)	-	-	-
67'6" - 71'6"	-	-	-
71'6" - 75'3"	-	-	-
75'3" - 76'6"	-	-	-
76'6" - 77'9"	-	-	-
77'9" - 78'10"	-	-	-
78'10" - 80'1"	-	-	-
80'1" - 80'9"	-	-	-
80'9" - 82'9"	-	-	-
82'9" - 86'10"	-	-	-

HOLE NUMBER: T6-15A

Drill alignment: Vertical
 Date started: Tuesday, November 7, 1961
 Date completed: Wednesday, November 15, 1961
 Driller: M. C. Vaughan, Cunningham Core Drilling and Grouting Co.
 Location Bearing N 55° W from T6-12A 460'

Depth in feet			Description
From	To	Thickness	
0'	4'	4'	Overburden
4'	7'10"	3'10"	Sandstone, grayish maroon, fine to medium grained, slightly ferruginous, weathered; contains yellowish brown clay galls and contained vugs. Includes 1'9" core loss.
7'10"	10'	2'2"	Sandstone, maroon, medium grained, contains sporadic quartz granules, ferruginous. Includes 7" core loss.
10'	15'5"	5'5"	Sandstone, maroon, fine grained, slightly ferruginous; broken and weathered; includes 4'7" core loss.
15'5"	18'	2'7"	Sandstone, maroon, coarse grained, quartzitic, slightly ferruginous, friable; contains abundant rounded quartz granules. Includes 6" core loss.
18'	18'4"	4"	Shale, grayish maroon.
18'4"	20'9"	2'5"	Sandstone, maroon, fine to coarse grained, ferruginous; contains abundant maroon shale partings parallel to the bedding planes. Includes 9" core loss.
20'9"	25'	4'3"	Sandstone, maroon, coarse grained, conglomeratic, ferruginous, contains abundant rounded quartz granules and sporadic contained vugs. Includes 1' core loss.
25'	26'6"	1'6"	Shale, pale grayish green to maroon, contains scattered interbeds of maroon, fine grained sandstone in the lower 3 inches. Includes 6" core loss.
26'6"	26'10"	4"	Sandstone, pale grayish maroon, fine grained, slightly ferruginous.
26'10"	30'6"	3'8"	Sandstone, maroon, fine to coarse grained, ferruginous, broken; contains partings of maroon shale and maroon clay galls. Includes 1'9" core loss.
30'6"	31'4"	10"	Shale, pale olive drab to pale grayish tan.
31'4"	32'4"	1'	Sandstone, pale rust brown to grayish brown, fine grained; abundantly fossiliferous, includes ostracods: <u>Mostigobolbina</u> sp and <u>Zygosella</u> sp; crinoid stems all in excellent preservation.

Upper shale

Upper Zone
20' to 25' sh

middle shale

<u>Depth in feet</u>			<u>Description</u>
<u>From</u>	<u>To</u>	<u>Thickness</u>	
32'4"	34'	1'8"	Shale, pale tan to grayish tan, includes 1'3" core loss.
34'	34'2"	2"	Sandstone, pale grayish brown to rust brown, fine grained.
34'2"	34'9"	7"	Shale, pale gray to pale grayish tan.
34'9"	35'1"	4"	Sandstone, pale grayish tan, fine grained.
35'1"	39'6"	4'5"	Shale, pale gray to pale grayish tan, includes 2' core loss.
39'6"	55'6"	16'	Shale, gray to grayish green, contains interbeds lenses and partings of gray fine grained sandstone and gray fine grained shaly sandstone.
55'6"	59'	3'6"	Shale, yellowish tan to pale brown.
59'	59'4"	4"	Shale, greenish gray.
59'4"	59'6"	2"	Sandstone, pale gray to pale grayish tan, fine grained.
59'6"	59'9"	3"	Shale, pale olive drab to pale gray.
59'9"	59'10"	1"	Sandstone, pale gray to pale grayish tan, fine grained.
59'10"	61'1"	1'3"	Shale, grayish maroon to pinkish maroon to olive drab; contains interbeds of grayish maroon fine grained sandstone.
61'1"	61'8"	7"	Sandstone, maroon, coarse grained, ferruginous, contains quartz granules and clay galls, vuggy.
61'8"	61'11"	3"	Shale, olive drab to maroon.
61'11"	64'2"	2'3"	Sandstone, maroon, fine to medium grained, ferruginous, contains widely scattered maroon shale partings parallel to the bedding planes. Includes 4" core loss.
64'2"	66'2"	2'	Sandstone, maroon, coarse grained, highly ferruginous, conglomeratic; contains quartz granules, includes 2" core gain.
66'2"	66'4"	2"	Shale, yellowish tan.
66'4"	66'5"	1"	Shale, drab maroon.

Middle
5/12/8

<u>Depth in feet</u>			<u>Description</u>
<u>From</u>	<u>To</u>	<u>Thickness</u>	
66'5"	66'7"	2"	<u>Sandstone</u> , maroon, coarse grained, ferruginous.
66'7"	67'	5"	Shale, olive green to maroon, contains 1/4 inch parting of maroon fine grained ferruginous sandstone at 67'.
67'	67'2"	2"	Shale, maroon.
67'2"	67'6"	4"	<u>Sandstone</u> , maroon, coarse grained, ferruginous, contains quartz granules, conglomeratic.
67'6"	71'6"	4'	Shale, maroon, contains 1/4 inch to 1 inch thick interbeds of maroon fine grained ferruginous sandstones.
71'6"	75'3"	3'9"	<u>Sandstone</u> , maroon, coarse grained, conglomeratic, highly ferruginous, contains large quartz granules rust brown clay pellets and contained vugs.
75'3"	76'6"	1'3"	Shale, maroon, contains 1" interbeds of grayish maroon fine grained sandstone.
76'6"	76'6.5"	0.5"	Shale, grayish green.
76'6.5"	76'10"	3.5"	<u>Sandstone</u> , drab maroon, fine grained, shaly, contains abundant maroon shale partings.
76'10"	77'2"	4"	<u>Sandstone</u> , drab maroon to grayish maroon, fine grained.
77'2"	77'3"	1"	Shale, pale greenish gray.
77'3"	77'9"	6"	<u>Sandstone</u> , maroon, fine grained, shaly, contains abundant maroon shale partings parallel to the bedding planes.
77'9"	78'10"	1'1"	Shale, olive drab to grayish maroon.
78'10"	79'	2"	<u>Sandstone</u> , maroon, fine grained, shaly, contains abundant partings of maroon shale.
79'	79'3"	3"	Shale greenish gray.
79'3"	79'9"	6"	Shale, maroon, contains partings of maroon fine grained sandstone parallel to the bedding planes.
79'9"	80'1"	4"	Shale, grayish green.
80'1"	80'9"	8"	<u>Sandstone</u> , maroon, fine grained, shaly, contains abundant maroon shale partings.

<u>Depth in feet</u>			<u>Description</u>
<u>From</u>	<u>To</u>	<u>Thickness</u>	
80'9"	82'9"	2'	Shale, greenish gray to maroon, contains 1/2 inch interbeds of maroon, fine grained ferruginous sandstone.
82'9"	85'	3'3"	Sandstone, maroon, fine grained, ferruginous, contains sporadic partings of maroon and pale green shale parallel to the bedding planes.
85'	86'10"	1'10"	Sandstone, maroon, fine to coarse grained, ferruginous, contains quartz granules, conglomeratic contains sporadic maroon and grayish green shale partings parallel to the bedding planes.
86'10"	87'5"	7"	Shale, yellowish tan to yellowish brown.
87'5"	89'10"	2'5"	Shale, greenish gray, contains sporadic lenses of greenish gray fine grained shaly quartzitic sandstone and sporadic maroon shale partings.
89'10"	92'10"	3'	Shale, pale greenish gray.
92'10"	93'	2"	Sandstone, maroon, coarse grained, conglomeratic, highly ferruginous; contains quartz granules.
93'	93'5"	5"	Shale, greenish gray.
93'5"	93'6"	1"	Sandstone, grayish maroon, fine grained.
93'6"	94'6"	1'	Shale, greenish gray.
94'6"	95'	6"	Quartzite, greenish gray, fine grained, 5" left in hole.

End of hole.

Log of Split Core T6-15A

Date Logged: November 18, 1961

Depth in feet			Description
From	To	Thickness	
Sample 1 (4' - 10')			
4'	7'10"	3'10"	Sandstone, grayish maroon, fine to medium grained, ferruginous, weathered; contains yellowish brown clay galls and contained vugs. Includes 1'9" core loss.
7'10"	10'	2'2"	Sandstone, maroon, medium grained, contains sporadic quartz granules, ferruginous, includes 7" core loss.
10'	15'5"	5'5"	Not sampled. See log.
Sample 2 (15'5" - 20'6")			
15'5"	18'	2'7"	Sandstone, maroon, coarse grained, quartzitic ferruginous, friable, contains abundant rounded quartz grains, includes 1'6" core loss.
18'	18'4"	4"	Shale, grayish maroon.
18'	20'9"	2'9"	Sandstone, maroon, fine grained to coarse grained, ferruginous; contains roughly 40% maroon shale partings parallel to the bedding planes, includes 9" core loss.
Sample 3 (20'9" - 25')			
20'9"	25'	4'3"	Sandstone, maroon, coarse grained, conglomeratic, ferruginous, contains abundant rounded quartz granules and sporadic contained vugs. Includes 1' core loss probably maroon shale.
25'	26'6"	1'6"	Not sampled see log.
Sample 4 (26'6" - 30')			
26'6"	26'10"	4"	Sandstone, pale grayish maroon, fine grained, ferruginous.
26'10"	30'	3'2"	Sandstone, maroon, fine to coarse grained, ferruginous, broken, contains partings of maroon shale and maroon clay galls.
30'	61'1"	31'1"	See log.

Depth in feet			Description
From	To	Thickness	
Sample 5 (61'1" - 66'2")			
61'1"	61'8"	7"	Sandstone, maroon, coarse grained, ferruginous, contains quartz granules and clay galls, vuggy.
61'8"	61'11"	3"	Shale, olive drab to maroon.
61'11"	64'2"	2'3"	Sandstone, maroon, fine to medium grained, ferruginous, contains widely scattered maroon shale partings parallel to the bedding planes. Includes 4" core loss.
64'2"	66'2"	2'	Sandstone, maroon, coarse grained, highly ferruginous, conglomeratic, contains quartz granules, includes 2" core gain.
66'2"	67'2"	1'	Shale, yellowish tan to olive green to maroon, contains 2" interbed of maroon coarse grained ferruginous sandstone at 66'5", not sampled see log.
Sample 6 (67'2" - 67'6")			
67'2"	67'6"	4"	Sandstone, maroon, coarse grained, ferruginous, contains quartz granules, conglomeratic.
67'6"	71'10"	4'4"	Shale, maroon, contains 1/4 inch to 1" interbeds of maroon, fine grained ferruginous sandstone, not sampled.
Sample 7 (71'10" - 75'3")			
71'10"	75'3"	3'5"	Sandstone, maroon, fine to coarse grained, highly ferruginous, conglomeratic, contains large quartz granules and contained vugs.
75'3"	80'1"	4'10"	Shale, greenish gray to olive drab contains interbeds and partings of maroon, fine grained shaly sandstone.
Sample 8 (80'1" - 80'9")			
80'1"	80'9"	8"	Sandstone, maroon, fine grained, shaly, contains abundant maroon shale partings.
Sample 9 (82'9" - 86'7")			
82'9"	85'4"	2'7"	Sandstone, maroon, fine grained, ferruginous, contains maroon and pale green shale partings parallel to the bedding planes.

<u>Depth in feet</u>			<u>Description</u>
<u>From</u>	<u>To</u>	<u>Thickness</u>	
85'4"	86'7"	1'3"	Sandstone, maroon, fine to coarse grained, ferruginous, contains maroon shale partings parallel to the bedding planes.
86'7"	93'10"	6'3"	Shale pale greenish gray contains lenses of greenish gray fine grained sandstone. See log for detailed description. Sample 10 (92'10" - 93')
92'10"	93'	2"	Sandstone, maroon, coarse grained, conglomeratic, highly ferruginous, contains quartz granules.

End of Sampling on T6-15A.