Mich. Newport Lake, White Pine: [specimens 18907-18915,18944-18953]. No. 472 1916-1917

Leith, C. K. (Charles Kenneth), 1875-1956
[s.l.]: [s.n.], 1916-1917

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FIELD SECTION BOOK

Newport Mine July 6, 1916
(Report to Newport Mining Co.)

1st

2nd

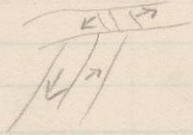
3rd

4th

5th

6th

7th

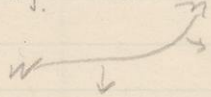


8th

Lake Mary Kan Pt July 10-12 1916
With T. W. Paine, Mr. Rand Supt
Mr. Hatch Genl Mgr. + Mr. Schmidt

Algonk
Adventure +

White Pine July 13, 1916 White Pine
Hulett + Gould



(For translation of notes see page 18).

Specimens in

Specimens collected by C. K. Leith, July, 1916.

UW

18907 Metallic copper from vein crossing bedding of black slate between sandstone lodes in White Pine Mine, Keweenaw copper district, Michigan.

18908 Slate carrying copper, White Pine Mine.

18909 Nonesuch sandstone carrying copper, White Pine Mine.

18910 Nonesuch sandstone carrying metallic copper showing veins of secondary chalcocite, White Pine Mine.

18911 Nonesuch sandstone carrying copper showing vein of metallic copper, White Pine Mine.

18912 Copper-bearing shale from between sandstone lodes, White Pine Mine, showing mud cracks.

18913 Nonesuch sandstone, White Pine Mine, showing vein of copper and chalcocite in same vein.

18914 Amygdaloidal copper from Newport exploration on Black River about 8 miles north of Bessemer, Michigan.

18915 Amygdaloid from Lake Mine blown out in blasting, cause of form unknown.

S. T. R.

	6.1 #1.11 1 96 (6,462,220 Exp 1x 7,374,407

74,908

Newport Aug 21, 1916

(Report to Wm. A. Read & Co.)

[illegible] 1st 1916.

[illegible] [illegible] 3,764,000 [illegible] 15% [illegible] 10% [illegible]

[illegible] 19th [illegible] 4,167,966 [illegible]

[illegible] 4,920,000 [illegible] 15% + 10%

[illegible] 10% [illegible] ~~4428~~ 4,228,000 [illegible]

[illegible] 4,428000 [illegible] 19th [illegible]

[illegible] 4,228,000 [illegible] 19th [illegible]

[illegible] 19th [illegible] 19th [illegible] 19th 399,600

20th 193,900

[illegible] 296,750 [illegible]

[illegible] 100 [illegible] 10 [illegible]

76.5% [illegible]

[illegible] 270,000 [illegible]

100 [illegible] 19th [illegible]

20 [illegible] 120 [illegible] 100 [illegible]

[illegible] 20% [illegible]

[illegible] 19th [illegible] 399,600. [illegible]

100 [illegible] 15% [illegible] 10% [illegible] 11 [illegible]

[illegible] ~~10%~~ 10 [illegible]

[illegible] 2,779,036 [illegible] 19th [illegible]

[illegible]

[illegible] 19th [illegible]

300 [illegible] 2 [illegible]

Bonus ... 132,000 ... 15%+10%

... 100' ... 15%+10%

... 18,200 ... 10 ...

140,250 ...

... 426,095 ...

... 7,705,381 ...

... 1st ... Aug 17

648,114

... 648,114 ... 341,096 ... (7%) ...

... 20th ... 113,900 ...

... 100' ... 2,844,000 ...

... 1st ... 18th ... (17,600 ... 5500 ... 18th)

... 18th ... 15th ... Paint ...

... 18th ... 15th ... 5,300 ...

... 18th ... 1500 ... 91,000 ...

... 19th ... 2600' = 9,880 ...

Bonnie x [illegible] Davis [illegible]

[illegible]

[illegible] 122,000 [illegible]

[illegible]

[illegible] 16th [illegible]

Blackwell [illegible] 230,000 x [illegible] 10% [illegible] = 207,000 tons
[illegible] 200,000

[illegible] 1st [illegible]

Melrose	2,083,400	60%
New Era No 1	175,000	
Montrose	978,640	26%
New Era No 2	526,960	14%
Ellen (Bonnie)	132,000	

[illegible] 18 19 + 20 [illegible] 1st 1916 x
[illegible]

[illegible] 3,300 8 [illegible] 63,000
Bonnie [illegible] 1,000

[illegible] 19th [illegible] 21st [illegible] 2440 x
[illegible] 3800 [illegible] 8 [illegible]
[illegible] 6 [illegible]
[illegible]
[illegible] 13' 1" [illegible] 21' 1"

Mayville Aug 22, 1916

[illegible] 1913

[illegible] 1914. 15 [illegible]

[illegible]

6810' [illegible] 71914 [illegible] 1100' [illegible]
[illegible] 35' [illegible]

[illegible] 800 [illegible]

[illegible]

[illegible] 1500 [illegible]

20, 50 [illegible] Phos [illegible]

S. T. R.

a = 200
b = 1700
C = $401,450
E - L - S

74,908

Amrit

S. T. R.

[illegible] 204

[illegible] 1704

[illegible] $1,284,318

[illegible] 1,310,030

Palms

Norman 1,146,352
Town 1,146,352
2,292,704

15% + 10% = 1.1

11th 111,000
100' 15% + 10% = 849,150 × 60 = 844,000

Install 62,641 × 3,199,346
100' 700'
100'
240
170'

Palms 390,000
150' 30' 1400'
75' (150+0÷2)

2000'

S. T. R.

74,908

Keweenaw

715,275 L.85+90% ×

11th
64,450 × 100'. 15+10%
12.669 493.042 ×
1,220,956

Norman 7×

647,900 1st
24,000 ×
48,840 11th 113,290 15,116

940,000

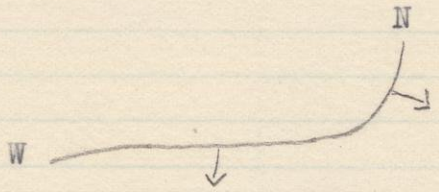
935,000 1st (12)
647,900
24,000
940,000 11th
2,546,900 tons
90%
2,292,210

11th+11th. 750' 10th

White Pine, July 13, 1916.

Notes by C. K. Leith.

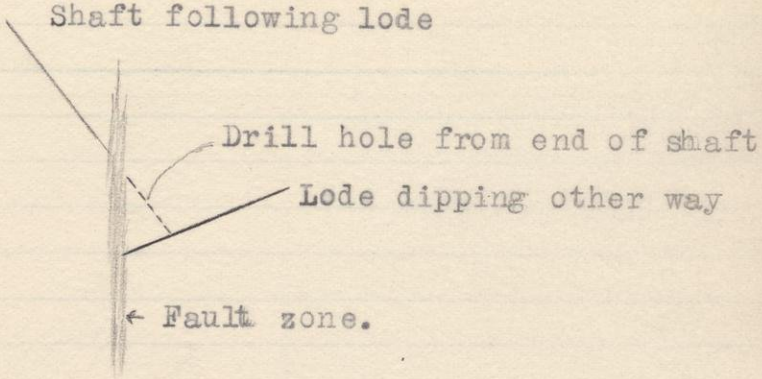
The mine is located near a bend of the formation like this.



Dips to the south and flattens to the east. Shaft down seven levels. Mining is in two lodes, upper one called No. 1 and lower one No. 2. No. 1 is most worked. Lodes five to eight feet thick. Below the lowest lode is a red sandstone and conglomerate and between the two lodes is "parting shale" or black graphitic shale which also carries value which cannot be recovered by mechanical separation. Hanging wall is sandstone. For general succession see map of the district by Mead, containing cross section by Seaman.

The remarkable structural feature through out the lode is the abundance of normal faults cutting the formation at all angles. The existence of horizon markers makes it easy to follow these faults. Net result of the faulting is to drop the beds in a series of steps in going east. One of the most remarkable exhibitions of faulting I have ever seen. Workings very irregular because of faulting.

In the slate a secondary cleavage is developed in the other bands. Note also the existence of one great fault mainly to the south of the present workings and mainly to the south of the drill holes. This strikes northwest and southeast and stands almost vertical. Section through the shaft shows the following:



Note existence of mud cracks in the shale, also false bedding.

Copper occurs in fine flakes in the sandstone and in the shale, principally in the former. The part in the sandstone only can be recovered. Copper seems to have been deposited at the time the bedding was made. It is finely bedded along with the other minerals and is also cross bedded. In addition to this first generation of copper there is considerable chalcocite and native copper, but this is uniformly in sheets or cracks crossing the bedding and therefore later.

Suggest that the faulting is of the kind which ordinarily accompanies the settling and drying of sediments.

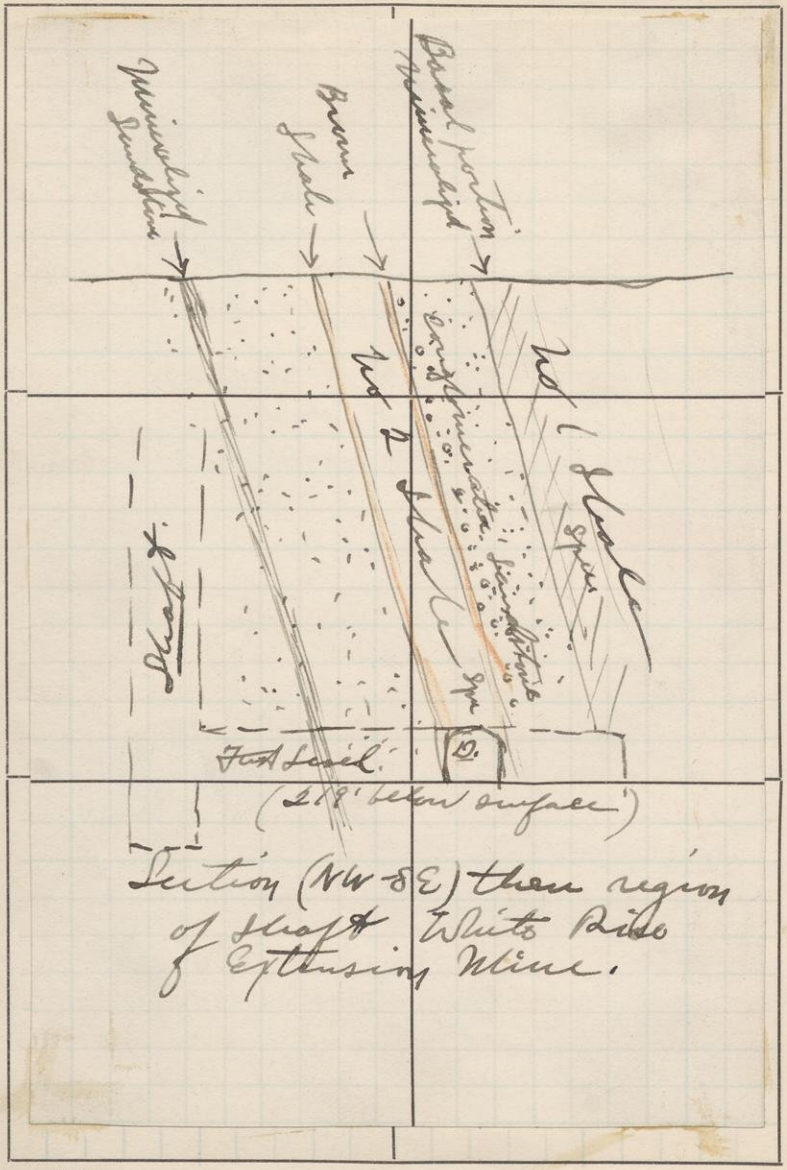
Copper recovered is about 65% of total. Most of the copper in the shale is lost. Copper recovered by mechanical separation.

Whitepine Extension Jan. 30-31, 1917
With Angus Smith
Thos Dunglas (Kearsarge, Mich)
A. E. Seaman
R. N. Hunt.

Miscellaneous
Records of holes 1406 + 718 missing
Dunglas will look up + send.
Note lode 90ft chalcocite in
lower part of quartz schist - about
30' above N-1 shale. Intervening
is 4-6 feet of grit and 25' of barren
schist. Lode 20" thick. Has been
found in 5 holes on Sect. 3.
Remaining holes not yet examined
for this lode.
Saw complete cores of holes 721 + 1307
at Seamans lab. Noted conspicuous
character of grit in Trade 55.
Ores lowings distinctly darker + more
carbonaceous.
Seaman reports "coal" nodules + seams.
Also has drawn out magnetite from
old Nonesuch specimens.
Complete succession shown in
Seamans sections.

Shumm Mining Costs

S. T. R.



Section (NW-SE) thru region of shaft White Rido Eptuning Mine.

74,908

Specimens from None Such formation
Sec. 7, T. 50 N., R. 43 W.
WHITE PINE EXTENSION MINE.

Collected by C. K. Leith, 1917.

U.W.Nos.	
18944	Conglomerate sandstone from base of sandstone bed which rests upon the "No. 2 shale" of White Pine Extension Mine, from 1st level said mine.
18945	Copper-bearing shale from so-called "No. 1 shale" in the White Pine Extension Mine, 1st level. This is the bed overlying the sandstone from which No. 18944 was taken. Specimen from basal five feet, the portion carrying the values.
18946	"Brown shale" from the barren and so-called "brown shale" layer a foot plus or minus thick lying upon footwall side "No. 2 shale" (main copper bearing horizon) in White Pine Extension Mine.
18947	From copper bearing portion or main mass of the so-called "No. 2 shale" of the White Pine Extension Mine, 1st level, E. drift. This is the main ore-bearing horizon shown by present development and is a bed four to six feet thick lying beneath the sandstone from which Specimen No. 18944 was taken. (See sketch).

18948 Mineralized sandstone from the copper-bearing vein (18" to 24" thick), lying 10 to 11 inches to the footwall beneath shale No. 2. (See sketch). Specimen from a short crosscut 100 ft. west of shaft upon the first level of the White Pine Extension Mine. This seam (and probably these specimens) runs about 60# cu. per ton, the richest and narrowest copper-bearing horizon shown thus far in development of the mine.

18949 "No. 2 shale" from west drift, 1st level, White Pine Extension Mine. Taken from a point about 450 feet west of shaft. Same bed as that from which No. 18947 was taken.

18950 Sandstone (unmineralized) from footwall formation beneath the "No. 2 shale". Specimen from shaft crosscut White Pine Extension Mine, 1st level, or stratigraphically below the mineralized bed from which Nos. 18948 18951 were taken.

18951 Copper-bearing sandstone from the mineralized zone described for specimen No. 18948. This specimen from shaft crosscut on 1st level White Pine Extension, or 8 ft. north of "No. 2 shale."

18952 No. 2 shale from dump pile of White Pine Extension Mine.

18953 "Brown shale" from dump of White Pine Extension Mine. For description "brown shale" see Spec. No. 18946.

Samples of ore taken from shoot leading to grinding mill of the White Pine Mine (not White Pine Extension).

7.40 [illegible]

[illegible] 6.21

6.30 [illegible] 7.50

7.35 [illegible]