



32D04NE2002 OM92-100 MCGARRY

010

**OMIP GRANT APPLICATION
OM92-100**

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**OMIP GRANT APPLICATION
TECHNICAL REPORT
OM92-100**

INTRODUCTION

During 1992 Deak Resources Corporation advanced two exploration programmes for which it had received OMIP designation. This report details the work completed.

LOCATION

The Kerr Mine is situated in Virginiatown in the McGarry township, approximately 38 kms. east of the town of Kirkland Lake.

SUMMARY

Lateral excavation was completed during the year to evaluate the Chesterville East zone and the Mill zone, both located on Deak's Kerr Mine property.

A 77 foot ventilation raise was completed as a requirement for the lateral development on the Chesterville East zone. Minor rehab was required for the same reason.

571 tons from the Chesterville East zone and 6308 tons from the Mill zone were processed at the Kerr mill for metallurgical testing.

LATERAL EXCAVATION - SILLING/BULK SAMPLING

Two major exploration targets were evaluated by silling on the respective structures; these were the Chesterville East and Mill Zones.

CHESTERVILLE EAST ZONE

This structure is situated approximately 2,000 feet east and along strike of the main Kerr orebodies. It was located by drilling from the 12th and 19th levels of the now-defunct, Chesterville Mines Limited in 1950, but was never developed. The host structures occur within a strong to weak green carbonate alteration package that contains gold-bearing quartz vein, quartz mylonite and mineralized dike zones.

The 1992 exploration program was designed to access this structure and to begin an evaluation of the lateral and vertical continuities of the mineralized zones. The green carbonate alteration envelope was crosscut and 60 feet of drifting/silling accomplished by year end.

MILL ZONE

The Mill Zone horizon forms a laterally and vertically continuous plane that parallels the main Kerr orebody about 1,000 feet to the south. Although drilling into the zone has been conducted sporadically since the discovery of the Kerr mine, the number of holes is very limited. The mineralization occurs as in echelon silicified, pyritized, altered pods in a host rock of weakly altered mafic and ultramafic flows. The lithologic setting, style of mineralization and alteration mirrors that of the main Kerr orebodies; the major difference is the lower degree of alteration in the Mill Zone.

The only available access to the area is a drift on the 1000' L. The program, in 1992, consisted of silling/slashing and drifting on 3 pods in the central part of the zone to evaluate the character geological nature and metallurgical properties of the mineralization. Work comprised the following: approximately 100 feet of drifting and slashing and "uppers" (take down backs) on 1002-57 north pod; and 180 feet of slashing and subdrifting and 130 feet of breasting on 1002-57 east pod.

SAMPLING PROCEDURES

All rounds and slashes on, or within, the ore-bearing structures were face and muck sampled and test holed where possible.

Muck samples were taken by the individual tram crews from each round of advance or each slash. The procedure involves sampling each car and combining/blending 5 such samples to make one composite sample for assaying.

Face samples are taken by the geologist or sampler on a daily basis. Each face is divided into sample intervals based on the visible structures, mineralization, alteration, etc. the intervals, which range from 0.5 feet to 4 feet, are then sampled as a panel,

catalogued and plotted on current assay plan. Assays above 0.10 o.p.t. are highlighted.

Test holes were drilled into the walls of drifts and sills to ensure that none of the mineralized structure was left behind. The holes are drilled 8 feet deep at a slight incline; three sludge samples per hole are collected and assayed.

F.R. Ploeger

SUMMARY OF DEVELOPMENT

RE: 1992 OMIP PROGRAM

1. Mill Zone

| | |
|------------------------------------|---------------------------------------|
| . Dev. footage | = 123' |
| . Equiv. sl. footage | = <u>484'</u> (46,718 cu. ft. of sl.) |
| Total footage drifting | = 607' |
| . Cu. ft. of breasting or TDB's | = 18,564 cu. ft. or 1,547 tons |
| . Raise footage | = 40' |

Total tons to mill for metallurgical testing = 6,308 tons

2. Chesterville East

| | |
|---|-------------------------------------|
| . Acc. rse to 19th Level Chesterville for ventilation | = 77' |
| . Acc. X-Cut & Drift footage | = 411' |
| . Equiv. sl. footage | = <u>14'</u> (1,080 cu. ft. of sl.) |
| Total footage drifting | = 425' |

Total tons to mill for metallurgical testing = 571 tons



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020

DEAK RESOURCES CORP/GSR MINING CORP
KERR MINE/MILL

MEMO TO: G. McDonald

FROM: Roy Lindsay

DATE: January 23, 1993

SUBJECT: Preliminary Mill Zone Ore - Metallurgical Testing

In late December, a sample of Mill Zone ore was received from Frank Ploeger for preliminary metallurgical testing. The sample as received was crushed to minus 20 mesh for standard laboratory leach testing. Prior to testing, a representative head sample was analyzed - results presented in Table 1 compared to Kerr normal "Flow Ores".

Table 1: Mill Zone vs Kerr Flow Ores

| <u>Element</u> | <u>Mill Zone</u> | <u>Flow Ore</u> |
|----------------|------------------|-----------------|
| Cu | 44 | 72 |
| Fe | 7.48% | - |
| Ni | 537 | 387 |
| Pb | 65 | 98 |
| Zn | 41 | 127 |
| As | +5,000 | 89.1 |
| C | 6.04% | - |
| S | 1.98% | - |

(Note above analysis in ppm unless otherwise stated)

Mill Zone ore is dissimilar from normal flow ore in two distinct categories - specifically arsenic and carbon content. As a result of the high carbon content, activity tests were completed to determine if the carbon was active in nature (i.e. absorb gold from solution) Initial activity testing on this sample proved negative as no gold was adsorbed from solution by the carbon.

Because of the extremely high arsenic content of the ore, leach testing was conducted at various grinds to establish a grind recovery relationship for the ore. Test results are presented below in Table 2:

Table 2: Metallurgical Results - Leaching

| Test No. | Grind | | Leach Hrs | Reagent Product Anal OPT | | & Rec. | Cons #/T | | | pH |
|----------|------------|------------|-----------|--------------------------|---------|--------|----------|------|------|----|
| | %-74 μ | %-44 μ | | Heads | Residue | | Cya. | Lime | | |
| 1 | 78.6 | 58.9 | 22 | 0.109 | 0.044 | 59.6 | 1.4 | 5.5 | 11.5 | |
| 2 | 78.6 | 58.9 | 44 | 0.085 | 0.045 | 47.2 | 1.4 | 7.1 | 12.2 | |
| 3 | 83.9 | 65.3 | 22 | 0.088 | 0.047 | 46.5 | 1.4 | 5.4 | 12.0 | |
| 4 | 83.9 | 65.3 | 44 | 0.080 | 0.045 | 43.7 | 1.4 | 7.2 | 12.1 | |
| 5 | 98.0 | 96.3 | 44 | 0.084 | 0.036 | 57.4 | 1.6 | 8.9 | 12.0 | |

Gold recoveries increased only with ultra fine (-44 micron) grinding. Without having completed any ore microscopy, it is "assumed" the gold recovery problems are associated with fine grained gold in the arsenopyrite matrix. This assumption will have to be verified by studying the ores mineralogy through either thin or polished sections.

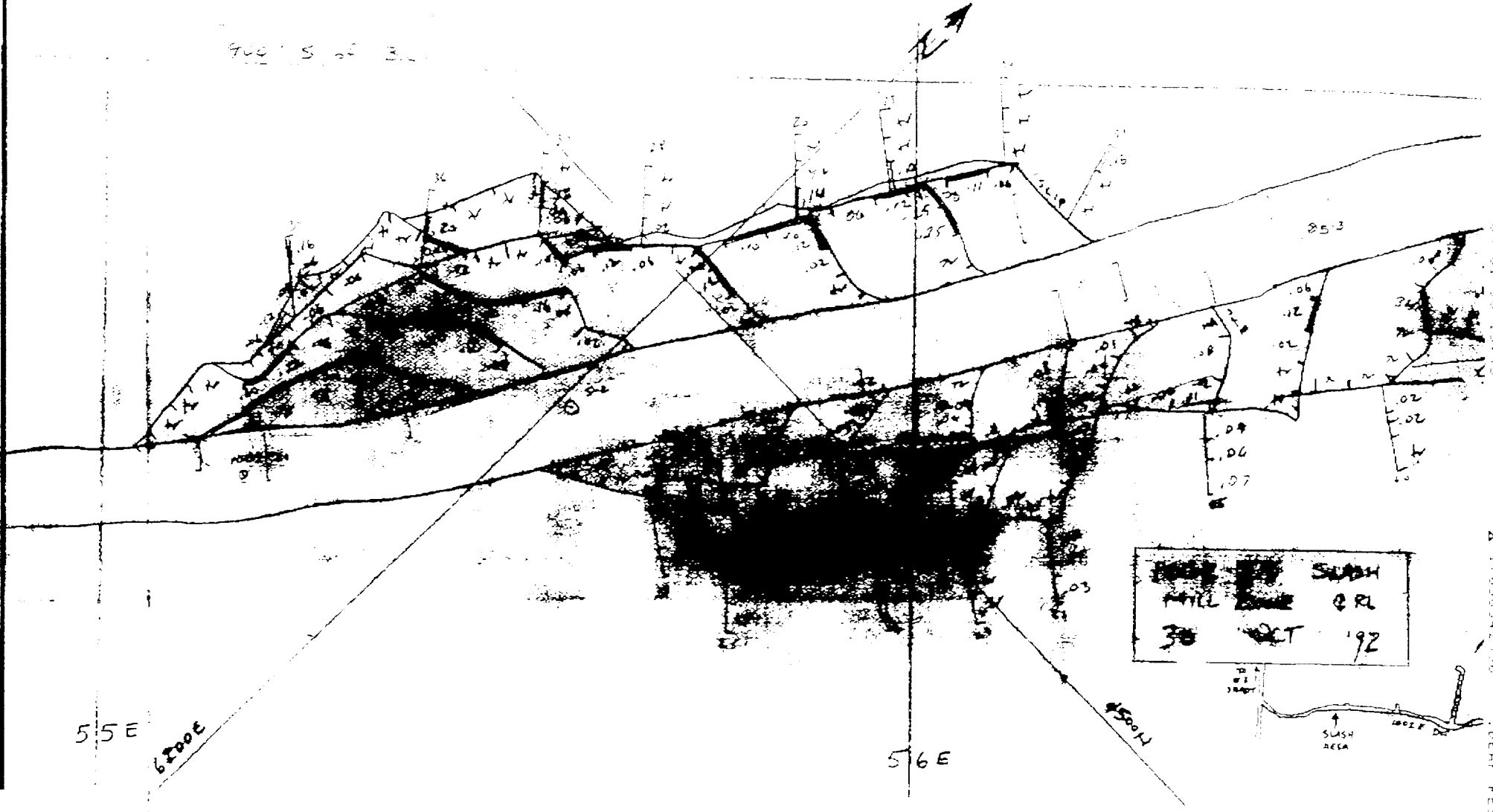
A flotation/regrind/re-cyanidation stage on the leach tailings will be evaluated to determine its metallurgical and economic feasibility. Another possible processing alternative is to float the mill zone ores followed by cyanidation of the flotation tailings if feasible. Although this option will be evaluated, it is felt low ratios of concentration may be encountered producing concentrate grades to low grade for economic pyrometallurgical treatment.

Another sample of Mill Zone ore should be evaluated from a lower depth in the mine to establish if this zone is metallurgically homogenous or not. Testwork will also be completed on a drill core sample of the mill zone as acquired from Cyprus. This testing will receive top priority in the laboratory upon receipt of this sample.

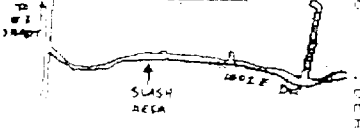
Roy D. Lindsay
General Mill Superintendent

- c.c. D. Towers
R. Nolet
R. Bresee
F. Ploeger
B. Dunlop

900' S of B...

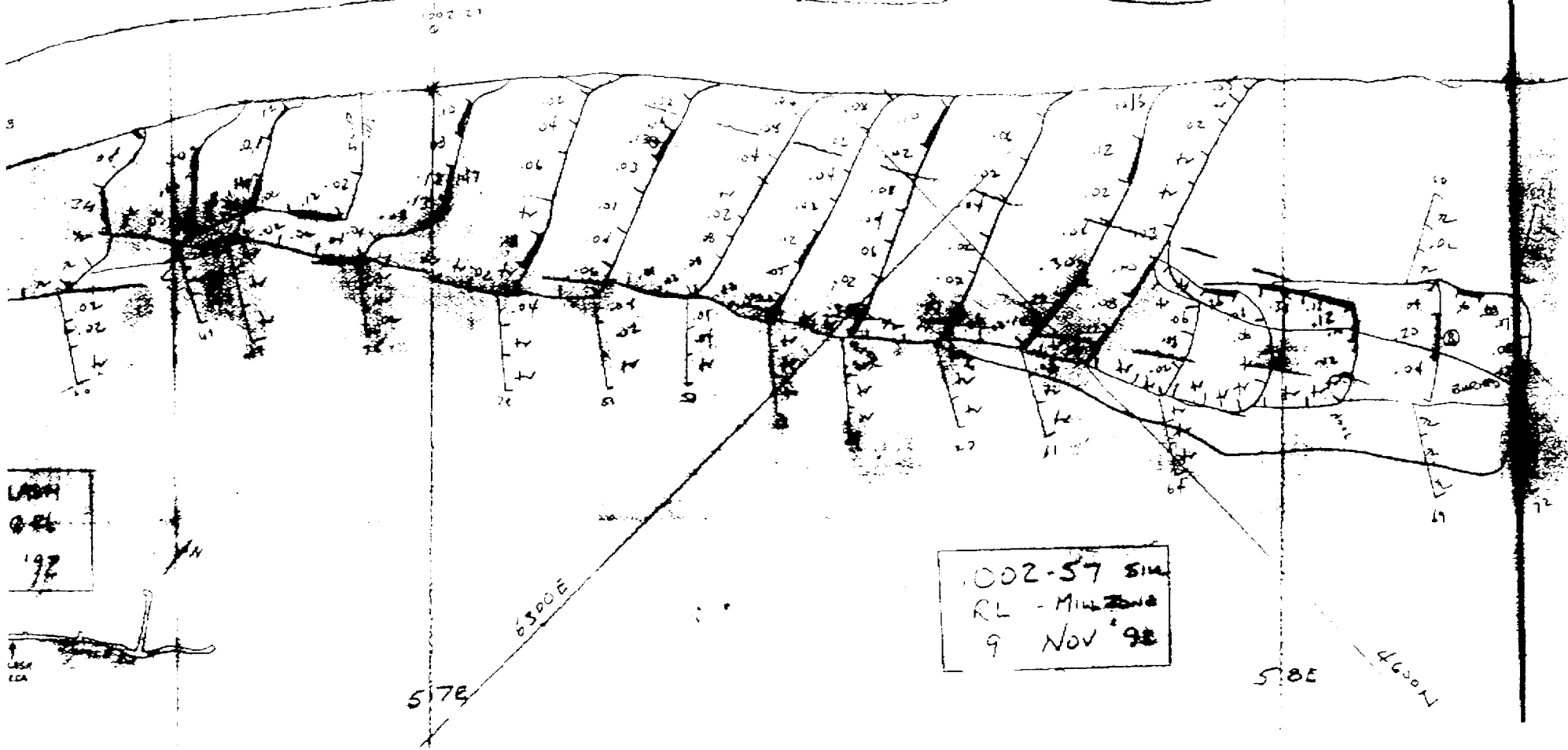


SUSH
 MILL
 30 OCT '92



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 2 10956342746
 DEPT. RES. 01
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LABOR
0-26
'92

LABOR
0-26

002-57 SIM
RL - Mill Zone
9 Nov '98

57E

5300E

58E

North
4600N

002-51

REPRODUCTION OF ORIGINAL RECORDS

900' S of BL



ORE OUTLINE

G300E

4500N

| | |
|---------|-----------|
| 1002-57 | TDBs |
| RL+16 | MILL ZONE |
| 10 | DEC '92 |

| | |
|-----|-----|
| 54 | 11 |
| 26 | 5 |
| 28 | |
| 102 | 241 |

SE

