THE HANNA MINING COMPANY

TO: G. Stone
FROM: W. A. Rowe
PROJECT: Knox mining

DATE: 11/17/72
A.F.E. NO. 72-425-3

DRILLING STATUS

SUMMARY

DRILLS WORKING	SHIFTS WORKED	TOTAL HOLES: AFE AUTH.	TOTAL HOLES: COMPLETED	TOTAL HOLES: DRILLING	TOTAL FOOTAGE: AUTH. AFE	TOTAL FOOTAGE: TO DATE	TOTAL FOOTAGE: THIS WEEK
	6		1	2		8002	397

HOLES DRILLED THIS PERIOD

	COORDINATES NE	COORDINATES NW	ADVANCE FT.	DEPTH FT.	ORE INTERSECTION FROM	ORE INTERSECTION TO	ORE RECOVERY	ROCK FORMATIONS & ORE CUT
11-1	2200	2725	347	347				Numerous zones of 5-15% sulfides were observed throughout the whole intercept of 24-347'
	3000	2675	10 -	still	drilling	out		Casing
	Dip - 62°							
	Test - 247' - 56.9°							

	THIS PERIOD	PROJECT TOTAL		THIS PERIOD	PROJECT TOTAL
CORE RECOVERY IN WALL ROCK			AVG. FEET/DRILL	8002/115	
CORE RECOVERY IN ORE			AVG. FEET/WORK SHIFT	59	70
TOTAL CORE RECOVERY	99.5	100	AVG. FEET/DRILL SHIFT		
RATE OF PENETR. IN ORE/SHIFT			AVG. RATE PENETR. HOST ROCK/SHIFT		

SAMPLE STATUS

SAMPLES COLLECTED INTERVAL		SAMPLES PREPARED OR COMPOSITED	SAMPLES SENT TO LABORATORY: PERIOD	SAMPLES SENT TO LABORATORY: TOTAL	SAMPLE RESULTS: PERIOD	SAMPLE RESULTS: TOTAL	NOTES
22+27.25							
33 - 47	115-131	267-273.5					
51 - 67	180-185.5	299.5-315					
87 - 91	185.5-199	315 - 334					
~~103 - 115~~	~~216.5-237~~	~~334 - 347~~					
	237 - 247						

GENERAL DRILLING RESULTS

(COMMENTS)

Total zone in 11-1 showed numerous intercepts rich in Po + graphite. Minor magnetite was noted associated with the graphitic zones. The sulfides, oxides, and graphite combined can explain the EM and Magnetometer anomalies. The zones with highest Po (+5%) were split and sent to Hibbing Lab to check Ni + Cu content. If the Po is high in Ni, the sulfides may be assumed to be the leakage from a down-dip UB source. If the sulfides are low in Ni, it is assumed they are the results of remobilized syngenetic sulfides. Host rocks consist of Qtz-plag-chlorite (± biotite) granulites and granulitic schists. Minor fibro-sillimanite was observed in the chlorite masses.

The drill moved to 30+26.75 to begin hole 11-2. The drill was setting casing at the time this report was written.

Attach following:

1. Geological plan showing proposed holes, holes drilled to date and this period; with elevation of collar, inclination, etc.
2. Log and cross-section of each hole.
3. Graph showing progress.

Printed in Canada

THE HANNA MINING COMPANY

TO: J. G. Stone
DATE 11/24/72
FROM: W. A. Rowe
A.F.E. NO. 72-425-3
PROJECT: Knox Mining

DRILLING STATUS

SUMMARY

1. DRILLS WORKING	SHIFTS WORKED	TOTAL HOLES: AFE AUTH.	TOTAL HOLES: COMPLETED	TOTAL HOLES: DRILLING	TOTAL FOOTAGE: AUTH. AFE	TOTAL FOOTAGE: TO DATE	TOTAL FOOTAGE: THIS WEEK
1	4		1	2		8269	267

HOLES DRILLED THIS PERIOD

2. HOLE NO.	COORDINATES N E	NW	ADVANCE FT.	DEPTH FT.	INTERSECTION FROM	TO	ORE RECOVERY	ROCK FORMATIONS & ORE CUT
11-2	3000	2675	267	277	97	190		graphitic granulitic schist w/ 5-15% Po + Py Po/Py ≅ 1/1. No Pn or cp observed
11-3	3400	2650	0	0	— Drill	Just	Setup	on pad.

3.	THIS PERIOD	PROJECT TOTAL		THIS PERIOD	PROJECT TOTAL
CORE RECOVERY IN WALL ROCK			AVG. FEET/DRILL	8269/119	
CORE RECOVERY IN ORE			AVG. FEET/WORK SHIFT	67'	69'
TOTAL CORE RECOVERY	100%	100%	AVG. FEET/DRILL SHIFT		
RATE OF PENETR. IN ORE/SHIFT			AVG. RATE PENETR. HOST ROCK/SHIFT		

4. SAMPLE STATUS

SAMPLES COLLECTED INTERVAL	SAMPLES PREPARED OR COMPOSITED	SAMPLES SENT TO LABORATORY: PERIOD	TOTAL	SAMPLE RESULTS: PERIOD	TOTAL	NOTES

5. GENERAL DRILLING RESULTS

(COMMENTS)

Hole 11-2 - initial dip = 51° -
Etch test 277' = 46.25°

The EM Response in 11-2 was explained by the graphitic and sulfidic zone from 97' to 190'. Sulfide content is anomalously high. The vein-type nature of the Po + Py is indicative of either introduced sulfides or remobilized metamorphic sulfides. Small graphitic and sulfidic zones were also encountered from 190 - 277.

The drill was moved and set up on hole 11-3 = 3400 NE 2650 NW. The drill crew did not work 11/23 or 11/24 Thanksgiving Holliday.

NOTE: Attach following:

1. Geological plan showing proposed holes, holes drilled to date and this period; with elevation of collar, inclination, etc.
2. Log and cross-section of each hole.
3. Graph showing progress.

THE HANNA MINING COMPANY

TO: J. G. Stone — DATE: 12/1/72

FROM: W.A. Rowe - D.E. Wyke — A.F.E. NO. 72-425-3

PROJECT: Knox Mining Corp.

DRILLING STATUS

SUMMARY

1. DRILLS WORKING	SHIFTS WORKED	TOTAL HOLES: AFE AUTH.	TOTAL HOLES: COMPLETED	TOTAL HOLES: DRILLING	TOTAL FOOTAGE: AUTH. AFE	TOTAL FOOTAGE: TO DATE	TOTAL FOOTAGE: THIS WEEK
1	7		1	2		8822	553

HOLES DRILLED THIS PERIOD

2. HOLE NO.	COORDINATES N E	COORDINATES NW	ADVANCE FT.	DEPTH FT.	MINE INTERSECTION FROM	MINE INTERSECTION TO	ORE RECOVERY	ROCK FORMATIONS & ORE CUT
11-3	3400	2650	267	267	42	201		graphitic schist and gneiss. 5-15% Po+Py (Py/Po = 1/1) no cp or Pn observed.
11-4	1800	2750	0	286	26	286		graphitic schist, gneiss, granulite. no pn or cp noted py/po ≅ 1:1 141-188 graph sill gneiss; 12' rexld gab (dike?) at 220'; 5-10% py 5-10% po in gneiss & sch

3.

	THIS PERIOD	PROJECT TOTAL		THIS PERIOD	PROJECT TOTAL
CORE RECOVERY IN WALL ROCK			AVG. FEET/DRILL	8822/126	
CORE RECOVERY IN ORE			AVG. FEET/WORK SHIFT	63	70
TOTAL CORE RECOVERY	100%	100%	AVG. FEET/DRILL SHIFT		
RATE OF PENETR. IN ORE/SHIFT			AVG. RATE PENETR. HOST ROCK/SHIFT		

4.

SAMPLE STATUS

Splits	SAMPLES COLLECTED INTERVAL	SAMPLES PREPARED OR COMPOSITED	SAMPLES SENT TO LABORATORY: PERIOD	SAMPLES SENT TO LABORATORY: TOTAL	SAMPLE RESULTS: PERIOD	SAMPLE RESULTS: TOTAL	NOTES
Hole: 3400 + 26.50 (11-3)	15-29	80-100	Hole 3000 + 26.75 (11-2) 18-28	97-112.5	150.5-170	237-241	
	29-42.5	100-120	35-52	112.5-120	170-183	241-262	
	42.5-58	120-140	52-70	120-140.5	183-197		
	58-80	140-160	70-97	140.5-150.5	217-227		
		160-181			229.5-237		
		181-201					
		215-237					
		237-246					

5.

GENERAL DRILLING RESULTS

(COMMENTS)

Hole 11-3 - a highly conductive graphitic zone was encountered from 42 to 133'. Graphite = 15%. Sulfides = 5-15% veinlets, pods and stringers of Po + Py. A less graphitic zone (5-10% graph) was found from 133 to 201'. Sulfide content of second zone remained anomalous at 5-15% Po with minor Py. No cp or Pn was observed.

Hole 11-4 26 to 296 the schists, gneisses & granulites contained graph 5-10% - locally to 15%. Except for pegmatites & two short sections where sulfide content was less than 5%, all the core contained 5-10%. py was dominant to 40'; po/py were 1:1 to 100' then po became dominant. a section from 211-223 is 60% an altered gabbro & a 2' zone at 273' appears the same. No visible sulfides were noted in the altered gab. po content at 236 became 10-15% & a ¼" to ½" veinpo cuts core at 279'.

Acid tests: 11-3 - 267' = 49.5° - initial Dip 54°
11-4 - 237' = 47.8° - initial Dip 54°

NOTE: Attach following:

1. Geological plan showing proposed holes, holes drilled to date and this period; with elevation of collar, inclination, etc.
2. Log and cross-section of each hole.
3. Graph showing progress.

THE HANNA MINING COMPANY

TO: J. G. Stone
FROM: W. A. Rowe
PROJECT: Knox Mining

DATE 12/8/72
A.F.E. NO. 72 - 425-3

DRILLING STATUS

SUMMARY

1. DRILLS WORKING	SHIFTS WORKED	TOTAL HOLES: AFE AUTH.	TOTAL HOLES: COMPLETED	TOTAL HOLES: DRILLING	TOTAL FOOTAGE: AUTH. AFE	TOTAL FOOTAGE: TO DATE	TOTAL FOOTAGE: THIS WEEK
1	6		1	2		9061	239

HOLES DRILLED THIS PERIOD

2. HOLE NO.	COORDINATES N	COORDINATES E	ADVANCE FT.	DEPTH FT.	ORE INTERSECTION FROM	ORE INTERSECTION TO	ORE RECOVERY	ROCK FORMATIONS & ORE CUT
11-4	1800 NE	2750 NW	81	367	286	353	—	graphitic Schist and gneiss 5-15% Po+Py with felted graphite bands- conductive No cp or Pn observed.
96 (Area 5)	1275	19 W	158	158	82	106	—	rexld Schist w/ local Pods + veinlets of Po + cp.
					106	113.5	—	MSU Po w/ minor Pn, cp.
					115		—	mafic gabbro w/ 5% diss Po + cp

3.	THIS PERIOD	PROJECT TOTAL		THIS PERIOD	PROJECT TOTAL
CORE RECOVERY IN WALL ROCK			AVG. FEET/DRILL	9061/132	
CORE RECOVERY IN ORE			AVG. FEET/WORK SHIFT	39	69
TOTAL CORE RECOVERY	100%	100%	AVG. FEET/DRILL SHIFT		
RATE OF PENETR. IN ORE/SHIFT			AVG. RATE PENETR. HOST ROCK/SHIFT		

4. SAMPLE STATUS

SAMPLES COLLECTED INTERVAL	SAMPLES PREPARED OR COMPOSITED	SAMPLES SENT TO LABORATORY: PERIOD	SAMPLES SENT TO LABORATORY: TOTAL	SAMPLE RESULTS: PERIOD	SAMPLE RESULTS: TOTAL	NOTES

5. GENERAL DRILLING RESULTS

(COMMENTS)

Etch tests - 11-4:
237' - 47.8°
367' - 44.5°

(11-4) graphitic + sulfidic schists and gneiss continued to 353'. The conductive zone does Appear to be wider than the EM response indicates.
Three days were lost in moving the drill from An 11 to Area 5. The biggest Problem being ice and snow on roads preventing the truck moving the equipment.
(96) - Area 5 — Penobscot sil schist is highly rexld w/ local veining of Po and cp. local cp flooding over 1/2' intervals. MSU sulfide zone (106 - 113.5) has moderate to strongly magnetic med gr. Po. Minor cp blebs are best com near upper and lower contacts. Tr Pn Notd. The mafic gabbro has a 5% sulfide average with diss blebs of Po + cp. numerous Pegmatites cut the sequence.
A short delay was caused by rods twisting off at 158 - The rods were recovered.

NOTE: Attach following:

1. Geological plan showing proposed holes, holes drilled to date and this period; with elevation of collar, inclination, etc.
2. Log and cross-section of each hole.
3. Graph showing progress.

Date Submitted 12-12-72 AN 1

Date Reported 2-1-73

Sample Submittal/Report Form
Hanna Research Lab

Project 6116-145
Submitter L. H

Lab No.	Sample No.	Sample Description	Requested Analyses (Please Check) % Wt. Fe$_t$	NI	CO	Cu	S			
26	(34-26.75) 11-3 AN 1	15-29		—	—	—	—			
27		29-42.5		.009	.007	.007	1.78			
28		42.5-58		—	—	—	—			
29		58-80		.014	.011	.011	2.89			
30		80-100		—	—	—	—			
31		100-120		.014	.011	.009	1.78			
32		120-140		—	—	—	—			
33		140-160		.023	.011	.018	3.24			
34		160-181		—	—	—	—			
35		181-201		.020	.011	.015	3.21			
36		215-237		—	—	—	—			
37		237-246		.020	.007	.013	2.70			
				—	—	—	—			
				.017	.011	.013	2.86			
				—	—	—	—			
				.017	.011	.013	3.40			
				—	—	—	—			
				.017	.011	.013	3.18			
				—	—	—	—			
				.014	.011	.015	1.51			
				—	—	—	—			
				.011	.007	.007	1.16			
				—	—	—	—			
				.011	.011	.011	1.75			
				—	—	—	—			

AN 11

Date Received 12-18-72
Date Reported 2-2-73

Sample Submittal Report Form
Hanna Research Lab

Project 646-145
Submitter LM

Lab No.	Sample No.	Sample Description	Requested Analyses (Please Check)				
			Req.	NI	CO	Cu	S
55	11-4 AN 11	39-57		.013	.018	.011	2.25
56	"	57-69		.016	.014	.013	1.99

Date Submitted 12-21-72
Date Reported 2-2-73 AN 11

Sample Submittal/Report Form
Hanna Research Lab

Project 6446-145
Submitter E.M.

Lab No.	Sample No.	Sample Description	Requested Analyses (Please Check) % Wt. Fe$_t$	NI	CO	Cu	S			
57	AN 11 11-4 (18+27.5)	69-80.5		—	—	—	—			
				.021	.018	.018	2.98			
58	"	80.5-88.5		—	—	—	—			
				.021	.018	.016	3.01			
59	"	88.5-110		—	—	—	—			
				.024	.018	.016	3.06			
60	"	110-132		—	—	—	—			
				.019	.011	.015	3.28			
61	"	132-147		—	—	—	—			
				.013	.014	.015	2.74			
62	"	147-161		—	—	—	—			
				.013	.011	.013	1.13			
63	"	164-187.5		—	—	—	—			
				.019	.018	.011	0.97			
64	"	187.5-200		—	—	—	—			
				.013	.011	.011	1.50			
65	"	209.5-218.8		—	—	—	—			
				.024	.014	.007	0.43			
66	"	311-332.5		—	—	—	—			
				.021	.014	.015	2.52			
67	"	332.5-353.5		—	—	—	—			
				.029	.018	.016	3.17			

Date Submitted 12-22 AN 11

Date Reported 2-2-73

Sample Submittal/Report Form
Hanna Research Lab

Project 646-145

Submitter LM

Lab No.	Sample No.	Sample Description	Requested Analyses (Please Check) % Wt. Fe$_t$	NI	CO	Cu	S			
79	11-4 AN 11	200-209.5		—	—	—	—			
				.016	.007	.013	2.36			
80	"	218.8-239		—	—	—	—			
				.018	.013	.014	2.58			
81	"	239-259		—	—	—	—			
				.018	.020	.018	2.58			
82	"	259-271		—	—	—	—			
				.021	.017	.018	3.28			
83	"	271-291		—	—	—	—			
				.013	.013	.016	2.63			
84	"	291-311		—	—	—	—			
				.016	.010	.016	2.90			