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A REPORT ON THE ERIE GOLD MINE

ERIE, B.C.

for

MR. D. W. COATES

by

JOHN S. VINCENT, P.ENG.

January 1974.

Vancouver, B.C.

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SUMMARY AND CONCLUSIONS

The Arlington-Erie Gold Mine at Erie, B.C. has a history of intermittent operation between 1900 and 1954, and reports show that approximately 24,500 tons of ore yielded 47,800 ounces of gold and 113,000 ounces of silver in addition to values in lead and zinc. Between 1958 and 1967 lessees shipped 35,957 tons of dump rock to the Trail smelter and realized payment for 4,980 ounces of gold and 19,703 ounces of silver.

Underground mining was concentrated in structurally favourable sections of the low angle quartz vein where transverse folding produced thick sulphide-rich zones containing in excess of 3 ounces of gold to the ton. Some of this material is visible in the walls and pillars of the old stopes.

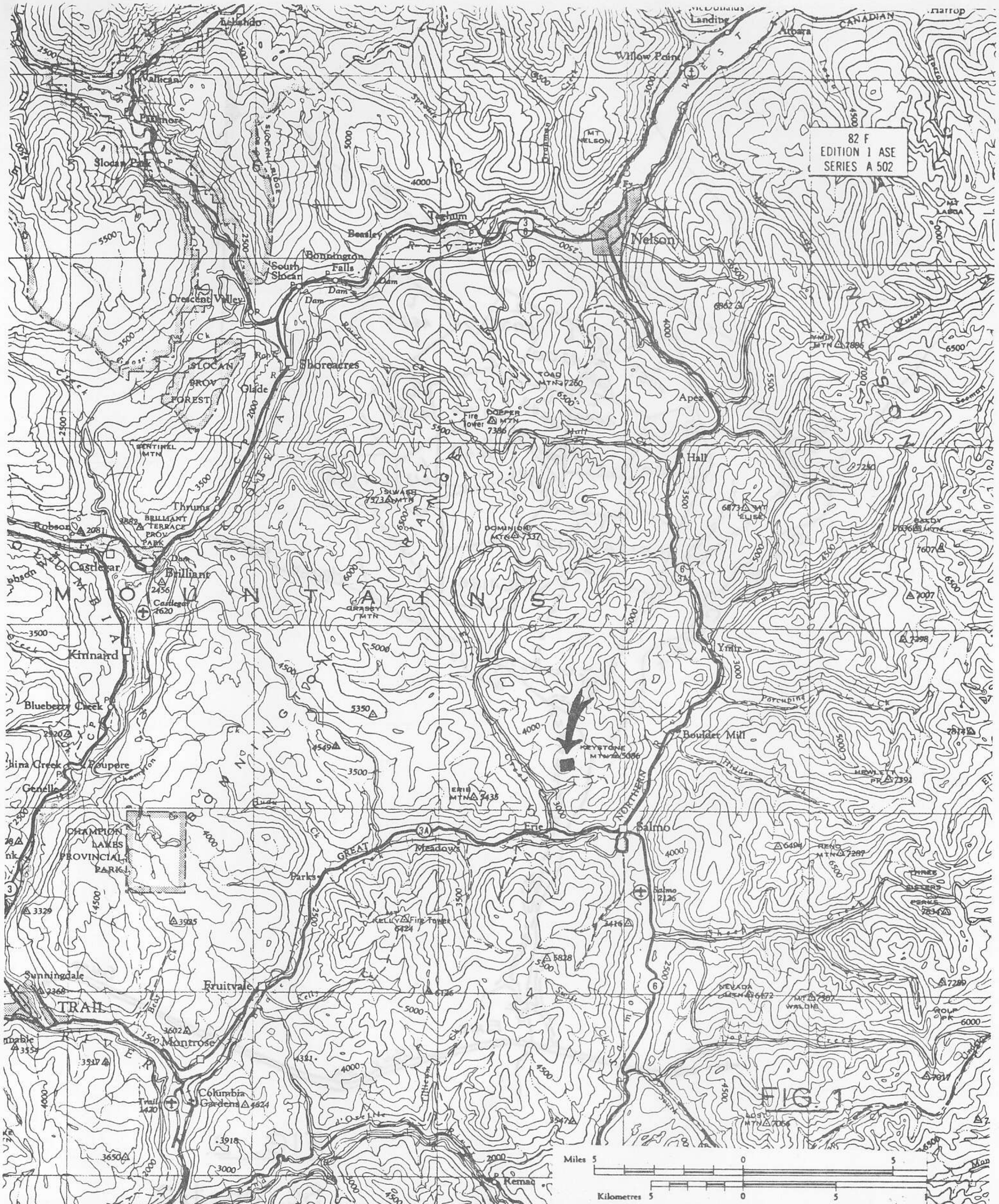
It is concluded that approximately 125,000 tons of dump rock and stope clean-up material is available for shipment to the Trail smelter with an indicated grade of 0.13 - 0.16 ounces of gold per ton. The geologic potential is such that: a) high grade material remains in the walls of the old stopes, and b) there is a possibility of extensions to the transverse mineralized structures, and c) there is the possibility of a lower level repetition of the favourable quartz vein.

The recommendations include the shipment of dump rock to the smelter and a staged program of evaluation and exploration to assess the underground potential. The total expenditure to carry out the total program is estimated at $168,000.00.

INTRODUCTION

The purpose of this report is to present the results of a study of the Arlington-Erie Gold Mine at Erie, B.C. The writer visited the property in mid November 1973 in the company of Mr. Albert Shrieves of Nelson, B.C. Mr. Shrieves was the resident Manager for New Arlington Mines Limited and was able to provide first-hand information during the underground tour, in addition to supplying significant records stored from the last period of operation. These records consisted of memoranda, reports, and sketches with information pertaining to mine and mill operation. Geological information was located which suggests that there is potential worthy of evaluation.

The body of this report consists of a summary of the history and operational aspects of the property, a discussion of the geology, mining and economic potential, and recommendations for the evaluation of the indicated potential.



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EDITION 1 ASE
SERIES A 502
Nelson
Willow Point
MT NELSON
Taghum
Beasley
Bonnington Falls
South Slocan
Crescent Valley
Slocan Park
Vallican
Passmore
SLOCAN PROV FOREST
Shoreacres
Glade
SENTINEL MTN
Thrums
Robson
BRILLIANT TERRACE PROV PARK
Castlegar
Brilliant
Kinnaird
Blueberry Creek
Genelle
CHAMPION LAKES PROVINCIAL PARK
Parks
Fruitvale
Sunningdale
TRAIL
Montrose
Columbia Gardens
Meadows
Erie
Salmo
Ymir
Boulder Mill
Hall
Apex
TOAD MTN 7260
COPPER MTN 7386
SIWASH MTN
DOMINION MTN 7337
GRASSY MTN
KEYSTONE MTN 5086
ERIE MTN 5435
MT KELLY Fire Tower 6424
HEWLETT PK 7392
RENO MTN 7207
NEVADA MTN 6172
THREE SISTERS PEAKS
GREAT NORTHERN
MOUNTAINS
FIG. 1
Miles
Kilometres
WASHINGTON
CANADA
5
Colville
6
30'
7
Metaline Falls 11 m
8
15'
9
UNITED STATES OF AMERICA
11

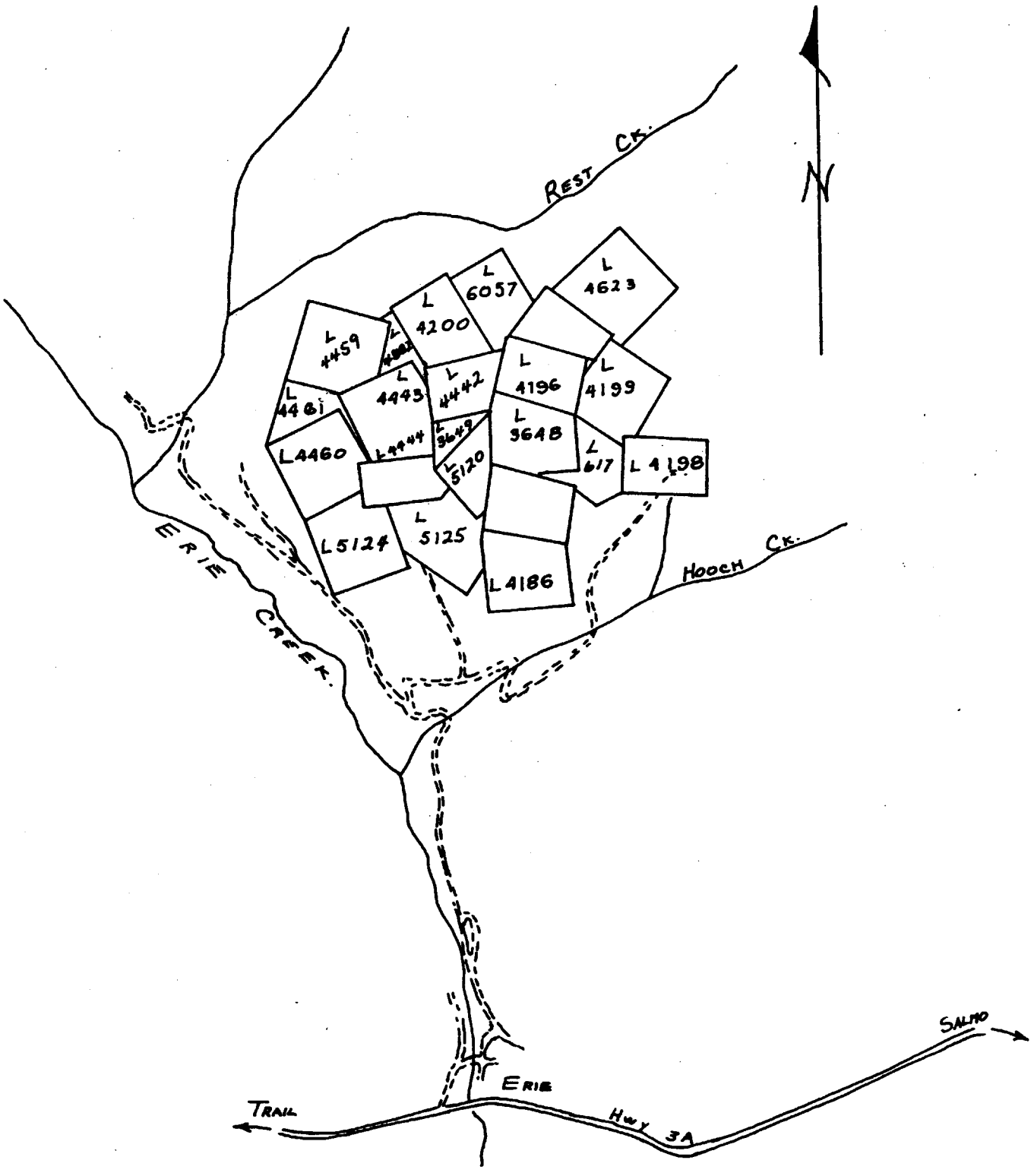

FIG. 2.

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PROPERTY, LOCATION AND ACCESS

The property is located in the Nelson Mining Division ~~at 117° 18' W.L. and 49° 13' N.L.~~ on the nose of a westerly trending ridge which lies approximately 2 miles northwest of Salmo. Access is gained from the Erie Creek road which turns off paved Highway 3A at the hamlet of Erie. About 1½ miles from Erie the mine road leaves the Erie Creek road and winds its way to the property at an elevation ~~of 3500 to 4000~~ feet ASL.

The mountain slopes are heavily wooded, but the topography is not extreme, and the road is navigable by car. The overburden consists of soil, and the thickness varies from 3 to 8 feet in areas visited by the writer.

The property consists of 20 Crown Granted mineral claims and 84.16 acres of adjoining fee-simple land; all are recorded in the name of Erie Mines Limited. The claims, their record numbers and size are listed below, and the property outline and location is shown in Figures 1 and 2.

Name	Lot No.	Size
MAGGIE	617	21 acres
ARLINGTON	3648	41.30
ARLINGTON FR.	3649	10.94
ARMOUR PLATE	4186	43.50
CANADIAN KING	4196	34.95
BROAD AXE	4198	35.16
GOLD STANDARD	4199	42.20
HENRY CLAY	4200	36.92
DIRECTORATE	4442	27.40

Name	Lot No.	Size
MICAWBER	4443	48.10
MICAWBER FR.	4444	2.10
LA DORA	4459	48.00
STRONTIAN	4460	48.60
LA DORA FR.	4461	17.60
M S C	4623	49.00
DIRECTORATE FR.	4882	11.00
ORIGINAL	5120	25.50
FEE DONALD	5124	50.20
ORIGINAL FR.	5125	44.50
NELLIE N	6057	31.30

HISTORY

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The property has a history of intermittent operation between 1900 and 1954, and reports show that approximately 24,500 tons of ore yielded 47,800 ounces of gold and 113,000 ounces of silver in addition to values in lead and zinc. A report by Mr. W. N. Plumb, P.Eng., dated October 13, 1954, summarizes the activity during this period accordingly:

> "The Arlington Mine was brought into production in 1900 and operated until 1912. The ore was mined by hand-steel, sorted underground, and the waste used as backfill. About 17,000 feet of development work was done and approximately 12,000 tons of ore, averaging $40.00 per ton, was shipped. The mine was closed in 1912, due to labour shortage during the First World War. From 1912 to 1933, it was operated sporadically by lessees.
>
> In 1933, Premier Gold Mines Limited acquired the property and leased it to the Oscarson brothers of Spokane, Washington. From

1933 to 1941, the Oscarsons mined by hand-methods, sorted and shipped 5,360 tons of ore averaging 1.34 ounces of gold, 3 ounces of silver and 3 per cent lead per ton. Premier Mines Ltd., meanwhile, mapped the mine and thoroughly sampled the extensive mine dumps, which are reported to have assayed about 0.145 ounces of gold per ton.

Since 1943, the mine has been operated intermittently by the present owners, on a small scale. Hand methods were still used until 1947. In 1948 and 1949, Kenville Gold Mines Limited, under option, uncovered two narrow veins by surface stripping and sank a thirty-foot shaft on one of them. They also took several bulk samples of the mine backfill, which is reported to have assayed about 0.165 ounces of gold per ton. The option lapsed in 1949. In recent years a 100-ton mill was erected and operated on dump "ore", supplemented by underground ore, believed to have come from 80-Level and from the Rolick stope on 60-Level. A 360-foot cross-cut was driven on 110-Level without finding ore. 573 feet of diamond drilling was done in 1953 in a search for new ore, with negative results. Mining and milling were suspended in July 1954."

The writer has no record of activity up until 1957 when Messrs. Fox and Linn of Trail obtained an operating lease. The Minister of Mines Reports record the following shipments of dump material to the Trail smelter:

		Content		Grade			
Year	Tonnage	Gold	Silver	Gold	Silver	Lead	Zinc
1958	30 tons						
1959							
1960	52	37 oz	105 oz	0.71 oz	2.02 oz	1.70%	2.11%
1961	161	114	320	0.71	1.99	1.89	1.92
1962	277	148	262	0.53	0.94	0.97	0.92
1963	1357	348	1004	0.25	0.74		
1964	4168	548	1869	0.13	0.45		
1965	5406	767	3044	0.14	0.56		
1966	7017	1003	3573	0.14	0.51		
1967	7325	851	3241	0.12	0.44		

		Content		Grade			
Year	Tonnage	Gold	Silver	Gold	Silver	Lead	Zinc
1968	5722	681 oz	2993 oz	0.12 oz	0.52 oz		
1969	3339	398	2219	0.12	0.66	0.57%	
1970	1103	85	1073	0.07	0.97		
	35,957 Tons	4,980 oz	19,703 oz				
		0.138	0.54				

Minor attempts at underground work are reported, but no significant results were achieved.

The writer found the underground workings to be in good shape considering their age. Much of the timber is still firm, and the posts and caps examined show no evidence of taking pressure as a result of ground settlement. Local caving in the portal areas would require clean-up to provide easier access and better ventiliation.

GEOLOGY

REGIONAL:

The area west of the Salmo River between the town of Salmo and the hamlet of Ymir, is underlain by a belt of northerly-trending volcanic and sedimentary rocks which have been intruded by the Nelson batholith. The oldest rocks are Lower Jurassic in age and consist of andesitic and basaltic lava flows of the Rossland Formation. Flow breccias and pyroclastic material

are fairly common, and in places vesicular and amygdaloidal horizons have been noted.

The Rossland Formation has been folded into a moderately open syncline which trends northerly, and the resulting trough is occupied by sediments of the Hall Formation; middle to upper Jurassic in age. In lithology these rocks vary in composition from conglomerate through greywacke-sandstone to quartzites, siltstones and argillites. In the mine area the formation is represented by black well-indurated hornfelsic argillites. These rocks appear to reflect the syncline defined by the underlying Rossland Formation.

The Jurassic volcanic and sedimentary rocks are intruded by Nelson Plutonic Rocks probably Lower Cretaceous in age. The predominant phase is porphyritic granite, but other phases which have been identified are quartz diorite, quartz monzonite, diorite, monzonite and syenite. Within the area under consideration the predominant phase is a coarse to medium grained non-porphyritic granite which occurs in satellite stocks poking through the volcanics and sediments.

LOCAL:

The property is situated on the western slope of Keystone Mountain and the immediate mine area is underlain by argillites which vary from well-indurated hornfelsic and calcareous to soft graphitic and schistose. The latter has been intensely folded while the harder calcareous beds have resisted deformation. The result has been that significant movement developed along

the bedding planes. The zone of mineralization occupies one of these bedding faults where an aplite sill has been intruded between a thick series of calcareous argillite and an underlying horizon of schistose and graphitic material. The sill has been regarded in the past as the major ore control. Mr. A. Lakes (1952, 53, 54) recognized several horizons between the upper levels and the lower 110 drift, and his mapping shows quartzitic, carbonaceous and limy argillite cut by "igneous rocks". These varieties of argillite might be difficult to recognize until more familiarity was acquired. However, the subtle differences, together with structural features, might be significant. The "igneous rocks" which appear on Lakes' sketches are further described by Plumb 1954, as varying from aplitic to porphyritic. Apart from the previously mentioned sill, these rocks appaar in dykes and sills throughout the mine.

The regional stratigraphic sequence on Keystone Mountain has a northerly trend and a gentle to moderate westerly dip. In the mine area the northerly strike is modified somewhat by a convexity to the east which defines a broad syncline plunging to the west at approximately 20°. Structural mapping underground, along with the pattern created by the drift as the producing horizon was followed, traces out this broad structure over an area approximately 1700 by 800 feet. The westerly dip is further modified by a series of gentle rolls transverse to the syncline which create flat areas, and which have an important bearing on ore localization.

Numerous faults with a northerly strike and easterly dip of 45° - 60° displace the mineralized horizon: the most significant displacement noted by

Plumb is 60 foot vertical in a dip-slip sense.

The structural picture in the mine area, although complicated, should not be regarded as complex. It is the key to ore localization, and structural analysis must be a major consideration in any future evaluation. Points of particular interest are:

1. The relative ages of the syncline and the transverse rolls.
2. The relationship between folding, faulting and mineralization with respect to age and location.
3. The relationship of the dykes and sills to folding and mineralization.

Plumb concluded that the cross-faulting played a more significant roll in ore localization than the folding by creating dilatant zones and anticlinal dragfolds on the western side of the fault. Parallel zones, or subsidiary bedding faults, were developed which allowed the emplacement of mineralization above the main flat fault. The Rolick and Little Bull Pen stopes mined such ore.

It is reasonable to question these conclusions and suggest that the cross-faulting is relatively late and has, perhaps, had no significant effect other than to complicate the picture by displacement. It is further suggested that the transverse folds are pre-ore and thus provided the most favourable sites for concentration. This type of folding could develop under the same stress pattern which would produce the bedding plane faults. The more competent argillite resisted tight folding while the soft carbonaceous horizons

yielded readily and crumpled to produce dilatant zones and bedding plane faults which would provide channels for the splite sill, or sills, and closely related quartz and mineralization. The later cross-faulting developed adjacent to the folds because of existing lines of weakness set up by the folding. If these faults were pre-ore, one would expect to find at least quartz vein material, if not sulphide mineralization: no such mention was found in the available descriptions dating back to 1932.

The axis of the transverse folds as located and plotted by Lakes (1954) on the drift plan composite drawing, reflects the open syncline and gives the impression that the syncline may be a post-ore feature.

Geological mapping by Lakes in the 110 level drift at the 4100 foot elevation shows considerably more folding than in the upper levels. There is an interesting repetition of stratigraphy, and Lakes points out that the carbonaceous horizon of economic interest should occur ahead. The face of the drift is in quartzitic argillite, such as overlies the sill and ore zone on the upper levels. Repetition is reasonable to expect, and drilling is justified to assess these possibilities. The face of the 110 cross-cut is well located and affords a first rate drill site.

MINERALIZATION:

The zone of mineralization is concisely described by Plumb:

> "The orebody consists of a network of quartz stringers permeating the highly contorted graphitic schists in a three- to six-foot band, usually below the aplite sill but sometimes above the sill and below the flat fault. Occasionally it forms a single vein from 4 inches to 4 feet thick, usually where it has intruded less graphitic material, in which case it may contain brecciated frag-

"ments of argillite. There is only the one main ore horizon throughout the mine, pinching and swelling but forming a more or less continuous sheet in a north-south direction and thinning gradually to the east and west.

"The mineralization consists of massive, fine- to coarse-grained pyrite, with occasional fine-grained galena and sphalerite. The gold and silver and contained in the sulphides and do not occur free. The fine-grained pyrite, with some galena, is reported to carry the higher gold and silver values. The silver to gold ratio is about two to one. The wall rocks, for at least 50 feet above and 100 feet below the graphitic zone, are thoroughly impregnated with fine-grained pyrite and were found to assay 0.012 ounces of gold per ton."

The writer took two character samples of vein material in the area of the Little Bull Pen stope where Mr. Shrieves pointed out sulphide mineralization in an 8 foot thick quartz vein. This material consists of medium to fine grained galena and pyrite in bands ¼" to ½" thick in white quartz. The occasional speck of malachite suggests minor copper, and past assays show the presence of appreciable zinc. On the writer's samples the following results were returned:

	Gold	Silver
Sample 3377	1.23 ounces	2.9 ounces
3378	5.71 ounces	11.0 ounces

MINING and REMAINING POTENTIAL

A total of 17,000 feet of drifting and raising has been carried out as shown in the accompanying map of composite drift plans. Except for the 60 and 110 level cross-cuts, the development drifting and raising was kept in the

vein and areas were mined which made ore. The better stopes were located where folds localized heavy sulphides, and Shrieves commented that 6 - 8 ounce gold was not uncommon in such zones. Several panels were extracted in flatter areas, but the grade was not as good. The practice during these periods of operation was to hand sort the muck underground and bring out only the better vein material. The remainder was put back in the stopes as fill. This fill material has been sampled by various investigators during the period 1950-53, and values reported in the order of 0.15 ounces of gold per ton and 1.10 ounces of silver. The dump has also been fairly extensively sampled and values in the order of 0.13 - 0.16 ounces of gold per ton have been reported. The various estimates on the tonnage of material remaining underground as fill, and on the dumps, vary between 150,000 and 170,000 tons. Approximately 36,000 tons have been shipped during the period 1958 - 1970, so the total is reduced accordingly. Of the total, it is probable that portions of the dump will have a significant gold content while other portions will be low.

In the 80 level stoping areas parallel gold-bearing veins were located in zones underlying the main zone and, although some mining was initiated, Shrieves suggested that significant amounts of material remained. Plumb examined this possibility in 1954 and reported that the structure had the potential of providing approximately 10,000 tons of mineable material. The grade to be expected was based on samples taken from the 80 level stoping area, and Plumb reports as follows:

> "Samples taken by New Arlington Mines Limited for 80 feet along strike averaged 1 ounce of gold, 6 ounces of silver, 1.4 percent lead and 2.3 percent zinc over a 3½-foot width. One character sample, taken by the author, in the same zone, averaged 0.34 ounces

of gold over a width of 81 inches, of which 9 inches was quartz, assaying 2.58 ounces, and 72 inches represented graphitic wall-rock, assaying 0.06 ounces."

The two Bull Pen stopes and the Rolick stope offer potential in clean-up, and thorough sampling of the walls combined with a structural study is fully justified.

CONCLUSIONS AND RECOMMENDATIONS

Three possibile areas of economic potential deserve consideration in view of the significant increase in the price of gold and silver since the property was operated in 1954.

1. Approximately 125,000 tons of material with an indicated grade of 0.13 - 0.16 ounces per ton of gold is available for shipment to the Trail smelter. The rock on the mine dumps can be shipped immediately, while underground clean-up and a little more effort will be required to recover the fill.

2. Clean-up and general salvage work in the old stope areas will be well rewarded, and thoughtful geological effort may well point to untested areas.

3. The possibility of lower level repetition, as suggested by Lakes, is not unreasonable and there is no geological evidence that precludes it.

With these possibilities in mind, the following course of evaluation is recommended:

1. Examine the various dump areas carefully, block out the better grade areas, and begin trucking the material to Trail. Values will be found in gold, silver, lead, zinc and quartz.

2. Carry out a comprehensive underground study which will include mapping and sampling. Begin with the stope areas to outline salvage possibilities and assess the structural signature of favourable areas.

3. Initiate diamond drilling in two phases:-

   (a) Set up an underground machine at the face on the 110 level and drill at least 4 holes to evaluate lower level potential as suggested by Lakes.

   (b) Utilize a small surface machine to test the northwestern portion of the mine area, and possibly areas of interest located by the geological work.

4. After studying the disposition of recoverable fill and salvage material, clean out the appropriate portals and drifts to gain working access.

COST ESTIMATE

1. Two trucks and a loader should be available locally and the estimated cost is itemized as follows:

(a) Allowing $1.00 per yard per hour for a 10 yard single axle truck working a 10 hour day, 22 days a month, the estimated cost would be $2,200 per month. To utilize 2 trucks:

Allow - $4,400 per month x 6 months	$ 26,400

(b) Rental on a 2½ yard rubber-tired loader:

- $3,000 per month, include fuel & maint. x 6	$ 18,000
Operator at $50 per day x 22 = $1,100 per month, plus benefits at 15%, $165	
$1,265 x 6	$ 7,590

The round trip is 52 miles of which 44 miles are paved between Erie and Trail. Two and a half hours per trip, including loading and unloading, is a reasonable allowance, and each truck should make 4 trips a day. This should move 2,000 tons to 2,400 tons per month to the smelter.

The cost estimate includes operating costs for a 6 month period to allow for the time lapse in processing at the smelter and receipt of the returns.

Haulage estimate for a 6 month period -	$ 51,990
Contingencies at 10% -	5,190
	$ 57,189

Allow $ 57,000

1. Geological Study and Sampling:

With concentrated effort, a Geologist and Assistant should map, sample and evaluate the underground excavation within a three week period.

(a)	Allow 20 days at $300	$ 6,000
(b)	Subsistence at $40 per day x 20	800
(c)	Vehicle rental and operation	400
(d)	Assay charges; estimate 200 samples at $17.00 (Au, Ag, Pb, Zn)	3,400
(e)	Evaluation and correlation of results, 5 days at $200	1,000
		$ 11,600

Estimate $ 12,000

3. Diamond Drilling:

(a)	2500 ft. of AQWL from 110 L @ $9.00	$ 22,500
(b)	2000 ft. in short holes from upper levels @ $9.00	18,000
(c)	Compressor rental & maintenance 2000 x 2 months	4,000
(d)	Logging and sampling	2,500
	- analytical	1,500
	- sample shipment	100
		$ 48,600

Estimate $ 49,000

4. It is anticipated at this time that access to the 80 level working areas might be desirable. Two men would be required to clean out the portal then 6 men could be utilized between drift rehabilitation and stope clean-up.

Labour and equipment rental & purchase $ 50,000

Cost Summary:

1.	Haulage	$ 57,000
2.	Geological study & sampling	12,000
3.	Diamond Drilling	49,000
4.	Underground Work	50,000

Total: $ 168,000

The anticipated schedule for the above program is planned as follows:

1.	April thru November	- Haulage
2.	April	- Study and sample
3.	May - June - July	- Drilling
4.	June on -	- Underground rehabilitation and clean-up

Respectfully submitted,

John S. Vincent

John S. Vincent, P.Eng.

JSV:jlc

Evaluation of the

ERIE/ARLINGTON GOLD MINE

Erie, B. C.

Nelson Mining Division

82F 3W (M)

49°14' North Latitude

117°20' West Longitude

for

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May 10, 1974

CONTENTS

INTRODUCTION

At the request of D. W. Coates, the writer conducted an evaluation of available data pertaining to the 25-claim Erie/Arlington Gold Mine to determine the potential both for renewed production at the mine, in light of the current high price levels for gold in excess of $150 per ounce, and for locating other similar deposits on or adjacent to the existing claim group. As warranted, estimates of exploration and development costs also were requested.

All information in this report has been obtained from public and private sources detailed under References.

SUMMARY, DISCUSSION, AND CONCLUSIONS

1. Between 1899 and 1970 the Erie/Arlington mine produced and shipped over 75,000 tons of selected ore averaging 0.63 oz Au/T, and at least 75,000 tons of low grade material averaging somewhere between 0.04 and 0.14 oz Au/T remain on surface dumps and in stope backfill underground. Minimum mining width was approximately 5 feet. At a conservative grade of 0.08 oz Au/T for the residual material, total mine production was 150,000 tons averaging 0.35 oz Au/T. At existing prices for gold, in excess of $150/oz, this represents a small but viable reserve, considering either direct shipping or beneficiating.

2. Surface dumps should be surveyed and sampled, tonnage/grade estimates of recoverable backfill made, and the feasibility of direct shipping ore to Trail established.

3. Hand steel was employed exclusively in the mine until 1947, and only minor underground development and stoping has been conducted since that time. Many branch veins and favourable anticlinal rolls, some of which yielded excellent ore in the past, have not been explored by development or drilling; and, since significant tonnages of relatively easily developed ore could be outlined, such structures should be test-holed with stoper or jackleg and extension steel or diamond drill. The feasibility of mining and direct shipping such mineralization should be investigated, or, as tonnage warrants, metallurgical testing to establish the feasibility of making and shipping a bulk flotation concentrate should be undertaken.

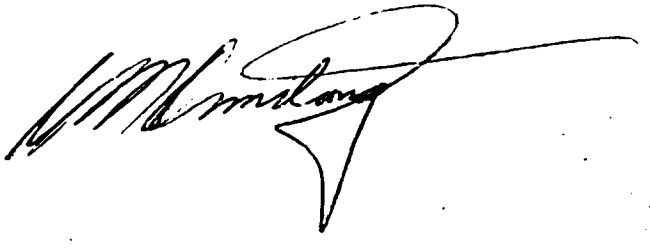
4. To provide a clear picture of the geological controls, and of the interrelationship and continuity of the many branch veins, so that underground exploration may be planned wisely and executed with acceptable flexibility, it will be necessary to prepare new level plans at a scale of 1"=20', and to draught cross sections at the same scale at 100', 50', or 25' intervals, as required by local conditions. No survey stations are shown on the existing level plans (1"=60'), and only a few incomplete cross sections have been prepared. A decision regarding the advisability of surveying the underground workings, as opposed to simple enlargement of the existing plans, should be made after a detailed underground examination.

5. Surface showings (Barker Lease and Kenville Area) physically and stratigraphically below the lowest 110 Level workings support the possibility of a repetition of the favourable lithological/structural ore controls in the main stoping block, as indicated by deformed carbonaceous schists and competent quartzitic argillite in the 110 Level crosscut. Surface and underground diamond drilling is warranted to test this favourable area. Additionally, there is no evidence to suggest that other repetitions of the same favourable lithological/structural conditions will not occur at deeper horizons.

6. Because the precious metal values are intimately associated with lead and zinc sulphides, relatively inexpensive soil sampling is potentially the best surface exploration technique to employ as a direct guide to other similar vein deposits. Past exploration, limited to prospecting, test pitting, and trenching, was hampered seriously by the extensive soil mantle, and no modern geochemical or geophysical exploration techniques have been employed on the property. Preliminary exploration of the claims, involving soil sampling, and VLF-EM and magnetometer surveying, should be based on a wide initial line spacing, at least 800 feet, and 100-foot sample intervals, with fill-in lines and detailing contingent on results. Subsequent bulldozer trenching and diamond drilling also would be contingent on favourable results in the follow-up detailing work.

RECOMMENDATIONS

In the writer's opinion the following staged program of surface and underground exploration is fully justified by: past production which indicates a small but highly profitable ore reserve at existing metal prices (150,000 tons grading at least 0.35 oz Au/T); the indicated 75,000-ton residual dump and backfill reserve averaging somewhere between 0.04 and 0.14 oz Au/T; the favourable potential for developing at relatively low cost additional in place reserves in branch vein and anticlinal structures which have not been tested to date; the favourable potential for locating major repetitions of ore below the main stoping block, as indicated by development work on the lowest 110 Level; and the absence of past surface exploration employing modern geochemical/geophysical techniques, and the related extensive but shallow soil coverage and favourable precious metal/sulphide associations which make soil sampling a particularly good exploration technique.



Surface Exploration

Stage I Preliminary. Lines at 800' spacings. Allow 5 weeks.

Line-cutting	15 mi @ $150=	$ 2250	
Soil sampling	100' samples Ag,Pb,Zn 15 mi @ $200=	3000	
VLF-EM	50' readings 15 mi @ $70=	1050	
Magnetometer	100' readings 15 mi @ $70=	1050	
Geological mapping	1"=200' 15 mi @ $125=	1875	
Surface dumps	Survey, sample, direct shipping feasibility	2500	
Air photo interpretation, transportation, rock analyses, supervision & data processing, draughting, supplies, freight, etc.		3500	
	Subtotal	15,225	$15,000

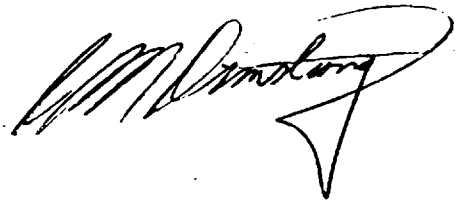
Stage II Detailing. Lines at 100' or 200' spacings. Allow 3 weeks.

Line-cutting, soil sampling, VLF-EM, magnetometer, mapping, etc. Allow 9 mi @ $850/mi, as above =		7650	
Bulldozer/ripper trenching, including sampling, assaying, and mapping		2500	
	Subtotal	10,150	10,000

Stage III Diamond drilling. NQ wireline for maximum core recovery. Allow 5 wks.

3500' @ base cost $11.50/ft =		40,250	
Mobilization/demobilization, access and site preparation, delays, supervision, logging, assaying, core storage, transportation, supplies, etc.		16,010	
	Subtotal	56,260	56,000

Subtotal Surface Exploration 13 weeks $81,000



Underground Exploration

Stage I	Detailed underground examination, sampling, and selective mapping (1"=20'). Allow 3 weeks.		
	Geologist & assistant 12 days @ $215, all inclusive =	$ 2580	
	Assaying 300 samples for Au/Ag, plus composites for Pb/Zn	3260	
	Feasibility of mining and direct shipping backfill	1000	
	Equipment and supplies, draughting, data processing, transportation, etc.	2750	
	Subtotal	9590	$ 10,000
Stage II	Jackleg/stoper extension steel test-holing (2600'). Allow 4 wks.		
	Jackleg/stoper rental, steel, bits, hose, compressor, etc.	2445	
	Plastic pipe, fittings, valves, and pumps	2920	
	Labour Driller & helper 25 days @ $150/day, all inclus =	4500	
	Sampling & assaying 650 samples for Au/Ag, plus composites for Pb/Zn	4980	
	Supervision, draughting, data processing, transportation, etc.	3200	
	Subtotal	18,045	18,000
Subtotal	Underground Exploration 7 weeks	$28,000	
Total	Surface & Underground Exploration		109,000
Administration and overhead	5 mos @ $2500 =		12,500
Contingency			8,500
Grand total	Surface & Underground Exploration		$130,000

LOCATION, ACCESS, DECLINATION, PHYSIOGRAPHY, VEGETATION, ROCK EXPOSURE, GLACIATION, CLIMATE

As shown on Figure 1, the property is centered 3 miles northwest of Salmo, B.C., in the Nelson Mining Division, at 49°14' north latitude and 117°20' west longitude.

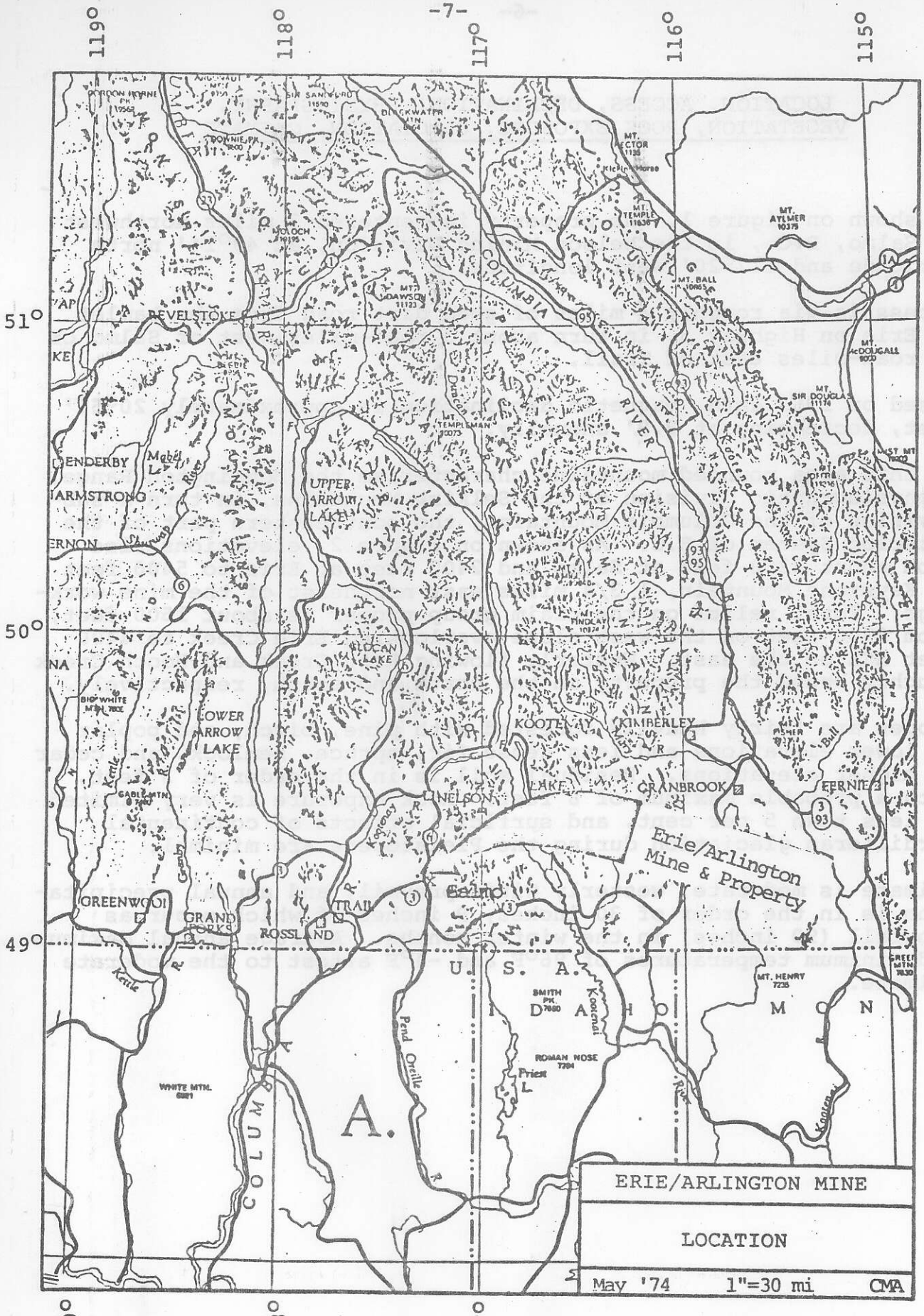
Access is via roughly 4 miles of good dirt road from the hamlet of Erie on Highway 3, in turn about 3 road-miles west of Salmo or 23 road-miles east of Trail.

Based on 1963 data, magnetic declination is approximately 20°56' east, decreasing at 2.8' annually.

In this area rounded mountains characterize the Bonnington Range, a physiographic division of the Selkirk Mountains, in turn a subdivision of the Columbia Mountains, the southeastern part of the Interior System of B.C. As shown on Figure 2, elevations rise from about 2200 feet at Salmo and 2400 feet at Erie to 5400 feet on Keystone Mountain, 1 3/4 miles east northeast of the mine workings. Total relief on the claim group proper is about 1500 feet, from 2900 feet on the west slope overlooking Erie Creek to 4400 feet ASL on the east. Westerly flowing Rest Creek and Hooch Creek roughly bound the property on the north and south, respectively.

Slopes are fairly heavily forested with pine, birch, and poplar at lower elevations and less dense fir, spruce, hemlock, and cedar at higher elevations. Residual soil is in the order of 3 feet, with a probable maximum of 8 feet. Rock exposure is very limited at less than 5 per cent, and surficial effects of continental Cordilleran glaciation during the Pleistocene are minimal.

Climate is moderate, westerly winds prevail, and annual precipitation is in the order of 30 inches, 9 inches of which occur as snowfall (90 inches) in the winter months. Average annual maximum and minimum temperatures of 96°F and -4°F attest to the moderate climate.

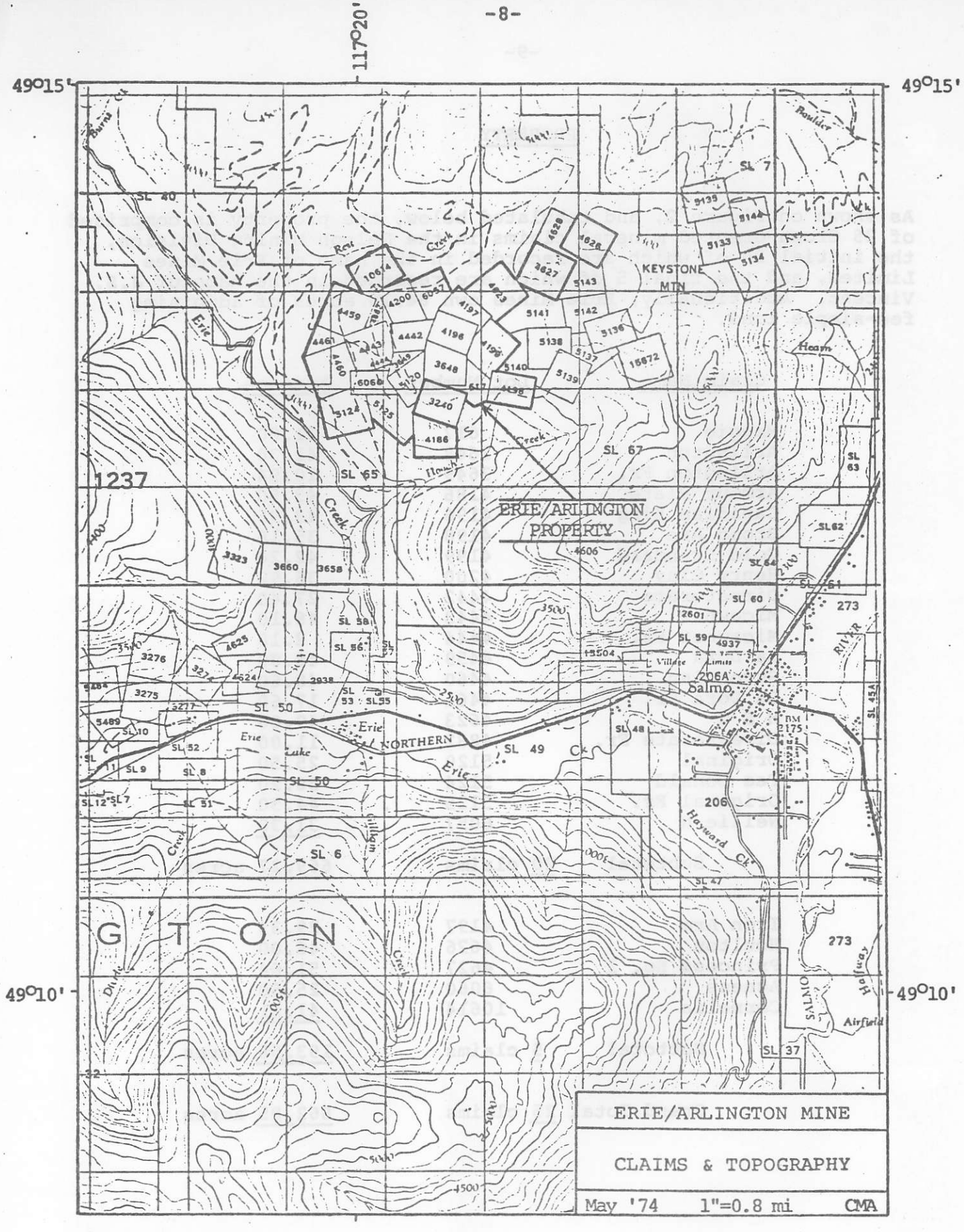


ERIE/ARLINGTON MINE

LOCATION

May '74 1"=30 mi CMA

Fig. 1



(from N.T.S. Salmo
1:50,000 82F/3W 1968)

Fig. 2

PROPERTY

As shown on Figure 2, and tabulated below, the property is comprised of 25 Crown-Granted mineral claims in the Nelson Mining Division, the initial 20 of which are recorded in the name of Erie Mines Limited, and the final 5 of which are recorded in the name of J.S. Vincent. Additionally, Erie Mines own 84.16 acres of adjoining fee-simple land.

Claim Name	Lot Number	Acreage
Maggie	617	21.00
Arlington	3648	41.30
Arlington Fr.	3649	10.94
Armour Plate	4186	43.50
Canadian King	4196	43.95
Broad Axe	4198	35.16
Gold Standard	4199	42.20
Henry Clay	4200	36.92
Directorate	4442	27.40
Micawber	4443	48.10
Micawber Fr.	4444	2.10
La Dora	4459	48.00
Strontian	4460	48.60
La Dora Fr.	4461	17.60
M S C	4623	49.00
Directorate Fr.	4882	11.00
Original	5120	25.50
Fee Donald	5124	50.20
Original Fr.	5125	44.50
Nellie N	6057	31.30
Subtotal	20 claims	669.27 acres
Iron Arm	4197	29.33
Houlton	4626	46.00
Princess No. 1	4627	51.64
Agness	6060	25.50
Cornelia	10614	41.11
Subtotal	5 claims	193.58 acres
Grand Total	25 claims	862.85 acres

HISTORY

Following is a chronological summary of the history of the Erie/ Arlington mine subsequent to the issuance of the original Arlington and Arlington Fraction Crown Grants in 1899:

1900-1913 Hastings (B.C.) Exploration Syndicate Ltd. Continuous underground mining, hand sorting, backfilling low grade in open stopes or dumping on surface, and direct shipping to various smelters (Nelson, Hall Mines, Granby Consolidated, and Trail). Shipped approximately 14,000 tons averaging $45/T, equivalent to about 2.3 oz Au/T, and varying from 1.5 to 2.9 oz Au/T.

1913-1931 Leased by Hastings, above, to various operators, culminating with control by Relief-Arlington Mines Ltd., in turn controlled by Premier Gold Mining Company Ltd. Minor sorting and direct shipping, and milling, chiefly of dump material, plus concentrate shipping. Combination stamp and flotation mill incomplete and unsuccessful. No record of ore or concentrates shipped.

1932-1947 Leased by Relief-Arlington, above, to various operators, chief of which were R.O. Oscarson (1932-1942) and B. Golac, K. Golac, and A.H. Shrieves (1943-1945). Property purchased by latter group, the Arlington Syndicate, in 1945, and operated or leased through 1947. In 1947 the first air driven machine was employed on the property, all prior drilling having utilized hand steel. In this period underground mining with hand sorting, plus hand sorting of some backfill and dump material, resulted in the direct shipment of over 6000 tons averaging 1.41 oz Au/T, 3.28 oz Ag/T, 2.71% Pb, and 2.68% Zn. Gold values varied from 0.65 to 2.55 oz/T.

1948-1950 Kenville Gold Mining Co. Ltd., under option, conducted considerable surface stripping and trenching, locating a new vein area; shipped 51 bulk samples of about 5 tons each (total 255 tons) from backfilled material averaging 0.148 oz Au/T, 1.1 oz Ag/T, 0.66 % Pb, and 0.67% Zn to Trail; and mined and trucked 870 tons of backfill averaging 0.189 oz Au/T and 2000 tons of dump material averaging 0.139 oz Au/T, 0.66 oz Ag/T, 0.48% Pb, and 0.62% Zn to its concentrator at Nelson. Total tonnage removed by Kenville thus was about 4000 tons averaging 0.23 oz Au/T and 0.96 oz Ag/T.

1951-1954 New Arlington Mines Ltd., comprised of the Arlington Syndicate and others, acquired the property, constructed a small 50 tpd flotation mill, subsequently expanded to 100 tpd, and mined and processed dump material and some backfill totalling about 16,000 tons with an average recovered grade of 0.067 oz Au/T, 0.227 oz Ag/T, 0.16% Pb, and 0.22% Zn. At a liberal 80% recovery, indicated grade of the mill feed was at least 0.08 oz Au/T. In the final year the 9,000 tons processed, chiefly from the dumps, yielded a recovered grade of 0.047 oz Au/T, equivalent to a head grade of at least 0.06 oz Au/T.

1955-1970 Following a lapse of 2 years, G.D. Fox leased the property from New Arlington, and direct shipped to Trail under a siliceous ore contract newly mined ore, clean-up and backfill material,

and selected dump material totalling approximately 36,000 tons grading 0.140 oz Au/T, 0.614 oz Ag/T, 0.47% Pb, and 0.62% Zn. In 1970 the 1100 tons shipped averaged 0.077 oz Au/T and 0.97 oz Ag/T. Erie Mines Ltd. apparently acquired all rights to the property from New Arlington in 1957. The property has been dormant since 1970.

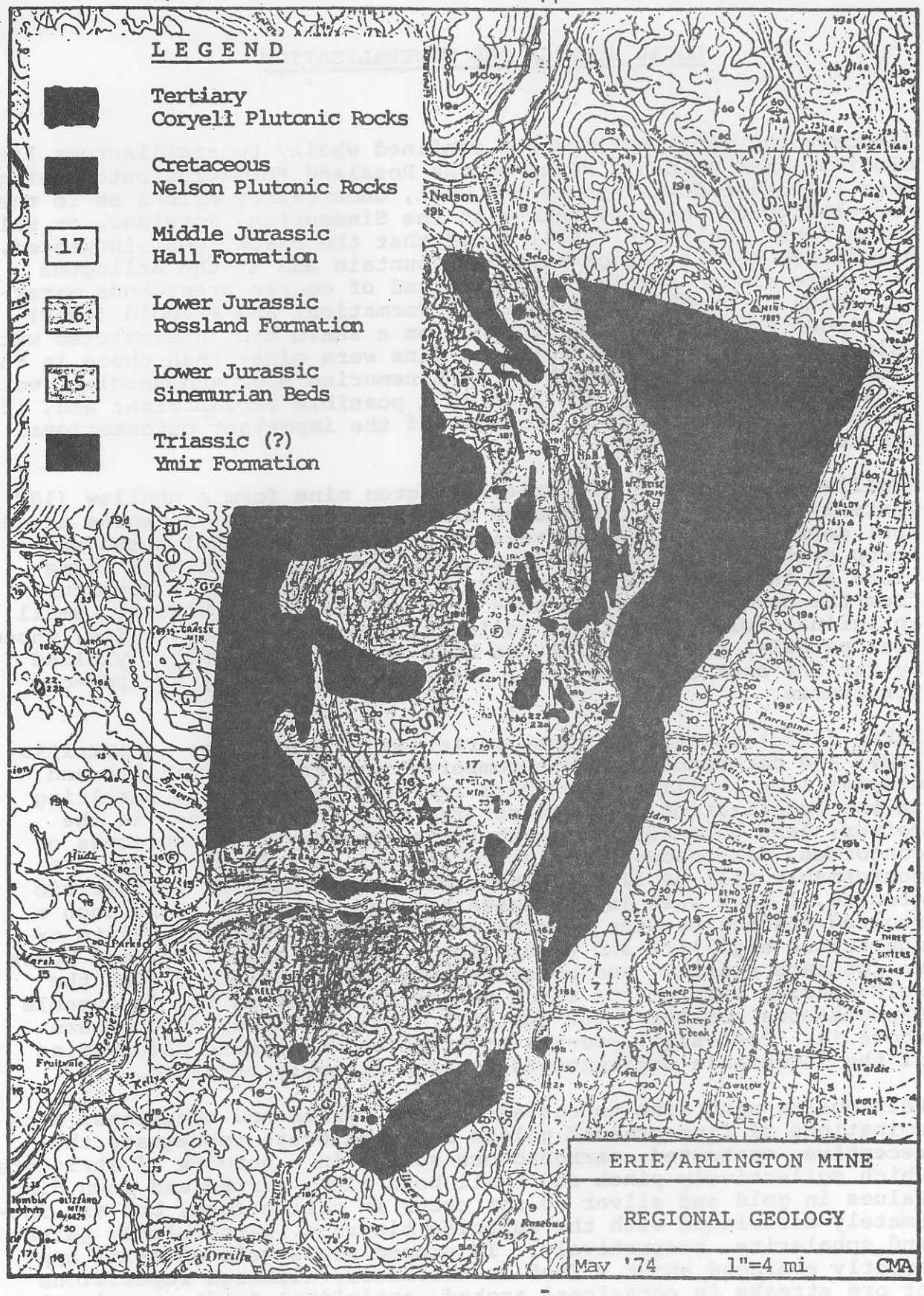
Between 1899 and 1970 recorded production totals over 75,000 tons averaging 0.63 oz Au/T, 0.81 oz Ag/T, 0.64% Pb, and 0.75% Zn.

REGIONAL GEOLOGY

As shown on Figure 3, a portion of Map 1090A which accompanies GSC Memoir 308 by Little, 1960, the region is underlain successively by northerly trending argillaceous sediments and minor limestones of the Ymir Group (Triassic?); argillaceous sediments with minor interbedded flows and pyroclastics of the Sinemurian Beds (Lower Jurassic); extensive volcanic flows and pyroclastics with minor shale interbeds of the Rossland Formation (Lower Jurassic); and arenaceous sediments of the Hall Formation (Middle Jurassic). Plutonic rocks of the Nelson batholith (Lower Cretaceous) and satellite stocks and bosses intrude and probably underlie all of the earlier assemblages, with porphyritic granite, granite, and granodiorite phases predominating. Small bodies of pophyritic monzonite, chiefly the Coryell Plutonic rocks (Tertiary) also intrude the older lithologies.

Southerly flowing Erie Creek coicides with an anticlinal axis whose extension south of east-west Beaver Creek is clearly evident in the valley of Archibald Creek. A parallel synclinal axis two miles to the west passes through Mount Kelly. Rocks of the Sinemurian Beds and the Rossland Formation were affected. There also is evidence for parallel warped folds in the Rossland and Hall Formations west of Ymir. Attitudes of the beds on the limbs of the major folds are generally steep, in excess of 45°, evidence of fairly tight or close folding.

Development of the folds probably was initiated during uplift at the close of the Jurassic, and further deformation coincided with intrusion of plutonic rocks of the Nelson batholith during the Cretaceous. It is probable that both deformation and intrusion took place in multiple interrelated stages, resulting in locally complex histories.



(from Map 1090A, Nelson,
GSC Mem 308, H.W. Little)

Fig. 3

LOCAL GEOLOGY AND MINERALIZATION

Although the mine workings are confined wholly to argillaceous lithologies, with volcanic rocks of the Rossland Formation outcropping over 1000 feet downslope to the west, uncertainty exists as to the correlation of the sediments with the Sinemurian, Rossland, or Hall Formations. Mulligan (1951) noted that the black, well-indurated, hornfelsic argillites on Keystone Mountain and at the Arlington Mine were almost devoid of banding and of coarse arenaceous material, both of which typify the Hall Formation; and Frebold (1958) concluded that fossils collected from a shale bed intercalated with volcanic rocks near the Arlington Mine were older than those in the Hall Formation. Overthrusting of Sinemurian Beds and Rossland volcanics was proposed by Mulligan as a possible explanation; and, if valid, also could account for some of the important deformational structures at the mine.

Argillaceous rocks in the Erie/Arlington mine form a shallow (10^{o}), westerly dipping, saucer-shaped structure which demonstrates a radical departure from the prevailing northerly regional trend and steep easterly dips of the Sinemurian, Rossland, and Hall Formations in the area. It is uncertain whether this major departure from the norm represents a pre- or post-ore event; however, small anticlinal folds, wrinkles, rolls, or bumps in the argillite, whose axes parallel the strike of the beds (concave westerly), yielded by far the best ore pods, and, accordingly, probably are pre-ore structures.

Lakes (1953) identified three varieties of argillite: quartzitic, limy, and carbonaceous. The competent quartzitic argillite and massive limy argillite beds have resisted deformation, resulting in the localization of movement (faulting and shearing) in the softer, less competent adjacent rocks, thereby creating zones of contorted, carbonaceous schist to several feet in thickness. A conformable sill of fine grained, coarse grained, or porphyritic granite, 1 to 2 feet in thickness has been intruded along such a faulted contact between massive, thick-bedded, limy argillite or quartzitic argillite and underlying schistose argillite; and bears an intimate spatial, and possibly genetic, association with the gold-bearing vein quartz which generally occurs in the favourable carbonaceous schists below the sill , but sometimes also occurs above it. Post-sill, pre-ore movement and continued deformation of the favourable carbonaceous schists probably occurred.

Vein quartz with fine to coarse-grained pyrite and occasional disseminations of fine-grained galena and sphalerite impregnate the receptive, contorted, carbonaceous schist in a network of stringers which collectively pinch and swell both along strike and down dip. Values in gold and silver do not occur in native form, but are intimately associated with the sulphide minerals, particularly galena and sphalerite, respectively. In stoped areas vein material apparently averaged about 2 feet in thickness, although repetitions of ore streaks in occasional arched, anticlinal folds, previously

mentioned, yielded mineable thicknesses to more than 20 feet. Lakes (1951) reported that "Numerous other localities of folding occur on all levels inspected, but have not been explored above or below smooth walls, ...". Test-holing of the backs in such areas with stoper or jackleg and extension steel could be very rewarding, and should be carried out.

Numerous footwall and hangingwall offshoots occur throughout the mine, sometimes associated with granitic dykes which branch from the main Arlington sill, and it is significant that where development has followed these leads, good ore sections sometimes were disclosed. One of several footwall strands on the 80 Level, for example, yielded an 80-foot length averaging more than 1 oz Au/T over 3½ feet. Virtually all development work in the mine utilized hand steel, and only strong branch leads were followed. With the percussion and/or diamond drilling equipment available to-day, it is a relatively simple matter to investigate such branch structures, and routine, close-interval test-holing is not only justified, but essential.

A number of northerly trending, steep easterly dipping faults cut the mineralized zones, and Plumb (1954) states that "The amount of throw varies from 4 feet ... to 60 feet ...".

Crosscutting on the deepest 110 Level toward the downward projection of the above-mentioned 80 Level branch vein cut unexpected, wide sections of highly contorted carbonaceous schist, and ended in 50 feet of competent quartzitic argillite. Lakes (1951) recognized a possible repetition of the favourable lithological/structural conditions prevailing throughout the mined area some 100 feet stratigraphically higher, and recommended testing the footwall of the quartzitic argillite bed ahead of the face for a possible repetition of ore. This hypothesis appears valid, and is substantiated by the occurrence of interesting surface showings stratigraphically below the 110 Level on the "Barker Lease" and at the "Kenville Showings". This favourable area should be investigated with a number of surface and possibly underground diamond drill holes.

ORE RESERVES

Lakes (1951) calculated that 12,720 feet of drifting and crosscutting (40 ft^3/ft), 4,585 feet of raising (30 ft^3/ft), and 225,222 square feet of stoping (5 ft high) yielded a total extraction of 150,000 tons. Since total recorded production to date is roughly 75,000 tons averaging 0.63 oz Au/T, it follows that in the otder of 75,000 tons of low grade material remains on surface dumps and in backfill underground.

The 51 bulk samples of backfill totalling 255 tons taken by Kenville arithmetically averaged 0.148 oz Au/T, and varied from 0.04 to 0.39. Kenville milled 870 tons of backfill averaging 0.189 oz Au/T, and 2000 tons of dump material, principally, averaging about 0.08 oz Au/T, and varying from about 0.06 to 0.19. Fox selectively shipped 36,000 tons of ore, backfill, and dump material averaging 0.140 oz Au/T, with shipments, principally from dumps, dropping fairly consistently from 0.142 in 1965 to 0.077 in 1970.

The current distribution of the indicated residual 75,000 tons between dumps and backfill is not known, and both surveying and sampling are required to establish tonnages and grades. Probable grade is somewhere between 0.04 and 0.14 oz Au/T, and, in view of the most recent shipments, a grade of 0.08 oz Au/T is perhaps most likely. On this basis the total initial reserve was some 150,000 tons averaging 0.35 oz Au/T, a small but potentially viable reserve at existing free market prices for gold.

As previously discussed, considerable potential exists for establishing significant in-place reserves from offshoot veins within the existing workings, as well as for locating repetitive ore structures underlying the main ore zone. In addition, the pronounced precious metal/sulphide association makes relatively inexpensive soil sampling a particularly effective surface exploration technique for locating other similar vein deposits under shallow overburden, a technique which has not been employed in this area to date. In the writer's opinion, the probability for finding other deposits with similar reserves is very good.

REFERENCES

1899-1971 B.C. Minister of Mines Reports, and Geology, Exploration and Mining in B.C.

1932 "Lode Gold Deposits of British Columbia". B.C. Department of Mines. Bulletin No. 1 (old series).

1934 "Geology and Mineral Deposits of the Salmo Map-Area, B.C.". GSC Memoir 172. J.F. Walker.

1951 "Preliminary Report on the Arlington Mining Property". A. Lakes, P.Eng.

1952 "Progress Report of New Arlington Mines Limited". A.H. Shrieves, G. Kvist, A. Lakes, P.Eng.

"Supplementary Report, Arlington Mining Property". A. Lakes, P.Eng.

1953 "Progress Report - Arlington Mines Limited". A. Lakes.

"New Arlington Mines Limited". A. Lakes, P.Eng.

"Summary Report on the New Arlington Mines Limited". W. Maybank, P.Eng.

1954 "Report on New Arlington Mines Limited". H.C. Hill, P.Eng.

"The Geology of the New Arlington Mine". W.N. Plumb, P.Eng.

1960 "Nelson Map-Area, West Half, B.C.". GSC Memoir 308. H.W. Little.

1974 "A Report on the Erie Gold Mine". J.S. Vincent, P.Eng.

In addition to the above, miscellaneous plans, sections, assay data, correspondence, smelter settlements, etc. were available for examination.

Maps Aeromagnetic. 1"=1 mi. Salmo. Map 8479 G. Sheet 82F/3. 1973

Claim. 82F 3 (M).

N. T. S. 1:50,000. Salmo. 82F/3W. 1968.

CERTIFICATION

I, CHRISTOPHER MACKENDRICK ARMSTRONG of the City of Vancouver, Province of British Columbia, do hereby certify:

THAT I am a practicing Geological Engineer residing at 4085 West 29th Avenue, Vancouver 8, British Columbia.

THAT I am a registered Professional Engineer in good standing in the Provinces of British Columbia and Ontario.

THAT I received the degree of B.Sc. in Geological Engineering from Queen's University, Kingston, Ontario in 1960, and practiced my profession continuously in the period between leaving university in 1959 and returning to university in 1966.

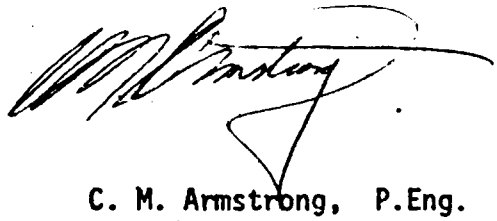
THAT I enrolled in the Department of Mineral Engineering at the University of British Columbia in 1966, and in the period to 1969 completed course work and research work requirements in an M.A.Sc. program, specializing in bacterial/acid leaching systems; thesis writing was not completed; post graduate courses in economic geology and North American geology also were taken and completed.

THAT since leaving university in 1969, I have practiced my profession both as a Geological Engineer and as a Specialist/Advisor in ambient temperature/pressure leaching systems.

THAT the following is a true record of my employment and experience:

1957	4 mos. Junior Geologist. Noranda Mines Ltd. Noranda, Quebec.
1958	4 mos. Party Chief. Hollinger North Shore Exploration Co. Ltd. New Quebec and Labrador.
1959-1961	27 mos. Assistant Geologist. Pickle Crow Gold Mines Ltd. Pickle Crow, Ontario. Teck Corporation Ltd.
1961-1962	9 mos. Assistant Geologist. Willroy Mines Ltd. Manitouwadge, Ont.
1962-1964	28 mos. Chief Geologist. Metal Mines Ltd. Werner Lake, Ontario. Consolidated Canadian Faraday.
1964-1966	24 mos. Chief Geologist. Tegren Goldfields Ltd. Kirkland Lake, Ontario. Teck Corporation Ltd.
1967	6 mos. Project Geologist. McLeese Lake property, B. C. Geophysical Engineering & Surveys Ltd. Teck Corporation Ltd.
1969-1970	13 mos. Laboratory Manager, Chief Geologist, and Consulting Engineer. S. M. Industries Ltd. Vancouver, B. C.
1970-1974	4 years. Independent Consulting Engineer.

THAT I do not have any interest, direct, indirect, or contingent, in the securities or properties of ERIE MINES LIMITED or D. W. COATES.



Dated at Vancouver this
10th day of May, 1974

C. M. Armstrong, P.Eng.

May 12, 1975

TO: D.W. Coates, President
Rest Creek Gold Mines Ltd.,

FROM: J. S. Vincent, P.Eng.

Re: Addendum to January, 1974 Report - Dump Sampling;
Laboratory Tests; Up-dated Recommendations

During the summer of 1974 nine samples were selected from the major dump area at the Erie mine and analysed for gold. The objective was to try and determine which rock types were barren and which deserved processing. Towards this end distinctive material was selected representative of the rock encountered underground. Surprisingly, all varieties sampled contain gold, and only one reported less than 0.10 ounces per ton. The results are tabulated as follows: -

Sample 1.	0.04 ounces/ton; Mixed Argillite wall rock and aplite sill;
Sample 2.	0.10 ounces/ton; Finely divided graphitic and schistose argillaceous rock;
Sample 3.	0.36 ounces/ton; Mixed argillaceous wall rock and sill with quartz stringers;
Sample 4.	0.15 ounces/ton; Similar to Sample 3;
Sample 5.	0.38 ounces/ton; Aplitic and argillaceous material adjacent to an old sample shaft;
Sample 6.	0.96 ounces/ton; Similar material to Sample 5 with more visible quartz veining;
Sample 7.	0.12 ounces/ton; Argillaceous wall rock and aplitic sill rock laced with quartz stringers;
Sample 8.	0.40 ounces/ton; Both samples were taken from a pile set
Sample 9.	aside for shipment to the Trail smelter.

The rock which has been sampled represents mine rock excavated while drifting and raising to reach the high-grade pods mined during the latter periods of operation. This work was done in the plane of the vein, and I believe that the sample results on the dump indicate that the argillaceous wall rock, and possibly the aplite sill, carry an appreciable amount of gold. The actual vein pinches and swells but the adjacent wall rocks are fractured and laced with quartz stringers

which possibly carry the values. Further sampling underground and on surface is warranted to evaluate this potential.

A literature review of several other gold-producing areas has been carried on this past winter in conjunction with our general gold study, and particular geologic relationships have become apparent which may be present on the Keystone Mountain Property. Where sedimentary and volcanic rocks are present and act as the host for gold bearing veins, there is often a close association with carbonaceous-rich stratigraphic members which have a "sponge effect" and carry appreciable values. This relationship has only recently become significant as the mining of low grade gold deposits has become a reality. On the Erie Property there is a bed of argillaneous rock adjacent to the ore zone which is both schistose and highly carbonaceous, and which contains low gold values. The values increase as the number of quartz stringers increase. A sample of this material from the surface dump assayed 0.10 ounces of gold per ton. The potential of this low grade mineralization warrants evaluation.

Twenty large samples of dump rock and underground material totalling about 1,000 pounds were collected last fall by Mr. C.M. Armstrong, P.Eng., as outlined in his memo of October 14, 1974, and delivered to Mr. Rod Blundell of Kamloops Research and Assay. Analytical and metallurgical tests were carried out on high grade underground vein material and adjacent low grade wall rock to evaluate concentration by a sink-float technique. The results indicate that a worthwhile up-grading can be achieved on such material, and Mr. Blundell who has had a great deal of experience in the installation and operation of heavy media plants believes that similar results can be obtained on the lower grade surface dump material. The test

results are presented on the attached Certificate of Assay.

Proposed Program and Cost Estimate:

1.	The immediate property costs:	
(a)	Option payment, 1975 (D.W. Coates to be reimbursed)	$ 10,000.00
(b)	Mineral Land Tax @ $.25 acre	167.35
(c)	Property tax (J.S.Vincent to be reimbursed)	118.69
(d)	Water License rental (J.S. Vincent to be reimbursed)	100.00
		$ 10,386.04

The revised recommended program should be undertaken in stages contingent on financing and results. Two specific phases are outlined which can proceed concurrently as weather conditions allow.

PHASE I.

Evaluation and exploration is recommended as outlined:

(a) Preliminary: Lines at 800 foot intervals; allowing for five weeks.

1. Line cutting, 15 miles @ $150.	$ 2,250.00
2. Soil sampling: 100 feet samples Az,Pb,Zn., 15 miles @ $200.	3,000.00
3. VLF-EM, 50 foot readings 15 miles @ $70.	1,050.00
4. Geological mapping 1" = 200'	1,875.00
5. Underground sampling of host rocks and selective geological mapping	8,000.00
6. Transportation, supervision data, compilation and administration	3,000.00
SUBTOTAL	$ 19,175.00

(b) Detailing: Lines at 100 - 200 feet intervalts; allow three weeks.

1. Line cutting, soil sampling, VLF-EM, estimate 9 miles at $800. per mile	$ 7,200.00
2. Bulldozer trenching of anomalous zones, sampling and assaying	2,500.00
SUBTOTAL	$ 9,700.00

(c)	Diamond Drilling:	
	1. 3,500 feet of BQWL @ $12. foot	$ 42,000.00
	2. Mob, demob, logging and assaying, transportation and administration	15,000.00
(d)	Metallurgical testing and assaying	1,000.00
	TOTAL estimated exploration	$ 97,261.04

PHASE II.

Contingent on the favourable mettalurgical results on the dump rock, processing can begin as the milling equipment is ready. The estimated cost breakdown for this phase is outlined as follows:

1. A preliminary cost has been estimated as closely as possible to acquire the milling plant, transport it to Kamloops, purchase the necessary additional equipment and put it in running order. A total of $40,000. is allocated to this requirement.

2. An amount of $20,000 will be required to run-in and operate the plant for an initial period.

TOTAL PHASE II Estimate	$ 60,000.00
TOTAL COST ESTIMATE FOR BOTH PHASES	$ 157,261.04

ALLOW $155,000.00

Respectfully submitted,

John S. Vincent

John S. Vincent, P.Eng.

Kamloops Research
&
Assay Laboratory
LTD.

B.C. CERTIFIED ASSAYERS

WEST TRANS CANADA HIGHWAY – BOX 946 – KAMLOOPS, B.C. V2C 5N4
PHONE 372-2784

R. G. Blundell
Res. 573-3016

January 20, 1975.

Mr. J. S. Vincent, P. Eng.,
John S. Vincent Ltd.,
1075 Melville St.,
Vancouver, B. C.

Dear Jack:

I am enclosing the results of the sink-float test for your perusal before our discussions. I selected high grade material as I can only purchase the chemicals in small quantitites and would have had to repeat the tests numerous times to obtain sufficient material in the sink to assay. This is not a particularly good test and subsequent ones we made on the Windpass and Homestake were much better, with almost nothing in the float. The grade of material reporting in the sink would approximate the enclosed results if we treated the low grade dump. The only difference would be that we would sink more of the middling floated in this test which would result in a slightly lower grade of sink concentrate. The ratio of sink to float would produce a much lower tonnage of sink and far more float material.

If you would like further work on a lower grade material for confirmation I will select this from the dump material on hand.

Yours sincerely,

KAMLOOPS RESEARCH &
ASSAY LABORATORY LTD.

R. G. Blundell.

RGB:d
Encl.

Kamloops Research & Assay Laboratory Ltd.
WEST TRANS CANADA HIGHWAY – BOX 946 – KAMLOOPS, B.C. V2C 5N4

B.C. LICENSED ASSAYERS
GEOCHEMICAL ANALYSTS

CERTIFICATE OF ASSAY

TO Mr. J. S. Vincent, P. Eng.,
1075 Melville St.,
Vancouver, B. C.

Certificate No. _____
Date January 20, 1975.

I hereby certify that the following are the results of assays made by us upon the herein described _____ samples

~~Mark No.~~	~~Marked~~		GOLD	SILVER	Pb	Zn	Cu	Distribution				
	Wt.Grams	Distribution	Ounces Per Ton	Ounces Per Ton	Percent	Percent	Percent	Au Percent	Ag Percent	Pb Percent	Zn Percent	Cu Percent
Sink	44.1	61.3	2.74	5.76	10.0	5.65	.22	97.9	98.0	93.0	85.5	71.3
Midds	49.9		1.36	3.44	4.58	4.45	.28					
Float	59.2	38.7	.07	.15	.83	1.35	.16	2.1	2.0	7.0	14.5	28.7
Total	153.2	100.	1.178	2.84	4.68	3.60	.22					

NOTE:
Rejects retained three weeks
Pulps retained three months
unless otherwise arranged.

R.G.S.
Registered Assayer, Province of British Columbia

C. M. ARMSTRONG, P.ENG.
CONSULTING ENGINEER
4085 West 29th Avenue
Vancouver, B. C.
V6S 1V4, Canada
(604) 224-7678

May 15, 1975

Rest Creek Gold Mines Limited
256 A Simpson Road
Richmond, B.C. V6X 2P9

Attn: Mr. D. W. Coates, President

Dear Mr. Coates: Re: Former Erie/Arlington Gold Mine at Rest Creek or Keystone Mountain near Salmo, B.C.

As requested, I have reviewed the following data:

1. "A Report on the Erie Gold Mine" by J.S. Vincent, P.Eng. dated January 1974, in which a total expenditure of $168,000 was recommended for direct shipping dump rock, geological study and sampling, diamond drilling, and underground work.

2. "Evaluation of the Erie/Arlington Gold Mine" by C.M. Armstrong, P.Eng. dated May 10, 1974, in which a total expenditure of $130,000 was recommended for a 3-stage surface exploration program and a 2-stage underground exploration program.

3. "Memo Report" by J.S. Vincent, P. Eng. dated May 12, 1975, in which a total expenditure of $155,000 was recommended for evaluation and exploration and for processing.

With regards to the latest updated and revised program recommended by Mr. Vincent, the writer fully concurs with the estimated expenditures of approximately $85,000 for evaluation and exploration, involving geochemical, geophysical, and geological surveys, underground sampling, diamond drilling, and metallurgical testing and assaying; and, contingent on additional favourable metallurgical results on the low grade surface dump material by heavy media separation, approximately $70,000 for processing, involving property costs, plant set-up, and run-in.

Attached is my Certification.

Yours very truly,

CMA:bs

C. M. Armstrong, P.Eng.
Consulting Engineer

CERTIFICATION

I, CHRISTOPHER MACKENDRICK ARMSTRONG of the City of Vancouver, Province of British Columbia, do hereby certify:

THAT I am a practicing Geological Engineer residing at 4085 West 29th Avenue, Vancouver, British Columbia, V6S 1V4, Canada.

THAT I am a registered Professional Engineer in good standing in the Provinces of British Columbia and Ontario.

THAT I received the degree of B.Sc. in Geological Engineering from Queen's University, Kingston, Ontario in 1960, and practiced my profession continuously in the period between leaving university in 1959 and returning to university in 1966.

THAT I enrolled in the Department of Mineral Engineering at the University of British Columbia in 1966, and in the period to 1969 completed course work and research work requirements in an M.A.Sc. program, specializing in bacterial/acid leaching systems; thesis writing was not completed; post graduate courses in economic geology and North American geology also were taken and completed.

THAT since leaving university in 1969, I have practiced my profession both as a Geological Engineer and as a Specialist/Advisor in ambient temperature/pressure leaching systems.

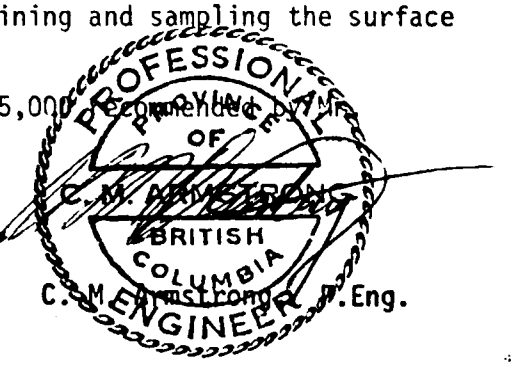
THAT the following is a true record of my employment and experience:

1957	4 mos. Junior Geologist. Noranda Mines Ltd. Noranda, Quebec.
1958	4 mos. Party Chief. Hollinger North Shore Exploration Co. Ltd. New Quebec and Labrador.
1959-1961	27 mos. Assistant Geologist. Pickle Crow Gold Mines Ltd. Pickle Crow, Ontario. Teck Corporation Ltd.
1961-1962	9 mos. Assistant Geologist. Willroy Mines Ltd. Manitouwadge, Ont.
1962-1964	28 mos. Chief Geologist. Metal Mines Ltd. Werner Lake, Ontario. Consolidated Canadian Faraday.
1964-1966	24 mos. Chief Geologist. Tegren Goldfields Ltd. Kirkland Lake, Ontario. Teck Corporation Ltd.
1967	6 mos. Project Geologist. McLeese Lake property, B. C. Geophysical Engineering & Surveys Ltd. Teck Corporation Ltd.
1969-1970	13 mos. Laboratory Manager, Chief Geologist, and Consulting Engineer. S. M. Industries Ltd. Vancouver, B. C.
1970-1975	5 yrs. Independent Consulting Engineer.

THAT I do not have any interest, direct, indirect, or contingent, in the securities or properties of REST CREEK GOLD MINES LIMITED.

THAT I have spent several days in the past year examining and sampling the surface and underground workings at the Erie/Arlington mine

THAT I concur with the revised program totalling $155,000 recommended by Mr. Vincent in his Memo Report dated May 12, 1975.



Dated at Vancouver this
15th Day of May, 1975

C. M. Armstrong, P.Eng.