674428

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

D. W. COATES
1668 West 1st Avenue
Vancouver 9, B. C.

by

C. M. Armstrong, P.Eng.
Consulting Engineer
4085 West 29th Avenue
Vancouver, B. C.
V6S 1V4, Canada
(604) 224-7678

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.

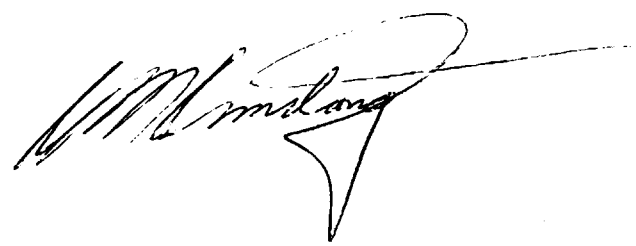
4. To provide a clear picture of the geological controls, and of the interrelationship and continuity of the many branch veins, so that underground exploration may be planned wisely and executed with acceptable flexibility,it will be necessary to prepare new level plans at a scale of 1"=20', and to draught 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 geophysieal 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.

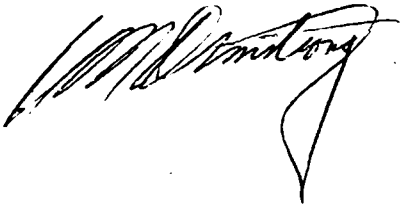
Geologist & assistant 12 days @ $215, all inclusive =	$ 2580	
Assaying 300 samples for Au/Ag, plus composites for Pb/Zn	3260	
Feasibility of mining and direct shipping backfill	1000	
Equipment and supplies, draughting, data processing, transportation, etc.	2750	
Subtotal	9590	$ 10,000

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, deoreasing at 2.8' annually.

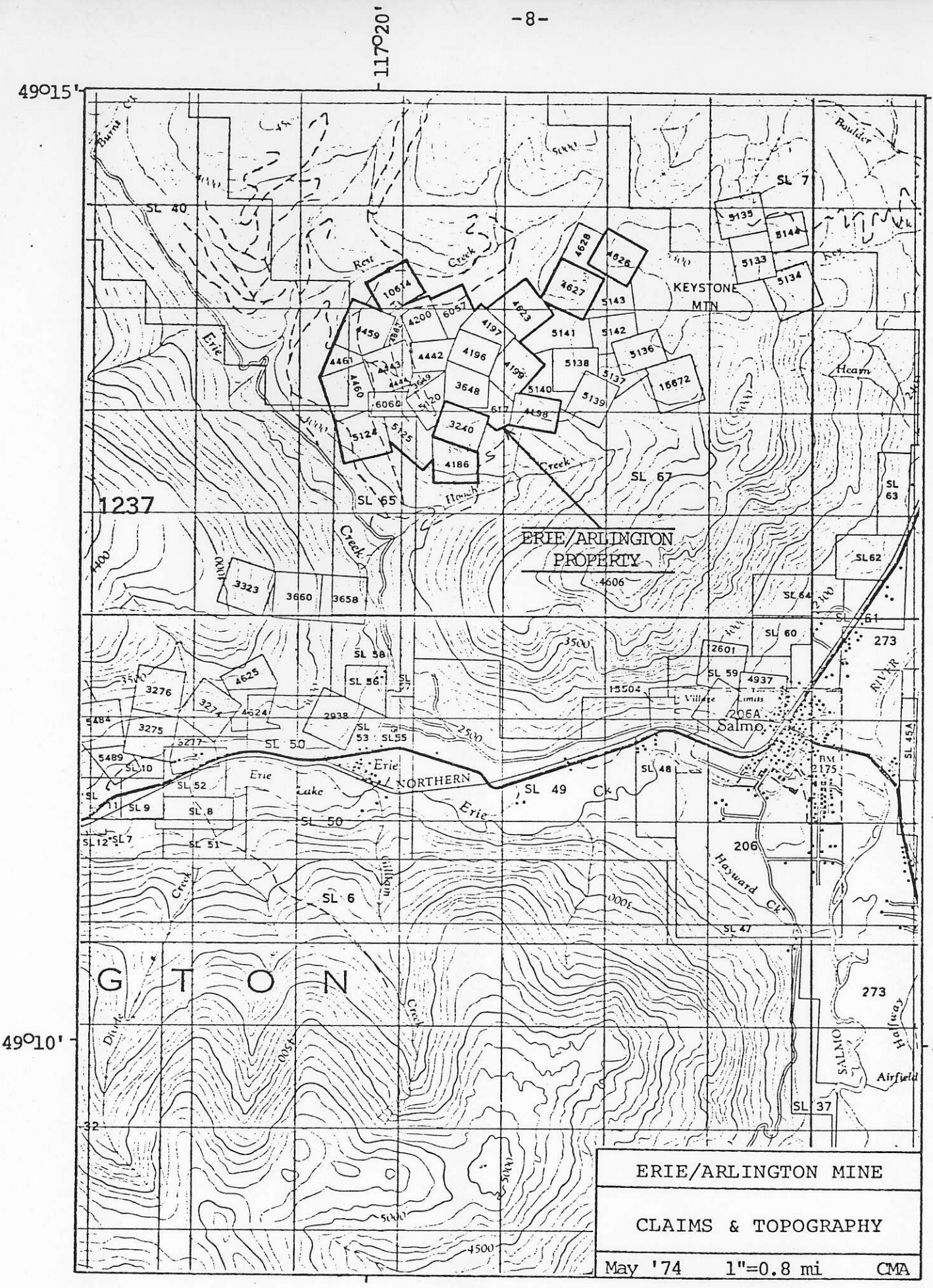
In this area rounded mountains characterize the Bonnington Range, a physiographic division of the Selkirk Mountains, in turn a subdivision of the Columbia Mountains, the southeastern part of the Interior System of B.C. As shown on Figure 2, elevations rise from about 2200 feet at Salmo and 2400 feet 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.


119°
118°
117°
116°
115°
51°
50°
49°
REVELSTOKE
ENDERBY
ARMSTRONG
VERNON
UPPER ARROW LAKE
LOWER ARROW LAKE
LOCAN LAKE
COLUMBIA RIVER
KOOTENAY LAKE
NELSON
KIMBERLEY
CRANBROOK
FERNIE
GREENWOOD
GRAND FORKS
ROSSLAND
TRAIL
Salmo
Erie/Arlington Mine & Property
U. S. A.
IDAHO
MONTANA
WHITE MTN. 8921
ROMAN NOSE 7284
Priest L.
SMITH PK. 7650
MT. HENRY 7235
MT. SIR DOUGLAS 11174
MT. McDOUGALL 9020
MT. AYLMER 10375
MT. TEMPLE 11630
MT. BALL 10865
MT. HECTOR 11135
MT. DAWSON 11123
MT. TEMPLEMAN 10073
MT. FINDLAY 10374
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.

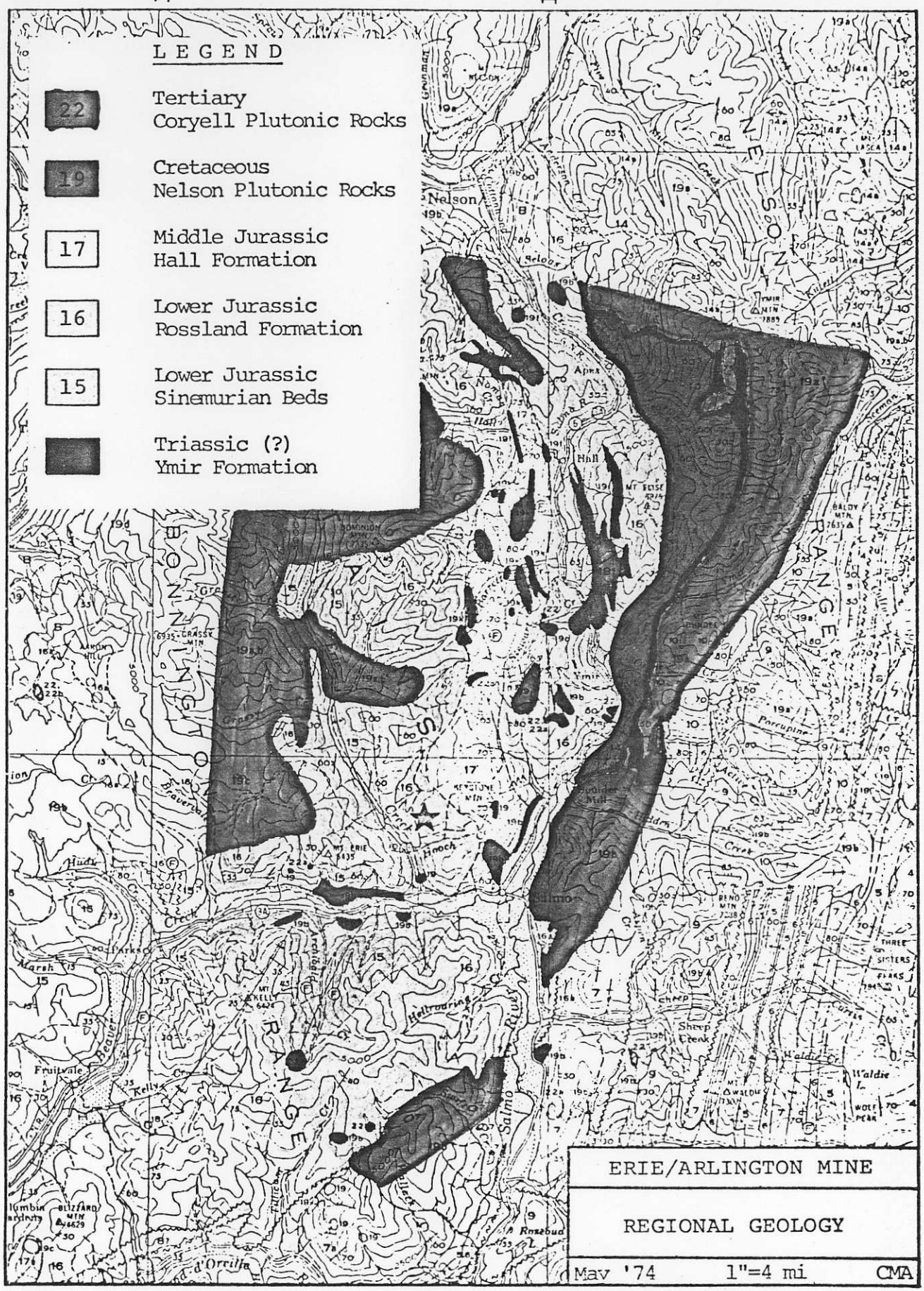
Between 1899 and 1970 recorded production totals over 75,000 tons averaging 0.63 oz Au/T, 0.81 oz Ag/T, 0.64% Pb, and 0.75% Zn.

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 (Tortiary) 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 erenaceous 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 order 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.

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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.

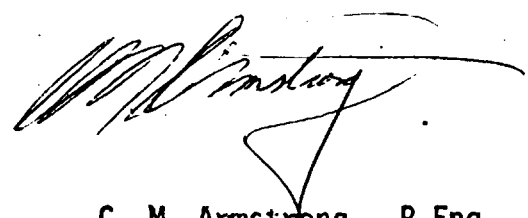
THAT I enrolled in the Department of Mineral Engineering at the University of British Columbia in 1966, and in the period to 1969 completed course work and research work requirements in an M.A.Sc. program, specializing in bacterial/acid leaching systems; thesis writing was not completed; post graduate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