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selling 50% to into the property

Can explore

Mile Post 45
P.O Box 6283 turn left. ~8.9 mi
Kingman AZ right left. ~2mi? –
86401 to corral (near right)

unities

..00 per line (blind box)

EQUIPMENT FOR SALE

Equipment for Sale
Ball mills — 6'x6', 6'x8', 2'x6', 30"x18" Lab.
Crushers — 9"x16", 12"x36", 2' Cone
Float cells — 18", 24", 36", 48", & Lab.
Filters — 6'x8', 4'x6', & Leaf type
Mine cars — 18", 24" R.D., 1 ton
We rebuild, repair and recondition mine & mill equipment. Also fabricate equipment for portable mills, placer, floatation and leaching. Call (303) 922-6035 for prices.
U.S. Mine & Mill Co.
1401 W. Wesley Ave.
Denver, CO 80223 5-8bu

FOR SALE OR LEASE

100 oz. per ton Silver Mine. Box 309, Nederland, CO 80466. tfbs

FOR SALE

Operating all year around. Arizona open pit gold mine. Approx. 800,000 tons reserves. (602) 753-1965 — (619) 698-9010. ~~753-6535~~ 5-8pa

For Sale
1 Leroi hydraulic crawler rig, model HDR-12-EO Serial #72X109 with model F4L912 Deutz power. 1000 C 2-7/8 drill steel, change over sub and down the hole hammer, drill any angle. Potter Drilling Co., P.O. Box 1815, Fallon, NV 89406; (702) 423-7745. 3-6bp

Nordberg SD mine hoist, 10 ft. by 8 ft. 5 inch drum. 600 HP. in storage. Barney (303) 292-5212. 4-7bt

For Sale
Complete Ball Mill 4+5 Gears; Liners in good condition. 50 hpr. electric motor. Will sacrifice for $10,000.00. Call (801) 259-7183 or (801) 259-8284. 3-5bs

Uranium Mine, open pit with 15,000 tons stripped, reasonable. (303) 275-8066. 3-5ph

3 Patented Claims near Silverton, on creek. 10,000. (303) 275-8066. 3-5ph

SERVICES

Geological, geochemical, geophysical and related drafting and slides. More years experience than necessary! **DRAFTING INK**, D. S. Connors, (303) 642-7610. tfbc

Joe Bardswich – Jorinex, Kingman

operating Portland mine – Au, Ag

750,000 –.057 Au
probable – .75 Ag
1.5:1 waste ore

mined 60,000

mile post 45 – hwy 93

30 W to L. Mohave
nine miles

5 miles E of Lake Mohave

5 miles S. of Searchlight (due E)

qtz – calcite vein – strike N-S,
dip 30 ~~40~~ E

1935–1942 – ship to Kathleen

crush to –3/4" 1000 T.P.D.

now recovery ~70%

short term cash crunch – Rock Engineering Const.
– 660,000 Canad. –
400,000 American – to get going in right style –

J O R I N E X
Exploration and Mining, Inc.
P. O. Box 6283
Kingman, Arizona 86402

February 8, 1984

Great West Minerals, Inc.
6525 North Meridian
Suite 300
Oklahoma City, OK 73116

Gentlemen:

Jorinex Exploration and Mining, Inc. is an Arizona Corporation, the wholly owned subsidiary of Jorinex Exploration and Mining Company, Ltd., an Ontario, Canada company.

Jorinex, Inc. has entered into a joint venture agreement with Dr. Antone Aguiar wherein Jorienx is to provide the fudns to place the Portland Mine into production. Dr. Aguiar holds a lease-purchase agreement to the Portland Mine; terms of which include a 6% head royalty, and a $2,000,000.00 buy-out.

The Portland Mine has a record of production of 132,000 tons @ .225 oz/ton AU from 1935 - 1941. Recent drilling (1970's - 1980's) approximates 15,000 feet of rotary percussion and diamond drilling. Estimates of ore using various cut-off grades include:

(a) 44,000 tons @ .115 AU and stripping ratio of 2.9:1

(b) 131,000 tons @ .095 stripping ratio 3.9:1

(c) 748,000 tons @ .0575 stripping ratio 1.47:1 (above estimates by P. Durning, Fisher-Watt Mining, 1981).

(d) 84,000 tons @ .088 stripping ratio 4.4:1

In addition, there is good potential for additional ore on the property, both at the north end of the outlined ore (faulted off) and the second vein known as the "little ore body".

Jorinex started stripping in March, 1983, and up to the present time has produced 1700 T.O. of gold from approximately 54,000 tons; averaging .05 oz/ton.

Recoveries from heap-leaching have been a problem. This problem was solved by dramatically increasing the amount of solution being sprayed on the pads. Oil contamination of the charcoal has been an on-going problem which was not recognized until September and October, and is being overcome by waste oil management and replacement of contaminated charcoal. Recoveries are now +70%.

Stripping of waste to date approximates 350,000 tons.

Start-up problems have included the incompetence and dishonesty of the independent metallurgical consulting engineer and the untimely death of the mine manager in a traffic accident.

Jorinex (Ontario) Ltd. has invested $660,000 Canadian dollars (approximately $528,000 United States dollars) into Jorinex, Inc. Jorinex, Inc. has a working capital deficiency of approximately $220,000 U.S. Due to the high start-up costs (including construction of facilities, training of personnel, acquisition of materials and equipment, and especially the early large quantity of stripping required), Jorinex, Inc. has operated at a loss to-date. December showed a large quantity of low-grade ore mined and crushed (20,000 ton) and just recently placed on the pads. Recoveries of gold in January will be 350 - 400 T.O. and will show a profit for the month. In addition, there is a stockpile of approximately 12,000 tons of +8" material that has to be crushed in a primary jaw crusher.

Assets of Jorinex on-site include:

1. Leach pads - 80,000 square feet
2. Carbon columns - four sets
3. Pjmps for pregnant and barren solution (5)
4. Developed wells capable of 60 G.P.M.
5. Trained crew

It is proposed that representation in management and equity be effected on a dollar to dollar basis with the money already invested by Jorinex, (Ontario) Ltd. Audited financial statements and records will be made available. For an interested party to acquire management control would require them buying out at least a portion of the Jorinex investment.

February 8, 1984

In addition, Dr. Aguiar has stated that he would be willing to sell all or a portion of his 50% interest in the joint venture agreement. The property owners are willing to renegotiate the purchase agreement. A meeting has been arranged for February 24, 1984.

Should you be interested in this proposal, the drill sections, production records, financial records, etc. will be made available. Should you wish a site visit, please call me at (602) 753-1965. Should you wish a meeting, I would be happy to meet with you at your office. However, I suggest that this be done in conjunction with a site visit.

To clarify any of the above or to acquire more information, please telephone me.

Yours truly,

L. J. Bardswich
P. Eng.

LJB:db

NICOR MINERAL VENTURES

One of the NICOR
basic energy companies

MEMORANDUM

To: Gary Parkison

From: C. Wendt

Date: May 4, 1984

Subject: Portland Mine

The Portland Mine has many problems, the least of which is the poor recoverys and high stripping ratios. Where as this is one I previously passed on with Queenstake, it will be worth looking at in a regional context with "detachment" type thinking.

Perry Durning of Fischer-Watt gave me a lot of insight as to why they "killed" the project and some of the numbers that are in the report (grades and tons) that are suspect.

Let's plan to see the area when we get to Kingman along with the entire detachment area.

If you have any questions, please give me a call.

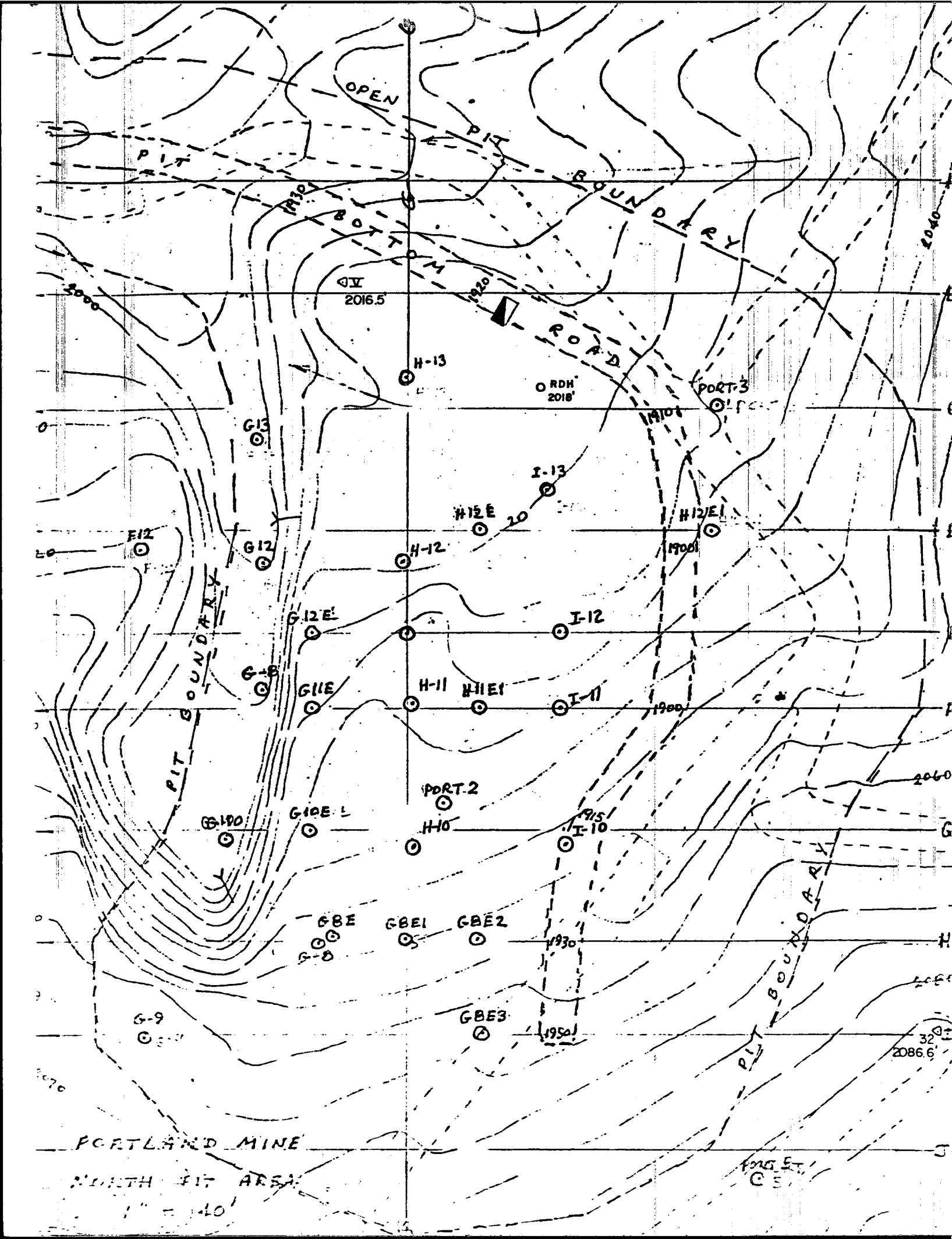
CW/lh

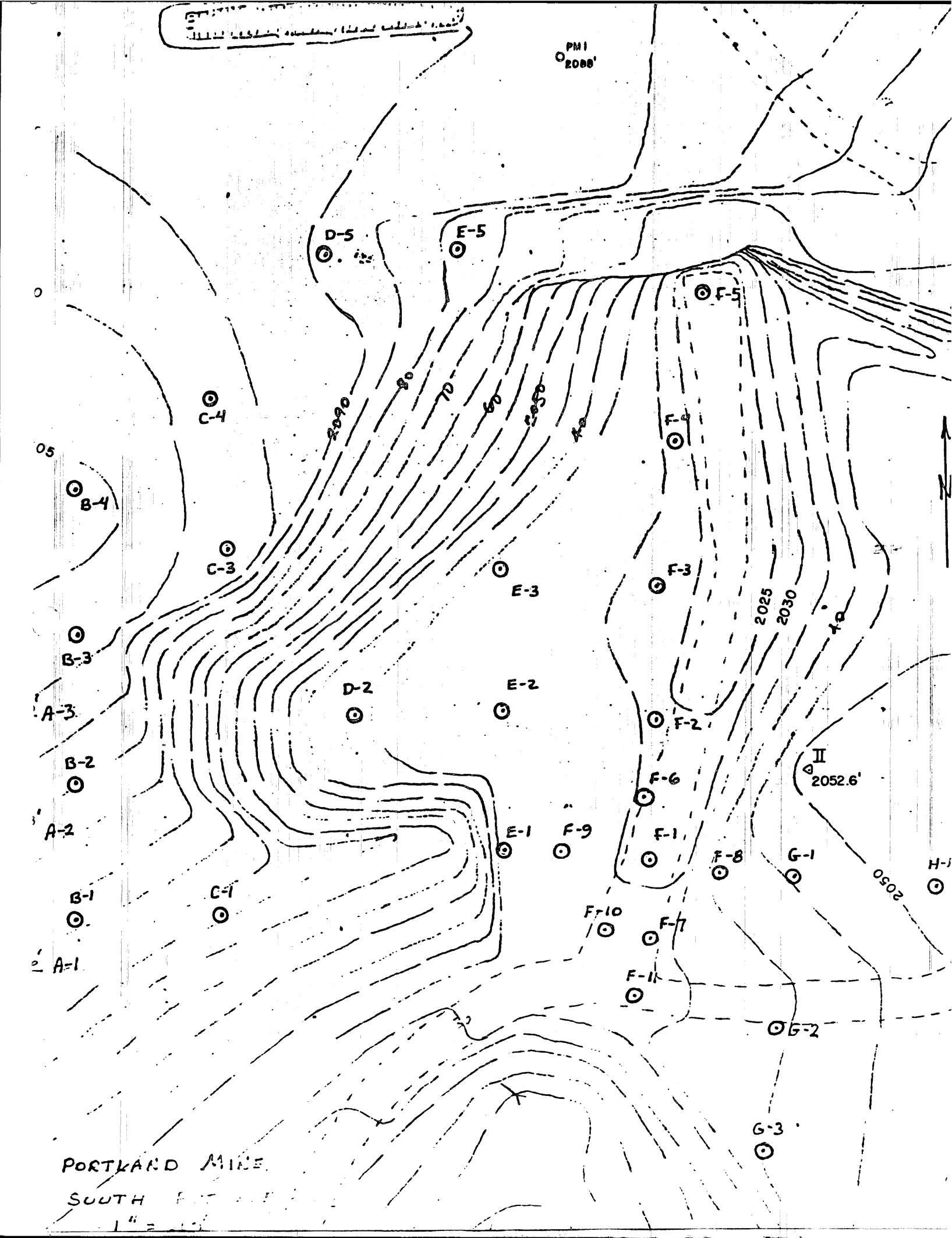
Clay

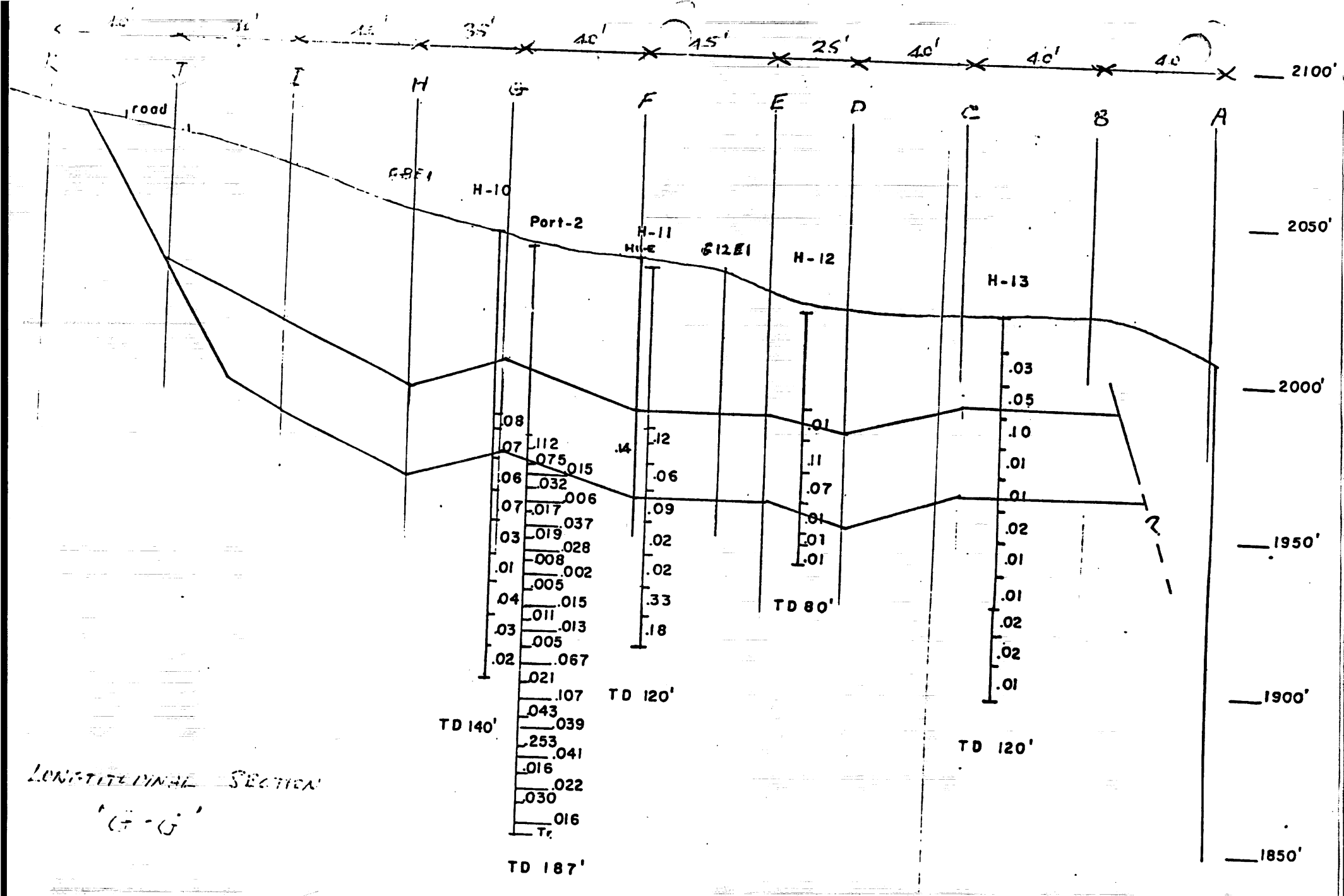
PORTLAND MINE

ORE AND WASTE QUANTITY CALCULATIONS

SECTION	DISTANCE BETWEEN	ORE AREA	AVERAGE AREA	ORE TONS	WASTE AREA	AVERAGE AREA	WASTE TONS
-A		0			500	(ROAD CUT	30,000)
	40		0	0		2850	9120
A		0			5200		
	40		0	0		6100	19520
B		0			7000		
	40		1750	5600		9300	29760
C		3500			11600		
	40		3650	11680		12400	39680
D		3800			13200		
	25		3800	7600		13950	27900
E		3800			14700		
	45		4150	14940		15300	55080
F		4500			15900		
	40		4050	12960		14550	46560
G		3600			13200		
	35		3600	10080		13800	38640
H		3600			14400		
	40		4150	13280		12700	40640
I		4700			11000		
	40		2350	7520		7750	24800
J		0			4500		
						2250	7200
TOTALS				83660			368,900

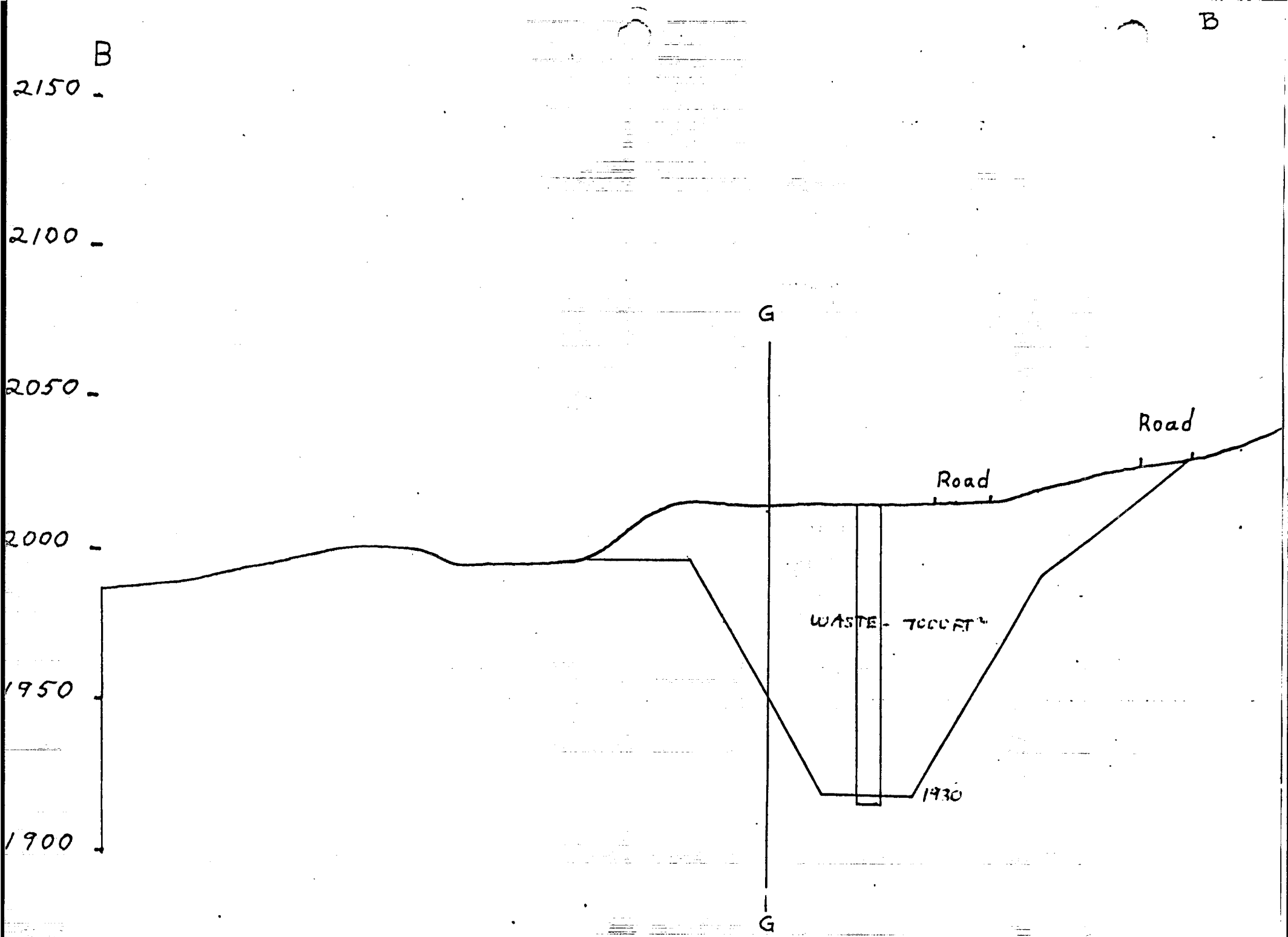

OPEN PIT
PIT BOUNDARY
BOTTOM
ROAD
2016.5
H-13
RDH 2018'
PORT-3
G13
I-13
H12E
H12E1
F12
G12
H-12
G12E'
I-12
G-8
G11E
H-11
H11E1
I-11
PORT-2
G10E
H10
I-10
GBE
GBE1
GBE2
G-9
GBE3
2086.6'
PORTLAND MINE
NORTH PIT AREA
1" = 40'


PM1
2088'
D-5
E-5
F-5
C-4
F-4
B-4
C-3
E-3
F-3
B-3
D-2
E-2
A-3
F-2
B-2
F-6
2052.6'
A-2
E-1
F-9
F-1
F-8
G-1
B-1
C-1
F-10
F-7
A-1
F-11
G-2
G-3
2090
80
70
60
2050
40
2025
2030
2050
PORTLAND MINE
SOUTH

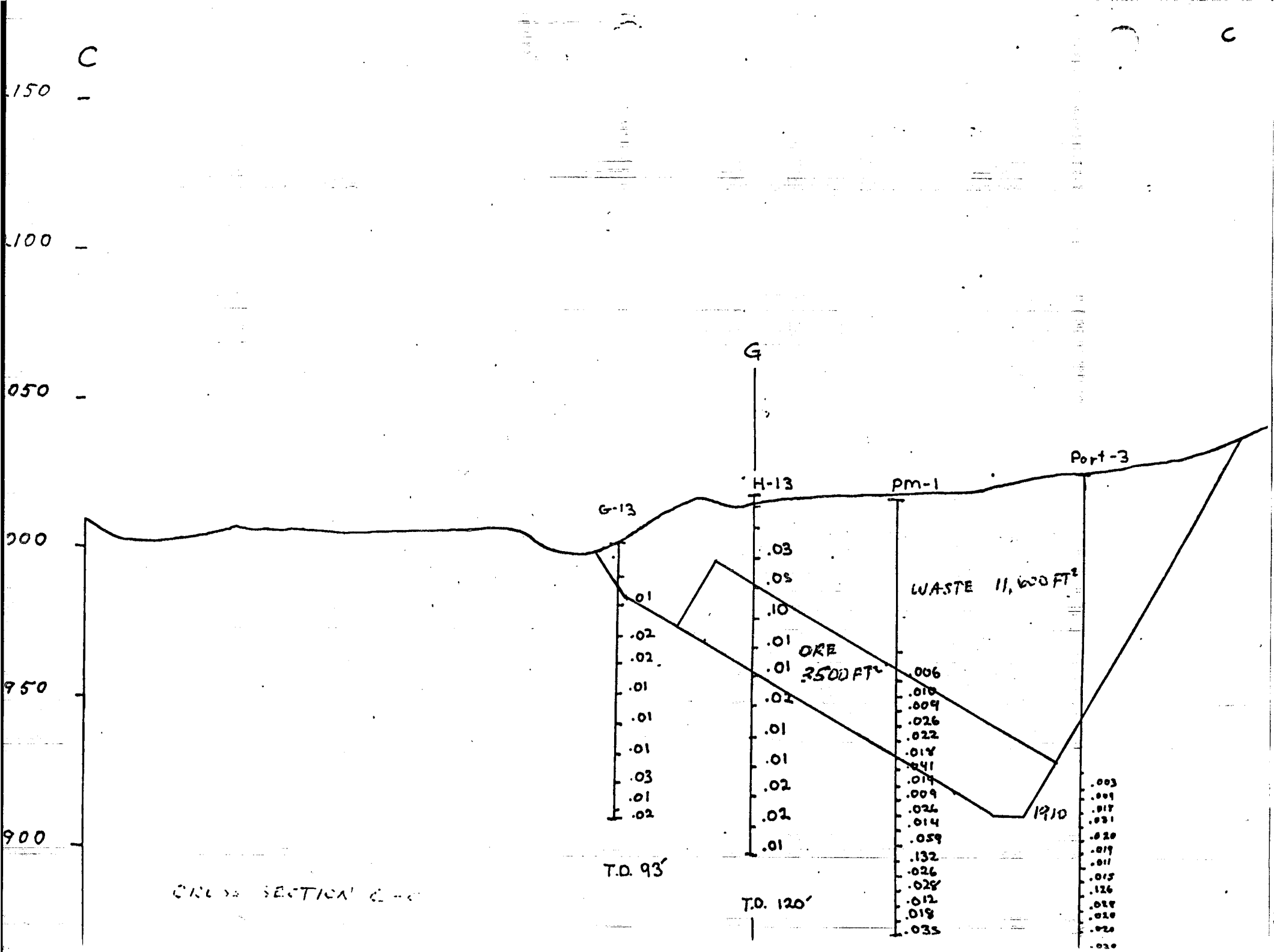


LONGITUDINAL SECTION
'G-J'

A
2150
2100
2050
2000
1950
G
G
Road
Road
Road
Dirt cut @ 30°
Rock cut @ 60°
WASTE 5200FT²
1930



CROSS SECTION B-B'


C
C
150
100
050
000
950
900
G
H-13
G-13
Pm-1
Port-3
WASTE 11,600 FT²
ORE 3500 FT²
1910
T.D. 93'
T.D. 120'
.03
.05
.10
.01
.02
.01
.01
.01
.02
.02
.01
.01
.02
.01
.03
.01
.02
.006
.010
.009
.026
.022
.018
.041
.019
.009
.026
.014
.059
.132
.026
.028
.012
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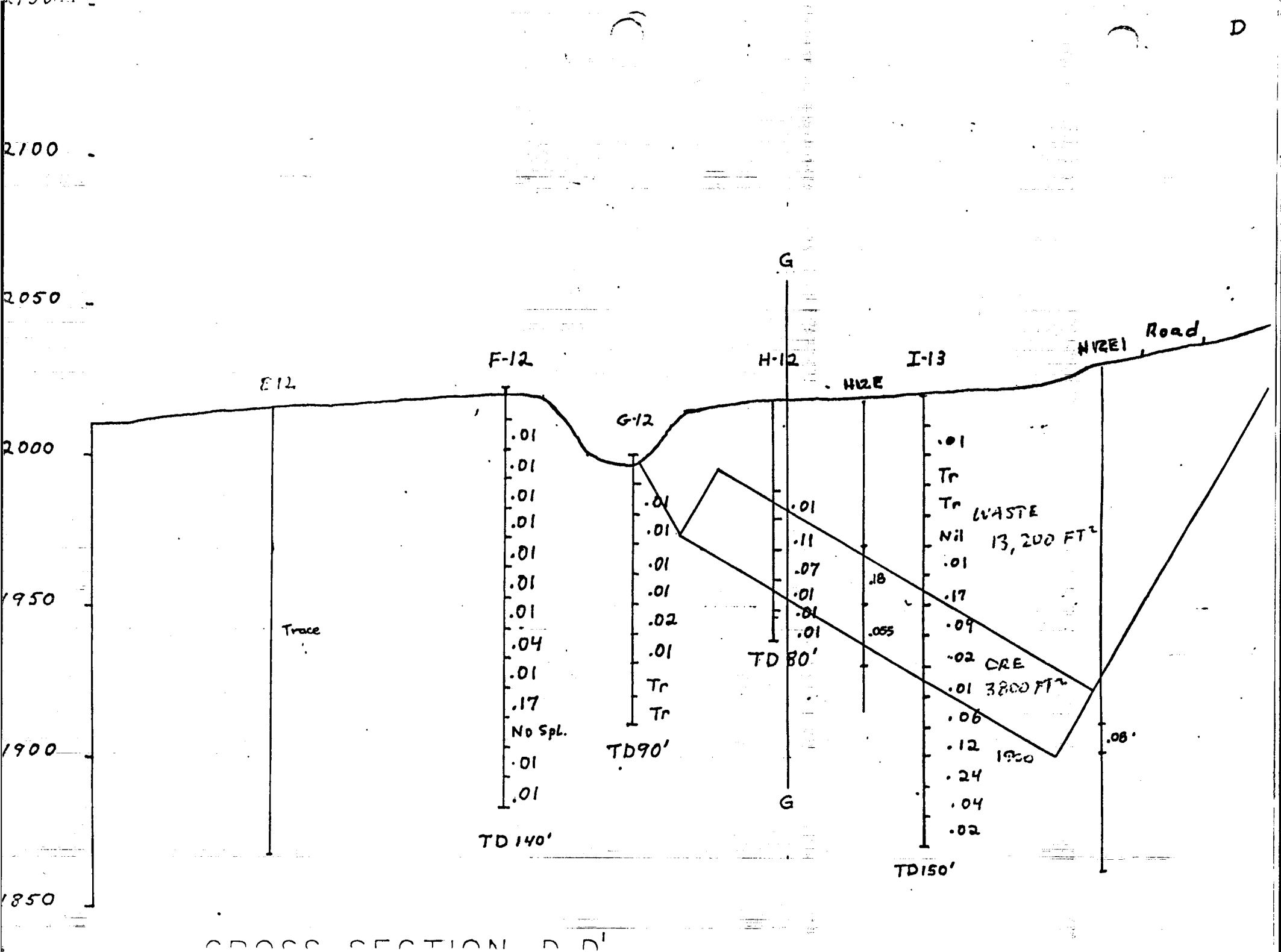
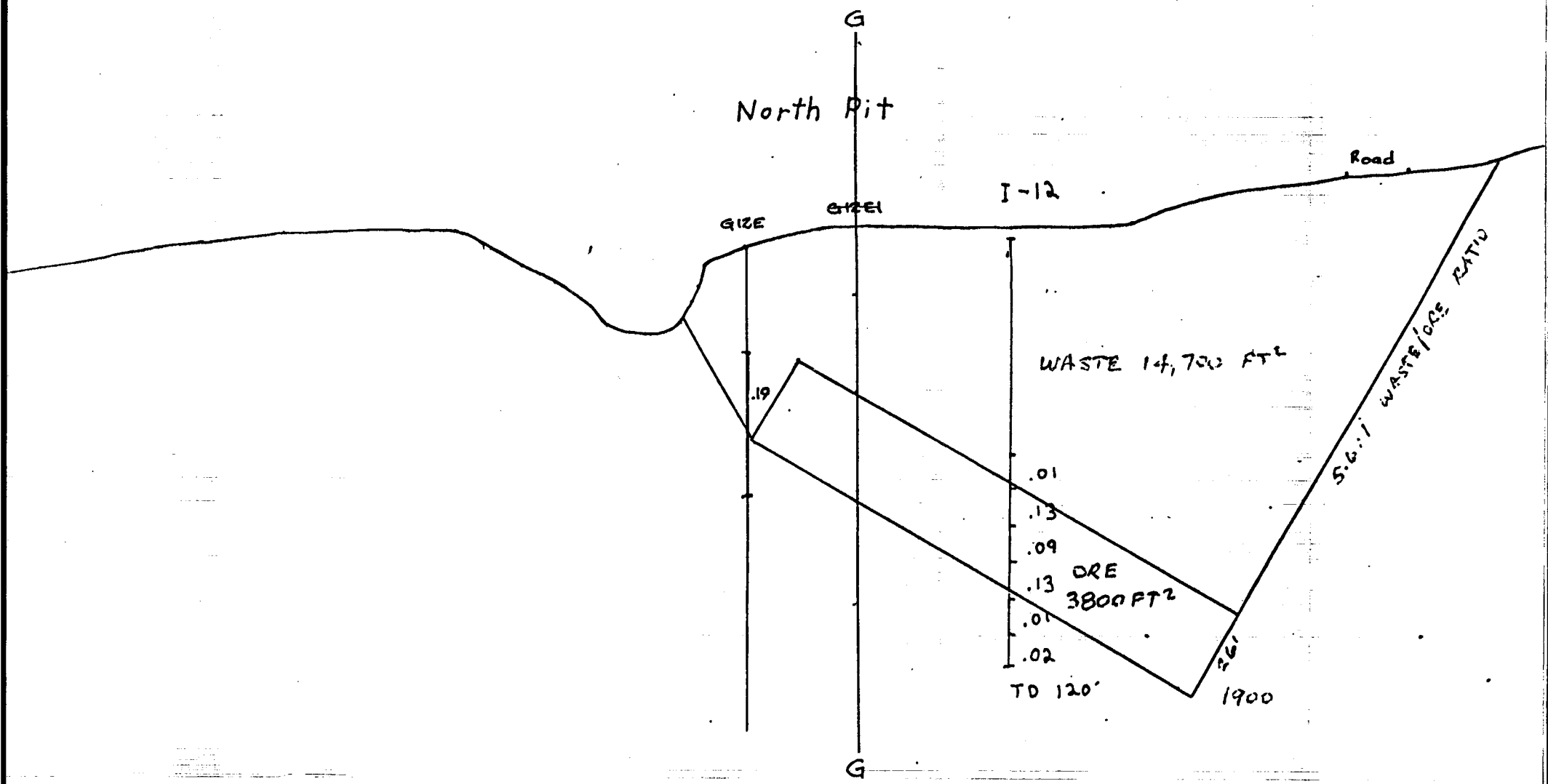
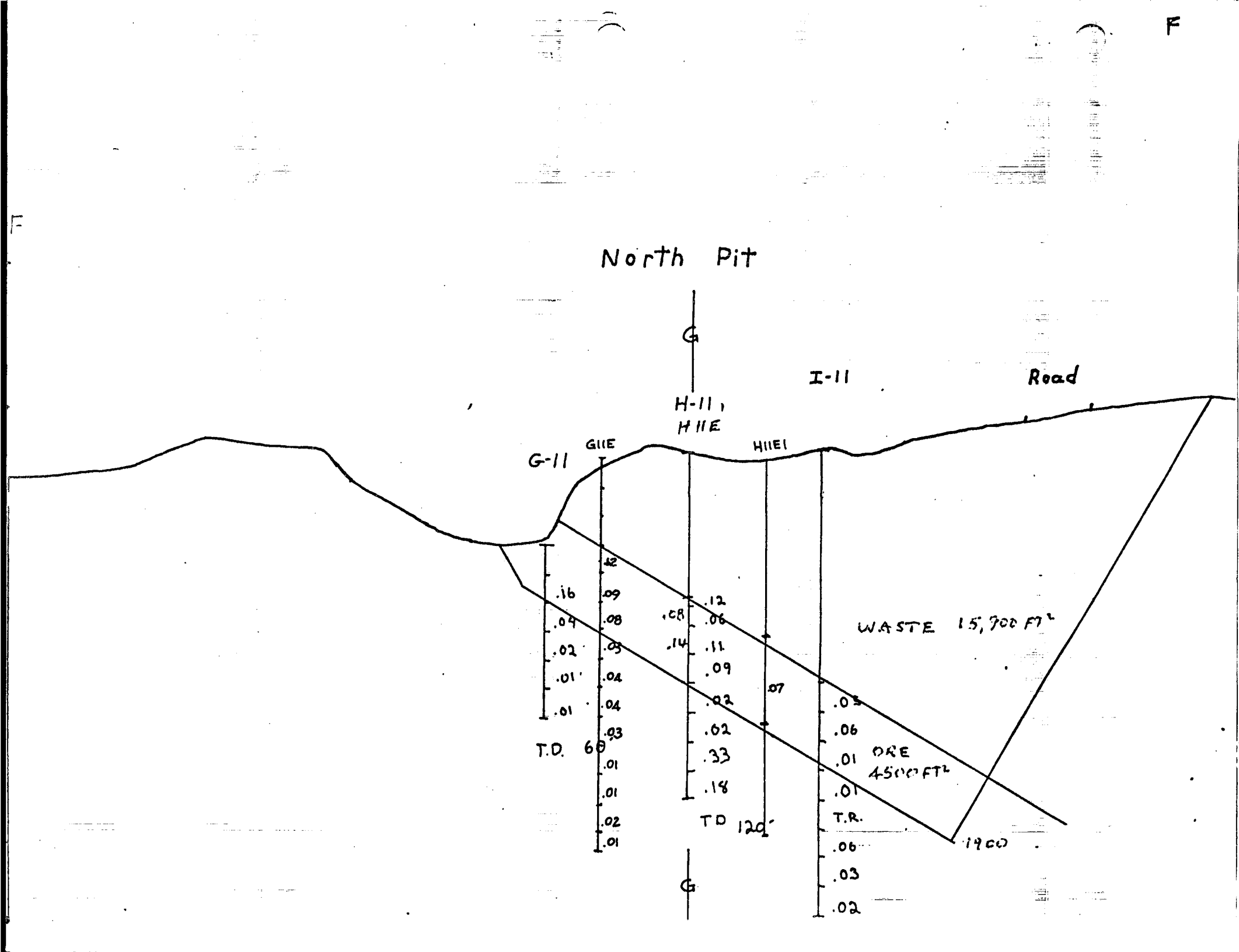
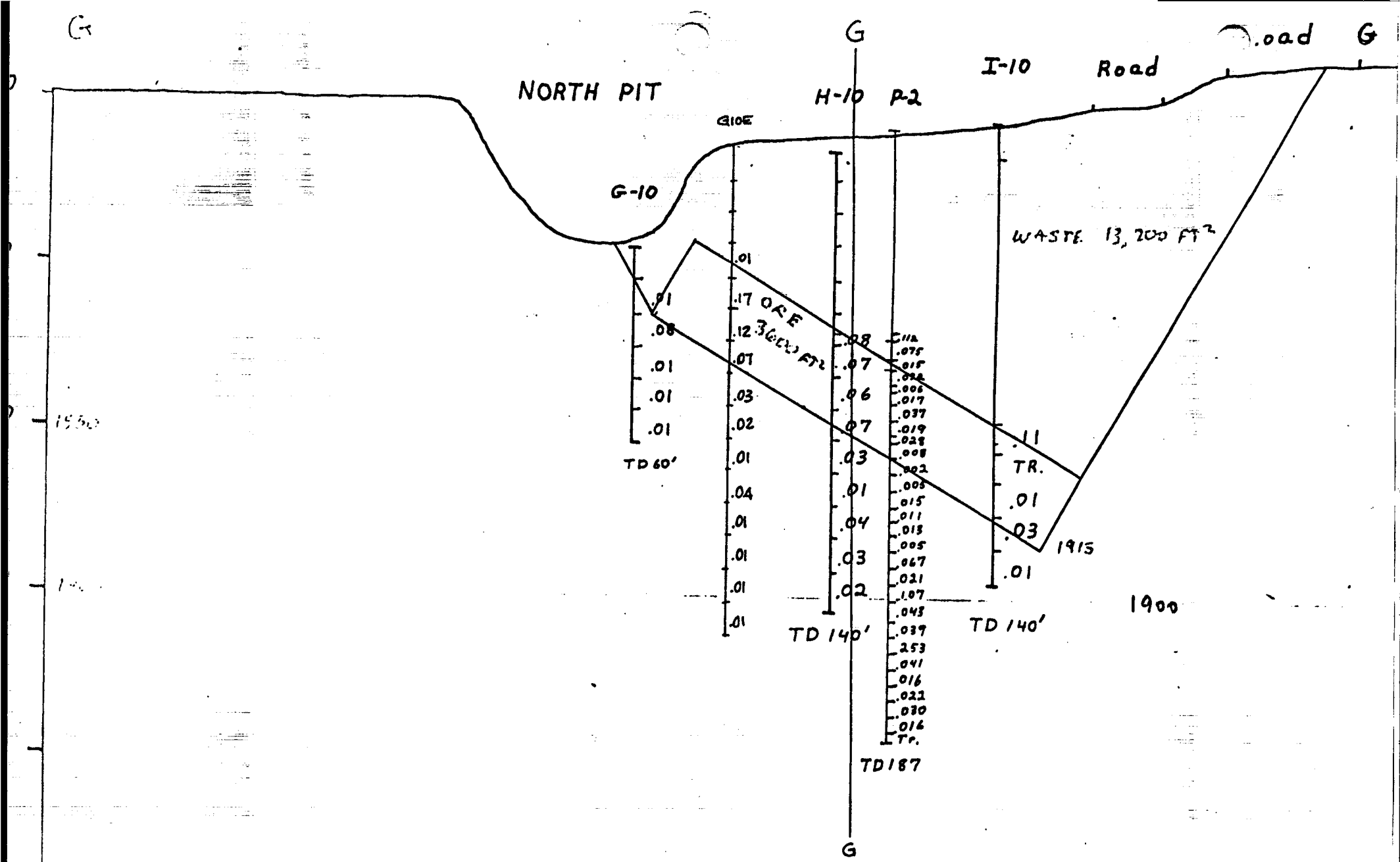
.020
.019
.011
.015
.126
.020
.020
.020



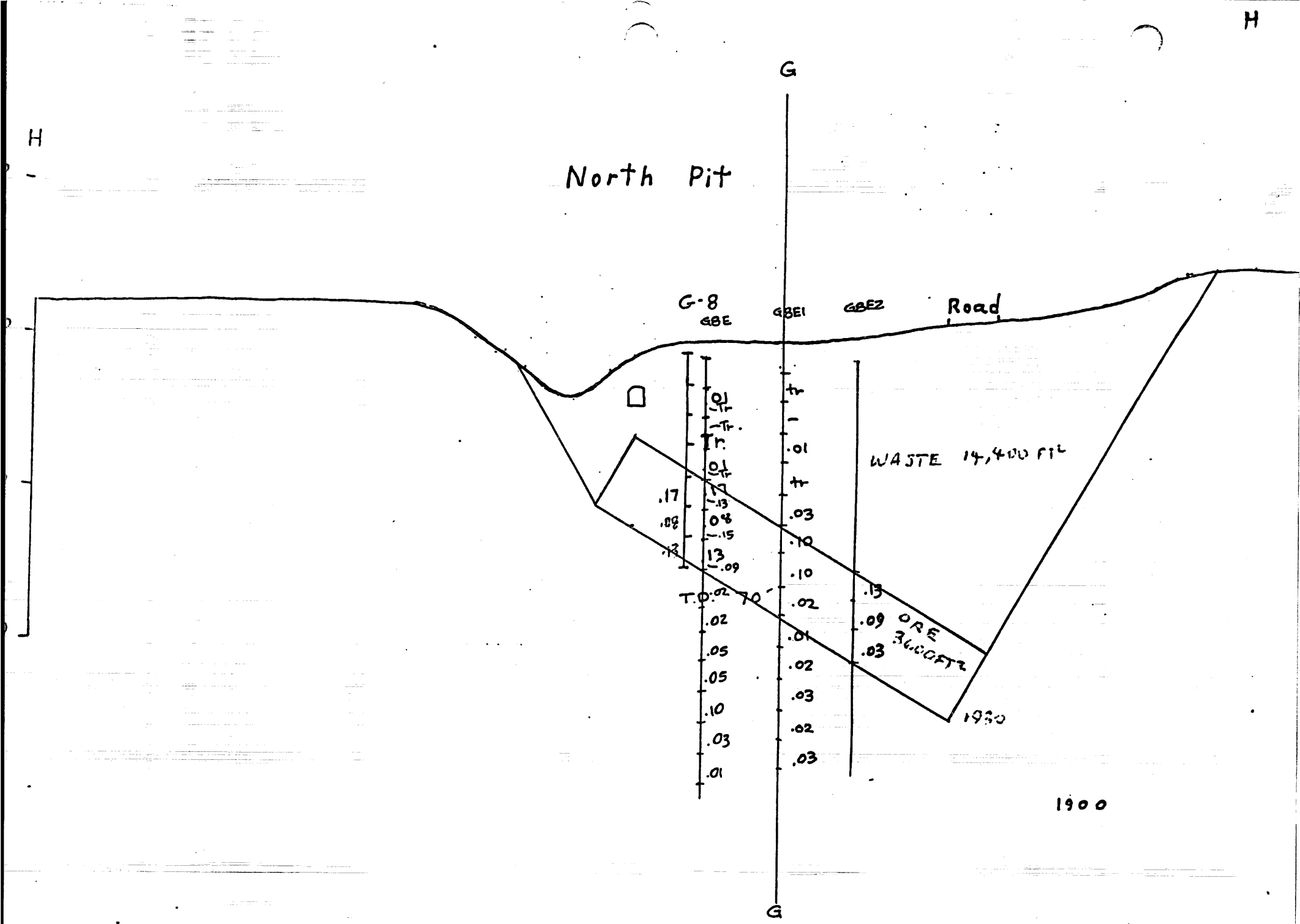
CROSS SECTION D-D'


G
North Pit
Road
I-12
GI2E
GI2E1
.19
WASTE 14,700 FT²
.01
.13
.09
.13
ORE
3800 FT²
.01
.02
TD 120'
261
1900
5.6:1 WASTE/ORE RATIO
G

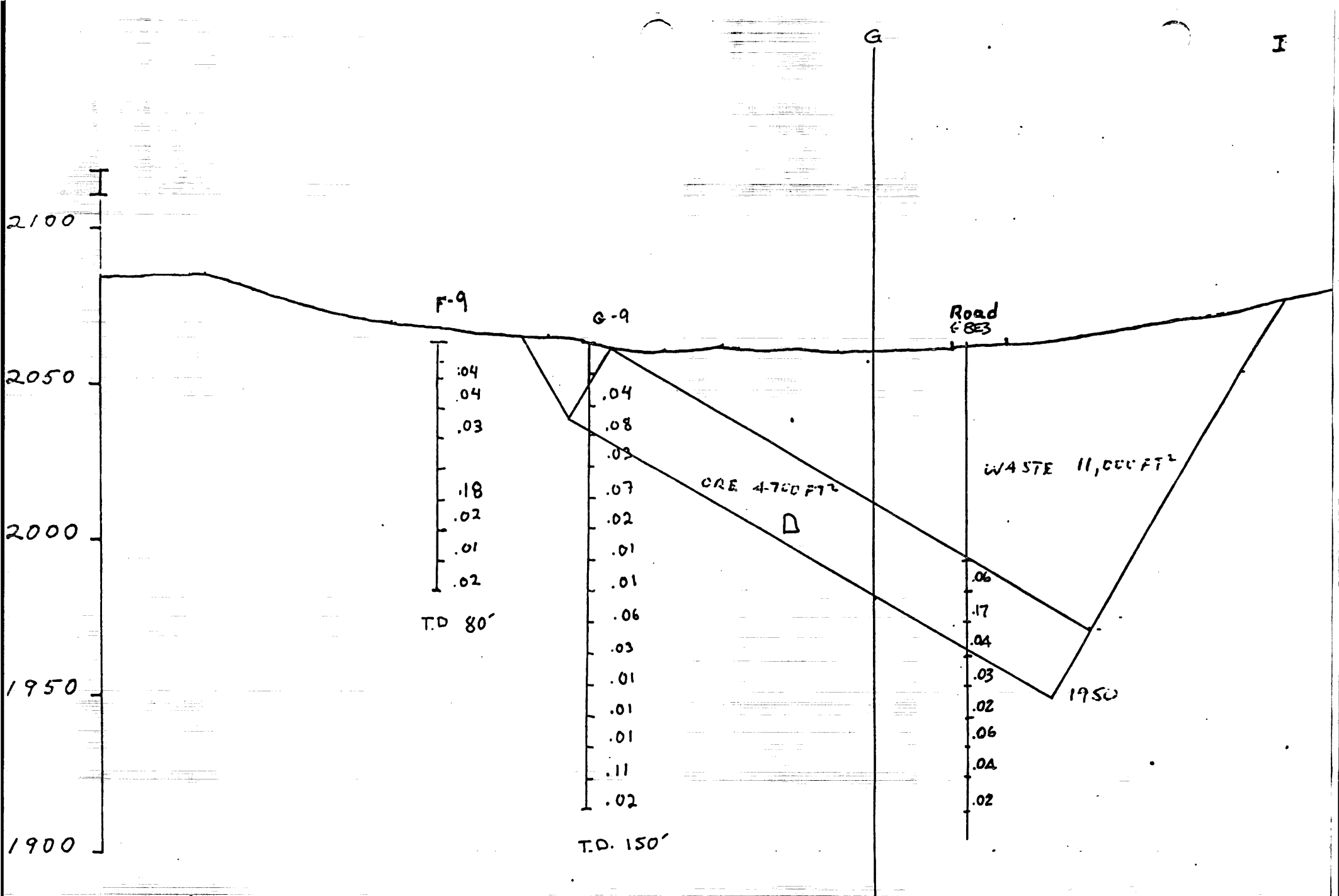

F
F
North Pit
G
I-11
Road
H-11,
H11E
G-11
G11E
H11E1
.16
.04
.02
.01
.01
.12
.09
.08
.03
.04
.04
.03
.01
.01
.02
.01
T.D. 60'
.08
.14
.12
.06
.11
.09
.02
.02
.33
.18
TD 120'
.07
.05
.06
.01
.01
T.R.
.06
.03
.02
WASTE 15,700 FT²
ORE
4500 FT²
1900
G



CROSS SECTION G-G'

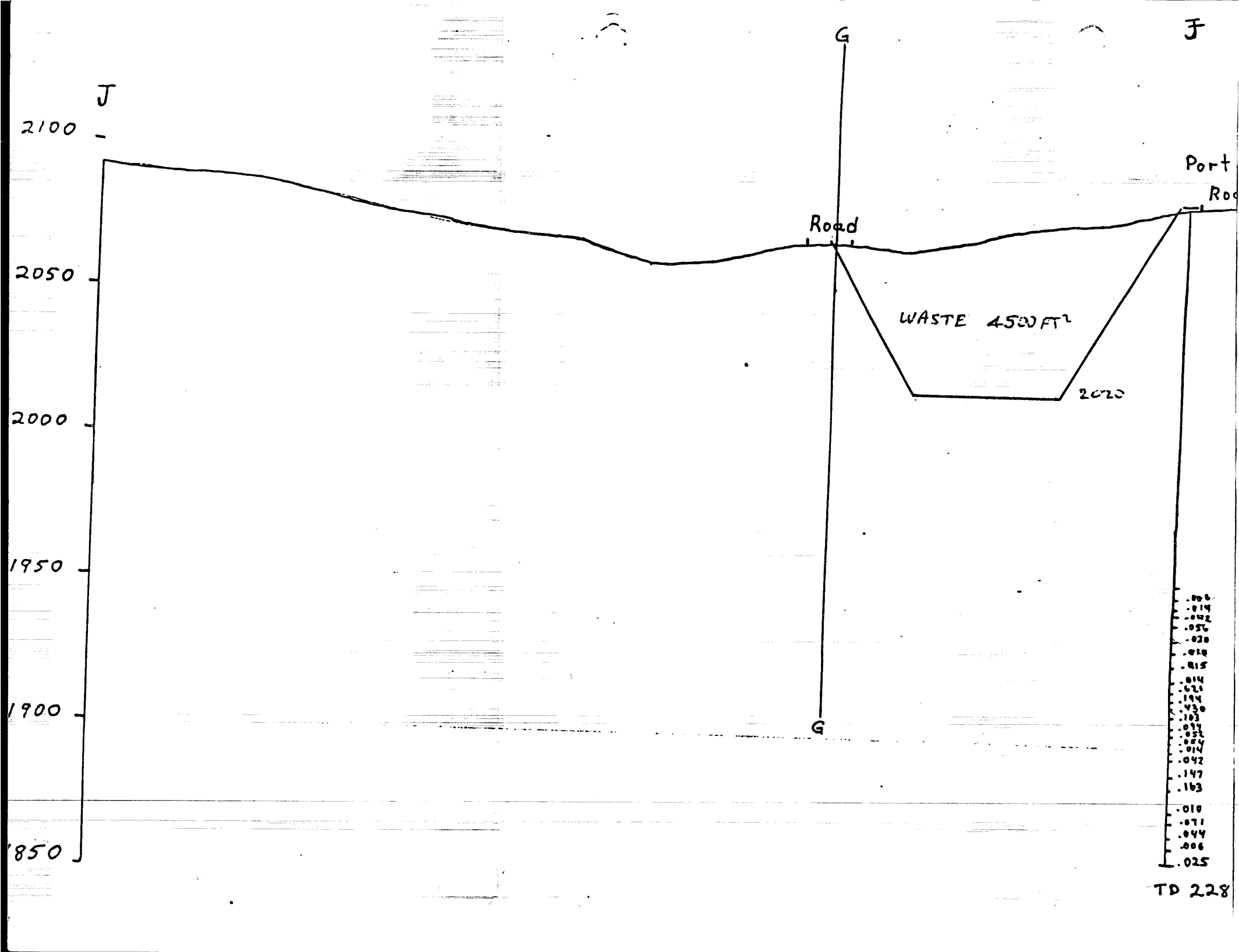


CROSS SECTION H-H'



CROSS SECTION I-I'

LOOKING NORTH


J
G
J
2100
2050
2000
1950
1900
1850
Road
Port
WASTE 4500FT²
2020
G
TD 228

GEOLOGICAL REPORT

ON

PORTLAND GOLD MINES PROPERTY

MOHAVE COUNTY

ARIZONA

FOR

PACIFIC CYPRESS MINERALS LTD.

NOVEMBER 30,1982

L.D.S. Winter
B.A.Sc., M.Sc., F.G.A.C.

TABLE OF CONTENTS

1. INTRODUCTION

Pacific Cypress Minerals Ltd. has recently acquired the Portland Gold Mine property in the Weaver Mining District of Mohave County in the northwestern part of the State of Arizona, U.S.A.(Figure 1). Between 1935 and 1939 a total of 132,000 tons of gold ore was shipped to the Katherine mill from this property from both open pit and underground operations. When the Katherine mill closed in 1939 the Portland Mine was also forced to cease operations and the property has remained idle since that time.

At the request of Mr. Edward Mueller, president of Pacific Cypress Minerals Ltd., the Portland property was visited on November 15, 1982 for the purpose of conducting a geological investigation as the basis for an exploration and developement proposal for the property. The following report describes the property, summarizes the results of the previous work and outlines a proposed developement program.

2. SUMMARY AND RECOMMENDATIONS

2.1 The Portland Mine property consists of 22 patented and located claims in the Weaver Mining District, Mohave County, Arizona.

2.2 Access is via paved and gravel roads from the Kingman-Boulder highway(U.S. 93). The semi-arid climate is favourable for year-round operation and the logistics for an open pit - heap leaching operation are excellent.

2.3 The mineralization occurs as colloidal gold and silver in a strataform "vein" of quartz and calcite close to the contact of Precambrian granites and schists and overlying Tertiary volcanics. The mineralized zone strikes north-south and dips 25°E. Mineralization is exposed over a strike length of 2200 feet.

2.4 Between 1935 and 1939, 132,000 tons of ore with an average grade of 0.225 oz Au/T. was produced from the property. In 1981 the Fischer-Watt Mining Co. Inc. of Kingman, Arizona re-evaluated the property. Their work produced estimates of 131,060 tons at 0.095 oz Au/T. or 748,364 tons at 0.057 oz Au/T. still available in the deposit.

2.5 The writer has recalculated the tonnages at 134,000 tons at 0.095 oz Au/T. with a waste to ore ratio of 3.90/1 or 788,000 tons at 0.057 oz Au/T. with a waste to ore ratio of 1.47/1 for an open pit operation.

2.6 A comparison of the assay results from drilling and those obtained by chip sampling of the mineralized zone suggests that the drill assays underestimate the value of the mineralization. A program of 700 feet of drilling plus additional sampling is recommended to better assess the grade of the mineralization in the "North and South Tunnel Orebodies" area. This work plus associated engineering studies would provide the basis for the layout of a viable open pit operation. The estimated cost of this work is $22,000.*

2.7 Preliminary leach tests have indicated that the ore is amenable to heap leaching technology. It is recommended that further testing, including a column leach test be conducted, prior to crushing plant and leach pad construction.

2.8 It is considered that there is considerable potential for additional mineralization between the "South Tunnel Orebody" and the "Little Orebody" (Figure 3) and also down dip from the presently known known areas.

2.9 The presently known ore is defined as probable or inferred ore and based on this material a three phase program of exploration followed by open pit developement and the construction of a crushing plant - heap leach facility is recommended. The estimated cost of this total program is $352,000.

2.10 Based on a production of 500 TPD for a 5 day week and with an open pit reserve of 134,000 tons with an estimated grade of 0.095 oz Au/T. and a maximum stripping ratio of 4 to 1, the estimated operating costs are $9.00 per ton rising to $15.00 per ton with the maximum stripping ratio.

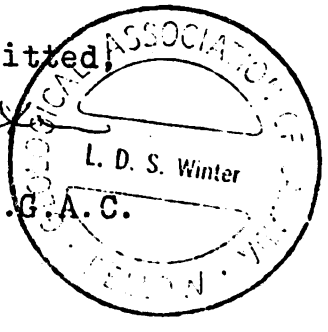
With gold at $US 400 per oz and an 80% recovery, the estimated recoverable value is $30.40 per ton. This provides a net gain of $21.40 per ton decreasing to $15.40 per ton with the maximum stripping ratios. If one considers the lesser net gain per ton of $15.40, then the estimated total net gain for the 134,000 tons is $2,063,600.

* All dollar values quoted in this report are in US dollars.

Respectfully submitted,

L.D.S. Winter

L.D.S. Winter,
B.A.Sc., M.Sc., F.G.A.C.



3. PROPERTY

3.1 CLAIM GROUP AND OWNERSHIP

The property consists of 3 contiguous patented claims , namely, the Portland, Sunshine and Sunshine #2 (Mineral Survey 3757, Patent #909600), and 19 located claims, the Portland 1 to 15 inclusive, the Better Luck and Better Luck #1 claims, the Good Luck claim and the Sunshine #3 claim(Figure 2).

The patented claims are jointly owned and the located claims controlled by the following.

Mona G. Potter
2415 Ala Wai Boulevard
Honolulu, Hawaii, U.S.A.
96815

Samuel L. Clark and Lavonne G. Clark
3955 Maple Tree Drive
Anaheim, California, U.S.A.
92807

Leland M. Wiscombe and June M. Wiscombe
6750 Hawaii Kai Drive No. 1005
Honolulu, Hawaii, U.S.A.
96825

The claim group is under option to Mr. Antone Aguiar, 4021 Fairmont Street, San Diego, California, U.S.A. 92105. In turn, Mr. Aguire has entered into an agreement with Pacific Cypress Minerals Ltd. in which Pacific Cypress has made an initial payment of $12,000 and is required to provide all the funds necessary to bring the property to production. In return Pacific Cypress will be entitled to 60% of net profits with the vendors retaining 40% of net profits.

3.2 LOCATION AND ACCESS

The property is located in the Weaver Mining District in Sections 14 and 15, Township 23 North, Range 21 West, Gila and Salt River Base Meridian. (Mohave County Assessors Map 43, Book 307).

Paved and gravel roads permit easy access to the property. It is reached by travelling 27 miles north from Kingman, Arizona on the Boulder-Kingman Highway(US 93) and then 8.9 miles west on the Cottonwood Wash Road. From here the mine access road leads southwesterly for a distance of 10 miles. A truck or four-wheel drive vehicle is most appropriate for this access road.

3.3 TOPOGRAPHY

The claim group is in the western foothills area of the Black Mountain Range, approximately 5 miles east of the Colorado River. Rocky, hilly areas are separated by relatively flat sediment filled valleys..

3.4 CLIMATE

The semi-arid climate is characterized by high summer temperatures with low humidity and mild winters. The annual precipitation is from 6 to 9 inches. These conditions make the area favourable for year round operation.

3.5 WATER

There is no water on the surface but wells could supply sufficient water for the operations. Water is present in the lower mine workings, indicating that the water table is approximately 50 feet below the surface. The Colorado River is about 5 miles to the west.

3.6 SERVICES

Diesel electric power would be necessary for the initial developement but electricity could be available from the Kingman-Boulder power line if future requirements so dictated..

Supplies are available from Kingman, Boulder City or Phoenix in Arizona or Las Vegas in Nevada.

The 10 miles of mine access road would require upgrading for heavy truck and/or more continuous usage.

4. PREVIOUS WORK

Gold was first discovered in the Oatman-Katherine District, just to the south of the area of the property, in 1863-1864 by soldiers from Camp Mohave on the Colorado River. Exploration and mining has been carried on intermittently since that time with the main periods of activity being from 1900 to 1925 and from 1930 to 1942.

Developement records indicate that the Portland Mine operated between 1935 and 1939 when 400 feet of inclined and vertical shafts were sunk and 700 feet of lateral developement completed. Considerable trenching was also done in the area of the three main workings with the main production coming from the middle or "South Tunnel Orebody"(Figure 3).

Past production is reported to be 132,000 tons with a recovered grade of 0.225 oz Au/T.(Sookochoff, 1975). The ore was treated in the Katherine mill, about 10 miles from the property. In 1939 the Katherine Mine flooded, the Katherine mill was forced to close and subsequently the Portland Mine closed.

5. GEOLOGY

5.1 GENERAL

The geology of the Weaver Mining District and that of the Oatman and Katherine District to the south is very similar. An uneven terrain of Precambrian granites, diorites and mica schists is unconformably overlain by a thick sequence of Tertiary volcanics ranging in composition from felsic to mafic. All rock units have been intruded by porphyries of granitic to monzonitic composition. Following this event the rocks were tilted and faulted.

To the south in the Oatman District the gold bearing veins occur in fault structures, generally in the Oatman andesite unit, while in the Katherine area the important deposits occur in faults in Precambrian basement rocks. At the Portland Mine the mineralization occurs in a strataform "vein" close to the Precambrian - Tertiary volcanics contact.

The vein mineralogy is simple, being quartz, calcite, occasionally a grain of pyrite and gold. Ransome (1923) reports that the gold in the Oatman and Katherine Districts is free gold, but on the Portland property the gold appears to be in the colloidal state (E. Blanchard, personal communication).

5.2 PROPERTY GEOLOGY

Figure 3 is a sketch map of the property geology in the area of the old workings. The western part of the property is underlain by Precambrian rocks and some andesite flows, while the eastern part is occupied by Tertiary volcanic flows (Oatman andesite) striking approximately north - south and dipping 15° - 30° east. In the region of the unconformity between these units occurs the strataform "vein" or zone of quartz-calcite - gold mineralization, striking north-south and dipping 25°E. At the northern end of the"North Tunnel Orebody" the mineralized vein

rolls very quickly to take on an east - west strike and a steep north dip.Durning (1981) considers there is a fault in this area cutting off the ore, but it may be only a folding of the mineralized zone. A similar situation may exist in the area of the "Little Orebody" (Figure 3), where the mineralization strikes east-west and dips 30°-40° north. It is suggested that this is a roll in themineralization and that the main gold bearing zone is continuous between the "Little Orebody" in the south and the "South Tunnel Orebody".

The upper contact of the mineralized zone with the overlying andesite is considered to be a thrust fault, as indicated by the gouge, slicken sides and hematite alteration. This thrust strikes north-south and dips 25° E.

The footwall of the ore is variable, being either andesite or Precambrian basement, as well as stockworks of small quartz and calcite veins or a breccia cemented by quartz and calcite.

The main zone of mineralization is a 3 to 100 foot thick zone of quartz and calcite that appears to be conformable with the volcanic stratigraphy. The occasional spec of pyrite can be seen in the mineralized zone and the gold is reported to be in the colloidal state.

6. ORE RESERVES

6.1 PAST APPRAISALS AND PRODUCTION

In 1937 C.M. Becker M.E. made an estimate for Gold Standard Mines Corporation, which showed proven reserves of 287,000 Tons grading 0.19 oz. Au/T. in three orebodies (Table 1). From 1935 to 1939 Gold Standard Mines produced 132,000 tons of ore from underground and open pit operations grading 0.225 oz. Au/T. (Sookochoff, 1975). If these figures are accurate then there should be approximately 155,000 tons of reserves still present on the property.

TABLE 1
ORE RESERVE ESTIMATE
C.M. BECKER M.E. (1937)

	Tons	Grade oz.Au/T
Little Orebody	6,000	0.40
South Tunnel	200,000	0.175
North Tunnel Orebody	81,000	0.207
TOTAL	287,000	0.189

Sookochoff (1975) arrived at a tonnage estimate from both drill and underground data of 300,000 tons at o.201 oz.Au/T.

In 1978 and 1979 ASARCO Inc. undertook a surface sampling and hammer drilling program, in an attempt to develop a large tonnage open pit reserve. Their drilling results indicated a small gold deposit and the property was returned to its owners.

From October through December 1980, Fischer-Watt Mining Co. Inc. of Kingman, Arizona initiated and extensive surface and underground sampling program. This work indicated a potenteal of + 100,000 tons of open pit material grading 0.10 oz. Au/T. (Durning, 1981). Following this a 10 hole (1585 feet) core and rotary drilling program was undertaken in January through March of 1981. Using the information from this drilling, plus the ASARCO Inc. results and the results of underground sampling, Fischer-Watt estimated the tonnage of ore available in the area of the "North and South Tunnel Orebodies" within 200 feet of surface. (Table 2)

TABLE 2
ORE RESERVE ESTIMATE-NORTH AND SOUTH
TUNNEL OREBODIES AREA

ZONE	TRUE THICKNESS (feet)	oz.Au/T	oz.Ag/T	TONS
Upper or Hangingwall Portion of Vein	11.4	0.095	0.61	131,060
Hangingwall Portion of vein with values	30.6	0.098	0.56	318,420
Total Vein	63.6	0.057	0.58	748,364

Tonnage factor 13 $ft.^3$ per ton
Cut-off grade 0.04 oz.Au/T

Durning(1981) considered that the Fischer-Watt drilling indicated a number of significant points about the mineralization.

1. The mineralized zone is locally greater than 100 feet thick.

2. The gold values are erratically distributed throughout the zone but the upper 10 feet is of a better grade than the material below it.

3. There is some doubt as to the validity of the drill hole results, i.e., they may have

underestimated the grade of the mineralization. In general the drill hole values were significantly lower than the chip samples from underground workings taken close to the drill hole locations.

6.2 TONNAGE ESTIMATE

Using the Fischer-Watt data(Durning,1981) the writer re-calculated the tonnage potential in the area of the "North and South Tunnel Orebody". Two possible open pit mining situations were considered, one to mine only the hangingwall zone and the other to mine the total "vein". In both cases a tonnage of available ore was determined and the stripping ratio required to mine the ore. The results of these calculations are presented in Table 3. For the details of the calculations the reader is referred to Appendix 1.

TABLE 3

NORTH AND SOUTH TUNNEL OREBODY AREA

TONNAGE ESTIMATE

AVAILABLE FOR OPEN PIT MINING

ZONE	TONS	GRADE oz/T.*		W/O RATIO
		Au	Ag	
Upper or hangingwall portion of vein	134,000 (131,060)+	0.095	0.61	3.90/1
Total vein	788,000 (748,364)+	0.0575	0.58	1.47/1

NOTE: * Grades are as calculated by Durning, 1981.

+ Tonnage estimates by Fischer-Watt (Durning,1981).

The tonnage calculations by Fischer-Watt using the polygonal method and those by the author using the method of cross-sections are in close agreement. The Fischer-Watt grade estimates have been used but due to the comments by Durning(1981) the reported grades are tentatively considered to be minimum grades. As an example, hole PM-1 is reported to have no significant hangingwall values and Durning(1981) reports only 8.6 ft. at 0.095 oz Au/T. or 51.9 ft. at 0.034 oz Au/T. A vertical

shaft within a few feet of this hole is reported by Sookochoff(1975) to have given 30.5 ft. assaying 0.299 oz Au/T.

It is recommended that some additional drilling and sampling be done to better assess the grade of the calculated tonnage prior to development for production is started.

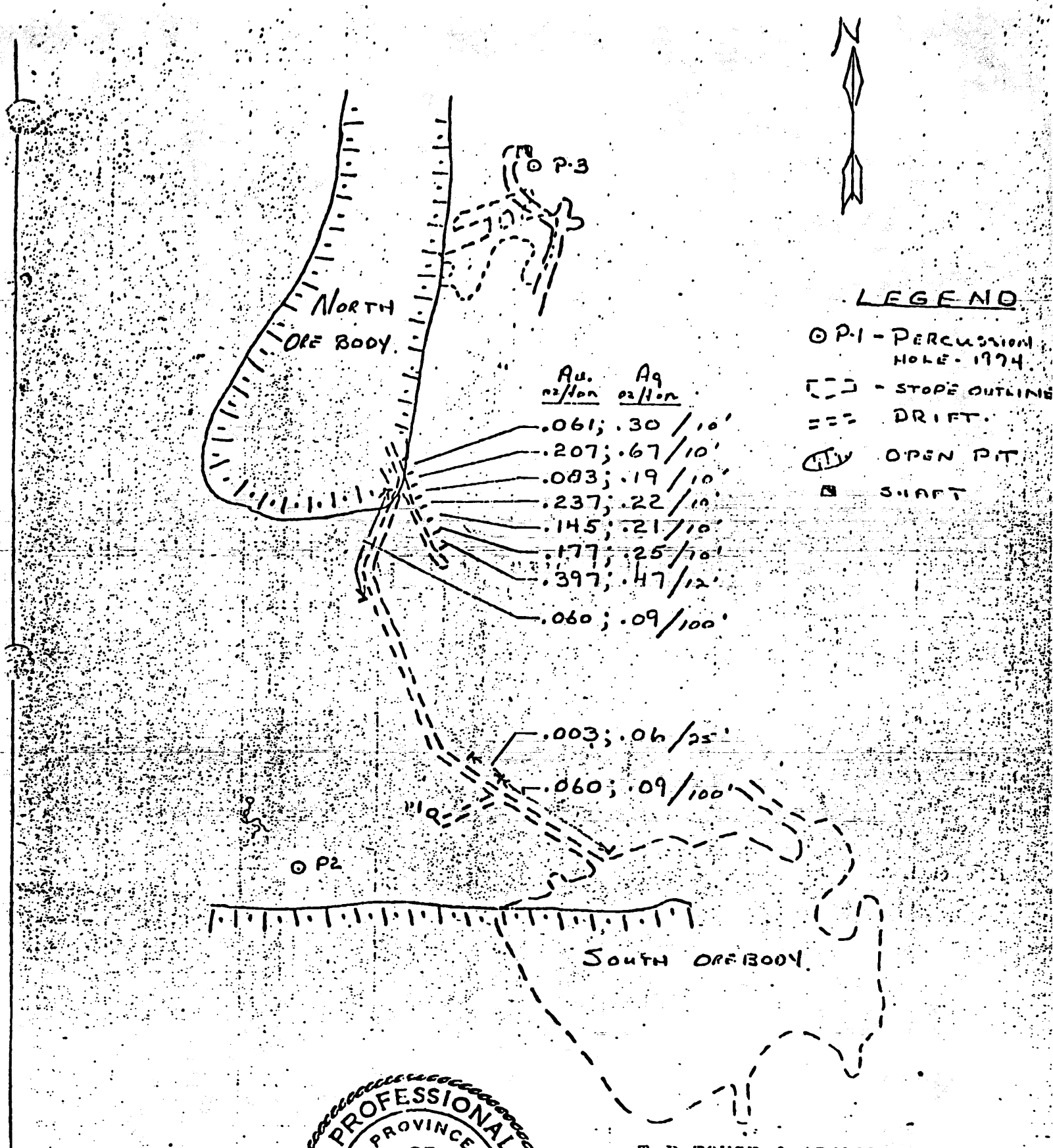
To get some idea of the distribution of values across the vein width 5 chip samples were taken by the writer from the underground workings. The results are presented in Table 4.

TABLE 4

SAMPLE RESULTS ACROSS THE "VEIN"
"NORTH TUNNEL OREBODY"

SAMPLE	LOCATION	VALUES oz/T. Au	Ag
1.	North Tunnel Orebody Chip sample over 6 ft Hangingwall zone	0.23	1.23
2.	7 ft. vertical section Tunnel portal	0.19	1.75
3.	7 ft. vertical section approximately in middle of stratigraphic section North Tunnel Orebody	0.11	0.68
4.	North Tunnel Orebody Chip sample over 8 ft. Drift face at hangingwall	0.21	0.92
5.	North Tunnel Orebody Chip sample over 7 ft, vertical section at footwall of ore	0.02	0.51

In summary, it is considered that there is 134,000 tons of inferred or probable ore with a minimum grade of 0.095 oz Au/T. available for open pit mining with a maximum stripping ratio of 3.9/1.



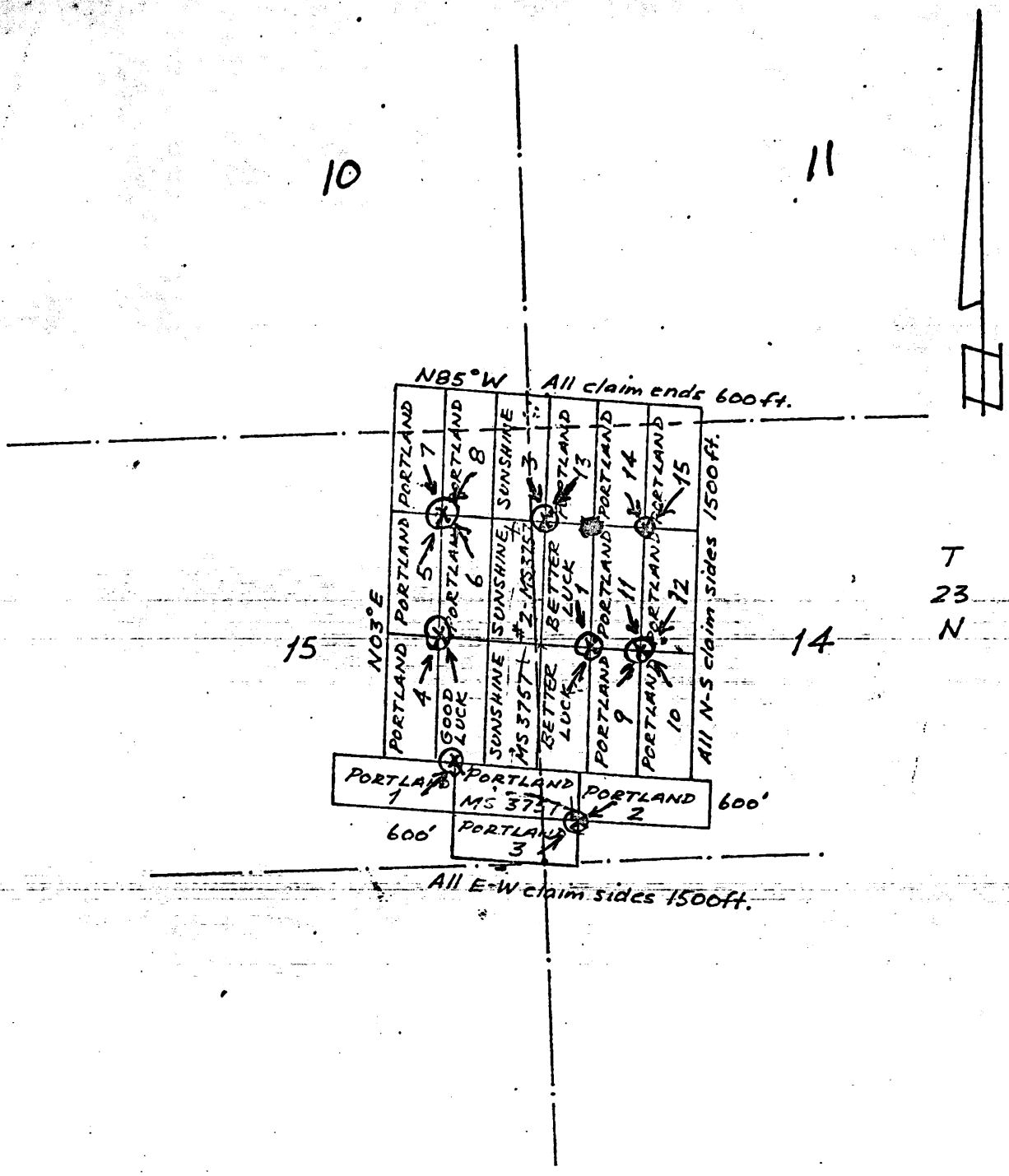
PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
LAURENCE VOU'DRIDER

T.R.TOUGH & ASSOCIATES LTD.
CEDAR CITY MINES LTD.

PORTLAND GOLD MINES PROPERTY

WORKINGS & SAMPLING

Scale 1"-100ft.



PACIFIC CYPRESS MINERALS LTD.

FIGURE 2

CLAIM GROUP

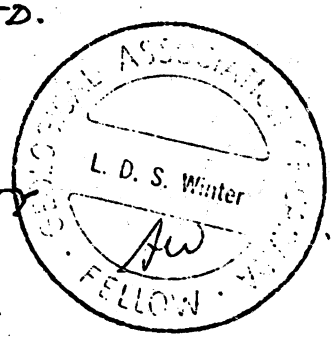
PORTLAND MINE PROPERTY

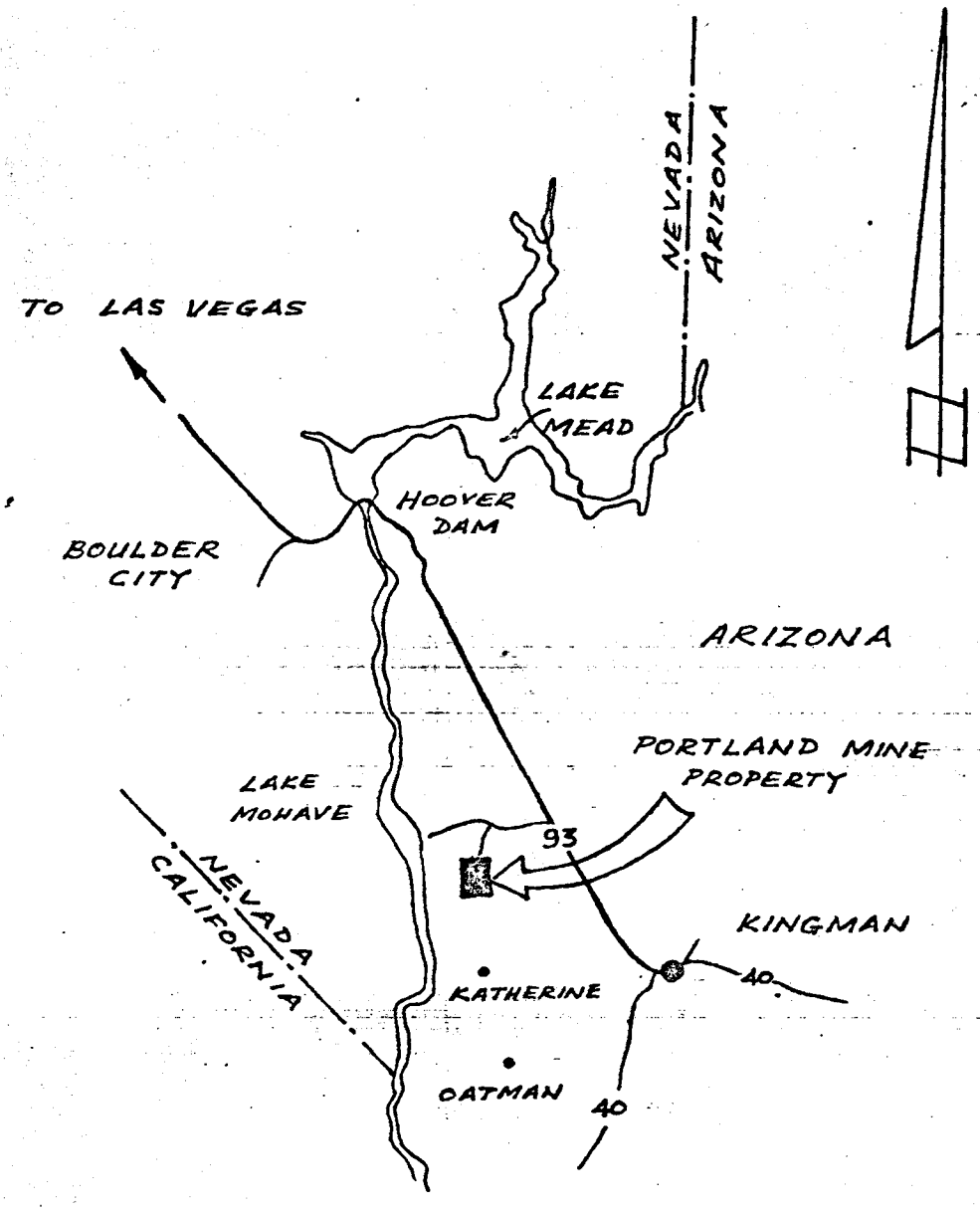
MOHAVE COUNTY

ARIZONA.

SCALE: 1 IN. = 2000 FT.

NOV. 30, 1982





PACIFIC CYPRESS MINERALS LTD.

FIGURE 1

LOCATION MAP

PORTLAND MINE PROPERTY

MOHAVE COUNTY

0 12 24 36 48

MILES

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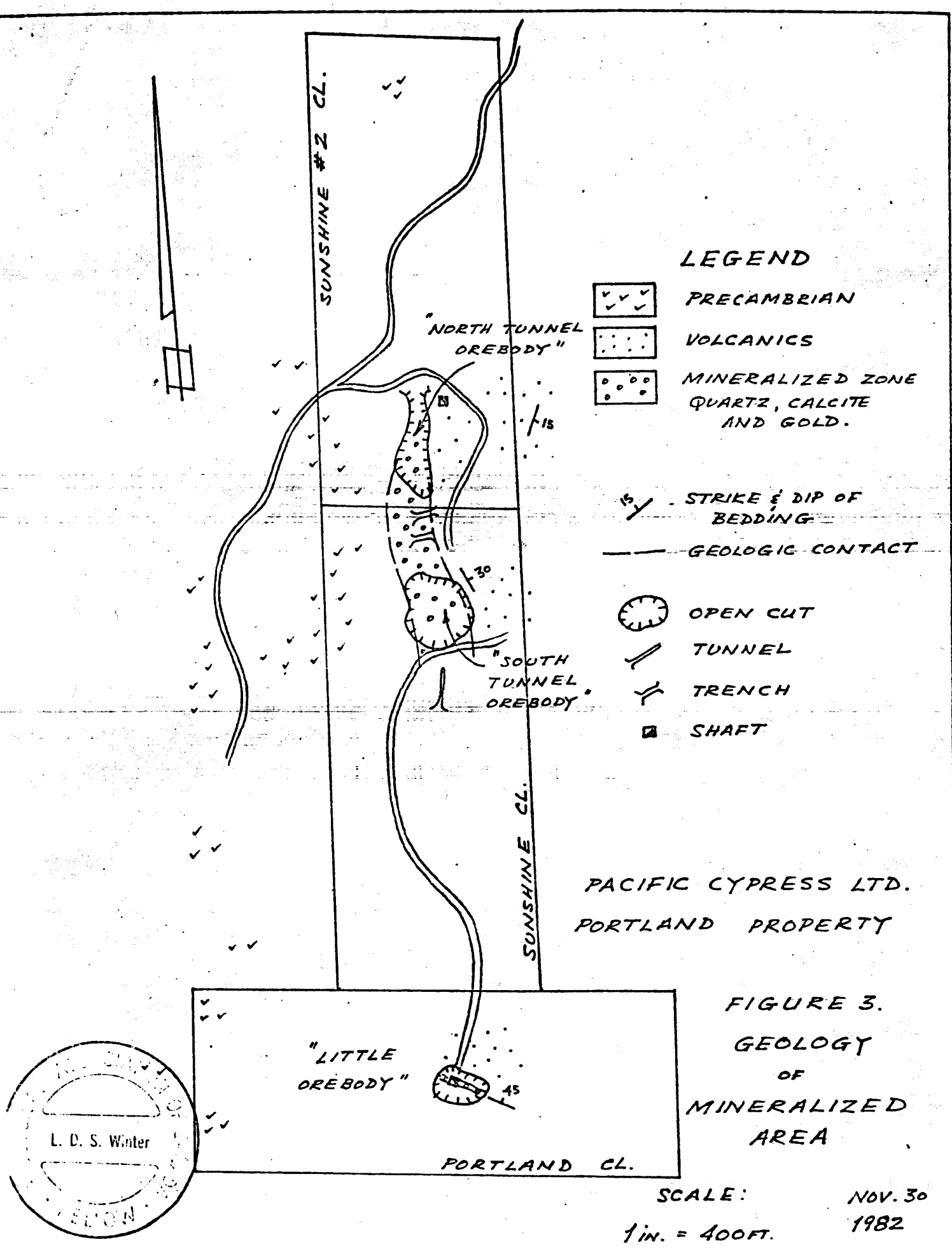
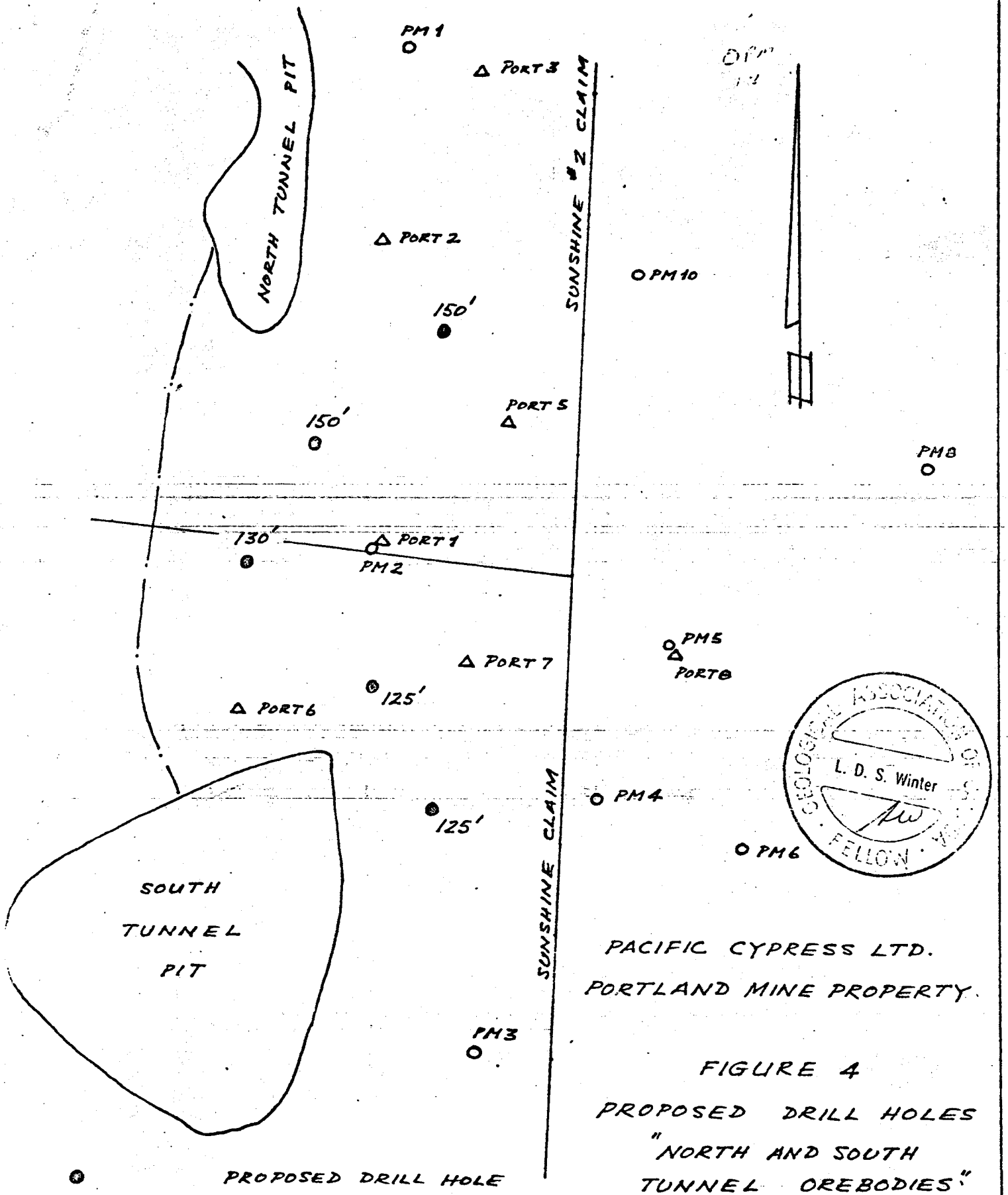
FELLOW

Nov. 30, 1982


SUNSHINE #2 CL.
"NORTH TUNNEL OREBODY"
15
30
"SOUTH TUNNEL OREBODY"
SUNSHINE CL.
"LITTLE OREBODY"
45
PORTLAND CL.
LEGEND
PRECAMBRIAN
VOLCANICS
MINERALIZED ZONE QUARTZ, CALCITE AND GOLD.
STRIKE & DIP OF BEDDING
GEOLOGIC CONTACT
OPEN CUT
TUNNEL
TRENCH
SHAFT
PACIFIC CYPRESS LTD.
PORTLAND PROPERTY
FIGURE 3.
GEOLOGY
OF
MINERALIZED
AREA
SCALE:
1 in. = 400 ft.
NOV. 30
1982



PACIFIC CYPRESS LTD.

PORTLAND MINE PROPERTY.

FIGURE 4

PROPOSED DRILL HOLES "NORTH AND SOUTH TUNNEL OREBODIES" AREA

SCALE 1 IN. = 100 FT.

NOV. 30, 82

● PROPOSED DRILL HOLE

○ PM ASARCO DRILL HOLE

△ PORT FISCHER - WATT DRILL HOLE

6.3 POTENTIAL FOR ADDITIONAL MINERALIZATION

It is considered that the mineralized zone in the "Little Orebody" represents the southerly continuation of the "South Tunnel Orebody" and as such the 1400 feet between the two has the potential to be mineralized. Sookochoff(1975) reports that trenches have traced the "Little Orebody" for a strike length of over 300 feet on surface.

Durning(1981) suggests that the mineralized zone is faulted off just north of the "North Tunnel Orebody". As indicated earlier, the mineralization in this area may be folded, not faulted. In either case geological investigation may be able to locate additional mineralization north of the presently known limits.

All of the drilling to date has been in relatively short drill holes. From the extensive and strataform nature of the "vein" it is considered that there is considerable potential down dip for mineralization. Drilling would be required to assess this possibility.

7. PROPOSED PROGRAM

The work to date indicates that at least a small open pit-heap leaching gold operation should be considered for the property. A small exploration program, to better assess the grade of the mineralization, followed by open pit developement and treatment plant facilities is recommended. The recommended program is proposed in three phases.

Phase 1 : Mapping of the geology, underground workings and surface features in the "North and South Orebody" area to provide engineering data for pit development.

At the same time it is recommended that 700 feet of core drilling in 5 holes(Figure 4) plus sampling of the exposed mineralization be done to determine more accurately the grade of the ore.

The estimated costs are:

Drilling, 700 ft. @ $20 per ft	$14,000
Mapping, sampling, assaying	8,000
Total (See Section 8.1 Exploration work & Pit Preparation)	$22,000

Phase 2 This phase would involve the acquisition of equipment and/or the arrangement of contracts for stripping and then mining the ore.

At this time all the necessary state and federal permits should be obtained.

Phase 3 Concurrent with Phase 2 a crushing plant, leach pads, ponds and associated facilities should be constructed on site.

An integral part of this phase would be to develop an adequate supply of water for the property.

7.1 MINING

It is considered that approximately 134,000 tons of ore are initially available to be mined by open pit methods. Much of the stripping could be done by a D-9 or D-10 dozer since the rock overlying the mineralization is either poorly compacted, altered or fractured. The ore, and those portions of the waste that are harder could be drilled and blasted with little difficulty. Following the completion of the exploration work proposed in Phase 1 detailed production planning could be undertaken

Past mining has shown that thicknesses of greater than 10 feet of ore could be mined by the room and pillar method, provided the grade is satisfactory.

7.2 MILLING

Preliminary leach tests(Witte,1982) have shown that the ore is amenable to heap leach technology but that further studies such as column tests to determine the optimum size for crushing, percolation rates and reagent consumption are required.

Test work done at the same time as the leach tests indicated that the gold is easily extracted in a conventional cyanidation process with recoveries of 95% of the gold at 80% -200 mesh with reasonable reagent consumption of 2.1 lb/T. of NaCN and 1 lb/T. of lime being experienced.

From these preliminary results it is proposed that a crushing plant to treat 500TPD(5 days per week) in association with a heap leaching operation be considered for treating the Portland Mine ore.

8. ESTIMATED COSTS AND REVENUE

The following estimates are based on a production of 500 TPD from an open pit with an estimated reserve of 134,000 tons and an estimated grade of 0.095 oz Au/T. All dollar values quoted are US dollars.

8.1 ESTIMATED CAPITAL COSTS

Crushing plant, turnkey 500 TPD erected on site		$ 120,000
Heap Leaching Facility		
3 heap leach pads	$ 9,000	
2 heap leach ponds	9,000	
Carbon circuits and electrolytic cells	11,000	
Pumps, plumbing, accessories, piping etc.	7,000	
Fencing	1,000	
Sub-total	$ 37,000	37,000
1- 30 Ton transloader: loads and hauls muck from mine to mill and moves crushed ore to leach pads		43,000
Mining equipment: no capital costs since work to be done by contract and all costs are operating costs		---
Assay laboratory for mining and mill control		25,000
Exploration work & pit preparation		33,000
Mill site & leach pad preparation Development of water supply		15,000
Engineering, supervision, start up and consulting expense		15,500

Capital to place 3500 tons on the leach pad prior to leaching	31,500
Sub-total	320,000
Contingency 10%	32,000
TOTAL ESTIMATED EXPENSES	$ 352,000

8.2 ESTIMATED OPERATING COSTS

Mining, delivery to mill	$ 5.00 per ton ore
Crushing & heap leaching	3.00
Electrochemical recovery and overhead	1.00
TOTAL	$ 9.00 per ton ore

These estimates do not take into account a stripping ratio greater than 1 to 1. An estimated cost of $2.00 per ton for stripping waste would add an additional $6.00 per ton of ore to the operating costs for a stripping ratio of approximately 4 to 1.

8.3 ESTIMATED REVENUE

These estimates are based on 134,000 tons of ore at 0.095 oz Au/T., production of 500TPD and recovery of 80% of the gold. No account is taken of the values in silver in the ore and gold is valued at $US400/oz.

Value per ton (gross)	0.095 x $400	$38.00
Value per to at 80% recovery	$38 x .80	30.40
Gross daily return	500 x $30.40	$15,200
Daily operating costs		
Stripping ratio 1/1	500 x $9.00	$4,500
Stripping ratio 4/1	500 x $15.00	$7,500
Daily net gain		
Stripping ratio 1/1	$15,200 - $4,500	$10,700
Stripping ratio 4/1	$15,200 - $7,500	$7,700
Daily gold production	500 x .095 x .80	38 oz
Gross value recoverable gold 134,000 x $30.40		$4,073,600

Net value of recoverable gold

Stripping ratio 1/1	134,000 x $21.40	$2,867,600
Stripping ratio 4/1	134,000 x $15.40	$2,063,600

Duration of operation

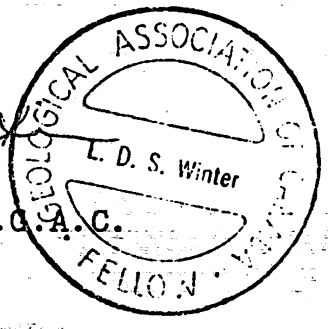
134,000 tons @ 500TPD	268 days
500TPD for 5days/week	12 months

Production is estimated at 120 days after the start of development work.

Cash flow is anticipated 150 days after the start of development work

In summary, these estimates indicate that an open pit - heap leach operation would be a profitable operation based on 500 TPD and operation for one year. Production past that time would depend on the development of additional open pit and/or underground reserves.

L.D.S. Winter



L.D.S. Winter,
B.A.Sc., M.Sc., F.G.A.C.

November 30, 1982

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Ransome,F.L.,1923: Geology of the Oatman Gold District, Arizona, A Preliminary Report, U.S.G.S., Bull. 743, p.56.

Sookochoff, L.,1975: Geological Report on the Portland Gold Mines Property, Mohave County, Arizona, January 14,1975 for Cedar City Mines Ltd., p.24.

Witte,M.K.,1982: Metallurgical Testing on Arizona Ore, Project No. 5041-82, Sept. 1982, p.6.

APPENDIX 1

CALCULATION OF ORE TONNAGES IN THE "NORTH AND SOUTH TUNNEL OREBODY" AREA

Using the Fischer-Watt and ASARCO data(Durning 1981) and the method of sections, the tonnage of ore with a stripping ratio less than 4 to 1 and apit slope of 45° was calculated. The general outline of the pit is shown in Figure 5 and the accompanying sections in Figures 6-10. A tonnage factor of 13 cu. ft. per ton was used. In calculating the tonnage in the total vein no attempt was made to subtract the mined out area from the sections. This correction of 132,000 tons was made after the total tonnage was calculated. In the calculation of the tonnage in the hangingwall zone the open pit ore already mined was excluded during the calculations and then a correction for the underground ore, 15,000 tons, was made at the end.

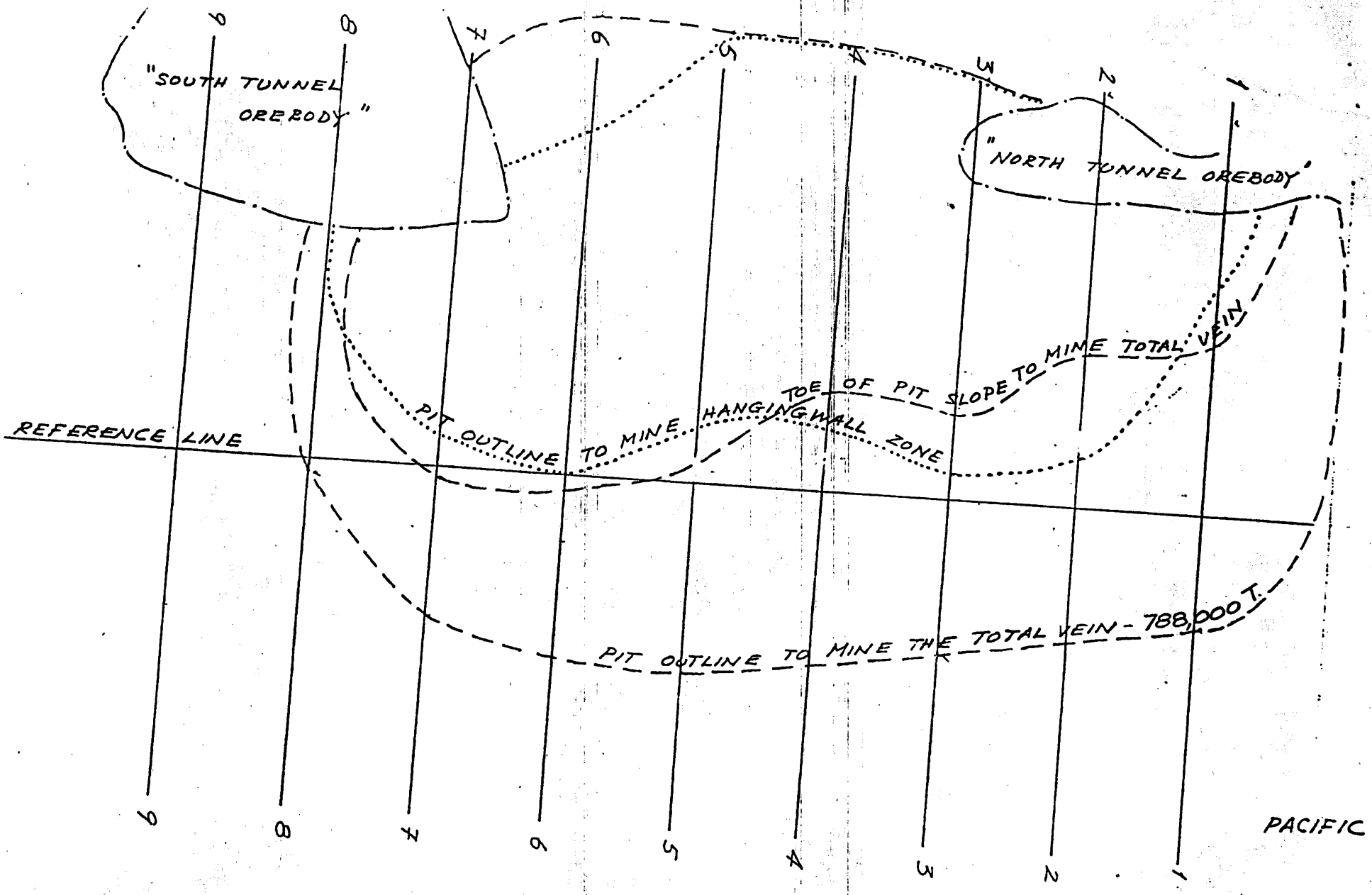
TONNAGE ESTIMATES

	TOTAL VEIN		HANGINGWALL VEIN	
SECTION	ORE	WASTE	ORE	WASTE
1	49,200	125,385	1,538	3,846
2	117,692	168,462	19,231	68,462
3	168,462	221,538	20,769	80,769
4	162,308	197,692	26,923	91,538
5	182,308	262,308	25,385	113,077
6	146,154	197,692	40,769	97,692
7	84,615	149,231	12,308	59,231
8	9,616	33,461	2,308	8,846
less	132,000		less 15,000	
TOTAL	788,355	1,355,769	134,231	523,461
Waste/Ore	1.47/1		3.90/1	

LEGEND FOR FIGURES 6 - 10

PM	ASARCO drill hole
Port	Fischer-Watt drill hole
26 - 0.075	Intersection: length of intersection in feet assay in oz Au/T.
	Hangingwall Zone
	Total vein
– – – – –	Eastern pit limit for mining total "vein"
.....	Eastern pit limit for mining 134,000 tons from the hangingwall zone only.

All sections drawn looking north



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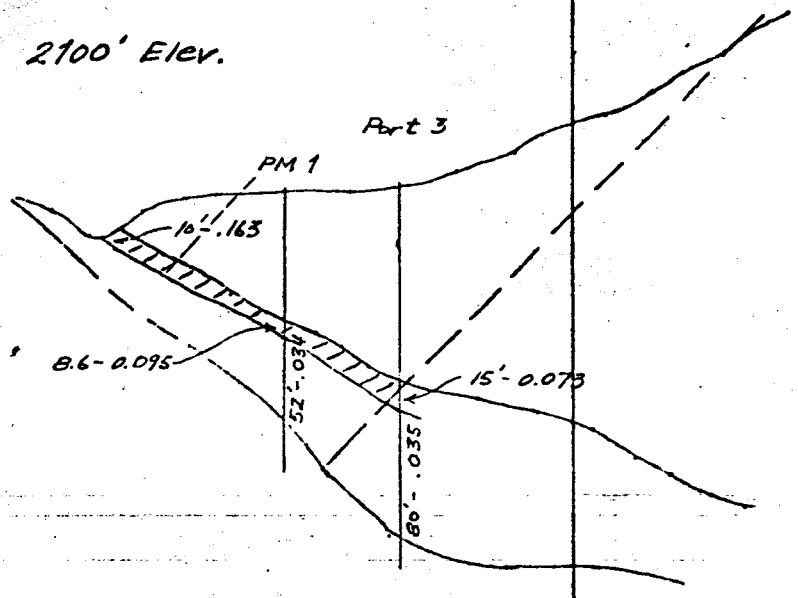
SCALE: 1 IN.

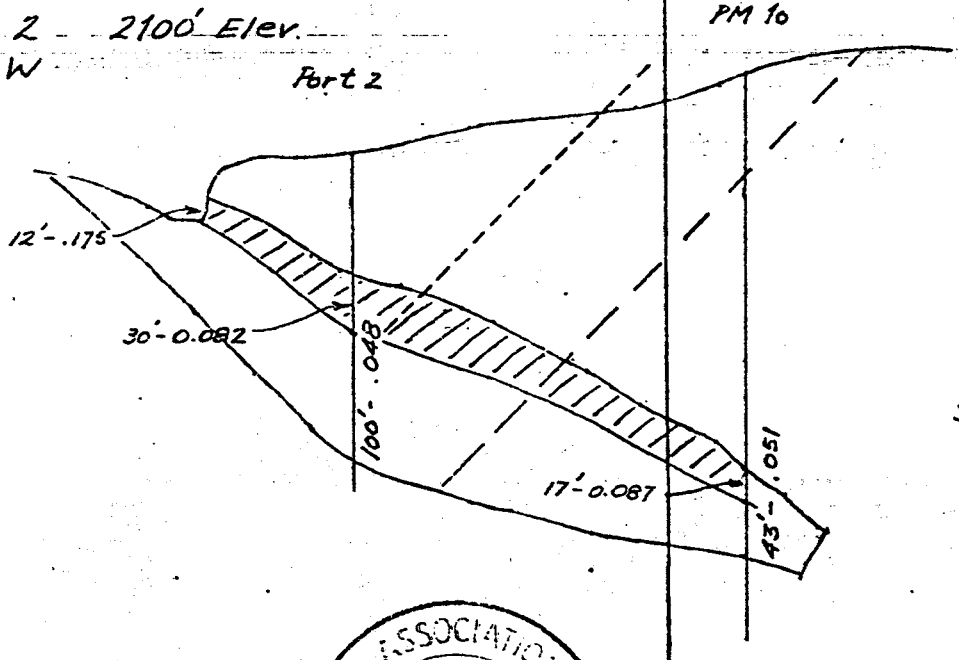
REFERENCE LINE.

1 W — 2100' Elev. — 1 E



SECTION 1-1

2 W — 2100' Elev. — 2 E

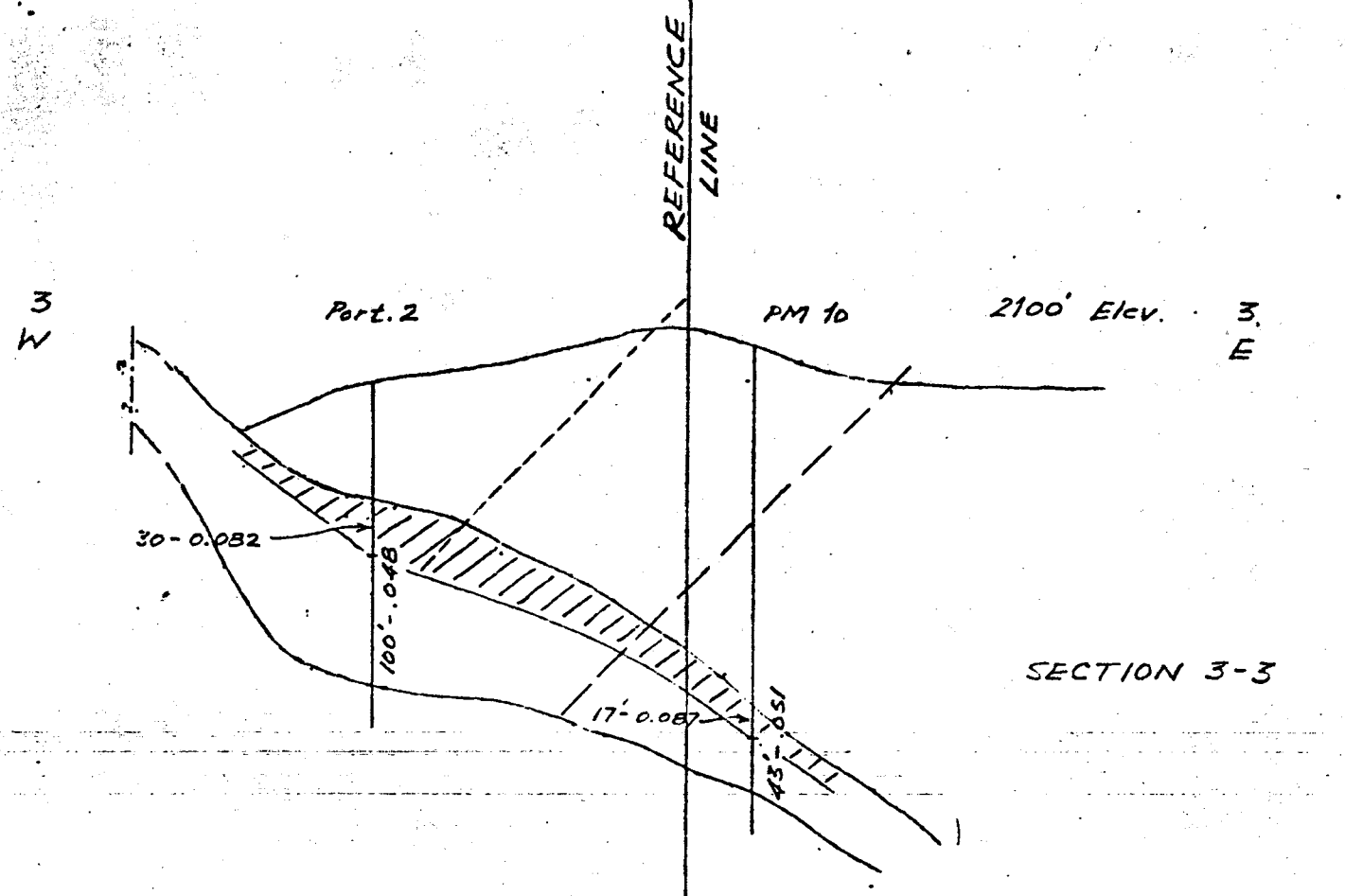


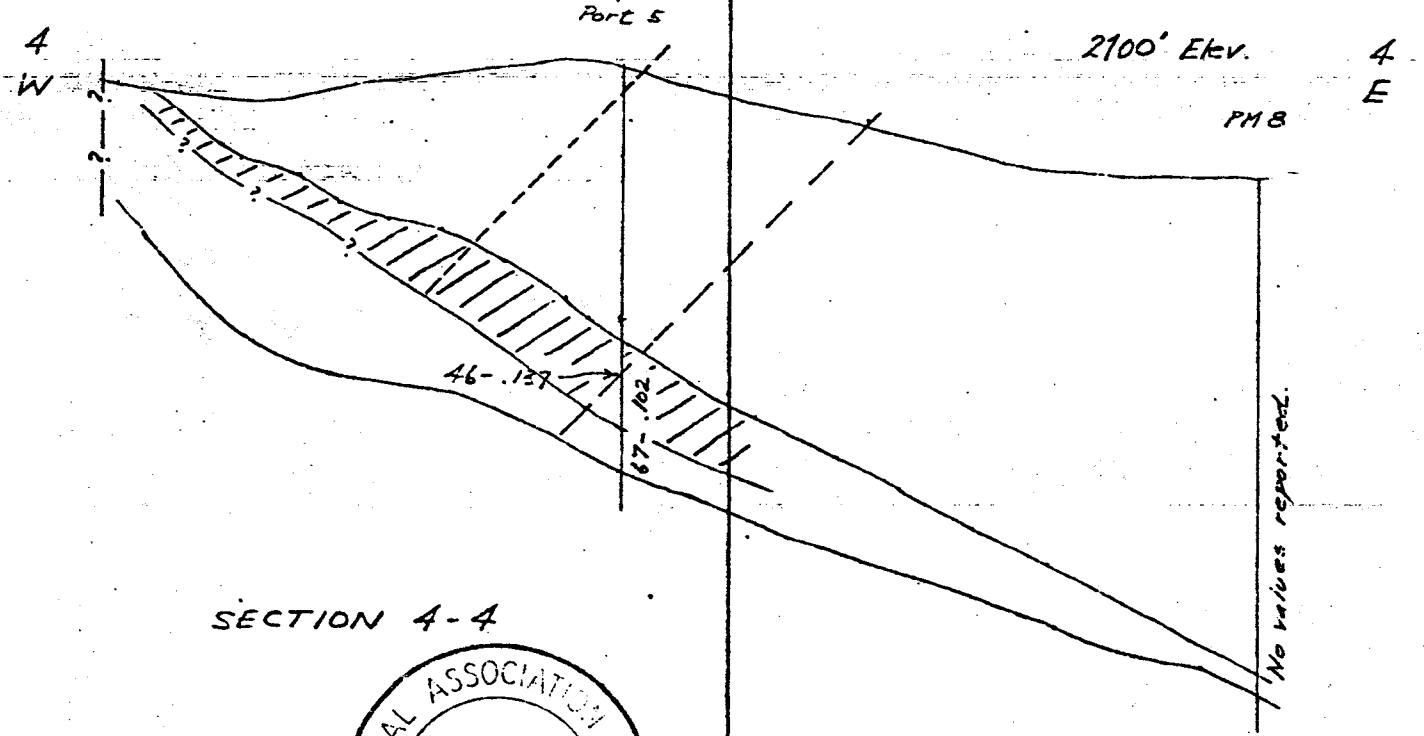
SECTION 2-2.

FIGURE 6.

SCALE: 1 IN = 100 FT.

NOV 26, 82





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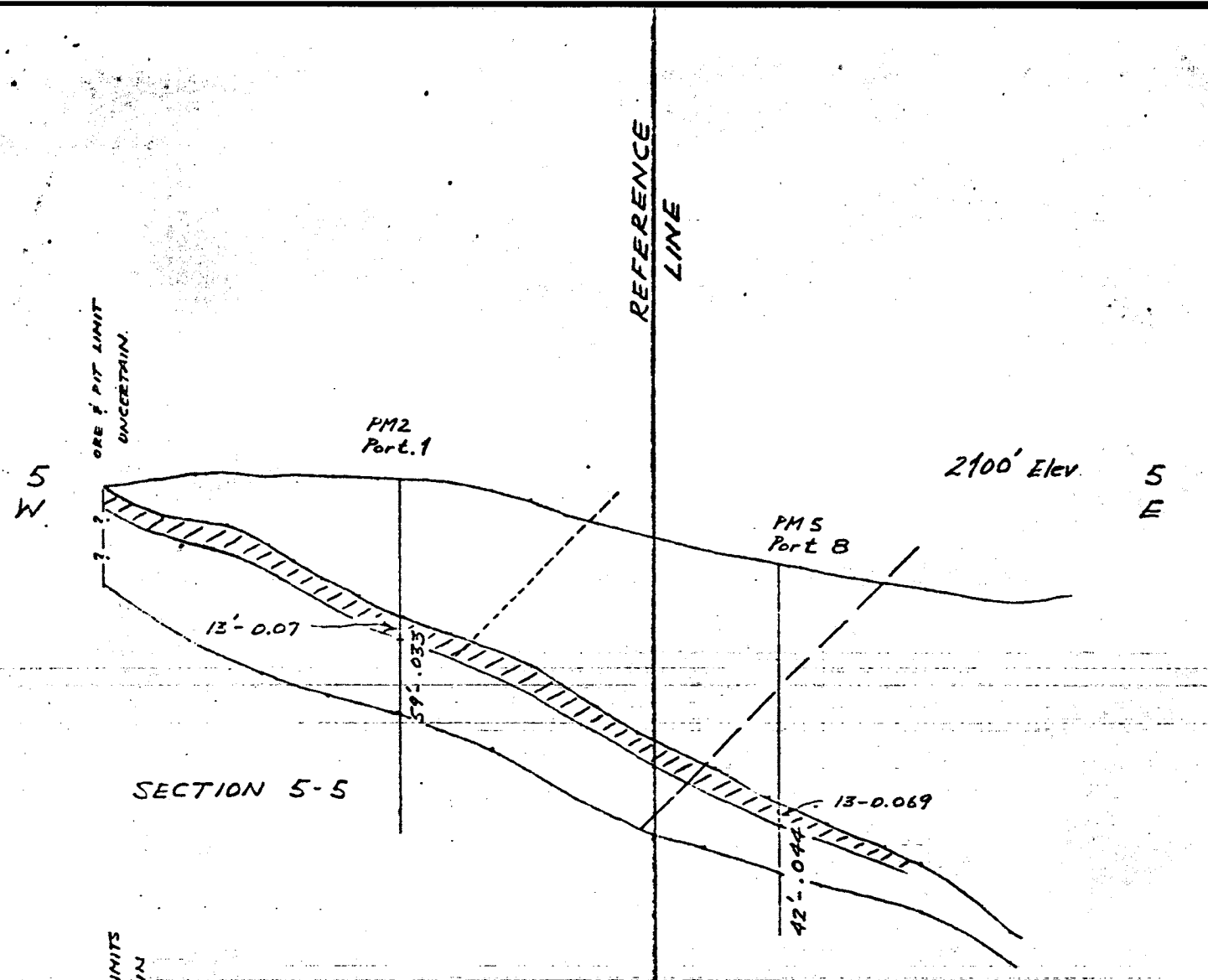
L. D. S. Winter
FELLOW

FIGURE 7

SCALE: 1 IN. = 100 FT.

Nov. 26, 82



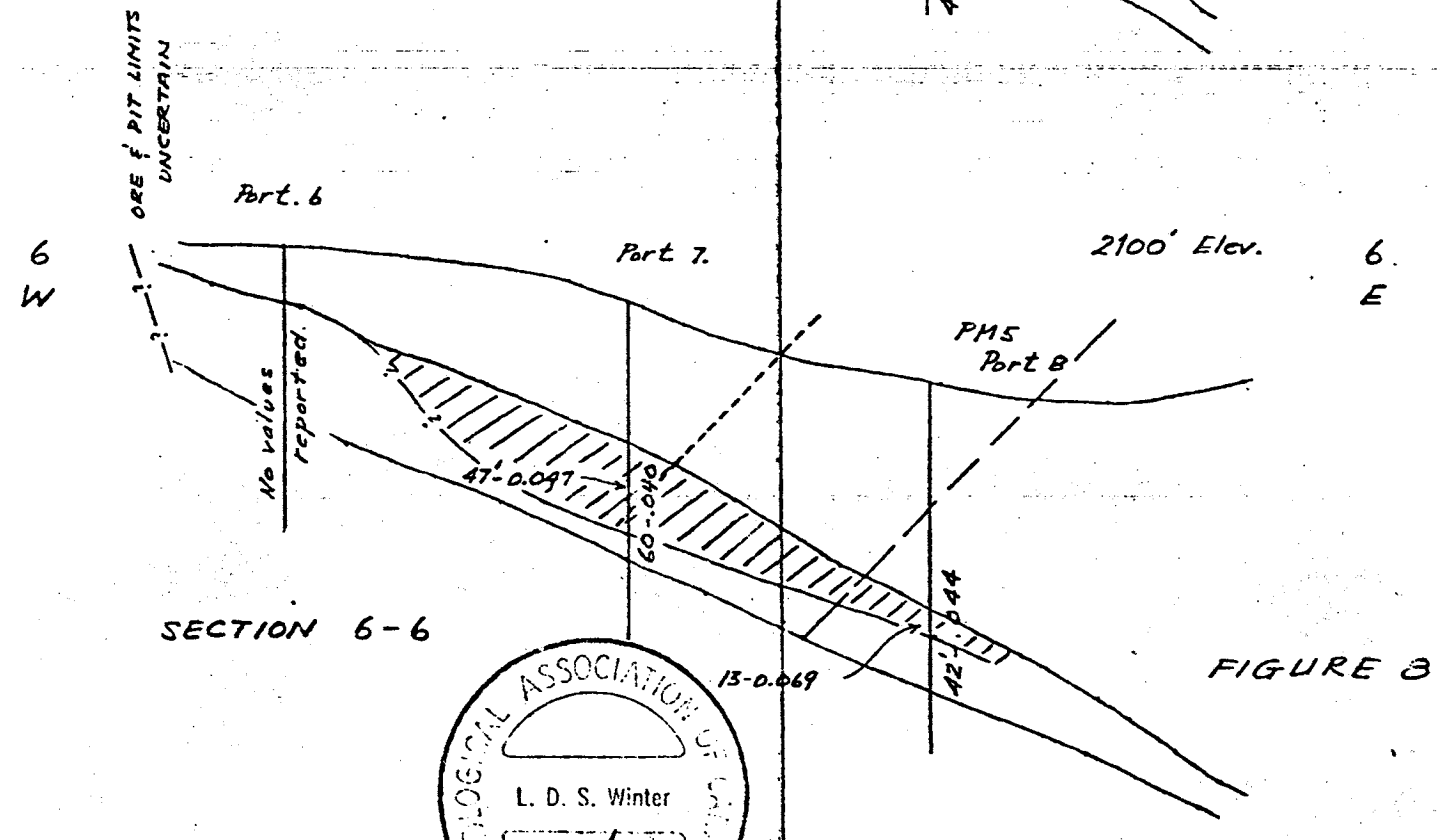


FIGURE 8

SCALE: 1 IN. = 100 FT.

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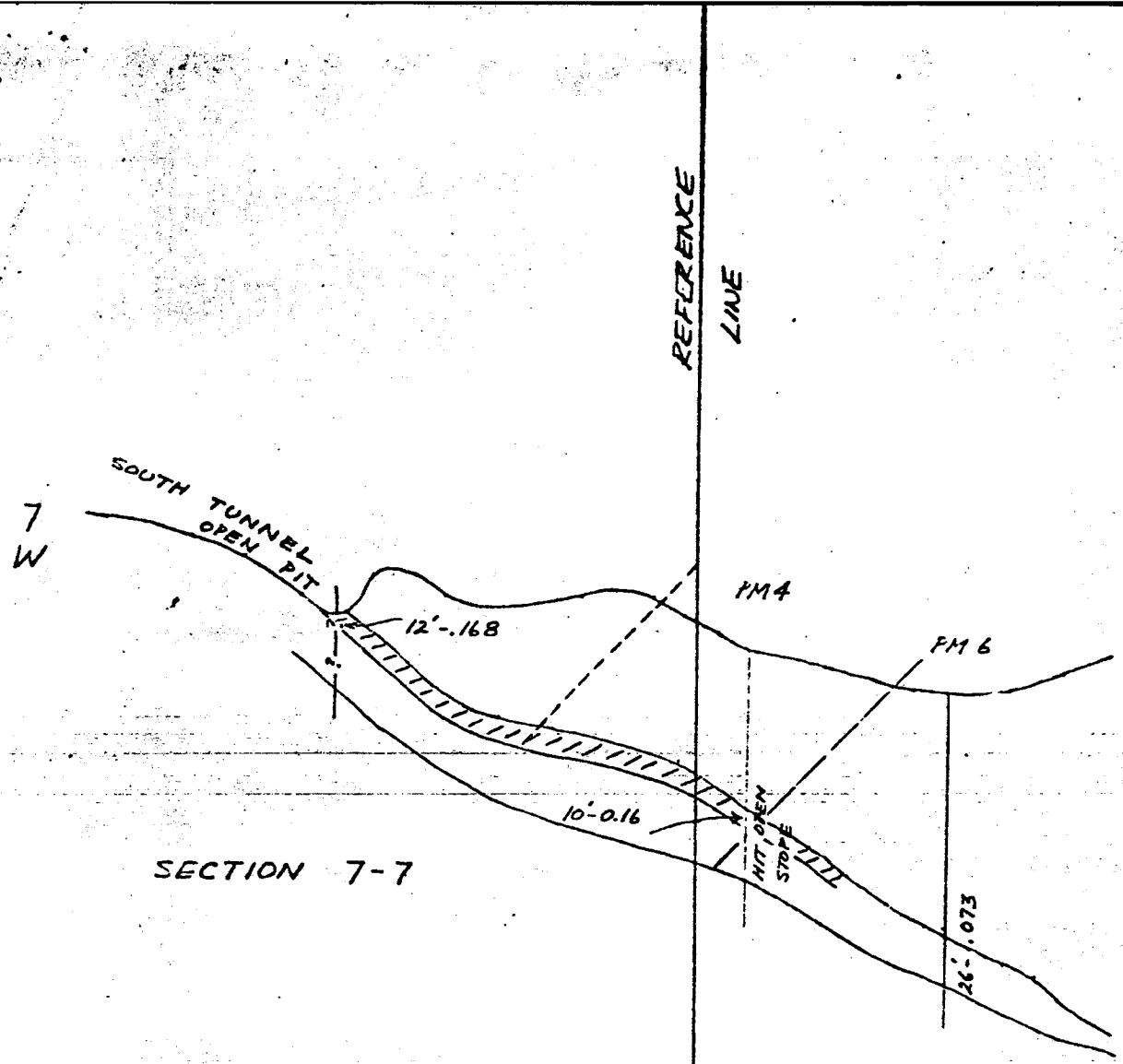
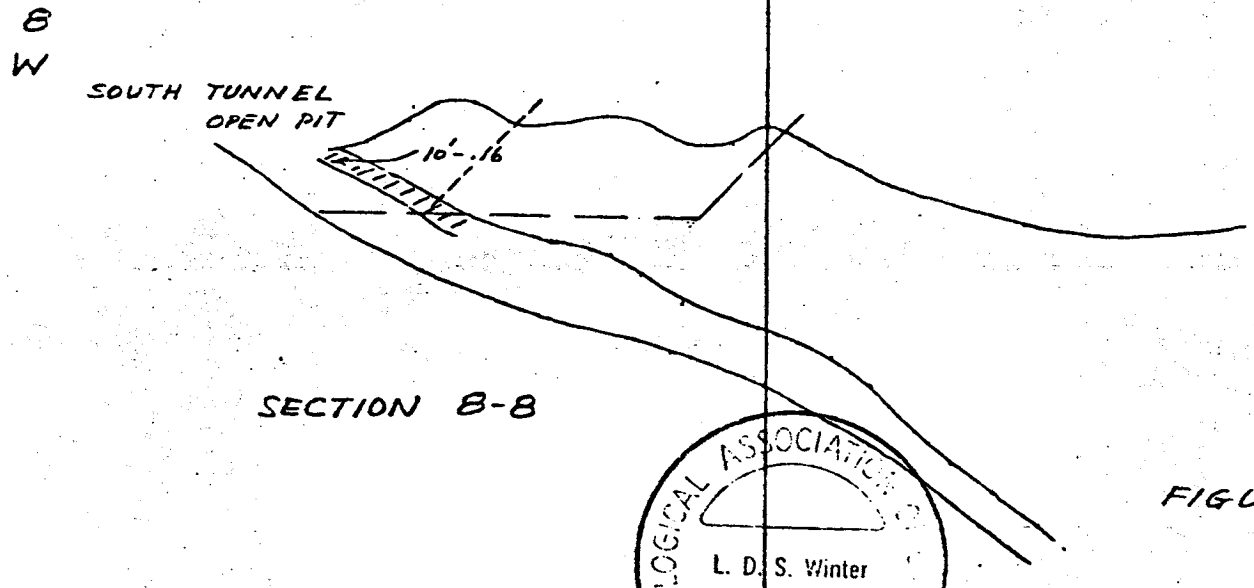


SECTION 7-7

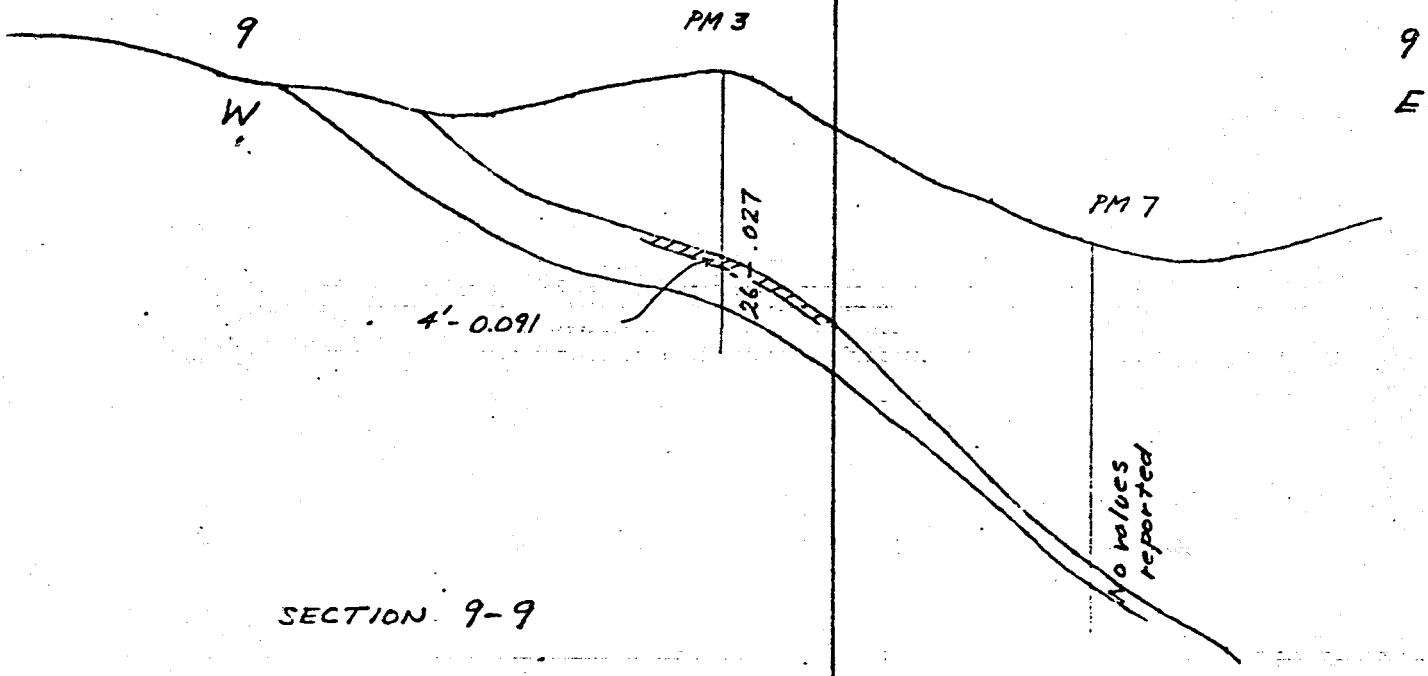


SECTION 8-8

FIGURE 9.

SCALE: 1 IN. = 100 FT.

NOV. 26, 82

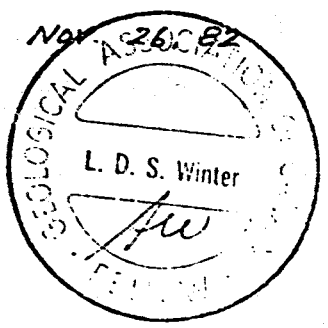


SECTION 9-9

FIGURE 10

SCALE: 1 IN. = 100 FT.

Nov 26 82



SUMMARY REPORT

ON THE

PORTLAND MINE PROPERTY

MOHAVE COUNTY, ARIZONA

OF

JORINEX EXPLORATION & MINING LIMITED

L.D.S.Winter
B.A.Sc., M.Sc., F.G.A.C.
October 14, 1983

1. INTRODUCTION

In March of 1983 Jorinex Exploration and Mining Limited, a private Ontario company entered into a joint venture agreement with a Mr. Antone Aguiar of San Diego, California to develop and mine the Portland Mine gold-silver orebody in Mohave County, Arizona. In early May, 1983, pad leaching of 15,000 tons of ore commenced and to date 37,500 tons of ore with an average grade of 0.066 oz Au/T have been placed in the pads.

Initial test work had indicated a 60% gold recovery after three weeks in column leach tests, however the leaching to date indicates the gold recovery is only about 35% of the total contained values. A leach pond to treat approximately 4500 tons of ore is presently being installed to assess the viability of pond leaching to increase the gold recoveries. If this approach shows positive results then it is proposed that the operation would move to leach all the ore in this fashion.

2. PROPERTY, LOCATION AND ACCESS

The property consists of 3 continguous patented mining claims and 19 located claims jointly owned by Samuel L. Clark et al of Anaheim, California.

The Portland Mine is located in the Weaver Mining District of Mohave, County, Arizona approximately 45 miles south of the Boulder Dam, 27 miles north of Kingman, Arizona and 8 miles west of US highway 93 from which it can be reached by gravel roads.

3. AGREEMENTS

The owners, Samuel L. Clark et al retain a 6% royalty based on the head gold and silver assay with the property being optioned to Aguiar and operated under a joint venture agreement between Aguiar and Jorinex Exploration and Mining Inc., an Arizona company which is a wholly owned subsidiary of Jorinex Exploration and Mining Limited. Jorinex is required to provide the funds to place the property in operation and after return of these funds any profits from the operation are split 50-50 between Aguiar and Jorinex.

4. PREVIOUS WORK

Gold was first discovered in the Oatman-Katherine District, just to the south of the Portland Mine, by soldiers in 1863-1864. Most mining activity took place between 1900 and 1925 and 1930 to 1942.

Development records indicate that the Portland Mine shipped 132,000 tons with a recovered grade of 0.225 oz Au/T to the Katherine mill before the Katherine mine flooded and the mill was closed in 1939.

Since that time a number of appraisals have been made of the property. C.M. Becker M.E. estimated in 1937 that the deposit contained 287,000 Tons at 0.189 oz Au/T. In 1975 Sookochoff (1975) arrived at a tonnage estimate of 300,000 Tons at 0.201 oz Au/T. Using data from ASARCO drilling in 1978 and 1979 plus their own work in 1980 and 1981, Fischer-Watt Mining Co. Inc. estimated that the deposit contained 748,364 Tons grading 0.057 oz Au/T and 0.58 oz Ag/T. with a cut-off grade of

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Sookochoff,L.,1975: Geological Report on the Portland Gold Mines Property, January 14, 1975 for Cedar City Mines Ltd. p. 24.

0.04 oz Au/T. Included in this is the upper or hangingwall portion of the vein which is estimated to be 134,000 Tons averaging 0.095 oz Au/T and 0.61 oz Ag/T. The writer has calculated that the total tonnage could be mined with a stripping ratio of approximately 1.5 to 1.

5. GEOLOGY

The Portland Mine occurs in the Black Mountains of north-western Arizona, approximately 5 miles east of the Colorado River. An uneven terrain of Precambrian gneisses, schists, and acid intrusives is unconformably overlain by a thick sequence of Cretaceous to Tertiary volcanics ranging in composition from felsic to mafic. The rocks have been intruded by porphyries following which they were tilted and faulted.

The Portland mineralization occurs as a strataform "vein" of quartz and calcite up to 100 feet thick striking north-south and dipping at 15°-30° to the east, conformable with the enclosing volcanics. The vein mineralogy is simple, being dominantly quartz and calcite and the gold and silver are reported to occur as finely disseminated grains of electrum within the vein. In general the hangingwall portion of the vein carries the highest values and the grade diminishes towards the footwall.

6. WORK DONE TO DATE

As indicated earlier 37,500 tons of ore with an average grade of 0.066 oz Au/T have been mined and placed on leach pads to date. The necessary solution storage ponds, carbon columns, and stripping facilities have also been put in place.

From the beginning of leaching in May until mid-September 1983 approximately 870 oz Au have been recovered along with a small amount of silver.

The original 15,000 tons of ore that was placed on the pad was only crushed to minus 2" and this appeared to limit the ability of the solutions to leach the ore. As a result a new crusher was obtained in mid-July and the remaining ore has been crushed to minus 3/4". The leaching has also been hampered by a shortage of water but this problem will be readily solved by the drilling of one or two wells in the area. A number of shallow wells indicate that the water table lies about 100 feet below the surface in the region of the mine.

7. OPERATING COSTS

Based on the experiences from early May to mid-September 1983, the operating costs are placed at $US 8.00 per ton (0.02 oz Au/T. for gold at $US 4.00 per oz). From this it can be seen that from the recovery to date the operation is operating at about the break even point.

8. SUMMARY

Jorinex Exploration and Mining Inc. in a joint venture agreement with Antone Aguiar have been operating the Portland Mine in Mohave County, Arizona since early May 1983. The deposit is estimated to contain approximately 750,000 tons grading 0.057 oz Au/T. and 0.58 oz Ag/T. mineable by open pit methods with a stripping rate of 1.5 to 1. To date 37,500 tons of ore grading 0.066 oz Au/T have been mined and are presently being leached using a heap leaching

approach. To mid-September, 870 oz of gold have been recovered for a recovery rate of about 35%.

On an experimental basis a leach pond has been constructed and about 4500 tons of ore is now being processed in this facility. It is considered that this approach will significantly increase the gold recovery and if this proves to be the case then the management would move to treat all the ore in this manner.

L.D.S. Winter

L.D.S.Winter
B.A.Sc.,M.Sc.,F.G.A.C.
October 14, 1983

PORTLAND MINE - CASH FLOW FORECAST

Basis of forecast:

Estimated Reserves (probable)

750,000 T ore @ 1.5:1 stripping ratio req
1,125,000 tons waste

Mined to date:

60,000 T ore and 350,000 T waste
∴ 690,000 T ore and 775,000 T waste remain
Ratio = 1.1:1

Assuming production of 2000 TPD on a 5-day basis

2000 ore
2200 waste
4200 total

20% allowance for breakdowns, etc. = 5000 TPD

35 ton haul units need 143 loads/day = 72 loads each

In early days, require night shift of one loader and two trucks.

PORTLAND MINE - CASH FLOW

Revenue @ 2000 TPD @ 5 days/week
=22 days /month
=44,000 TPD

Indic. Reserves = 690,000 @ .057
Assume 15% dilution and 15% shrinkage
= 690,000 T @ .0485

Assume 60% recover after 90 days
= .0291 oz/ton recovered

∴ Once continuous cycle is attained
.0291 oz/ton @ 44,000 tons/month
=1280 oz/month

Subtract royalty of 7% of net (assumed)
sales tax of 2%
refining of 1%

∴ Revenue ounces = 1152/month.

Revenue $ at	400/oz	460,800
	350/oz	403,200
	300/oz	345,600

PORTLAND MINE CASH FLOW
SUMMARY OF EXPENSES

Direct costs (assuming 2000 TPD)

EQUIPMENT

7 Yd. Loader - rental	7,000.00	
MTCE, Teeth, Repairs, Tires	3,500.00	
2 Trucks 35T @ 7,000.00 ea.	14,000.00	
MTCE, Tires, Repair s	3,000.00	
4 Yd. Loader to Feed Crusher	4,000.00	
MTCE, Parts, etc.	2,000.00	
Dozer (D-8 size)	8,000.00	
MTCE and Repairs	3,000.00	
Crushing Plant (Cone)	15,000.00	
MTCE, Screens, Cones	5,000.00	
Jaw Crusher	10,000.00	
MTCE	2,000.00	
Drill	7,000.00	
MTCE, etc.	3,000.00	
Generators	2,000.00	
5T Truck, P/U, etc.	2,500.00	
Equipment Total		$91,000.00

PORTLAND MINE - CASH FLOW
SUMMARY OF EXPENSES

Direct Costs (Other) Monthly		
Fuel	20,000.00	
Gas	2,000.00	
Explosives	6,000.00	
Steel, Bits, Etc.	2,000.00	
Assays, Etc.	6,000.00	
Piping	4,000.00	
Cyanide	44,000.00	
Carbon and Regeneration	3,000.00	
Plastic Assuming 20,000 T/Sheet	8,000.00	
Lime	2,000.00	
Miscellaneous Materials and Supplies	10,000.00	
Wages	66,000.00	
Direct Costs Total	$173,000.00	
Indrect Costs		
Consultants	2,000.00	
Insurance	2,000.00	
Accounting	1,000.00	
Office	1,500.00	
Taxes	2,000.00	
Depreciation (Pumps, Columns, Stipper)	2,000.00	
Telephone	700.00	
Indirect Costs Total	$11,200.00	
TOTAL COSTS		$275,200.00

PORTLAND MINE
MANPOWER REQUIREMENTS

Loader Operators	3
Truck Drivers	4
Dozer	2
Drill	1
Crusher	2
Piping, Fencing, Blasting	2
Recovery and Electrowin	6
MTCE and Fab.	2
Supervision and Management	2
TOTAL	24

PORTLAND MINE - ESTIMATED CASH FLOW FORECAST, 1984

	MAR	APR	MAY	JUN	JULY	AUG	SEPT	OCT	NOV	DEC
EQUITY INFUSION	500									
REVENUE 400/oz	230	345	461	461	461	461	461	461	461	461
350/oz	201	301	403	403	403	403	403	403	403	403
300/oz	172	258	346	346	346	346	346	346	346	346
COSTS	275	275	275	275	275	275	275	275	275	275
ADD PURCH. OF ASSETS OUTSTANDING PAYABLES	30	30								
	100	100								
CASH FLOW										
400/oz	+325	-60	+186	+186	186	186	186	186	186	186
350/oz	+296	-104	+128	+128	128	128	128	128	128	128
300/oz	+267	-147	+71	+71	71	71	71	71	71	71

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GEOLOGICAL REPORT

ON THE

PORTLAND GOLD MINES PROPERTY

MOHAVE COUNTY, ARIZONA

for

CEDAR CITY MINES LTD. (N.P.L.)

January 14, 1975
Vancouver, B.C.

L. Sookochoff, P.Eng.,
Consulting Geologist

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PART A

SUMMARY AND CONCLUSIONS

The Portland Gold Mines property consists of 3 patented claims and is located in the Oatman District in Sections 14 and 15, Township 23N, Range 21W, Mohave County, Arizona. Access is via paved and gravelled roads north and west of Kingman, Arizona.

The semi-arid climate is favourable for year-round operations.

All logistics involved in an exploration programme are excellent.

Railroad facilities are available in Kingman, Arizona, some 45 road miles from the property.

Exploration and development has been carried out by various owners and leasors with the bulk of production totalling 132,000 tons occurring during 1935 and 1939. The production came primarily from the "South Tunnel Ore Body" where the bulk of the ore was mined by open pit methods. Minor production came from the "Little Ore Body" with limited tonnage from the "North Tunnel Ore Body."

Extensive sampling has been done on the property since production ceased in 1939. Reported ore reserves of approximately 300,000 tons averaging $6.64/ton at $35.00 gold, which, at today's prices, would be $33.20/ton ($175.00 gold).

A total of 335 feet of X-ray diamond drilling was done in the open pit area of the "South Tunnel Ore Body" most of which showed values in the country rock to a depth of 130 feet with a grade of 0.08 oz Au/ton and 0.96 oz Ag/ton in the footwall area of the main limestone unit.

Percussion drilling in December of 1974 intersected zones containing significant gold and silver values. The best intersection was a 25 foot section of .076 oz Au/ton and 0.82 oz Ag/ton which at recent metal prices would be valued at $17.40/ton.

Other significant intersections were of .075 oz Au/ton and 0.33 oz Ag/ton over 10 feet and .085 oz Au/ton and 0.52 oz Ag/ton also over 10 feet.

Assays within the footwall and hangingwall of the main zone were generally less than .025 oz Au/ton.

The method of air percussion drilling that was utilized was not adequately equipped for full recovery of the cuttings to assess the actual value of the intersections. Therefore it is felt that core drilling as a follow-up programme could possibly reflect the values of previous core drilling and former and recent detailed sampling.

The property is underlain by altered andesites and siliceous limestone of Tertiary Age. A thrust fault marks the hanging wall contact between the limestone and andesite. The zones trend northerly and dip at a low angle to the east. The drilling and pit development in the "South Tunnel Ore Body" suggests a thickness of at least 200 feet.

The mineralization appears to be sub-microscopic and may possibly be colloidal in nature.

The potential ore in the vicinity of the "North Tunnel Ore Body" and the "South Tunnel Ore Body" workings and the possible extensions could be in the range of several million

tons of low grade ore which could be developed with a detailed drilling programme.

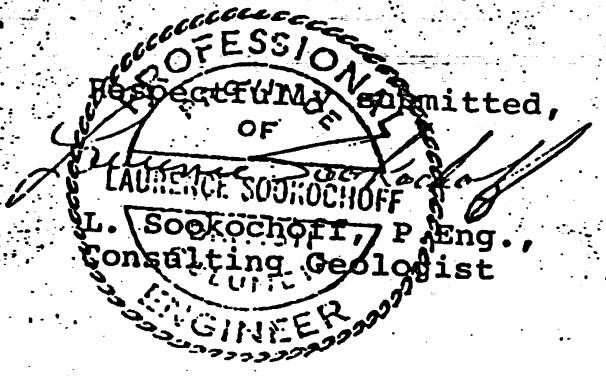
The topography is such that any such tonnages developed would be amenable to inexpensive open pit mining methods.

RECOMMENDATIONS

It is recommended that a programme consisting of diamond drilling, geological mapping and prospecting be carried out on the property. Additional claims should be staked to cover all possible extensions of the mineralized zone.

It is also recommended that Cedar City Mines Ltd (N.P.L.) allocate the sum of $50,000.00 to implement the recommended exploration programme.

Respectfully submitted,



L. Sookochoff, P.Eng.,
Consulting Geologist

January 14, 1975
Vancouver, B.C.

GEOLOGICAL REPORT

ON THE

PORTLAND GOLD MINES PROPERTY

MOHAVE COUNTY, ARIZONA

for

CEDAR CITY MINES LTD. (N.P.L.)

PART B

INTRODUCTION

The following report has been compiled from information obtained by the writer during a personal examination of the surface and underground workings located on the property on December 8-18th inclusive, 1974; from a study of available past records of work and production carried out by previous and present owners, and from public and private publications.

PROPERTY

The property consists of three contiguous patented claims, namely, the Portland, Sunshine and Sunshine No. 2 (U.S. Patent No. 3757) and 6 located claims, the Shirley 1-6 incl.

OWNERSHIP

The patented claims are owned jointly by the following:

Mona G. Potter,
Apartment # 5
305 East California Street,
Pasadena, California

Samuel L. Clark and Lavonne G. Clark
3955 Maple Tree Drive,
Anaheim, California 92807

Leland M. Wiscombe and June N. Wiscombe,
4341 Wilderness Court,
Birmingham, Alabama, 35213

The patented claims are held under option from the above owners.

LOCATION AND ACCESS

The property is located in Sections 14 and 15, Township 23, North, Range 21 West, Gila and Salt River Base Meridian, as shown on Mohave County Assessors Map 43, Book 307.

The property is accessible by paved and gravelled roads from Kingman, Arizona and is reached by travelling 27 miles north from Kingman on the paved Boulder-Kingman Highway U.S. 93. The Cottonwood Wash Road heads west from the highway and is travelled for a distance of 8.9 miles. From this point the mine access road heads southwesterly to the property, a distance of some 11 miles.

A truck or four-wheel drive vehicle is required for the last eleven miles.

All the workings are accessible by roads.

TOPOGRAPHY

The topography is relatively gentle with very slight relief as is typical of the western foothills area of the Black Mountain Range.

CLIMATE

The semi-arid climate is characterized by high summer temperatures with low humidity and mild winters. The annual precipitation is only from 6 to 9 inches, making it a favourable climate for year round operations.

WATER

Water is non-existent on the surface but wells could supply sufficient water for exploration. The Colorado River is located five miles to the west of the property.

POWER

Diesel electric power would be necessary for the initial stage of development but hydroelectric power would be available from the Kingman-Boulder power line for future milling purposes.

TRANSPORTATION

Truck transportation to railhead in Kingman would be available.

SUPPLIES

Most supplies would be obtainable from Kingman, Boulder City and Phoenix in Arizona or Las Vegas, Nevada.

HISTORY

From information available, the first records of development and production were during the period between 1935 and 1939. The development work consisted of some 700 feet of lateral work and some 400 feet of incline shaft.

Considerable trenching or open cutting has been done in the area of the outcropping of the three main workings. Open pit mining was carried out on the middle or "South

Tunnel Ore Body". The pit measures approximately 300' x 200' x 75'.

(i) Production

Past recorded production totalled 132,000 tons of ore which netted $7.89/ton based on $35.00/oz of gold. The ore was mined and shipped to the Katherine mill a distance of some 10 miles.

Production figures from August 13 to August 25, 1935 show 516.20 tons of ore shipped with a weighted average grade of 0.347 oz Au/ton and 1.22 oz Ag/ton.

Recovery of the metals by the cyanidation process was 93% of the gold. Silver recovery was not recorded.

The Katherine Mine flooded in 1939, hence the mill was shut down followed by the cessation of operations at the Portland Mine.

(ii) Sampling

During July 1940 Dr. Emil J. Rausch sampled all the underground workings and surface exposures. A total of 203 samples were cut which gave an average grade for the three

developed workings and surface areas of $7.03/ton in gold values at $35/00/oz Ag. At present day prices the value would be approximately $35.00/ton.

Clyde M. Becker, M.E. reported proven ore reserves calculated from some 700 feet of development work at 287,000 tons with an average value of $6.64/ton @ $35.00 gold. Today's prices would impart a value of approximately $33.00/ton. Mr. Becker's tonnage breakdowns were as follows:

Little Ore Body	6,000 tons @ $14.00/ton	($70.00)
South Tunnel Ore Body	200,000 tons @ $ 6.14/ton	($30.00)
North Tunnel Ore Body	81,000 tons @ $ 7.24/ton	($36.00)

Recent personal contact was made with John Boissenault, P.Eng. of Timmins, Ontario, regarding sampling carried out by him during 1974. His results of 40 samples gave a weighted average grade of 0.22 oz Au/ton and 1.50 Ag/ton.

(iii) Diamond Drilling

A total of 4 short X-ray diamond drill holes were drilled in the open pit area of the "South Tunnel Ore Body."

HOLE NO. 1 - was located near the south end of the pit; was drilled at -45° with an azimuth of 305°; was collared in the footwall of the main limestone unit, and averaged 0.08 oz Au/ton and 0.96 oz Ag/ton for a length of 130 feet. The hole, plus the main zone and hangingwall portion, suggests a thickness of at least 200 feet.

HOLE NO. 2 - was located near the middle of the pit; was drilled at -10° with an azimuth of 295°; was also collared in the footwall of the limestone unit, and averaged 0.0612 oz Au/ton and 0.90 oz Ag/ton over a length of 85 feet.

HOLE NO. 3 - was located at the north face of the pit and was drilled at +8° with an azimuth of 330°; was collared in the limestone unit and drilled along the zone for a length of 60 feet. The hole averaged 0.318 oz Au/ton and 0.67 oz Ag/ton over its entire length. A five foot section between 45 and 50 feet assayed 2.16 oz Au/ton and 1.22 oz Ag/ton.

HOLE NO. 4 - could not be located in the pit but it averaged 0.224 oz Au/ton and 0.45 oz Ag/ton for a length of 60 feet.

(iv) Rotary Drilling

Six rotary drill holes were drilled during December 1974. The more significant results were as follows:

P-1 - located near the north edge of the South Ore Body and drilled to a depth of 90 feet where the hole broke into some old workings on the main zone. Thus the hole was assumed to be all in the hanging wall and values were up to .025 oz Au/ton and .25 oz Ag/ton.

P-2 - located 100 feet south west of P-1 and was drilled to a depth of 230 feet. The hole was completely in the foot-wall of the main zone. Values ranged up to .025 oz Au/ton and 0.15 oz Ag/ton.

P-3 - located east of the east wall of the North Ore Body and was drilled to a depth of 120 feet. A 25-foot section from 60 to 85 feet averaged .076 oz Au/ton and 0.82 oz Ag/ton. At recent metal prices this would indicate a value of $17.40/ton.

P-4 - located near the Little Ore Body and drilled to a depth of 30 feet. This hole was all in overburden and was abandoned due to caving.

P-5 - located near the Little Ore Body and drilled to a depth of 120 feet. The more significant intersection was from 100 to 110 feet where assays averaged .075 oz Au/ton and 0.33 oz Ag/ton. At recent metal prices this would indicate a value of $14.44/ton.

P-6 - located near the Little Ore Body and drilled to a depth of 40 feet. A 10-foot section from 30 to 40 feet returned assays averaging 0.085 oz Au/ton and 0.52 oz Ag/ton which would be valued at $16.95/ton. The top part of the hole assayed up to 0.025 oz Au/ton and 0.10 oz Ag/ton.

GENERAL GEOLOGY

The Oatman District is generally underlain by rocks consisting of Tertiary lava flows resting on an underlying Precambrian crystalline complex. The lava flows and associated tuffs vary in composition and texture from basalt to rhyolite. The units trend north-south and dip eastward at a low angle.

The Oatman andesite is the most significant formation in the area as all known mineral deposits in the area are generally found in or associated with it. The lavas are generally intensely altered.

Intrusive dykes and stocks of rhyolite porphyry form prominent topographical features in the area.

LOCAL GEOLOGY

The property is underlain by interbedded silicified and crystalline limestone and altered andesite. A thrust fault marks the contact between the andesite and the hangingwall of the limestone units. The fault zone is marked by shearing and hematite gouge. The fault action has probably played a role in brecciating the limestone unit as well as the

footwall and hangingwall andesites. Deuteric quartz has been introduced into the limestone unit and in some areas colloform structure was noted. The highest gold and silver values occur within the limestone.

Quartz and calcite have pervaded into the hangingwall and footwall andesites which carry significant gold and silver values.

MINERALIZATION

The only visible metallic mineral noted in the mineralized rock was rare minute pyrite cubes. The gold and silver minerals appear to be sub-microscopic which suggests that the minerals may be colloidal in nature. Such a case would conceivably be the reason for the pervasiveness of the gold and silver values evident in both the limestone and altered andesite.

A total of three main workings exist on the property over a distance of approximately one-half a mile.

"Little Ore Body"

The "Little Ore Body" workings consist of a cut along the strike of the surface exposure of the limestone unit and some

underground development including a 100 foot deep inclined shaft and some stoping. The silicified limestone unit strikes at 290° and has a dip of -30° to the north east. The actual thickness of the zone could not be determined as the footwall was not exposed in the underground workings. A chip sample taken approximately 50 feet down the -45° incline shaft assayed 0.16 oz Au/ton and 0.06 oz Ag/ton across a width of 7.0 feet. Previous assaying of the "Little Ore Body" gave a value of $70.00 per ton based on present day values for gold with a 6,000 ton ore reserve.

The zone could be the same zone that the other two workings are on or could well be a parallel unit. There are several limestone units within the vicinity of the property. Several trenches have traced the zone for over 300 feet along the surface.

"South Tunnel Ore Body"

The "South Tunnel Ore Body" is located approximately 1200 feet at 10° from the "Little Ore Body" workings.

The development consists of a 200 foot long drift above which some stoping has taken place and an open pit has been developed above the drift. The open pit has dimensions of about 300' x 200' x 75'. The zone strikes at 310° and dips N.E. at -30°.

The work done in the pit and underground, plus the diamond drilling carried out in the pit, suggests a mineralized section of at least 200 feet in thickness. The limestone unit varies between 12 and 25 feet thick where worked.

Previous sampling of the underground and surface exposures on the zone averaged $6.14/ton ($30.00) for an ore reserve figure of 200,000 tons.

A 14-foot chip sample cut in the stoping that was done in the southeast corner of the pit assayed 0.08 oz Au/ton and 0.58 oz Ag/ton.

A chip sample cut along the wall of the last 100 feet of the 200-foot long drift which was along the footwall area of the limestone horizon, assayed 0.02 oz Au/ton and 0.62 oz Ag/ton.

"North Tunnel Ore Body"

Approximately 800 feet at 10° from the open pit on the "South Tunnel Ore Body" a surface cut and underground development represent the work carried out on the "North Tunnel Ore Body." The zone here strikes at 000° and dips at -33° to the east.

Previous sampling gave a grade of $7.24 ($36.00)/ton for a reserve figure of 81,000 tons.

A chip sample cut from the main stope area assayed 0.18 oz Au/ton and 1.60 oz Ag/ton across 8.4 feet. The zone is exposed in the workings for 30 feet.

Samples cut in a shaft which has been sunk on the zone averaged $10.46 ($52.00) across 30.5 feet.

The zone has been developed by parallel winzes to a depth of 50 feet and 150 feet respectively with minor sub levels.

A crosscut driven at 250° into the footwall of the main zone has revealed the presence of another limestone unit which has been exposed across a 10-foot width with the face of the crosscut remaining in the limestone.

Underground chip sampling by the writer within a drift near the "North Tunnel Ore Body" revealed an average grade of 0.19 oz Au/ton and 0.26 oz Ag/ton over 72 feet which included 12 feet of 0.39 oz Au/ton and 0.47 oz Ag/ton. The true width of this section is not known.

ORE RESERVES

Ore reserves calculated from the workings totalled approximately 300,000 tons with a value of $7.03/ton ($35.00 gold). At present day prices this would be approximately $35.00/ton which would represent a grade in both instances of about 0.20 oz Au/ton. The silver associated with the ore should average around 1.0 oz Ag/ton.

POTENTIAL ORE

With the advent of a much higher price for gold and silver than prevaled over the past 30 odd years, and with the knowledge of low grade gold and silver values in the altered volcanics forming the footwall and hangingwall of the better mineralized silicified limestone, the potential for developing large tonnages of low grade ore are excellent.

The topography of the hangingwall area reflects a dip slope to some extent and could render the mineralized zone to be amenable to cheap open pit mining methods with a favourable ore to waste ratio.

The apparent dimensions of that portion of the zone developed by the "South Tunnel Ore Body" and the "North Tunnel Ore Body", within the limits of the underground workings and between

the workings, are 1,500 feet x 500 feet x at least 200 feet. The actual thickness of the mineralized section has yet to be determined.

Several million tons of open pitable ore could possibly be developed with a detailed drilling programme.

EXPLORATION PROGRAMME

Diamond drilling should commence at once to establish strike length, depth and thickness of the zone.

In conjunction with the drilling, geological mapping and prospecting should be carried out over the area including that area which should be staked to cover all extensions of the known zones and to cover other possible zones.

Some bulldozer work will be required to provide access to drill sites and to trench other areas on the property that have yet to be tested.

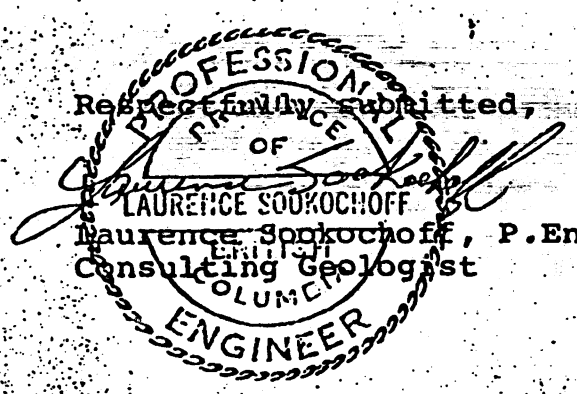
ESTIMATE OF COSTS OF EXPLORATION PROGRAMME

Diamond Drilling 2000 feet @ $15/foot	$30,000.00
Assaying - 400 assays @ $10/assay including shipping	4,000.00
Geological mapping and prospecting	2,000.00
Engineering and Supervision	4,000.00
Travel and Living Expenses	3,000.00
Bulldozer - Roads and Drills etc	1,500.00
Staking	1,000.00
Contingencies	4,500.00
	$50,000.00

It is estimated that the above programme should take approximately three months to complete.

Upon the successful completion of the above programme, a second phase should be initiated to further delineate the zone. This should consist of a 10,000 foot drilling programme that should have a total estimated cost of approximately $150,000.00.

Respectfully submitted,



Laurence Sookochoff, P.Eng.,
Consulting Geologist

January 14, 1975

Vancouver, B.C.

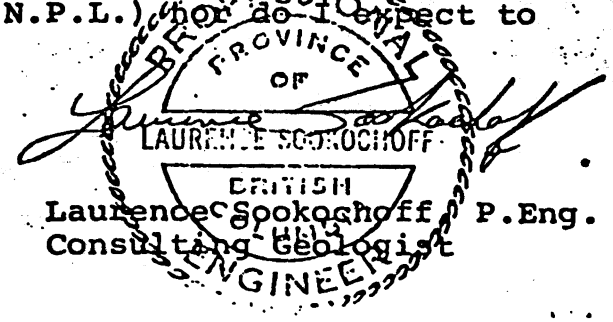
CERTIFICATE

I, LAURENCE SOOKOCHOFF, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That I am a Consulting Geological Engineer and an associate of T.R. Tough & Associates Ltd., with offices located at 519-602 West Hastings Street, Vancouver, British Columbia.

I further certify:

1. That I am a graduate of the University of British Columbia (1966) and hold a B.Sc. degree in Geology.
2. I have been practising my profession for the past eight years.
3. I am registered with the Association of Professional Engineers of British Columbia.
4. This report is based on information obtained by the writer from a personal examination of the property December 8-18th, 1974 and from public and private publications as listed in the bibliography.
5. I do not own any direct or indirect interest in the property described herein nor in the securities of Cedar City Mines Ltd. (N.P.L.) nor do I expect to receive any therein.



Laurence Sookochoff, P.Eng.
Consulting Geologist

January 14, 1975
Vancouver, B.C.

BIBLIOGRAPHY

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2. Reconnaissance Report Portland Mine, Mohave County, Arizona, June 1973 by Dudley L. Davis, M.E.

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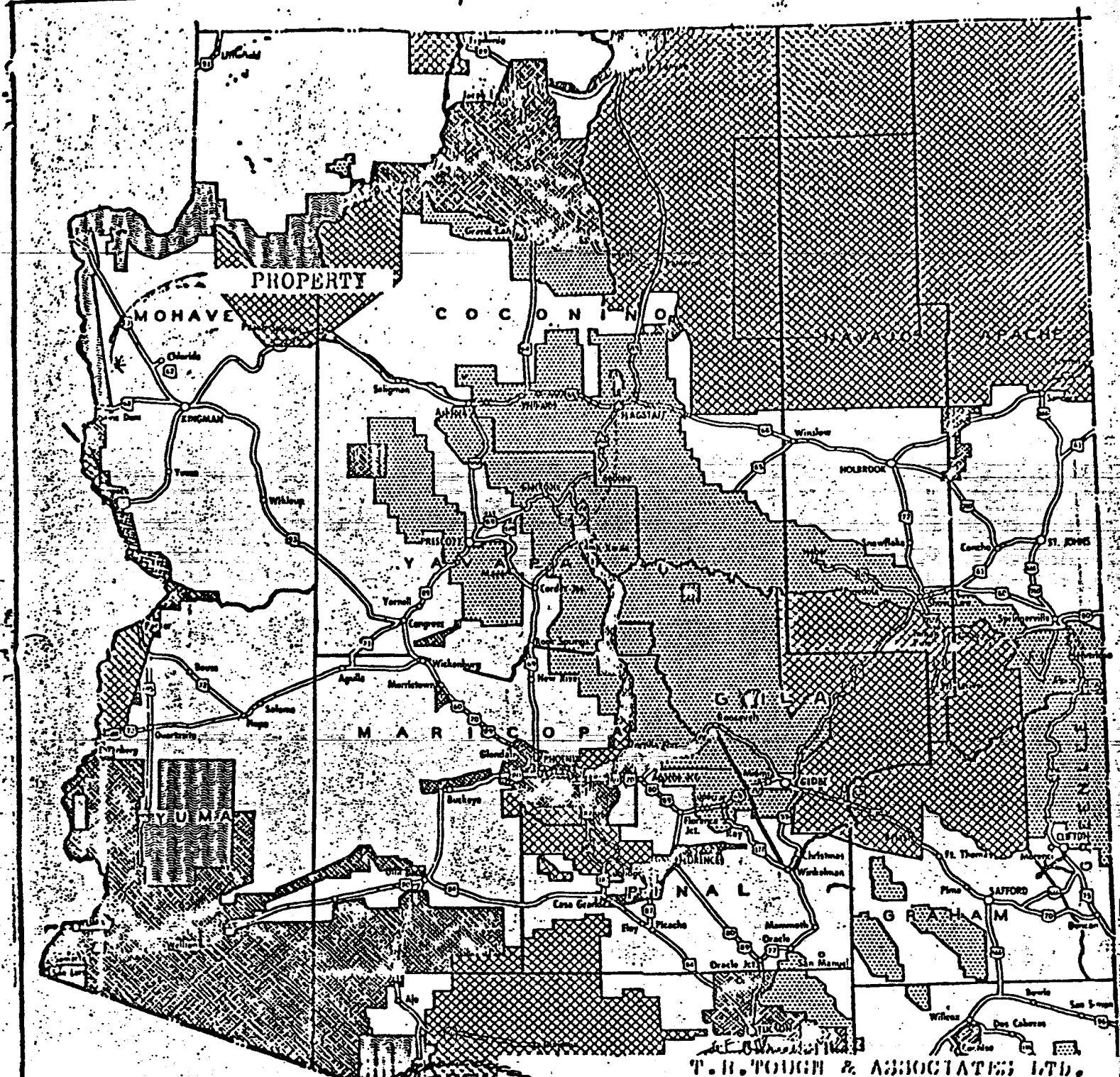
5. Report on the Victoria Gold Mines Inc. Oatman District, Arizona by J.P. Ryan, M.E. January 4, 1948.

6. Report; Victoria Gold Mines Inc. Oatman; Arizona, by J. Carlton Bray M.E. 1946.



STATE OF ARIZONA

DEPARTMENT OF MINERAL RESOURCES

0 10 20 30 40 50

SCALE - MILES

1970

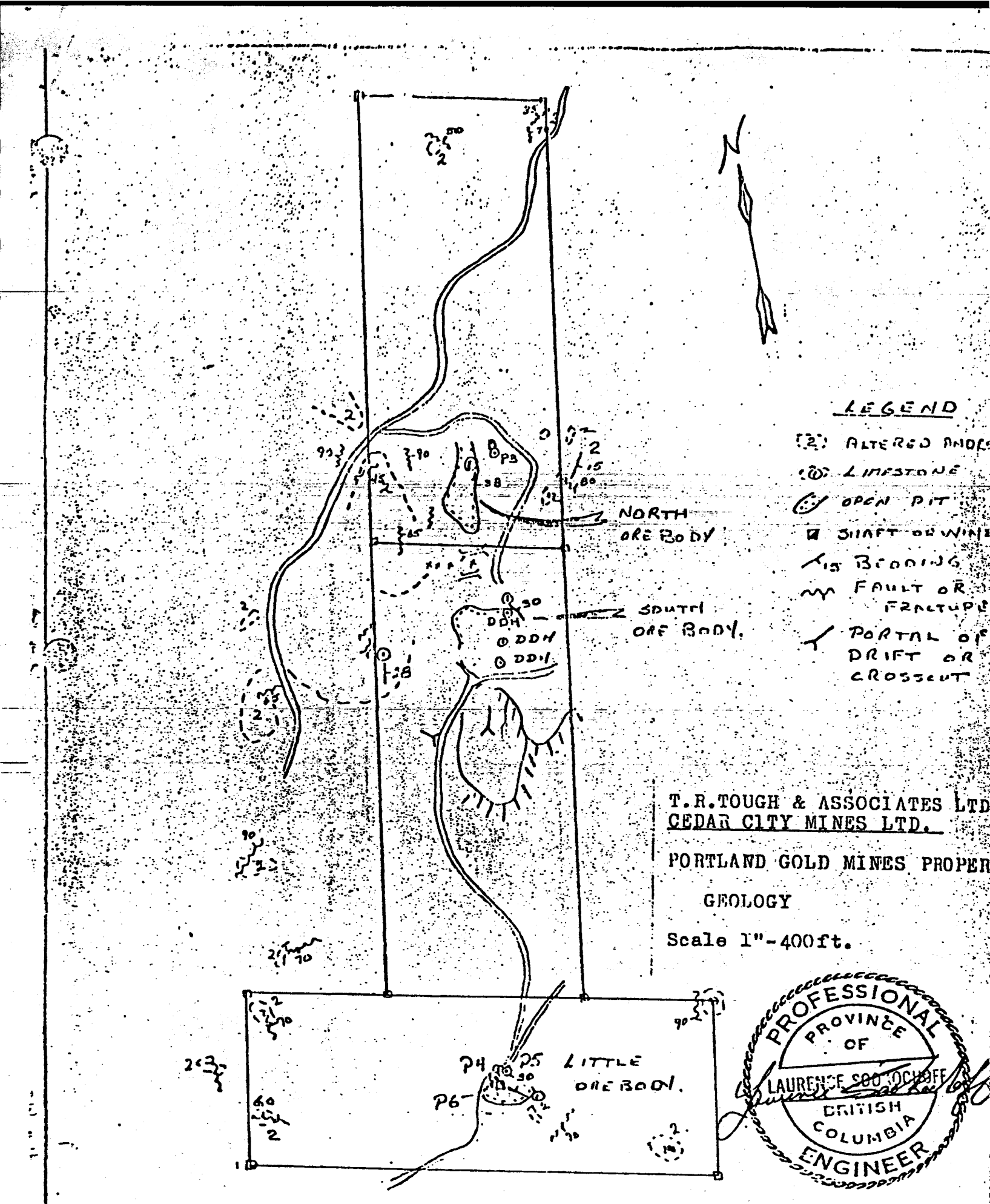
PROFESSIONAL ENGINEER
PROVINCE OF
LAURENCE [illegible]

T.R.TOUGH & ASSOCIATES LTD.
CEDAR CITY MINES LTD.

[illegible] GOLD MINES PROPERTY

LOCATION MAP

Scale 1"-4.5miles



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PORTLAND GOLD MINES PROPER

GEOLOGY

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Chester F. Millar

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P.O. Box 1809
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PORTLAND MINE

MILLAR DRILL ASSAYS

NOV/81 - FEB/82

Arizona Testing Laboratories

817 West Madison · Phoenix, Arizona 85007 · Telephone 254-6181

For Red Dog Mining Company
Post Office Box 1809
Riviera, Arizona 86442

Date February 19, 1982

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
5344	P282/E12:						
	10-20	0.01					
	20-30	0.01					
	30-40	0.01					
	40-50	Trace					
	50-60	0.01					
	60-70	Trace					
	70-80	Trace					
	80-90	Trace					
	90-100	Trace					
	100-110	Trace					
	110-120	Trace					
	120-130	Trace					
	130-140	Trace					
	140-148	Trace					
	P282/G-12E						
	10-20	Trace					
	20-30	Trace					
	30-40	0.26					
	40-50	0.25					
	50-60	0.15					
	60-70	0.10					
	70-80	0.04					
	80-86	0.04					
	P282/G-14:						
	10-20	0.01					
	20-30	Trace					

Respectfully submitted,

ARIZONA TESTING LABORATORIES

Claude E. McLean, Jr.

Registered Assayer
6258
CLAUDE EUGENE McLEAN, JR.
Date Signed
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E-

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Date February 19, 1982

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
5344	P282/G-14:						
	30-40	Trace					
	40-50	Trace					
	50-60	Trace					
	60-70	Trace					
	70-80	Trace					
	80-90	Trace					
	90-100	Trace					
	100-110	Trace					
	110-120	Trace					
	120-130	Trace					
	130-140	Trace					
	P282/H-11E:						
	10-20	Trace					
	20-30	Trace					
	30-40	Trace					
	40-50	0.01					
	50-60	0.15					
	60-70	0.14					
	70-80	0.14					
	80-90	0.06					
	90-100	0.04					
	100-110	0.02					
	110-120	0.05					
	P282/H-11E1:						
	120-130	0.02					
	130-140	0.01					

Respectfully submitted,
ARIZONA TESTING LABORATORIES

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ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
5344	P282/H11E1:						
	10-20	Trace					
	20-30	Trace					
	30-40	Nil					
	40-50	Trace					
	50-60	Trace					
	60-70	0.05					
	70-80	0.10					
	80-90	0.07					
	90-100	0.02					
	100-110	0.02					
	110-120	0.01					
	120-125	0.02					
	P282/H-12E:						
	10-20	Trace					
	20-30	Trace					
	30-40	Nil					
	40-50	Trace					
	50-60	0.25					
	60-70	0.11					
	70-80	0.05					
	80-90	0.06					
	90-100	0.02					
	100-110	0.01					
	110-120	0.03					
	120-130	0.01					
	130-140	0.05					
	140-150	0.02					

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ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
5344	P282/H-12E1:						
	90-100	Trace					
	100-110	Nil					
	110-120	0.02					
	120-130	0.08					
	130-140	0.04					
	140-150	0.03					
	150-160	0.03					
	160-170	0.03					

Respectfully submitted,

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Date February 11, 1982

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
5303	P282/G-8E 10-20	Trace					
	20-30	Trace					
	30-40	Trace					
	40-50	0.13					
	50-60	0.15					
	60-70	0.09					
	70-80	0.02	0.076				
	80-90	0.02					
	90-100	0.05					
	100-110	0.05					
	110-120	0.10					
	120-130	0.03					
	130-140	0.01					
	P282/G-8E1						
	10-20	Trace					
	20-30	Nil					
	30-40	0.01					
	40-50	Trace					
	50-60	0.03					
	60-70	0.10	0.10				
	70-80	0.10					
	80-90	0.02					
	90-100	0.01					
	100-110	0.02					
	110-120	0.03					
	120-130	0.02					
	130-140	0.03					

Respectfully submitted,

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Date February 11, 1982

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
5303	P282/G-8E2:						
	10-20	0.01					
	20-30	Trace					
	30-40	Trace					
	40-50	Nil					
	50-60	Nil					
	60-70	Trace					
	70-80	0.13	0.11				
	80-90	0.09					
	90-100	0.03					
	110-103	0.03					
	P282/G-8E3:						
	5-10	0.01					
	10-20	Nil					
	20-30	Nil					
	30-40	Nil					
	40-50	Nil					
	50-60	Nil					
	60-70	Trace					
	70-80	0.06					
	80-90	0.17					
	90-100	0.04	0.06				
	100-110	0.03					
	110-120	0.02					
	120-130	0.06					
	130-140	0.04					
	140-150	0.02					

Respectfully submitted,

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ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
5303	P282/G-10E:						
	10-20	Nil					
	20-30	Nil					
	30-40	0.01					
	40-50	0.17					
	50-60	0.12	0.12				
	60-70	0.07					
	70-80	0.03					
	80-90	0.02					
	90-100	0.01					
	100-110	0.04					
	110-120	0.01					
	120-130	0.01					
	130-140	0.01					
	150-160	0.01					
	P282/G-11E:						
	10-20	Trace					
	20-30	Trace					
	30-40	0.12					
	40-50	0.09					
	50-60	0.08	0.066				
	60-70	0.03					
	70-80	0.04					
	80-90	0.04					
	90-100	0.03					
	100-110	0.01					
	110-120	0.01					
	120-130	0.02					

Respectfully submitted,

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LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
5303	P282/G-11E:						
	130-136	0.01					
	P282/I7:						
	10-20	Trace					
	20-30	Trace					
	30-40	Nil					
	40-50	Nil					
	50-60	Nil					
	60-70	Nil					
	70-80	Nil					
	80-90	Nil					
	90-100	0.01					
	110-110	Trace					
	110-120	0.08	Oil				
	120-130	0.14					

Respectfully submitted,

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Date January 26, 1982

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION		OZ. PER TON		PERCENTAGES			
			GOLD	SILVER	COPPER			
5041	P1181/G1:	5-10	0.04					
		10-20	Trace					
		20-30	Trace					
	P1181/H1:	10-20	Trace					
		20-30	Trace					
		30-40	Nil					
		40-50	Trace					
		50-60	Trace					
		60-70	Trace					
		70-80	0.02					
	P1181/H10:	10-20	Trace					
		20-30	Trace					
		30-40	Trace					
		40-50	Trace					
		50-57	0.03					
	P1181/H11:	10-20	Trace					
		20-30	Trace					
		30-40	Trace					
		40-50	0.01					
	P1181/H12:	10-20	Trace					
		20-30	Trace					
	P1181/I10:	10-20	Trace					
		20-30	0.01					
		30-40	0.01					
		40-50	0.01					

Respectfully submitted,
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For Red Dog Mining Company
Post Office Box 1809
Riviera, Arizona 86442

Date January 26th 1982

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION		OZ. PER TON		PERCENTAGES			
			GOLD	SILVER	COPPER			
5041	P1181/I10:	50-60	Trace					
		60-70	Trace					
		70-80	0.01					
	P1181/I11:	10-20	0.01					
		20-30	0.01					
		30-40	Trace					
		40-50	Trace					
		50-60	Trace					
		60-70	Trace					
		70-80	0.04					
	P1181/I12:	10-20	Trace					
		20-30	Trace					
		30-40	Trace					
		40-50	Nil					
		50-60	Trace					

Respectfully submitted,

ARIZONA TESTING LABORATORIES

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Certificate No. 6258
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For Red Dog Mining Company
Post Office Box 1809
Riviera, Arizona 86442

Date December 29, 1981

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
4673	P1281/G-9						
	10-20	0.04					
	20-30	0.08	0.055				
	30-40	0.03					
	40-50	0.07					
	50-60	0.02					
	60-70	0.01					
	70-80	0.01					
	80-90	0.06					
	90-100	0.03					
	100-110	0.01					
	110-120	0.01					
	120-130	0.01					
	130-140	0.11					
	140-150	0.02					

Respectfully submitted,
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For Red Dog Mining Company
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Riviera, Arizona 86442

Date December 29, 1981

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
4673	P1281/F-9: ?						
	5-10	0.04					
	10-20	0.04	0.075				
	20-30	0.03					
	40-50	0.18					
	50-60	0.02					
	60-70	0.01					
	70-80	0.02					
	P1281/F-12:						
	10-20	0.01					
	20-30	0.01					
	30-40	0.01					
	40-50	0.01					
	50-60	0.01					
	60-70	0.01					
	70-80	0.01					
	80-90	0.04					
	90-100	0.01					
	100-110	0.17					
	110-120	No sample maybe Dec 17					
	120-130	0.01				120-130 = 0.25	
	130-140	0.01					
	P1281/G-8:						
	10-20	0.01					
	20-30	trace					
	30-40	0.01					
	40-50	0.17	0.127				
	~~50-60~~	~~0.08~~					
	60-70	0.13					

Respectfully submitted,

ARIZONA TESTING LABORATORIES

Claude E. McLean, Jr.

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For Red Dog Mining Company
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Date December 29, 1981

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
4609	P1281/K-1:						
	10-20	0.02					
	20-30	0.02					
	30-40	trace					
	40-50	trace					
	50-60	trace					
	60-70	trace					
	70-80	trace					
	80-90	0.03					
	P1281/L-1:						
	10-20	trace					
	20-30	trace					
	30-40	trace					
	40-50	nil					
	50-60	nil					
	60-70	0.01					
	70-80	trace					
	80-90	trace					
	90-100	nil					
	100-110	0.02					
	110-120	0.01					

Respectfully submitted,

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For Red Dog Mining Company
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Date December 29, 1981

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
4609	P1281/M-1:						
	10-20	nil					
	20-30	0.01					
	30-40	nil					
	40-50	0.01					
	50-60	nil					
	60-70	nil					
	70-80	trace					
	P1281/N-1:						
	10-20	nil					
	20-30	trace					
	30-40	nil					
	40-50	trace					
	50-60	nil					
	60-70	nil					
	70-80	nil					
	80-90	nil					
	90-100	nil					
	100-110	nil					
	110-120	nil					
	120-130	nil					
	130-140	nil					
	P1281/O-1:						
	90-100	0.17	0.13				
	100-110	0.09					
	110-120	0.03					
	120-130	0.03					

Respectfully submitted,

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Date December 23, 1981

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
4609	P1281/G-2:						
	10-20	0.02					
	20-30	0.01					
	30-40	0.01					
	40-50	0.01					
	50-60	0.01					
	60-70	0.01					
	70-80	0.02					
	80-90	0.03					
	90-100	0.05					
	100-110	0.03					
	110-120	0.02					
	120-130	0.01					
	130-140	0.01					
	P1281/G-3:						
	10-20	0.01					
	20-30	0.01					
	30-40	Trace					
	40-50	0.01					
	50-60	Trace					
	60-70	Trace					
	70-80	Trace					
	80-90	0.02					
	90-100	0.01	0.065				
	110-110	0.07					
	110-120	0.06					
	120-130	0.02					

Respectfully submitted,

ARIZONA TESTING LABORATORIES

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Date December 23, 1981

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
4609	P1281/G-3:						
	130-140	0.04					
	140-150	0.01					
	150-160	Trace					
	P1281/G-10:						
	10-20	0.01					
	20-30	0.08					
	30-40	0.01					
	40-50	0.01					
	50-60	0.01					
	P1281/G-11:						
	10-20	0.16	0.10				
	20-30	0.04					
	30-40	0.02					
	40-50	0.01					
	50-60	0.01					
	P1281/G-12:						
	10-20	0.01					
	20-30	0.01					
	30-40	0.01					
	40-50	0.01					
	50-60	0.02					
	60-70	0.01					
	70-80	Trace					
	80-90	Trace					
	P1281/G-13:						
	10-20	0.01					
	20-30	0.02					

Respectfully submitted,
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LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
4609	P1281/G-13:						
	30-40	0.02					
	40-50	0.01					
	50-60	0.01					
	60-70	0.01					
	70-80	0.03					
	80-90	0.01					
	90-93	0.02					
	P1281/H-13:						
	10-20	0.03					
	20-30	0.05	0.075				
	30-40	0.10					
	40-50	0.01					
	50-60	0.01					
	60-70	0.02					
	70-80	0.01					
	80-90	0.01					
	90-100	0.02					
	100-110	0.02					
	110-120	0.01					

Respectfully submitted,

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Date December 17, 1981

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
4515	P1281:						
	50-60	0.04					
	60-70	0.03					
	120-130	0.25					
	P1281/F-6:						
	5-10	0.47					
	10-20	0.09					
	20-30	0.05	0.084				
	30-40	0.04					
	40-50	0.03					
	50-60	0.03					
	60-70	0.01					
	70-80	0.02					
	80-90	0.07					
	90-100	0.02					
	100-110	0.02					
	110-120	0.01					
	120-130	0.03					
	130-140	0.11					
	P1281/F-7:						
	10-20	0.02					
	20-30	0.05					
	P1281/F-8:						
	10-20	0.01					
	20-30	0.12					
	30-40	0.21					

may be Dec 29 Fil 110-120

Respectfully submitted,
ARIZONA TESTING LABORATORIES, INC.

Claude E. McLean, Jr.

Registered Assayer
CERTIFICATE NO. 6258
CLAUDE EUGENE McLEAN JR.
Date Signed 12-17-81
ARIZONA, U.S.A.

Arizona Testing Laboratories

817 West Madison · Phoenix, Arizona 85007 · Telephone 254-6181

For Red Dog Mining Company
Post Office Box 1809
Riviera, Arizona 86442

Date December 17, 1981

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
4515	P1281/F-8:		0.12				
	40-50	0.11					
	50-60	0.04					
	60-70	0.03					
	70-80	0.02					
	80-90	0.04					
	90-100	0.02					
	100-110	0.01					
	110-120	0.03					
	130-140	0.26					
	P1281/F-9: ?						
	0-5	0.12					
	5-10	0.07	0.08				
	10-20	0.05					
	20-30	0.03					
	30-40	0.03					
	40-50	0.02					
	70-80	0.01					
	80-90	0.02					
	90-100	0.02					
	100-110	0.02					
	110-120	0.02					
	120-130	0.01					
	130-140	0.01					
	P1281/F-10:						
	10-20	0.15					
	20-30	0.03					

Respectfully submitted,
ARIZONA TESTING LABORATORIES, INC.

Claude E. McLean, Jr.

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6258
CLAUDE EUGENE
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Date Signed 12/17/81
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817 West Madison · Phoenix, Arizona 85007 · Telephone 254-6181

For Red Dog Mining Company
Post Office Box 1809
Riviera, ARizona 86442

Date December 17, 1981

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
4515	P1281/F-10:						
	30-40	0.03					
	40-50	0.02					
	50-60	0.02					
	60-70	0.02					
	70-80	0.01					
	80-90	0.05					
	90-100	0.02					
	100-110	0.01					
	110-120	0.01					
	120-130	0.01					
	130-140	0.06					
	P1281/F-11:						
	5-10	0.08					
	10-20	0.01					
	20-30	0.05					
	30-40	0.03					
	40-50	0.02					
	50-60	0.02					
	60-70	0.03					
	70-80	0.10					
	80-90	0.01	0.041				
	90-100	0.03		0.045			
	100-110	0.05					
	110-120	Trace					
	120-130	0.05					
	130-140	0.07					
	140-150	0.05					
	150-160	0.01					

Respectfully submitted,

ARIZONA TESTING LABORATORIES

Claude E. McLean, Jr.

Registered Assayer
CERTIFICATE NO
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CLAUDE EUGENE
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Date Signed 1/11/82
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Arizona Testing Laboratories

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For Red Dog Mining Company
Post Office Box 1809
Riviera, Arizona 86442

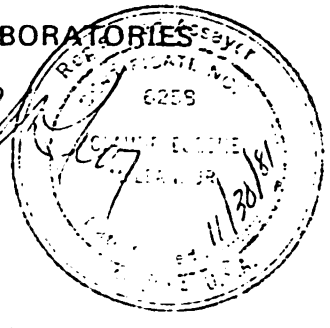
Date November 30, 1981

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
4247	P1181/H-1:						
	90-100	0.01					
	100-110	0.01					
	110-120	0.05					
	P1181/H-11						
	50-53	0.12	0.091				
	53-60	0.06					
	60-70	0.11					
	70-80	0.09	0.095				
	80-90	0.02					
	90-100	0.02					
	100-110 ½	0.33					
	110-120	0.18					
	P1181/H-12						
	30-40	0.01					
	40-50	0.11					
	50-60	0.07					
	60-70	0.01					
	70-72	0.01					
	72-80	0.01					
	P1181/ I-10						
	90-100	0.11					
	100-110	trace					
	110-120	0.01					
	120-130	0.03					
	130-140	0.01					

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E. McLean, Jr.



Arizona Testing Laboratories

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For Red Dog Mining Company
Post Office Box 1809
Riviera, Arizona 86442

Date November 30, 1981

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
4247	P1181/ I-11						
	80-90	0.05	0.055				
	90-100	0.06					
	100-110	0.01					
	110-120	0.01					
	120-130	trace					
	130-140	0.06					
	140-150	0.03					
	150-160	0.02					
	P1181/ I-12						
	60-70	0.01					
	70-80	0.13					
	80-90	0.09	0.117				
	90-100	0.13					
	100-110	0.01					
	110-120	0.02					

Respectfully submitted,

ARIZONA TESTING LABORATORIES

Claude E. McLean, Jr.

Registered Assayer
Certificate No. 6258
Claude Eugene McLean, Jr.
Date Signed 11/30/81
Arizona, U.S.A.

Arizona Testing Laboratories

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For Red Dog Mining Company
Post Office Box 1809
Riviera, Arizona 86442

Date November 23, 1981

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
4201	P-1181/D-2:						
	5-10	0.06					
	10-20	0.03	0.06				
	20-30	0.09					
	30-40	0.03					
	P-1181/E-1:						
	5-10	0.10					
	10-20	0.03					
	20-30	0.03					
	P-1181/E-2:						
	2-10	0.07					
	10-20	0.03					
	20-30	0.03					
	30-40	0.02					
	P-1181/E-3:						
	5-10	0.04					
	10-20	0.02					
	P-1181/F-1:						
	5-10	0.19					
	10-20	0.24	0.177				
	20-30	0.10					
	30-40	0.03					
	40-50	0.02					

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E. McLean, Jr.

Registered Assayer
CERTIFICATE NO.
6258

Arizona Testing Laboratories

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Riviera, Arizona 86442

Date November 23, 1981

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
4201	P-1181/F-2:						
	5-10	0.07					
	10-20	0.03					
	20-30	0.02					
	30-40	0.03					
	40-50	0.02					
	P-1181/F-3:						
	5-10	0.07					
	10-20	0.10	0.073				
	20-30	0.05					
	30-40	0.03					
	40-50	0.02					
	50-60	0.02					
	60-70	0.02					
	70-80	0.02					
	80-90	0.01					
	90-100	0.02					
	100-110	0.01					
	P-1181/F-4:						
	5-10	0.02					
	10-20	0.03					
	20-30	0.08					
	30-40	0.03					
	40-50	0.02					
	50-60	0.02					

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E. McLean, Jr.

Registered Assayer
CERTIFICATE NO. 6258
EUGENE
JR.
ARIZONA, U.S.A.

Arizona Testing Laboratories

817 West Madison · Phoenix, Arizona 85007 · Telephone 254-6181

For Red Dog Mining Company
Post Office Box 1809
Riviera, AZ. 86442

Date November 23, 1981

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
4201	P-1181/F-5:						
	10-20	0.01					
	20-30	0.04					
	30-40	0.02					
	40-50	0.02					
	50-60	0.02					
	60-70	0.04					
	70-80	0.01					
	80-90	0.02					
	90-100	0.03					
	100-110	0.01					
	P-1181/G-1:						
	30-40	0.01					
	40-50	0.10					
	50-60	0.03					
	60-70	0.02					
	P-1181/H-1:						
	80-90	0.05					

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E. McLean, Jr.

Registered Assayer CERTIFICATE ARIZONA

Arizona Testing Laboratories

817 West Madison · Phoenix, Arizona 85007 · Telephone 254-6181

For Red Dog Mining Company
Post Office Box 1809
Riviera, Arizona 86442

Date November 23, 1981

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
4116	P-1181/C-3:						
	5-10	0.04					
	10-20	0.04					
	20-30	0.06					
	30-40	0.04					
	40-50	0.03					
	50-60	0.02					
	60-70	0.02					
	70-80	0.02					
	80-90	0.02					
	90-100	0.02					
	P-1181/C-4:						
	10-20	0.03					
	20-30	0.04					
	30-40	0.02					
	40-50	0.02					
	50-60	0.02					
	60-70	0.02					
	70-80	0.02					
	80-90	0.02					
	90-100	0.02					
	P-1181/D-5:						
	10-20	0.01					
	20-30	0.01					
	30-40	0.01					

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E. McLean, Jr.

Registered Assayer
CERTIFICATE NO. 2238
CLAUDE EUGENE McLEAN, JR.
Signed
ARIZONA, U.S.A.

Arizona Testing Laboratories

817 West Madison · Phoenix, Arizona 85007 · Telephone 254-6181

For Red Dog Mining Company
Post Office Box 1809
Riviera, Arizona 86442

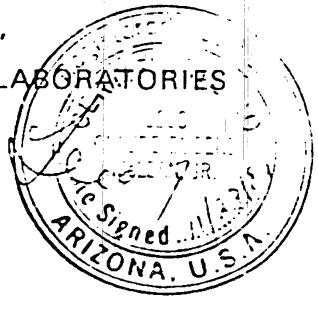
Date November 23, 1981

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
4116	P-1181/D-5:						
	40-50	0.02					
	50-60	0.02					
	60-70	0.03					
	70-80	0.02					
	80-90	0.02					
	90-100	0.03					
	P-1181/E-5:						
	5-10	0.02					
	10-20	0.02					
	20-30	0.02					
	30-40	0.02					
	40-50	0.03					
	50-60	0.02					
	60-70	0.02					
	70-80	Trace					
	80-90	0.01					
	90-100	0.01					
	100-110	0.01					
	110-120	0.01					
	120-130	0.01					
	P-1181/H-10:						
	57-60	0.08					
	60-70	0.07	0.07				
	70-80	0.06					
	80-90	0.07					

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E. McLean, Jr.



Arizona Testing Laboratories

817 West Madison · Phoenix, Arizona 85007 · Telephone 254-6181

For Red Dog Mining Company
Post Office Box 1809
Riviera, Arizona 86442

Date November 23, 1981

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
4116	P-1181/H-10:						
	90-100	0.03					
	100-110	0.01					
	110-120	0.04					
	120-130	0.03					
	130-140	0.02					

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E. McLean, Jr.

Registered Assayer
Certificate No
6258
Claude Eugene
McLean, Jr.
Signed
Arizona, U.S.A.

Arizona Testing Laboratories

817 West Madison · Phoenix, Arizona 85007 · Telephone 254-6181

For Red Dog Mining Company
Post Office Box 1809
Riviera, Arizona 86442

Date November 17, 1981

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
4054	P-11-6-81/A-1:						
	5-10	0.01					
	10-20	0.01					
	20-30	0.01					
	30-40	0.01					
	40-50	0.01					
	50-60	0.01					
	60-70	trace					
	70-75	0.03					
	P-1181/A-2:						
	5-10	0.01					
	10-20	0.05					
	20-30	0.05					
	30-40	0.02					
	40-50	0.01					
	50-60	0.01					
	60-65	0.01					
	P-1181/A-3:						
	5-10	0.01					
	10-20	0.02					
	20-30	0.02					
	30-40	0.02					
	40-50	0.02					
	50-60	0.13	0.10				
	60-70	0.07					

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Claude E McLean Jr

Claude E. McLean, Jr.

Registered Assayer
No. C258
Claude Eugene McLean, Jr.
11/17/81
Arizona

Arizona Testing Laboratories

817 West Madison · Phoenix, Arizona 85007 · Telephone 254-6181

For Red Dog Mining Company
Post Office Box 1809
Riviera, Arizona 86442

Date November 17, 1981

ASSAY CERTIFICATE

LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
4054	P-1181/B-1:						
	5-10	0.09					
	10-20	0.03					
	20-30	0.02					
	30-40	0.02					
	40-50	0.04					
	50-60	0.02					
	60-70	0.02					
	70-80	0.01					
	80-90	trace					
	90-100	nio					
	P-1181/B-2:						
	5-10	0.02					
	10-20	0.05					
	20-30	0.03					
	30-40	0.04					
	40-50	0.02					
	50-60	0.01					
	60-70	0.02					
	70-80	0.01					
	80-90	trace					
	P-1181/B-3:						
	5-10	0.04					
	10-20	0.06	0.042				
	20-30	0.03					
	30-40	0.04					
	40-50	0.01					

Respectfully submitted,

ARIZONA TESTING LABORATORIES

Claude E. McLean

Claude E. McLean, Jr.

Registered Assayer
CERTIFICATE
6263
CLAUDE EUGENE
McLEAN, JR.
Date Signed 11/17/81
ARIZONA, U.S.A.

Arizona Testing Laboratories

817 West Madison · Phoenix, Arizona 85007 · Telephone 254-6181

For Red Dog Mining Company
Post Office Box 1809
Riviera, Arizona 86442

Date November 17, 1981

ASSAY CERTIFICATE

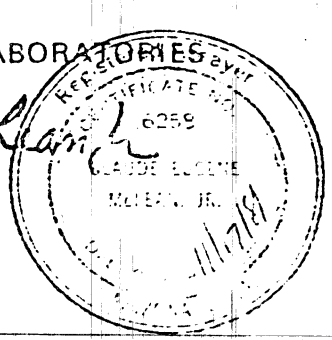
LAB NO.	IDENTIFICATION	OZ. PER TON		PERCENTAGES			
		GOLD	SILVER	COPPER			
4054	P-1181/B-3:						
	50-60	trace					
	60-70	trace					
	70-80	0.02					
	80-90	0.09					
	90-100	0.01					
	P-1181/B-4:						
	5-10	0.03					
	10-20	0.02					
	20-30	0.01					
	30-40	0.03					
	40-50	0.01					
	50-60	trace					
	60-70	0.02					
	70-80	0.01					
	P-1181/C-1:						
	5-10	trace					
	10-20	0.01					
	20-30	0.03					
	30-40	0.02					
	40-50	0.01					
	50-60	0.02					
	60-70	0.02					
	70-80	0.02					

Respectfully submitted,

ARIZONA TESTING LABORATORIES

Claude E McLean

Claude E. McLean, Jr.



Fischer-Watt Mining Co. Inc.

ADMINISTRATIVE OFFICE: 114 TUCKER, SUITE 2
KINGMAN, ARIZONA 86401
PHONE: (602) 753-1622

Peter Drobeck
March 15, 1982

RESERVES ESTIMATE
PORTLAND MINE NORTH PIT
MOHAVE COUNTY, ARIZONA

Reserves in a crudely outlined pit in the northern part of the Portland project were estimated using core drilling, percussion drilling, and chip sampling. Results of this estimate indicate there are 43,944 tons of vein averaging .115 o/T Au and containing 5055 oz. Au, which can be mined with less than a 3 to 1 strip ratio.

A cross-sectional method was used for ore reserve calculations. Grade and thickness were calculated for a specific reserve block by weighted averaging of assays from samples bounding the block. These grade and tonnage figures were projected half way to the next cross section. No assays were projected more than 25 feet with the exception of some blocks on the west side of the pit where no sampling was available.

In many of the percussion holes, 10 foot cutting samples included hanging wall andesites and some of the vein's hanging wall. In such cases, the hanging wall andesite was arbitrarily assigned a low gold content between .01 to .03 o/T Au depending on assays of similar rock in surrounding holes. The rest of the gold in the sample was assigned to the vein, thus upgrading this part of the assay value. This resulted in assay values for the vein hanging wall that were similar to values obtained in chip sampling the workings (i.e.; .15 to .30 o/T Au).

In calculating the tonnage of both vein and waste, a factor of 13 ft^3/ton was used, corresponding to a rock density of 2.4 g/cc.

PORTLAND RESERVES

X-Section	Block	Thick	Dip	Strike	Tons	Grade	oz Au
D-D'	A	12	27	40	997	.079	78.7
	A'	9	33	40	456	.079	36.0
	B	19	23	25	840	.135	113.4
	C	19	26	40	1520	.155	235.6
	D	19	20	40	1169	.130	152.0
				TOTAL	4982	.124	615.7
E-E'	A	11	40	30	1015	.217	220.3
	B	19	70	30	3069	.191	585.9
	C	19	20	30	876	.110	96.5
	D	13	30	30	900	.117	105.3
	D'	9	34	30	353	.117	41.3
	E	10	67	30	1546	.122	188.6
	F	9	19	30	394	.130	51.3
				TOTAL	8153	.158	1289.2
F-F'	A	19	28	34	1391	.116	161.4
	A'	15	16	34	314	.116	36.4
	B	19	25	34	1242	.120	149.0
	C	19	29	34	1441	.104	149.6
	D	19	22	34	1043	.067	69.9
	E	10	22	34	575	.127	73.0
	F	10	31	34	811	.083	67.3
	G	10	25	34	654	.062	40.5
	H	10	51	34	667	.073	49.0
				TOTAL	8138	.098	796.1
G-G'	A	14	20	41	226	.086	19.4
	B	19	37	41	2217	.148	328.1
	C	19	22	41	1313	.103	136.4
	D	19	18	41	1078	.058	62.5
	E	19	45	41	2696	.054	145.6
	F	10	22	41	686	.043	29.4
	G	10	43	41	1356	.051	69.1
	H	10	22	41	693	.062	43.0
	I	6	40	41	378	.051	19.3
				TOTAL	10643	.080	852.8
H-H'	A	13	12	33.7	405	.134	54.2
	B	24	30	35	1840	.127	233.6
	C	22	28	35	1658	.109	180.7
	D	17	26	35	1190	.107	127.3
	E	11	20	35	592	.130	77.0
	F	10	10	35	269	.110	29.6
				TOTAL	5954	.118	702.4
I-I'	A	16	35	36	775	.060	46.5
	B	16	50	36	2066	.117	241.7
	C	16	77	36	3233	.158	510.9
				TOTAL	6074	.132	799.1

PORTLAND RESERVES SUMMARY

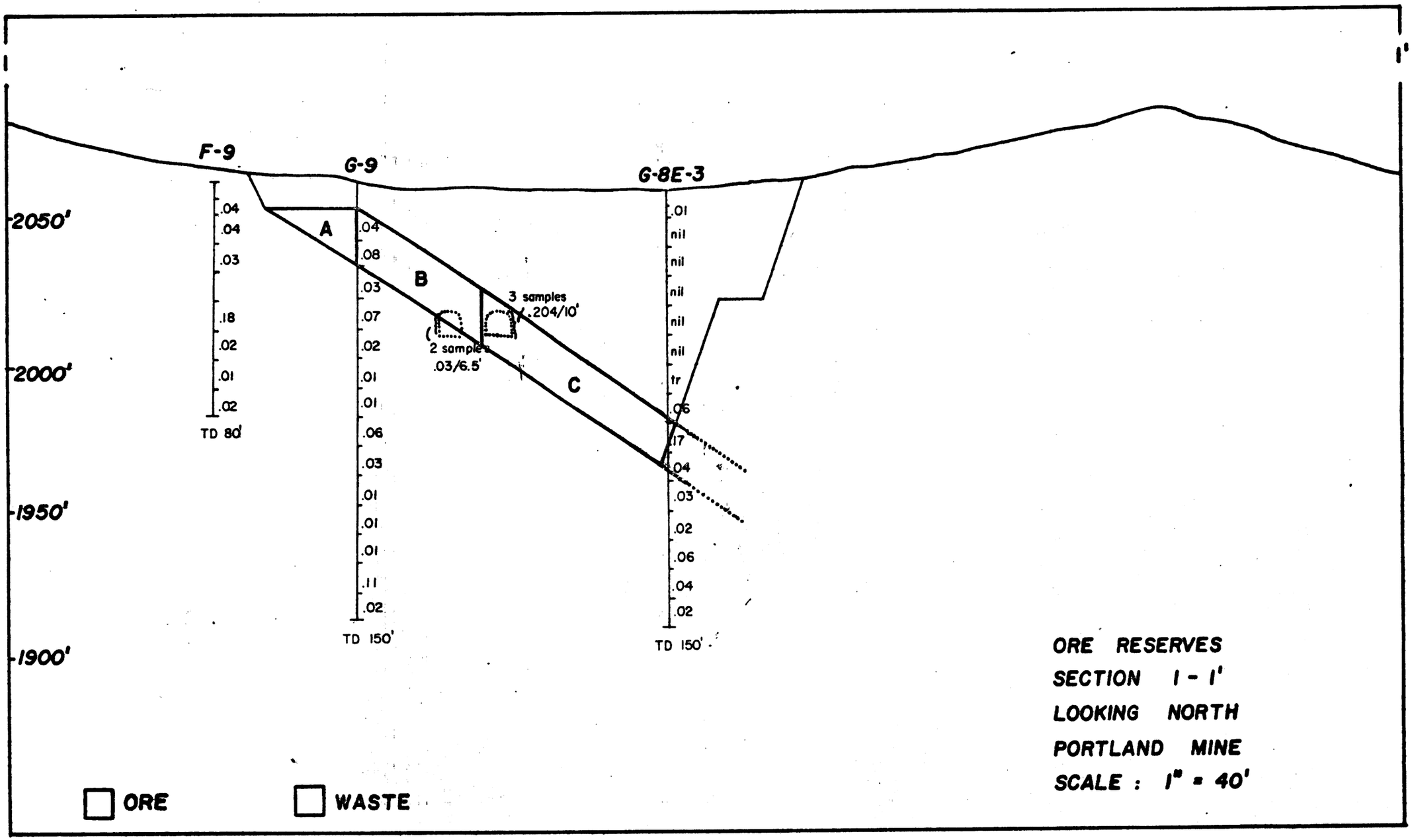
SECTION	TONS	GRADE	OZ. AU
D-D'	4982	.124	615.7
E-E'	8153	.158	1289.2
F-F'	8138	.098	796.1
G-G'	10,643	.080	852.8
H-H'	5954	.118	702.4
I-I'	6074	.132	799.1
TOTAL	43,944	.115	5055.3

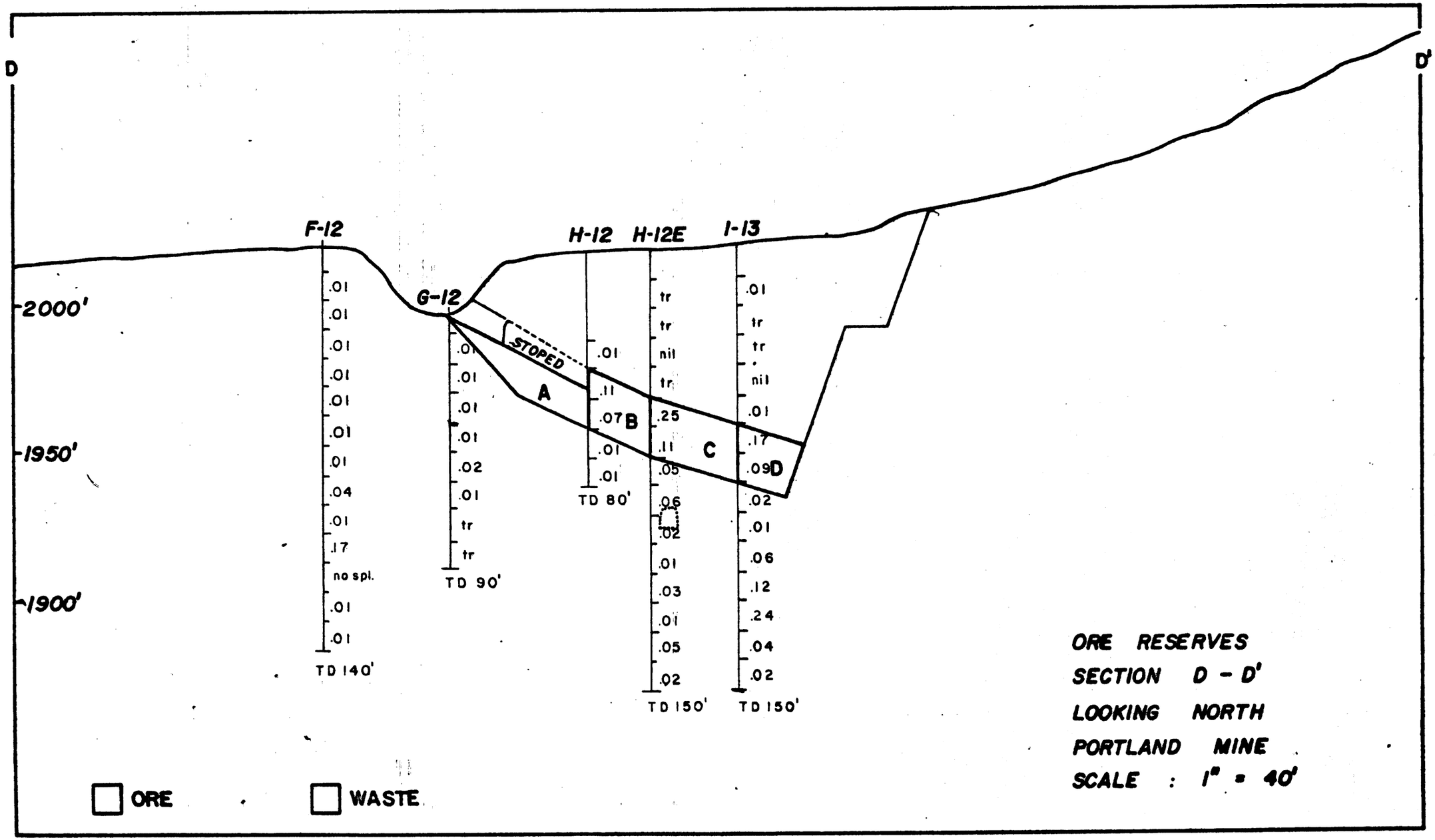
WASTE

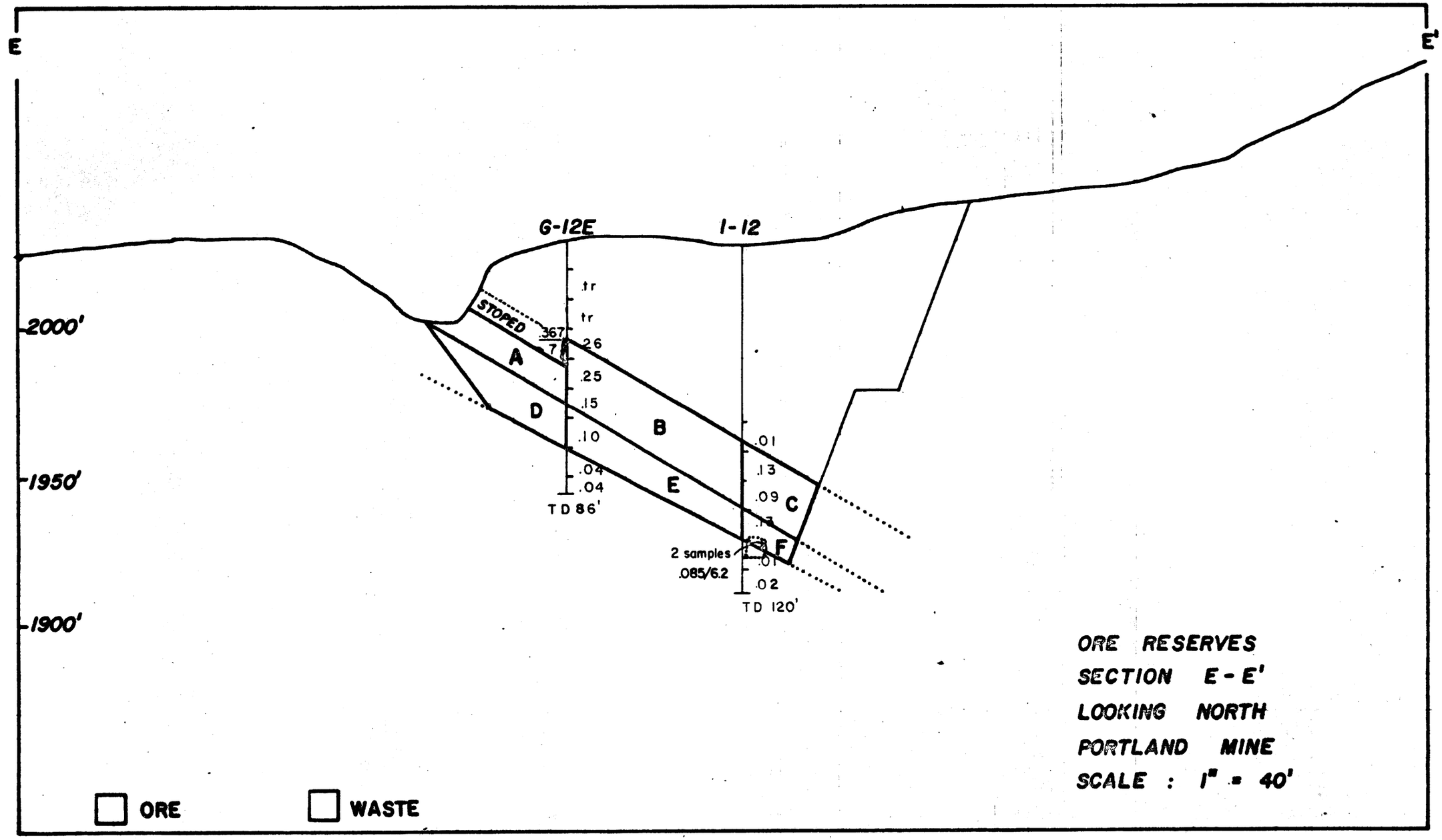
SECTION	TONNAGE
I-I'	19,924
H-H'	23,029
G-G'	27,962
F-F'	17,828
E-E'	18,883
D-D'	19,861
TOTAL	127,487 tons

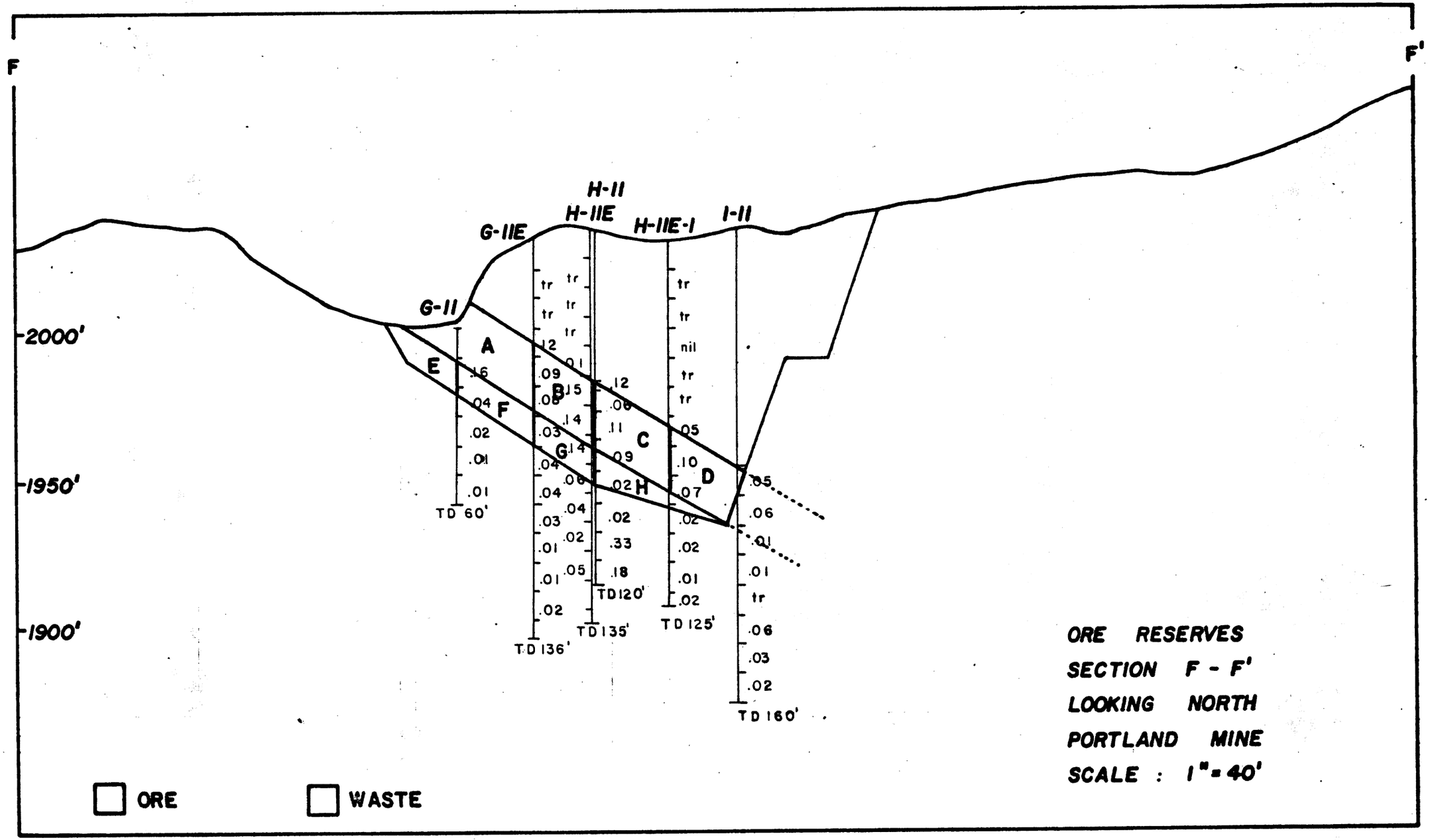
TOTAL WASTE 127,487

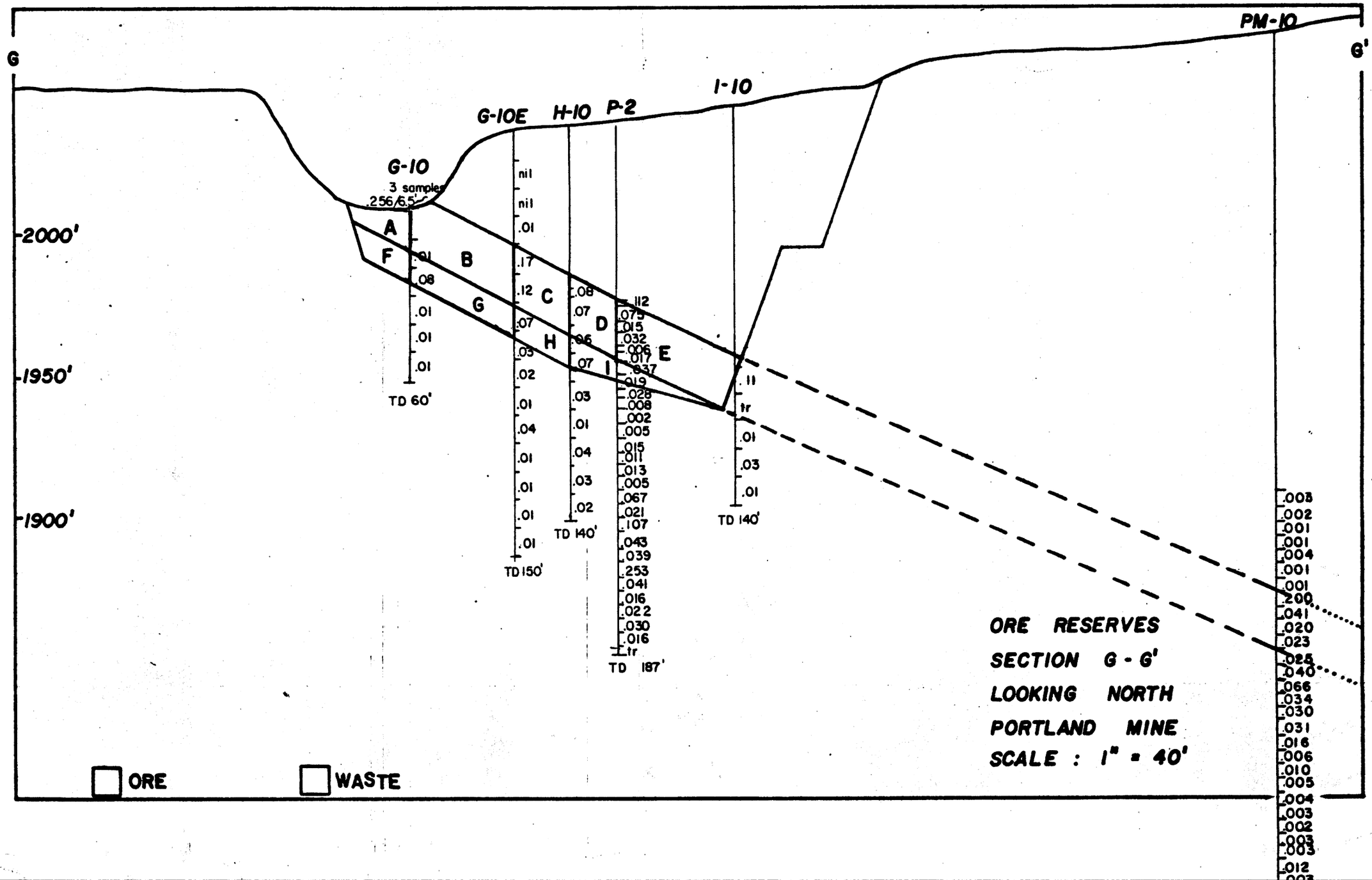
STRIPPING RATIO 2.9:1

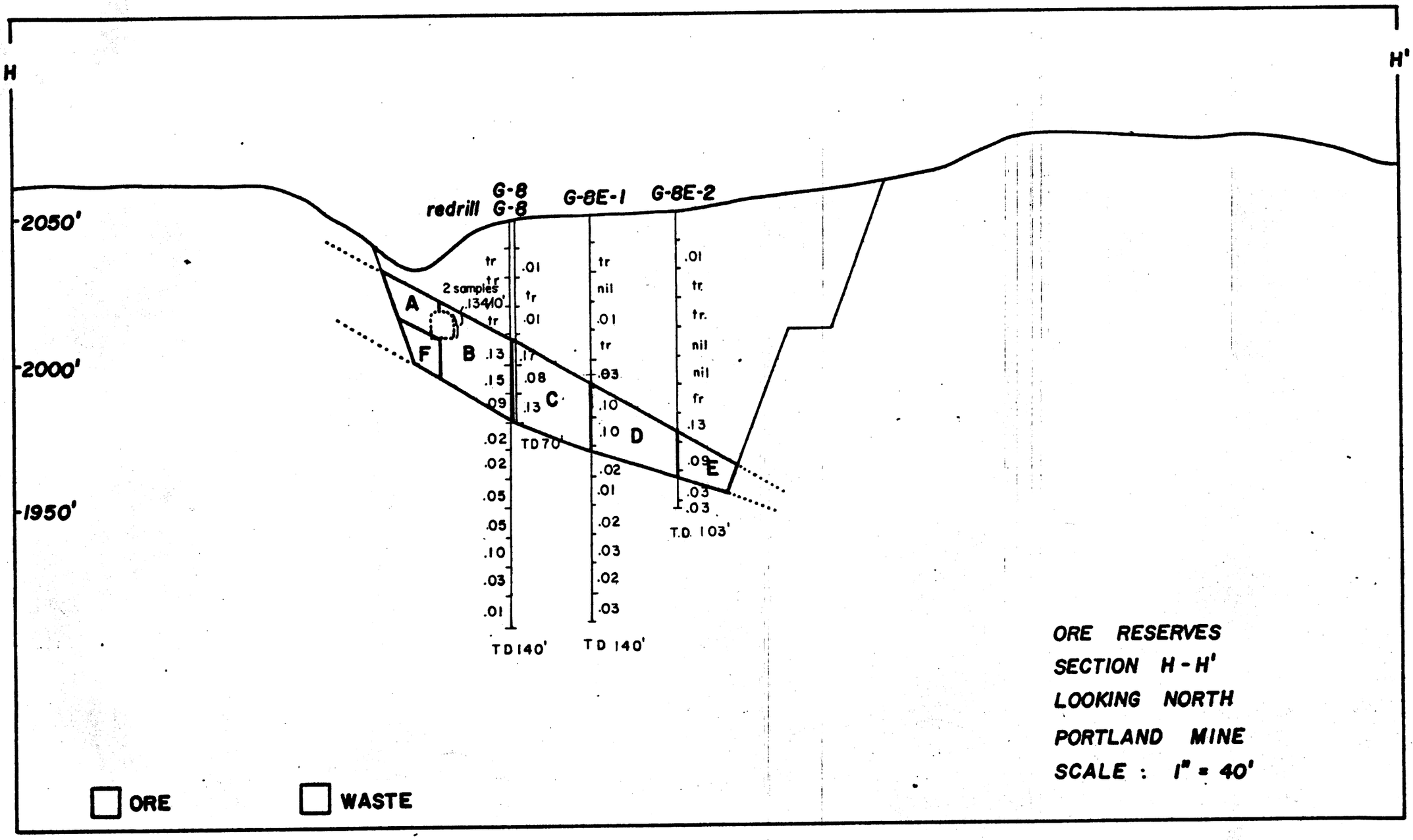

1'
F-9
G-9
G-8E-3
2050'
2000'
1950'
1900'
A
B
C
.04
.04
.03
.18
.02
.01
.02
TD 80'
.04
.08
.03
.07
.02
.01
.01
.06
.03
.01
.01
.01
.11
.02
TD 150'
3 samples
.204/10'
2 samples
.03/6.5'
.01
nil
nil
nil
nil
nil
nil
tr
.06
.17
.04
.03
.02
.06
.04
.02
TD 150'
ORE
WASTE
ORE RESERVES
SECTION 1 - 1'
LOOKING NORTH
PORTLAND MINE
SCALE : 1" = 40'


D
D'
F-12
G-12
H-12
H-12E
I-13
2000'
1950'
1900'
STOPED
A
B
C
D
.01
.01
.01
.01
.01
.01
.04
.01
.17
no spl.
.01
.01
TD 140'
.01
.01
.01
.01
.01
.02
.01
tr
tr
TD 90'
.01
.11
.07
.01
.01
TD 80'
tr
tr
nil
tr
.25
.11
.05
.06
.02
.01
.03
.01
.05
.02
TD 150'
.01
tr
tr
nil
.01
.17
.09
.02
.01
.06
.12
.24
.04
.02
TD 150'
ORE
WASTE
ORE RESERVES
SECTION D - D'
LOOKING NORTH
PORTLAND MINE
SCALE : 1" = 40'


E
E'
G-12E
I-12
2000'
1950'
1900'
tr
tr
.26
.25
.15
.10
.04
.04
TD 86'
STOPED
367
7
A
D
B
E
.01
.13
.09
C
F
2 samples
.085/6.2
.01
.02
TD 120'
ORE
WASTE
ORE RESERVES
SECTION E-E'
LOOKING NORTH
PORTLAND MINE
SCALE : 1" = 40'


F
F'
G-IIE
H-II
H-IIE
H-IIE-1
I-II
G-II
2000'
1950'
1900'
A
B
C
D
E
F
G
H
TD 60'
TD 136'
TD 135'
TD 120'
TD 125'
TD 160'
ORE
WASTE
ORE RESERVES
SECTION F - F'
LOOKING NORTH
PORTLAND MINE
SCALE : 1"= 40'


G
G'
PM-10
I-10
G-10E
H-10
P-2
G-10
3 samples
.256/6.5'
2000'
1950'
1900'
A
B
C
D
E
F
G
H
I
nil
nil
.01
.17
.12
.07
.03
.02
.01
.04
.01
.01
.01
.01
TD 150'
.08
.07
.06
.07
.03
.01
.04
.03
.02
TD 140'
.112
.075
.015
.032
.006
.017
.037
.019
.028
.008
.002
.005
.015
.011
.013
.005
.067
.021
.107
.043
.039
.253
.041
.016
.022
.030
.016
tr
TD 187'
.01
.08
.01
.01
.01
TD 60'
.11
tr
.01
.03
.01
TD 140'
.008
.002
.001
.001
.004
.001
.001
.200
.041
.020
.023
.025
.040
.066
.034
.030
.031
.016
.006
.010
.005
.004
.003
.002
.003
.003
.012
ORE RESERVES
SECTION G - G'
LOOKING NORTH
PORTLAND MINE
SCALE : 1" = 40'
ORE
WASTE


H
H'
2050'
2000'
1950'
G-8
redrill G-8
G-8E-1
G-8E-2
2 samples
.134/0'
A
B
C
D
E
F
tr
tr
tr
.01
tr
.01
.13
.15
.09
.17
.08
.13
.02
.02
.05
.05
.10
.03
.01
TD 70'
TD 140'
tr
nil
.01
tr
.03
.10
.10
.02
.01
.02
.03
.02
.03
TD 140'
.01
tr
tr.
nil
nil
fr
.13
.09
.03
.03
T.D. 103'
ORE
WASTE
ORE RESERVES
SECTION H - H'
LOOKING NORTH
PORTLAND MINE
SCALE : 1" = 40'