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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

- 1st $\sqrt{2} \cdot \sqrt{2} = 2$
- 2nd $\sqrt{2} \cdot \sqrt{2} = 2$
- 3rd $\sqrt{2} \cdot \sqrt{2} = 2$
- 4th $\sqrt{2} \cdot \sqrt{2} = 2$
- 5th $\sqrt{2} \cdot \sqrt{2} = 2$
- 6th $\sqrt{2} \cdot \sqrt{2} = 2$
- 7th $\sqrt{2} \cdot \sqrt{2} = 2$



- 8th $\sqrt{2} \cdot \sqrt{2} = 2$
- 9th $\sqrt{2} \cdot \sqrt{2} = 2$

Lake Myre Kan Pt July 10-12 1916
With F. W. Paine, Mr. Reed Supt
Mr. Halbur Civil Engr. + Mr. Schwartz

$\frac{1}{\sqrt{2}} \left(\begin{array}{c} 1 \\ 0 \\ 0 \\ 1 \end{array} \right) = \frac{1}{\sqrt{2}} \left(\begin{array}{c} 1 \\ 0 \\ 0 \\ 1 \end{array} \right)$

① 5. 13 6 → 7 12 13
1 2 7 12 20 6 12 8 → 1 12 13
1 2 50, 350' × ~~12~~ → 1 2 6 13 → 1 2 13 14

② $\{ \sigma \rightarrow \neg \neg \sigma, \neg \neg \sigma \rightarrow \sigma \}$

(3) $\frac{1}{x^2} = x^{-2}$
 $\frac{d}{dx} x^{-2} = -2x^{-3} = -\frac{2}{x^3}$

[illegible]

③ 1. A.C. 16 1/2 - 0 - 2. 7 1/2 x 13
A.C. 16 x

[Handwritten notes, likely bleed-through from the reverse side of the page.]

Handwritten notes in Arabic script, likely a list or index, with some underlined entries. The text is written on a piece of paper with a vertical red margin line on the left. The handwriting is cursive and somewhat difficult to decipher due to the script and the way the ink has spread. There are several lines of text, some of which are underlined. The notes appear to be organized in a list-like fashion, possibly representing a collection of items or a series of entries. The paper is aged and shows some signs of wear, including creases and discoloration.

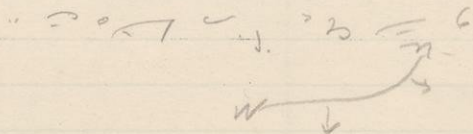
✓ 29. 2. 2020

2458 + 6 = 2464

A° 13 p. 10 1 3 V. longu
 p. 6 1 2 3 4 5 6 7 8 9 10
 60 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
 100 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
 100 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

White Pine July 13, ¹⁹¹⁶ Time
J. Hickey + Gould

8



h. p. w. s. e. x

h. 6' 7" x

226 16. 27 x 1' 10" x

Ab 5-8' L x R. A. A. 10' x

226 10" x 5" L x 1' 10" x

1' 10" x 1' 10" x 1' 10" x

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1' 10" x 1' 10" x 1' 10" x

(For translation of notes see page 18).

8-7-5 x 7-6-5 x 5-4-3
5-4-3

0.6

5-4-3 x 5-4-3 x 5-4-3
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Specimens in 7-6-5

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 mudcracks.
- 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.

	<p>6-1 #1.11 2 90 C 6,462,220 E 7,374,467</p>

Newport Aug 21, 1916
(Report to Wm. A. Read & Co.)

1 - L - 1.15 + 1916.

→ 2x $\frac{3,764,000}{2} \sim L. 15\% \sim 10\% \sim 2x$

26.154 $\frac{3,764,167,966}{2}$

→ 2x 4,920,000 1.15% + 10%

→ L. 10% - 4428 4,228,000 x 2x

4,428,000 6 19th

→ 4,228,000 6 19th

V 19th V 19th 19th 399,600

20th 193,900

→ 296,750

1.15% 100' 10

76.5% 100' 10

→ 802,270,000 100'

100' V 19th

20200 120' V 100' 100'

100' V 100' 100'

→ 2) 19th 399,600. 56

100' 1.15% 100' 100' 100'

→ 100' 100' 100'

→ 2,779,036 V 19th 100'

100'

→ 19th 100'

200' 100' 200' 100' 100'

S.

T.

R.

	~ 206 ~ 1700 $C = \$401.450$ $\sim 1 \sim 3$

Amvil $i = 0.626, 000$ $f. 1st 1916$ ~ 21.000
 $\sim 717, 000$ ~ 1.000 ~ 1
 $626, 000$ ~ 2 $\sim 15 \times 10 \times 1$ $(62.815, 000)$
 ~ 10
 $\sim 11th$ 27000 ~ 1
 $\sim 0.993, 000$ ~ 1000 ~ 1000
 $\sim 29, 000$

~ 21.000 ~ 1000 ~ 1000
 ~ 1000 ~ 1000
 $\sim 11th + 10th$ ~ 1 ~ 1
 $\sim 18th$ ~ 2 $\sim 18th$ ~ 1
 ~ 1000 ~ 1000 ~ 1000
 ~ 1000 ~ 1000 ~ 1000 ~ 1000

~ 1000
 ~ 1000

~ 1000 ~ 1000 ~ 1000 ~ 1000
 ~ 1000 ~ 1000 ~ 1000 ~ 1000
 ~ 1000 ~ 1000 ~ 1000 ~ 1000

7

$i = 626, 000$ ~ 1000 ~ 1000
 $\sim 440, 000$
 $\sim 186, 000$
 ~ 1000 ~ 1000 ~ 1000

~ 1000 ~ 1000 ~ 1000 ~ 1000
 ~ 1000

S.

T.

R.

<p>no 2200 b 1704 LC \$1,284,318 L 225 1,310,000</p>	

S.

T.

R.

	<p>b - 1000 - 0 - Palms + (# 490, 141. 10 L - 1000 - 52</p>

Keweenaw

h 715,275 L 85+90% L x 6.5

$$\begin{aligned} & \text{11th} \\ & \sim 64,450 \times \sim 100' \text{ } \delta .15+10\% \\ & \sim L 12.669 \rightarrow 493,042 \times \end{aligned}$$

p 1,220,986

x

Norman Tx

$$\begin{aligned} & \sim 100' \times \sim 1.2 \times 1.1 \times \\ & \downarrow \sim 100' \times 647,900 \times 1.15 \\ & \sim 100' \times 24,000 \times 6.5 \\ & \sim 48,840 \times \sim 11th \times 113,290 \rightarrow 15,116 \end{aligned}$$

$$\begin{aligned} & p \text{ } \sim \text{ } \sim 83' \times 6 - \\ & \underline{940,000} \times \sim 1.1 \times \end{aligned}$$

$$\begin{aligned} & \sim 7.5\% \times 935,000 \text{ } \downarrow \sim 1.15 \times (6.2) \\ & \quad 647,900 \text{ } \downarrow \sim 1.1 \\ & \quad 24,000 \text{ } \downarrow \sim 1.1 \\ & \quad 940,000 \text{ } \downarrow \sim 11th \\ & \quad \underline{2,546,900 \text{ } \text{trans}} \\ & \quad 90\% \text{ } \sim 1.1 \times \\ & \quad \underline{2,292,210} \end{aligned}$$

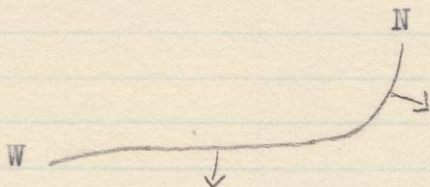
$$\begin{aligned} & \sim 100' \times 10th + 11th \times 150' \times 11th \\ & \sim 100' \times 11th \end{aligned}$$

$$\sim 100' \times 11th \times 150' \times 11th$$

White Pine, July 13, 1916.

Notes by C. K. Leith.

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

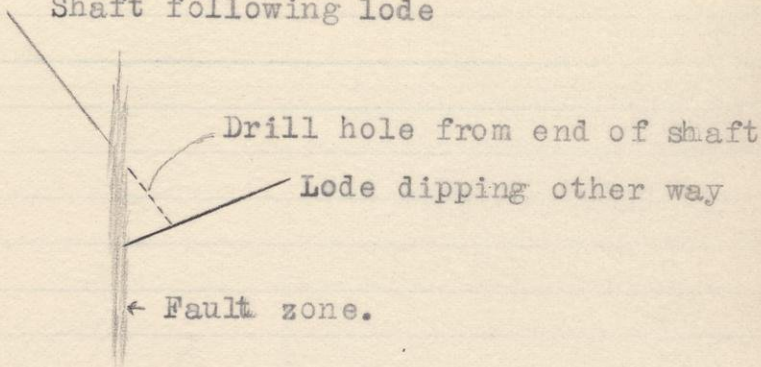


Dips to the south and flattens to the east. Shaft down seven levels. Mining is in two lodes, upper one called No. 1 and lower one No. 2. No. 1 is most worked. Lodes five to eight feet thick. Below the lowest lode is a red sandstone and conglomerate and between the two lodes is "parting shale" or black 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 throughout 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:

Shaft following lode



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.

-3-

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.

White pine Extension Jan. 30-31, 1917
 With Angus Smith
 Near Douglas (Kearsage, Mich.)
 A. E. Seaman
 R. W. Hunt.

Miscellaneous

Records of holes 1406 + 718 missing
 Douglas will look up + send.

Note beds 90th chelcovite in
 lower part of quartz shale - about
 30' above No. 1 shale. Intervening
 is 4-6 feet of grit and 25' of barren
 shale. Beds 20" thick. Has been
 found in 5 holes on Sect. 3.

Remaining holes not yet examined
 for this bed.

Saw complete cores of holes 721 + 1307
 at Seaman's lab. Noted conspicuous
 character of grit in beds 55.

See horizons distinctly darker + more
 carbonaceous.

Seaman reports "coal" nodules + seams.
 Also has drawn out magnetite from
 old Yonewick specimens.

Complete succession shown in
 Seaman's sections.

- 2000 12 1 - 2000 12 9

UN (1-1-62)

Shuman mining costs, A.P. + 1500

9. $\Rightarrow \text{C} \rightarrow 126 \text{ } 25-30' \times 5' \text{L} \times 1 \text{C.}$

2, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 8

807

$$h \circ \tau = \tau \circ h \quad \text{Ag.} = 1 \Rightarrow \text{L.C. } \tau$$

7. { 60' \rightarrow 15' 2. 150'

$\Delta = 1 - 2.25 - 1/4 \cdot 1.25 = 0.75$

جنگل کے درختوں کا پتہ

32. 27. 8. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 841. 842. 843. 844

1-5-7 45-# 7 J 2 30-# 1 2. 10-#

✓ 9x - 2 1/2 15-25% Cu ✓ r = 6

V_x center of gravity Helium 6.

→ 1 ✓ 2.6.8 g. x

$\rightarrow 135 \pm 0.20\%$ $\rightarrow 20\%$ $\rightarrow 20\%$ $\rightarrow 20\%$

1000 1960 \$1.00 max 60-6x 66 w/cr

3) $L(1) = 1.580,00$ \rightarrow $\frac{1}{1.580,00} = 0,00063291139$ ✓

of - 100

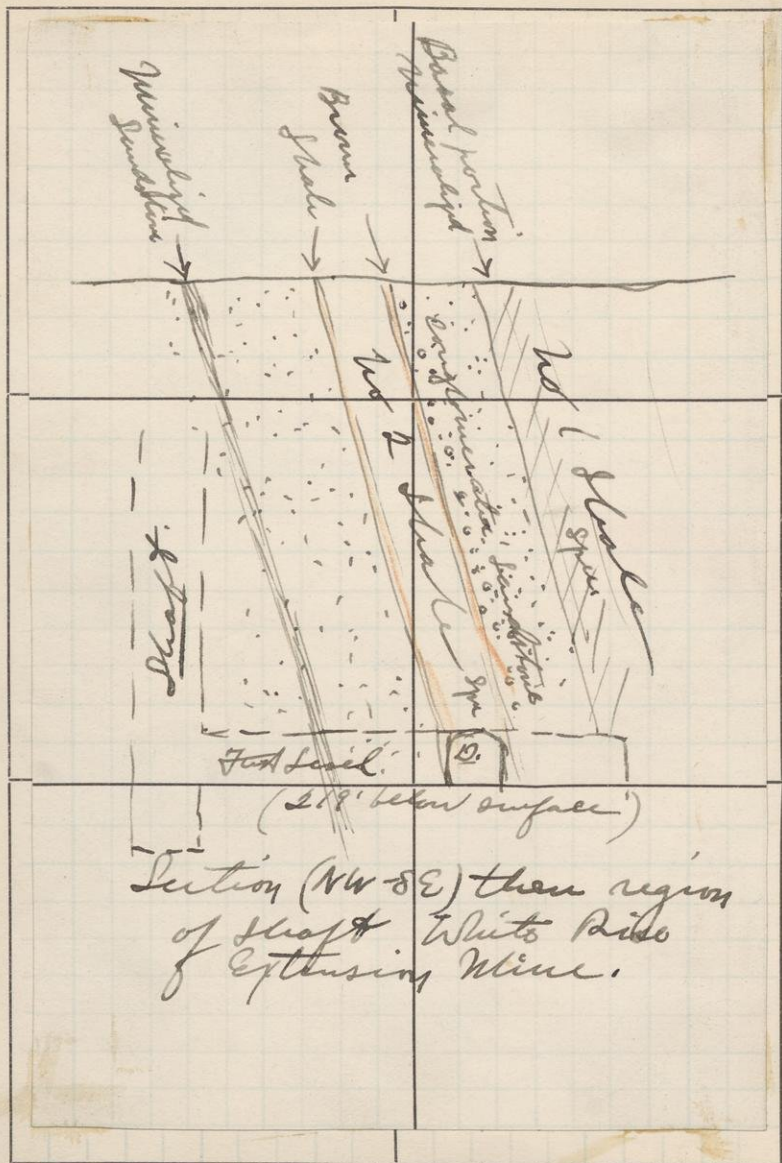
$\rho \cdot \dot{x} = 1 \times 2 \times 10^7$ etc $\rho \cdot \dot{y} = 1 \times 10^7$

4

S.

T.

R.



23

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 and 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.

Lost ?

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

7.40 a —

176 6.21

6:30 J. L. 6 7.50.

7.55 L —

