

-002057

obsolete
in favor of
Paul's memo
July 4, 1972

MEMORANDUM

TO: M. O. Hampton
FROM: J. R. McLachlan
DATE: May 8, 1972
SUBJECT: ORE MINING PLAN: MAY - DECEMBER, 1972

This memorandum outlines an ore mining plan from May 1 - Dec. 31, 1972 designed to feed the concentrator 8000 TPD at a combined grade of 10.4% (3.87% Pb, 6.53% Zn).

Except in May, two faces of ore have been developed in every month for simultaneous mining. This approach is taken for two reasons:

- (1) to ensure a proper blend of ore to meet the 10.4% requirement at 8000 TPD.
- (2) to assist the mine in meeting target objective of 8000 tons of crusher feed per day in the shortest possible time, i.e. one crushing shift.

Although the grade of ore in any one month may not strictly be 10.4%, the month-month average over the balance of the year averages 10.4%.

Allowance has not been made for stockpiling of any ore. Sources of mill feed are varied enough and milling rate is high enough that this can be kept to a minimum. If some stockpiling does occur to meet short term requirements then these amounts must be reclaimed as soon as possible.

Because the exact date of mining "high bottom" on 3870 bench has not been definitely established this source of mill feed has not been shown on the schedule. Ore from this bench will be "free" as far as this schedule is concerned. A conservative estimate to take the bench down to correct elevation of 3870 bench places this at 188,500 T tons averaging 4.58 Pb and 6.52 Zn.

J. R. McLachlan
J. R. McLachlan
Planning Engineer

JRM/mm

cc. R. L. Haffner, N. G. Cornish, N. G. Stephenson, H. M. Grenier, P. M. Pettigrew

MAY, 1972

<u>Bench</u>	<u>Block</u>	<u>Tons</u>	<u>Pb</u>	<u>Zn</u>	
3950	70-9*	23,400	3.9	6.6	10.5 ?? ✓
	70-4*	115,200	4.0	7.0	11.0. ??
	66-14	5,700	3.6	6.7	
	70-2	58,500	3.3	6.6	
	70-3	37,200	2.0	8.2	
3870	Clean-Up	8,000	4.5	7.5	12.0????
		<u>248,000</u>	<u>3.53</u>	<u>7.06</u>	
			<u>10.59</u>		

JUNE, 1972

3950	70-3	21,900	2.0	8.2	
	70-2	4,000	3.3	6.6	
	70-16	11,300	3.1	6.8	
	65-4	81,800	1.9	5.8	
Stockpile	H.G.	121,000	4.5	7.0	
		<u>240,000</u>	<u>3.30</u>	<u>6.68</u>	
			<u>9.98</u>		

* Using grade from blast holes (more informative) rather than projecting from D.D.H.

JULY, 1972

<u>Bench</u>	<u>Block</u>	<u>Tons</u>	<u>Pb</u>	<u>Zn</u>
3950	65-4 ✓	19,200	1.9	5.8
	70-1 ✗	98,700	2.9	6.8
	66-24 ✓	41,400	2.5	6.1
3830 ✓	Ramp	88,700	5.8	7.7
		<u>248,000</u>	<u>3.80</u>	<u>6.93</u>
			<u>10.73</u>	

13.5

AUGUST, 1972

3830	Ramp	41,500	5.1	6.8
3910	70-15 ✗	9,000	5.5	6.5
3910	65-5A ✗	100,200	4.7	5.8
3910	70-4 ✓	22,600	3.4	6.3
3910	70-2 ✓	47,700	2.0	4.0
3870	66-2 66-23 ✓	27,000	5.6	9.1
		<u>248,000</u>	<u>4.26</u>	<u>6.04</u>
			<u>10.30</u>	

14.7

SEPTEMBER, 1972

<u>Bench</u>	<u>Block</u>	<u>Tons</u>	<u>Pb</u>	<u>Zn</u>
3910	66-15 ✓	2,000	4.4 ✓	6.8
3910	70-2 ✗	47,800	2.0	4.0
3910	70-3	6,400	3.7 ✓	6.8
3910	70-16 ✗	65,600	2.4	5.5
3910	70-5 ✓	14,900	3.0	7.8
3910	70-1	2,000	3.0	5.7
3910	65-4	11,500	5.3	8.8
<i>WV 1st.</i> 3870 ✓	66-23	11,600	5.6	9.1
3870 ✓	70-14	60,100	5.2	8.6
3870 ✓	65-5A	18,100	6.0	6.7
		<u>240,000</u>	<u>3.68</u>	<u>6.59</u>
			<u>10.27</u>	

OCTOBER, 1972

3910 ✓	65-4	45,700	5.3	8.8
3910 ✓	66-32	11,300	4.0	7.8
3910 ✓	70-5	10,000	3.0	7.8
3910 ✓	70-1 ✗	110,000	3.0	5.7
3950 ✓	70-9*	33,900	3.9	6.6
3870 ✓	70-5	16,000	3.2	6.6
3870 ✓	66-15	21,100	5.5	6.4
		<u>248,000</u>	<u>3.82</u>	<u>6.69</u>
			<u>10.51</u>	

* Using grade from blast holes rather than D.D.H.

NOVEMBER, 1972

<u>Bench</u>	<u>Block</u>	<u>Tons</u>	<u>Pb</u>	<u>Zn</u>
3910	70-1 ✗	46,700	3.0	5.7
3910 ✓	70-15	10,600	5.5	6.5
3910 ✓	65-5A	56,500	4.7	5.8
3870	66-32 ✗	16,400	3.6	3.9
3870 ✓	70-5	26,900	3.2	6.6
3870	66-15	33,400	5.5	6.4
3870 ✓	70-16	12,400 20,500	2.9	7.3
3870	65-5A	29,000	6.0	6.7
		<u>240,000</u>	<u>4.27</u>	<u>6.09</u>
				<u><u>10.36</u></u>

DECEMBER, 1972

3870	65-5A	29,700	6.0	6.7
3870	70-2 ✓	16,600	3.0	4.5
3870	66-32 ✗	33,000	3.6	3.9
3870	70-5	47,000	3.2	6.6
3870	70-16	58,000	5.5	6.4
3870	70-15	36,200	4.8	7.6
3870	70-1	27,500	2.9	6.6
		<u>248,000</u>	<u>4.31</u>	<u>6.21</u>
				<u><u>10.52</u></u>

Ore Developed for 1973

3870		117,800	4.2	6.8
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	Tons.	P/B	Z.	
JULY	263,000	4.3	6.5	10.8
AUG	263,500	4.7	7.2	11.9
SEP.	255,000	4.2	6.6	10.8
OCT	263,500	4.7	6.8	11.5
NOV	255,000	4.2	6.9	11.1
DEC	263,500	4.5	6.0	10.5
	1,563,500	4.4	6.7	

11.3.20.

10. 200
 11. 200
 12. 200
 13. 200
 14. 200
 15. 200
 16. 200
 17. 200
 18. 200
 19. 200
 20. 200
 21. 200
 22. 200
 23. 200
 24. 200
 25. 200
 26. 200
 27. 200
 28. 200
 29. 200
 30. 200
 31. 200

OCT.

	3870	66-23 ✓	11,600	???	5.6	9.1	6496	10556	14.7
	3870	0 66-15 ✓	33,400		5.5	6.4	18370	21326	11.9
	3870	0 65-5A ✓	29,000		6.0	6.7	17 400	19430	12.7
	"	0 70-5 ✓	47,000		3.2	6.6	15040	31020	9.8
		0 70-16 ✓	58,000		5.5	6.4	31900	37120	11.9
		0 70-15 ✓	36,200		4.8	7.6	17376	27512	12.4
242,700		0 70-1 ✓	27,500		2.9	6.6	7975	18150	9.5
3870		73 ✗	<u>20,300</u>		<u>4.2</u>	6.8	8526	13804	11.0
			263,500		4.7	6.8	123083	178968	11.5

NOV	3870	73	97,500		4.2	6.8	40950	66300	11.0
	3910	70-1 →	156,700		3.0	5.7	47010	89319	8.7
	3830	70-14	87,800		4.9	7.9	392	632	12.8
			<u>262,000</u>		<u>3.5</u>	6.1	88352	156251	9.6

DEC	3830	70-14	42,200		4.9	7.9	24108	38868	12.8
		65-5A	100,000		4.9	5.6	49000	56000	10.5
		66 15	100,000		4.0	5.4	40000	54000	9.4
		70-5	19,300		4.3	5.9	6149	8437	10.2
			263,500		4.5	6.0	119257	157305	

138
50,000
8,000.

~~scribbles~~

33
~~scribbles~~
3120

SEPT.

3910	65-4	75,700	5.8	8.8	24221	40,216	✓
	66-32	11,300	4.0	7.8	4520	8814	✓
	65-5A	56,500	4.7	5.8	26555	32770	✓
3870	66-15	21,100	5.5	6.4	11605	13504	✓
	70-16						
	70-16	2500	2.9	7.3	725	1025	✓
	70-5	26900	3.2	6.6	8608	17754	✓
L.G SP		2200	3.5	6.0	770	1320	
3910	70-15	10,600	5.5	6.5	5830	6890	✓
	70-1	78200	3.0	5.7	4740	89579	✓
		255,000	4.2	6.6	23460	44574	
					106,294	167667	

10.8

NOV.	3910	3870	70-1	75,500	3.0	5.7	23550	44745	
	3570		70-14	60100	5.2	8.6	31252	51686	
			65-5A	18100	6.0	6.7	10860	12127	
	3970	(1973)		97500	4.2	6.8	40950	66300	
				255	4.2	6.9	106,612	174858	11.1

JULY

	39-50	• 70-4	25,000	4.0	7.0	1000	1750	✓	11
		• 66-24	25,000	2.7	6.3	675	1575	✓	9
	3870	FLOOD	188,000	4.6	6.5	8648	12220		11.1
used in	H.G	S.P.	25,500	4.0	7.0	1000	1750		11.0
June			<u>263,500</u>	4.3	6.5	<u>11,323</u>	<u>17295</u>		10.8

AUG

	3830	• RAMP	88,700	5.8	7.7	51446	68299	✓	13.5
	38300	✓	41,500	5.1	6.8	21165	28220	✓	11.9
	3870	• 66-23	27,000	7.5-6	9.1	15120	24570	✓	14.7
	3910	70-5	24,900	3.0	7.8	7470	19422	✓	10.8
	3910	70-1	2,000	3.0	5.7	600	1140	✓	8.7
185	3910	65-4	11,500	5.3	8.8	6095	10120	✓	14.1
	3950	70-9	33,900	3.9	6.6	13221	22374	✓	10.5
235.5	3870	• 70-5	16,600	3.2	6.6	5120	10560	✓	9.8
28	3870	• 70-16	18,000	2.9	7.3	5220	13140	✓	10.3
263.5		66-15	<u>263,500</u>	4.7	7.2	<u>125457</u>	<u>191845</u>		11.9

SEPT	3870	66-23	11,600	5.6	9.1				14.7
	3870	70-14	60,100	5.2	8.6	31252	51686		13.8
	3870	65-5A	18,100	6.0	6.7	10860	12127		12.7
	3910	65-4	45,700	5.3	8.8	34221	40216		14.1
	3910	66-32	11,300	4.0	7.8	4520	8814		11.8
	3870	66-15	21,100	5.5	6.4	11605	13504		11.9
	3910	65-5A	56,500	4.7	5.8	26555	32770		10.5
	3870	70-16	2,500	2.9	9.3	925	1825		10.2
253.8	3870	70-5	26,900	3.2	6.6	9608	17754		9.8
	H.G. SP.		2,200	3.5	6.0	970	1320		9.5
			255,000						
	3910	70-15	10,600	5.5	6.5	5830	6890		12
			<u>255,000</u>	4.9	7.3	<u>124946</u>	<u>186906</u>		12.2

Pb Zn

July

3950 E	80,600 T	10.2%			9221
3870 ramp	140,000 T	11.1%	4.6%	6.5%	15540
3950 N (Sod)	43,000 T	9.7%	2.9%	6.8%	4171
	263,600 T	10.6%			27932
	+600 T				

~~10.6%~~

August

3820 ramp	130,200 T	13.5%	5.8%	7.7%	17577
3910	52,300 T	10.8%	3.0%	7.8%	5648
3950	33,900 T	9.0%	3.3%	5.7%	3051
3870	49,500 T	13%	6.0%	8.0%	6435
	265,900 T	12.3%			32711
	+2,400 T				

September

3870	50,900 T	10.8%	4.8%	6.0%	5497
3910S	56,500 T	10.5%	4.7%	5.8%	5932
3910N	45,800 T	14.1%	5.3%	8.8%	6444
S	10,600 T	12.0%	5.5%	6.5%	1272
3910 N	102,700 T	8.7%	3.0%	5.7%	8435
	266,400 T	10.3%			27580
	+11,400 T				



October

3870	142,500 T	10%			14250
	58,600 T	12%			7032
	74,200 T	13%			9646
	275,300	11.2%			30924
	+11,800 T				

107,200 T
119,147 @ 11.1%

November

3870	141,300 T	12.5%			17662
3910	51,600 T	8.7%			4489
	11,400 T	10.3%			1174
	11,800 T	11.2%			1322
	50,000	7.5%			3750

266,100 T
(216,100 T
24647 @ 11.4%
28391
→ 10.7%)

216,000 T	11.4%			
neel 39,000 T	8% (CG/Red)			
255,100	10.9%			
263,500 T	10.5%			

3120
27767
27667

27767 → 10.9%

December

1,589,800 T

174581

→ 11.0%
10.98%

- ① x-sects
- ② core logging - splitting
- ③ geol. mapping

$$\begin{array}{r}
 5.5 \quad 6.4 \\
 6.0 \quad 6.7 \\
 \hline
 11.5 \quad 13.1 \\
 5.7 \quad 6.6 \\
 5.6 \quad 6.5 \\
 \hline
 12.3
 \end{array}$$

$$\begin{array}{r}
 12.7 \\
 11.9 \\
 \hline
 24.6
 \end{array}$$

$$\begin{array}{r}
 5.2 \quad 8.6 \\
 6.0 \quad 6.7 \\
 \hline
 11.2 \quad 15.3 \\
 5.6 \quad 7.6
 \end{array}$$

~~5.7 6.5~~

5.7 6.4



$$\begin{array}{r}
 7.2 \quad 6.6 \\
 5.5 \quad 6.4 \\
 \hline
 8.7 \quad 13.0 \\
 4.8 \quad 6.5
 \end{array}$$

$$\begin{array}{r}
 2.9 \quad 7.3 \\
 1.2 \quad 6.6 \\
 \hline
 6.1 \quad 13.9 \\
 3.0 \quad 4.0
 \end{array}$$

$$\begin{array}{r}
 0.215 \quad 0.477 \quad 0.218 \\
 0.087 \quad 0.166 \quad 0.087 \\
 0.110 \quad 0.240 \quad 0.105 \\
 \hline
 406
 \end{array}$$

3950

July 0.204 0.422 0.211 149,100.

215,500

August 0.076 0.147 0.074 52,300

3900

November 0.900 0.147 0.073 51,600

September 0.303 0.611 0.305 215,500

148,400.

August 0.864 0.132 0.066 46,600

3870

266,400. 192,900

August 0.074 0.140 0.070 49,500

September 0.072 0.145 0.072 50,900

October 0.407 0.805 0.403 284,800

November 0.193 0.400 0.200 141,300

July 149,100

August 148,400

September 266,400

November 192,900.

~~25~~ 12.5

37.5
8.2
49.7
11.5

12.5
8
20

140
55
95
20

3910-70-2	47,800	2.0	4.0	95600	191,200	
3910-70-16	65,400	2.4	5.5	131,200	360,800	
3910-70-1	156,700	3.0	5.7	470,100	893,100	
3870-66-32	49,400	3.6	3.9	177,840	192,660	
3870-70-2	16,600	3.0	4.5	49800	74,700	
	336,150	2.75	5.0	924,540	1,712,490	
-	156,700			470,100	893,190	
	<u>179,400</u>	<u>2.5</u>	<u>4.6</u>	<u>544,440</u>	<u>819,300</u>	2.1

Removed from
1972 Extract schedule.

July 149,100 2950
188,800 3870 floor.
337,100 — 263,500

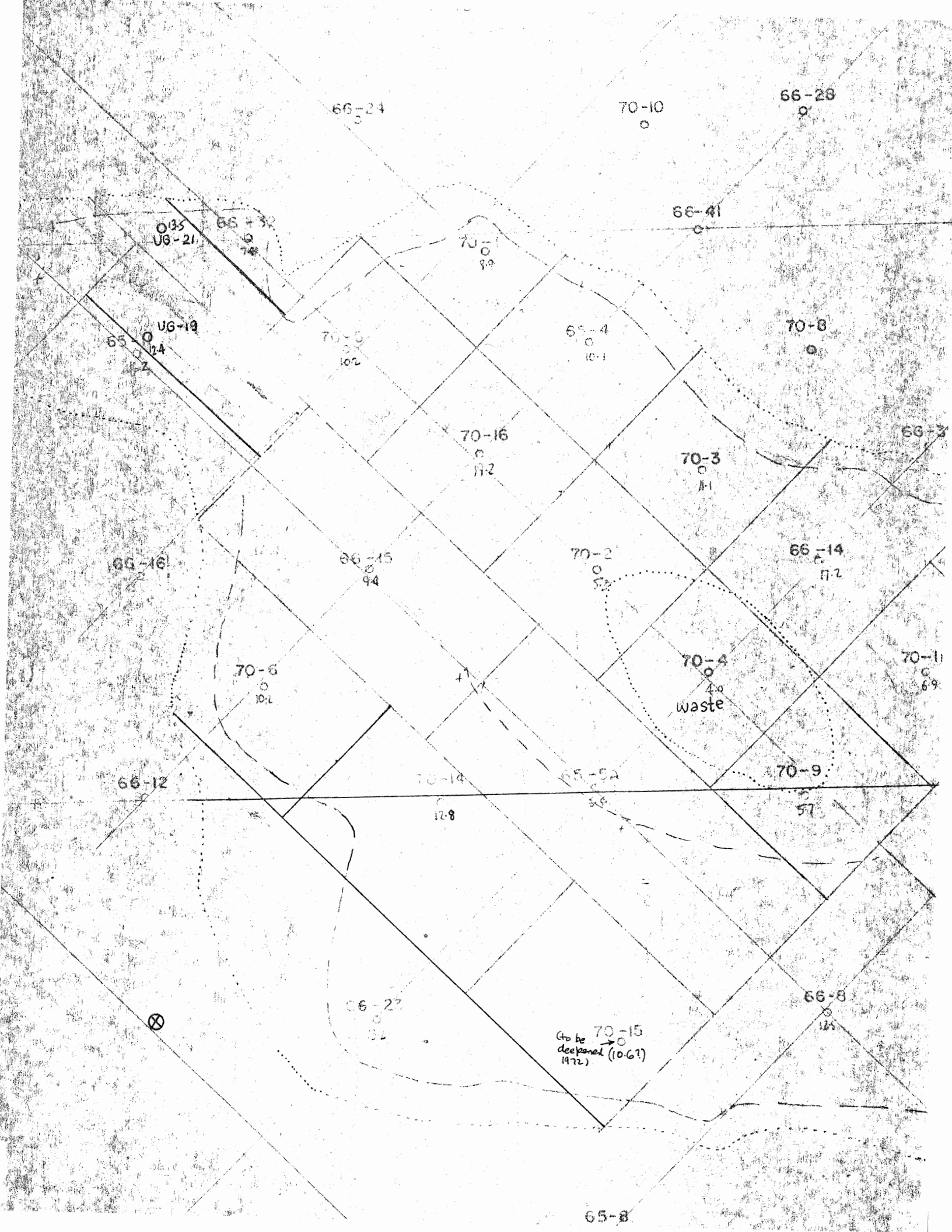
August 148,400 3950, 3910, 3870.
130,200 3830 ramp
278,600 — 263,500

September 266,400 3910, 3870.
— 255,000

October 284,800 3870
— 263,500

November 192,900 3910, 3870.
— 255,000.

required: 1,300,500
"actual": 1,359,800.



66-24

70-10

66-28

UG-21

66-32

66-41

70-9

UG-19

65-14

70-10

66-4

70-8

70-16

66-3

66-16

66-15

70-2

66-14

70-6

70-4

70-11

waste

66-12

70-14

66-5A

70-9

66-22

to be deepened (10.6?) (1972)

66-8

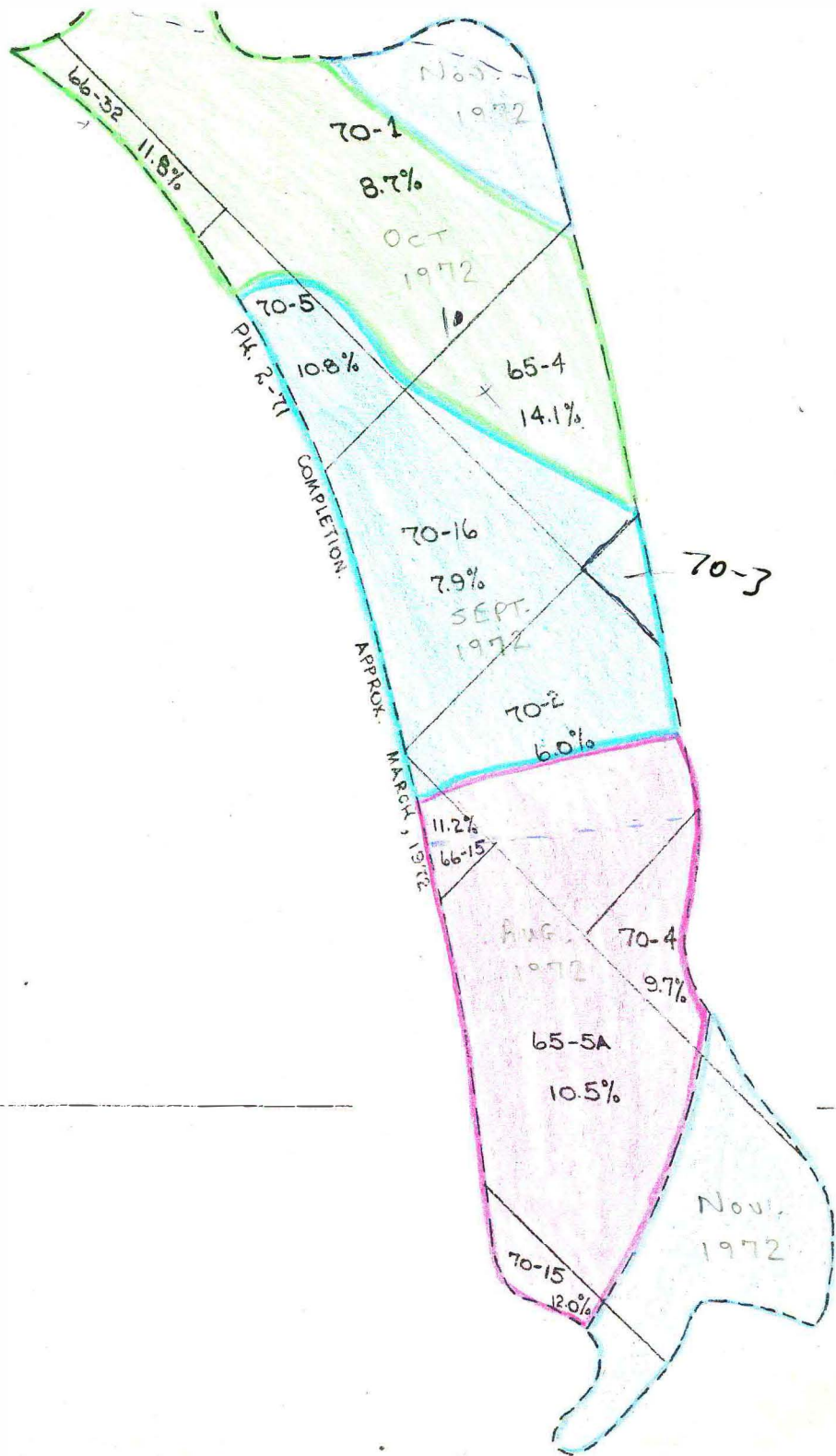
65-8



13,000 E

10,000 N





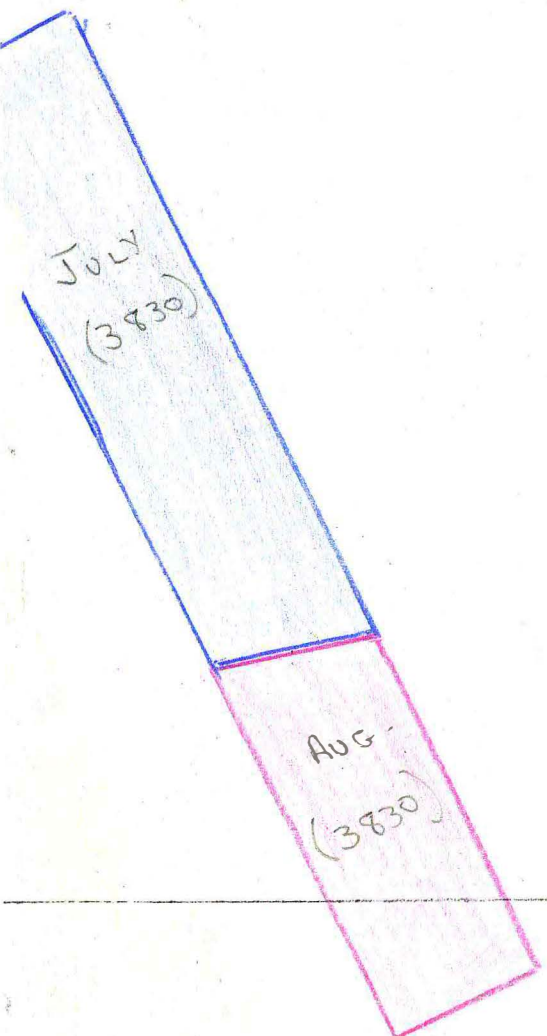
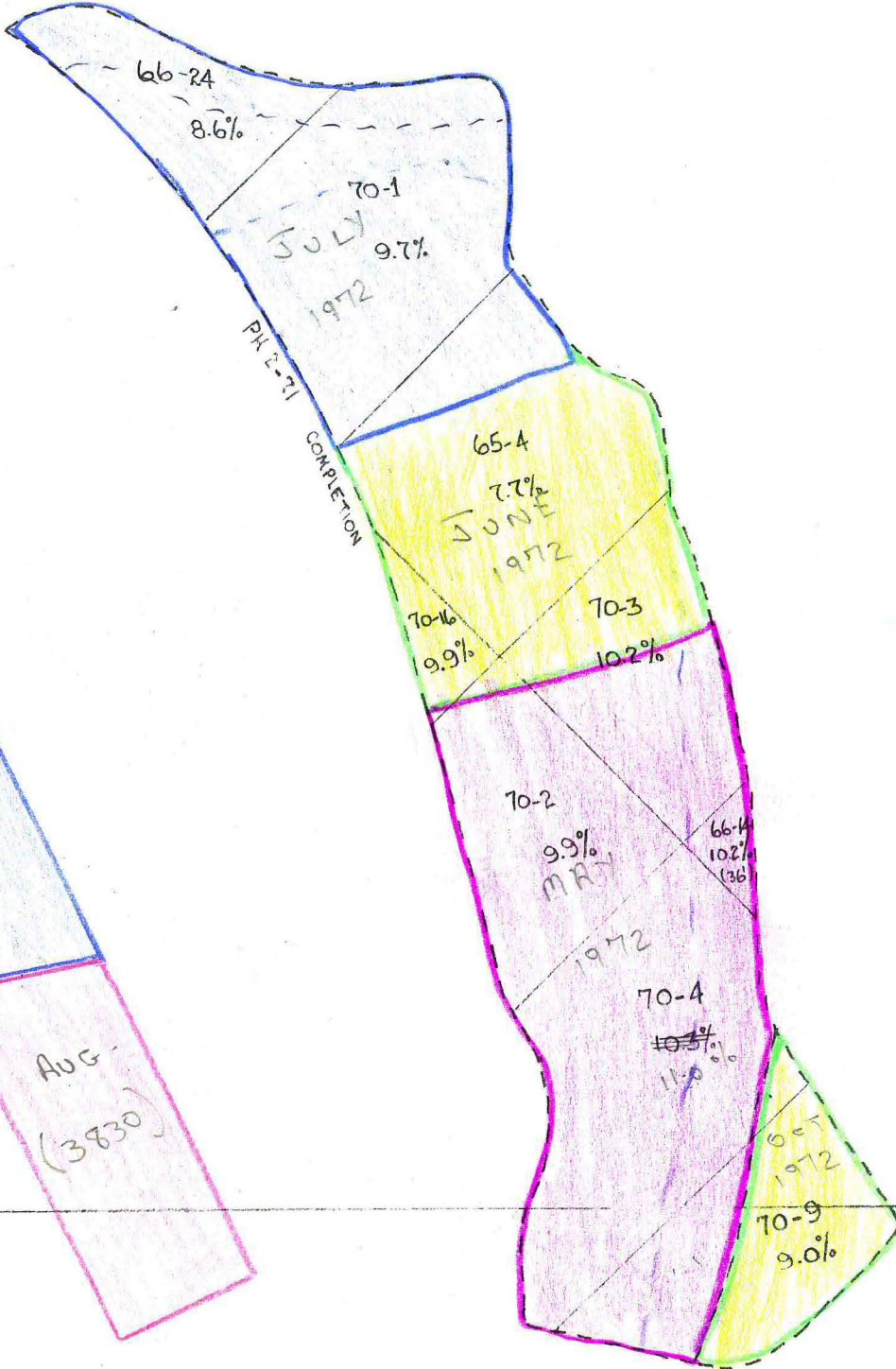
13,000 E

10,000 N

14,000 E

10,000 N

3910 BENCH
MAY - DEC ORE
 $1" = 100'$



N 10,000

3950 BENCH
MAY to DEC. ORE.

E 14,000

13,000 E

13,000 N



used twice +
w/any forage
August + October

3870
BENCH

ORE: MAY -
DEC. 1972