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NAME

PROPERTY FILE

SUBJECT

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PROPERTY FILE

TEL.: BUS. 987-5322 RES. 987-9520

#### WILLIAM M. SHARP, M.A.Sc., P.Eng.

#### **CONSULTING GEOLOGICAL ENGINEER**

### 3280 CHESTERFIELD AVENUE NORTH VANCOUVER, B.C. V7N 3M9

December 10, 1977.

President & Directors,
Dungannon Explorations Ltd. &
Sabina Industries Ltd. (N.P.L.),
c/o Suite #1275 - 555 Burrard St.,
Vancouver, B. C. V7X 1J6.

82 FNW 065-07

#### Gentlemen:

## PROGRESS REPORT - DEVELOPMENT & MINING HEWITT MINE PROPERTY, SILVERTON, B. C. SLOCAN MINING DIVISION

#### GENERAL

This report follows upon the writer's formal report of date September 26, 1977, and describes progress and results accomplished at the operation since that date. The reader is referred to the formal report for details of the property, history, past production, geology, and reserves of indicated and potential ore. On the recent inspection, as previously, the writer benefitted from the good guidance, assistance in mapping and sampling, and general data provided Mr. Frank Pho and crew.

#### PROGRESS DETAILS - 1977

September: Produce up-dated formal report.

#### May - December:

- (a) Extend Cunningham shaft from 13-level to 14-level. Any necessary rehabilitation required on shaft was well taken care of.
- (b) Drive short crosscut to north to intersect vein on 14-level.
- (c) Currently developing vein on 14-level. To date this has advanced some 70 ft.—with the southwest face still in good ore and, probably, the northeast face will be advanced an additional few feet in ore—depending up the effects of an apparent warp in the sediments at the northeast face.

#### CURRENT EXAMINATION

Dec. 2: Review field file of reports, maps, and compilation of, mainly, M. C. Robinson's geological sketches.

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Dec. 3: Drive to mine; inspect walls of main No. 10 X-C for evidence of former exploratory drilling (one hole only in south wall at 1650' from portal).

Descended shaft to No. 14 level, with brief inspection stops at 11-12-13 levels. The possibility of ore repetitions occurring closely beyond drift faces at each level has not been explored to any significant extent—mainly because the ready availability of ore within the central parts of the Cunningham ore shoot has, to date, made this unnecessary.

Map topography and geology on #14 level.
Lay out cut-lines and general location of muck-sampling for
Messrs. Pho and Palmer. These returned the following results:

Sample N	lo. Location.	True Width, ft.	Ag, oz/ton;	<u>Pb, %</u> ;	Zn, %.
9701	Ref. 0+48'	9.0'incl.2'waste	10.6	2.7	6.3
**		7.0'exc1.2' "	13.6	3.47	8.1
9702	Muck from base N.&S.wal	Avg. 8' approx. 1s	12.5	5.1	5.4
9703	Ref. 0+31'W. 1st rse. roun	6.0' d	26.4	6.7	15.0
Arith. A	verage	8.0' and less	17.5 oz/ton;	5.05%;	9.5%

#### SUMMARY & SUGGESTIONS

- 1. All development and mining operations are being carried out efficiently and in accordance with proper mining practices for small mines.
- 2. Continue drifting to E. and W. limits of ore on 14-level.
- 3. Continue driving existing slot-raise from 14 to 13 levels to, eventually, 10-level.
- 4. Extend mining below 14 level sill by means of steep slusher declines.
- 5. Defer scheduled exploration until such time as the maximum amount of good grade ore has been mined from the 10-14 level of the Cunningham ore shoot.
- 6. Readily accessible ore reserves within the Cunningham ore shoot are presently estimated to be about 6,000 tons--excluding significant quantities which may exist below No. 14 level. The above-noted figure does not include the 1670 tons

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of 'indicated' ore and 2600 tons of 'possible' ore on, respectively, the west and east segments of the North vein below 10-level and, additionally, the significantly larger tonnages of 'inferred' ore above and below 10-level.

Respectfully submitted,

W. M. SHARP, P.Eng.

WMS:mm

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# REPORT ON PROPOSED HEWITT MINE JOINT VENTURE SILVERTON AREA SLOCAN MINING DIVISION BRITISH COLUMBIA

by
J. D. Mason, P.Eng.

Vancouver, B. C. February, 1971

#### INTRODUCTION

#### General Statement

The following report is concerned primarily with an underground development program recommended for the Hewitt mining property, Silverton area, Slocan Mining Division, southeastern British Columbia. The program was formulated in 1970 by Surfside Explorations Ltd., a Vancouver based private company which then operated the property under agreement from Kopan Developments Ltd., owners.

The program which has been proposed relates to the underground development (down-rake) of ore mined on the Hewitt property during the early 1900's. It involves preparatory work, underground and other related operations with a total estimated cost of \$200,000.00.

Arjan Pacific Ltd. on December 15, 1970 entered into a joint venture agreement with Surfside Explorations Ltd. in connection with the proposed program. Under the terms of the agreement. Arjan and Surfside will each provide \$100,000.00 of the estimated capital required and they will share equally in future costs and revenues, subject to payment of 20 percent of net operating profits to Kopan up to a total of \$100,000.00. Title to the claims involved will be acquired by the joint venture when that payment has been completed.

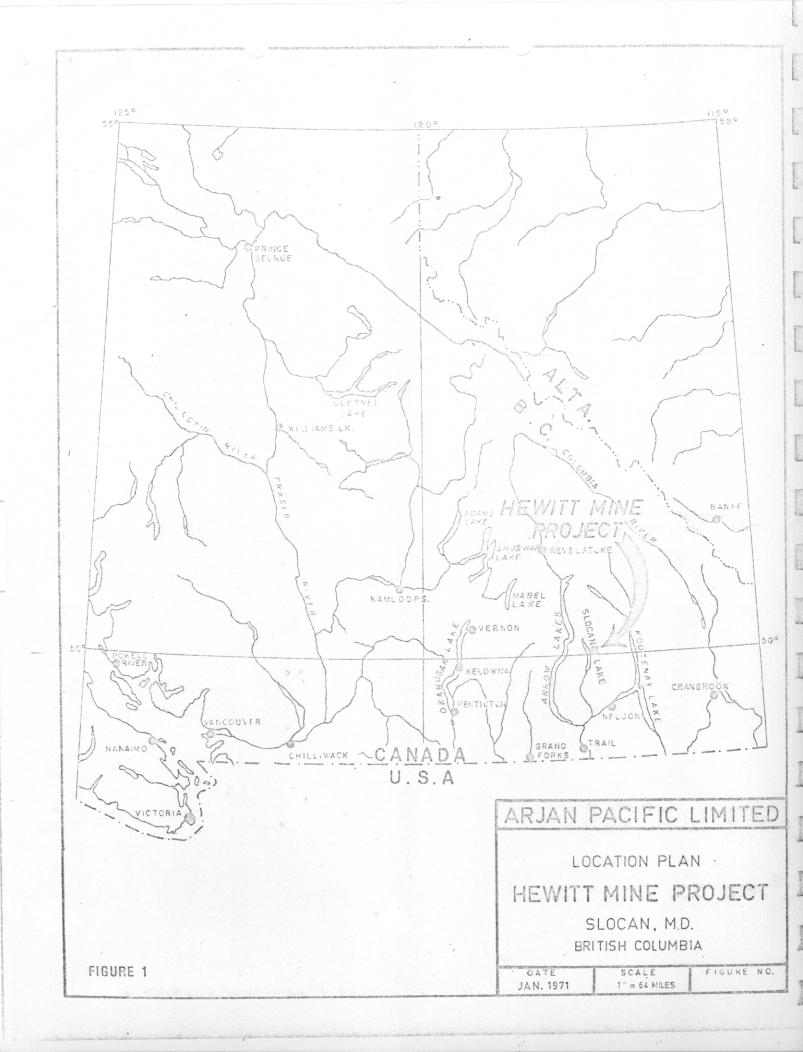
A significant factor involved in the appraisal of the joint venture is that an existing concentrator at Silverton can process ore produced so that no appreciable future investment will be required for plant and equipment. Furthermore, access roads and most other surface facilities required are in existence. Therefore, a very large percentage of the proposed joint venture expenditures will be devoted to mining operations.

#### Location and Access

The Hewitt mining property is located three miles to the southeast of the village of Silverton in the west Kootenay district, southeastern British Columbia (figure 1). Access to the property is provided by a good all-weather mining road four miles in length from Silverton which, in turn, can be reached by highway from the west Kootenay centres of Nelson and Trail.

Claims

The Hewitt property is made up of 26 contiguous crown-granted mineral claims and fractional claims which form the block outline shown in figure 2. Mine workings are located on the eastern part of the block and are nearby workings of the adjoining Van Roi and Lucky Thought properties.



#### Geography

Workings of the Hewitt mine have been driven along a general east-west line through or into a ridge which slopes through the mine area downward and to the north into Silverton creek which drains westerly into Slocan lake at Silverton (figure 3). The topography is moderate by west Kootenay standards and mine tunnel elevations range between approximate limits of 3,600 and 5,300 feet.

Ample supplies of mine timber and water are available. No snowslide problems affect work in the area.

#### History and Production

Outcroppings of silver-lead-zinc ore were discovered on the property in 1892 during the initial flurry of prospecting and staking in the Slocan mining camp. Exploration, development and producing operations followed in quick succession. These continued through to 1929 in which year operations were suspended as a result of the general depression. Since that time, the property has been worked intermittently.

It is worthy of note that, in 1929, prior to suspension of operations, No. 10 level west was being driven eastward to develop the downward projection on rake of ore mined at higher levels and to connect through to No. 10 level east, (figure 3). The program discussed herein represents simply the completion of the work in progress in 1929.

Production records from the Hewitt mine are incomplete. Those which are available indicate the following:

118,730 tons

1,803,059 ounces

3,587,158 pounds

5,460,121 pounds

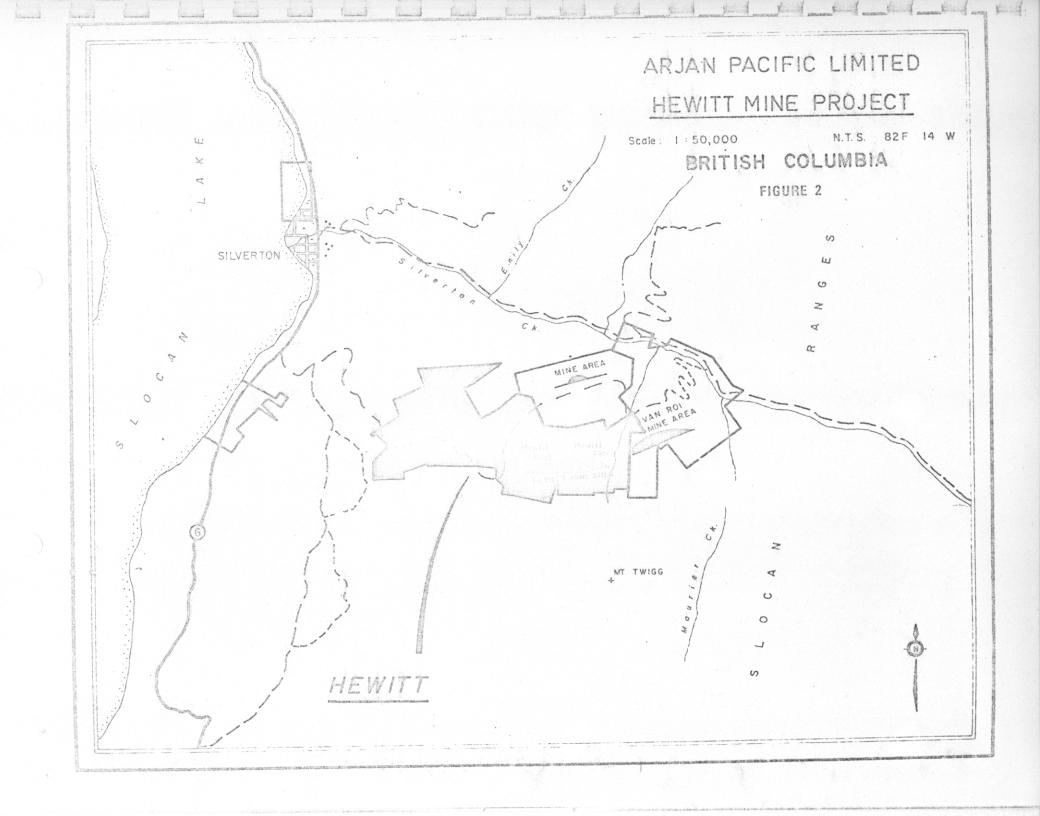
Tonnage produced
Silver recovered
Lead recovered
Zinc recovered

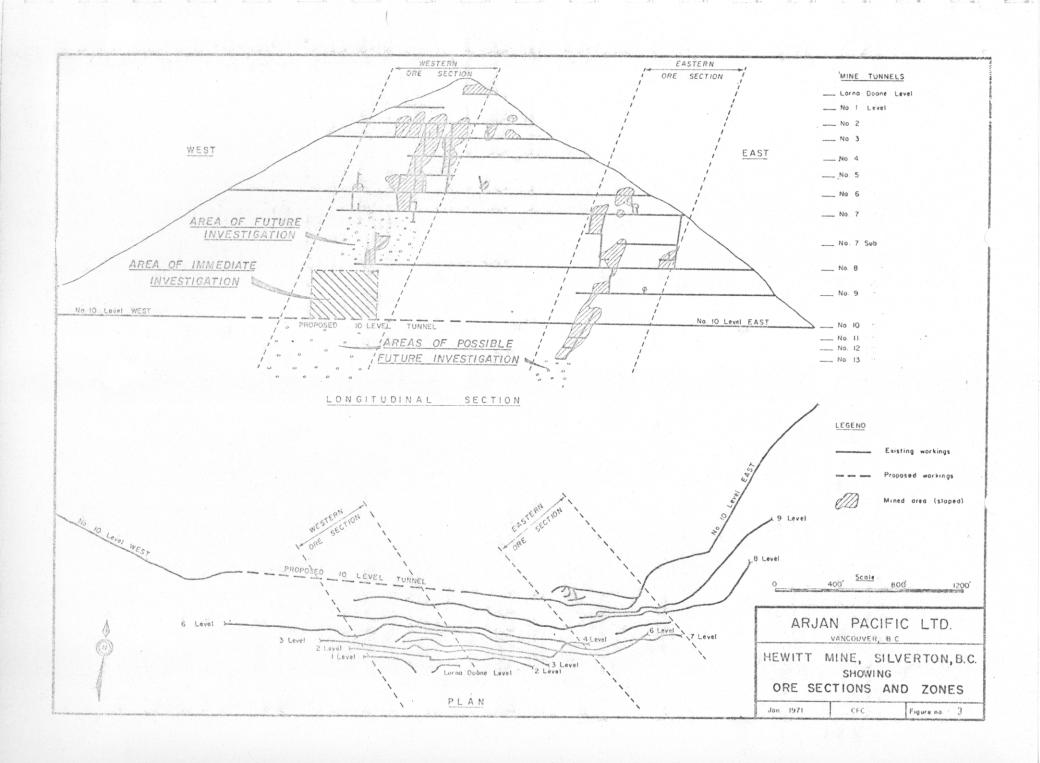
On the basis of its metal production, the Hewitt has come to be known as a silver property with lesser values in lead and zinc.

Surfside Explorations Ltd. in 1969 entered into an agreement with Kopan Developments Ltd. of Toronto which agreement includes the Hewitt property. Subsequently in 1969 and 1970 Surfside conducted mining operations in the No. 12–13 level interval of the eastern producing section of the mine (figure 3). Those operations took place from a winze and were terminated in ore in 1970, largely for safety and high winze operating cost reasons. The ore developed in the eastern section may at some future time be mined from a lower adit level, particularly if the proposed Hewitt No. 10 level west program locates ore on and below that level.

#### Development

The Hewitt property has been developed on fourteen levels which range in elevation from 3,600 to 5,300 feet. Mine development has progressed downward through time and silver-lead-zinc ore carrying high values in silver is present in the floors of the lowest levels.





#### GENERAL GEOLOGY

The Hewitt property straddles the contact between granitic rocks of the Nelson batholith and argillaceous sedimentary rocks of the Slocan series. The sedimentary rocks have been strongly folded into approximate conformity with the granite contact. As a result, drag folds of economic significance were developed in the sediments.

An east-west trending and northerly dipping shear or "lode" zone known as the Hewitt "lode" traverses the sedimentary section. For most of its length, the zone is bedded and is essentially a gouge-filled, graphitic and poorly mineralized feature. Where it cuts across the sedimentary bedding in the drag folds mentioned above, silver-lead-zinc ore shoots are found.

#### HEWITT ORE SECTIONS

Past production from the Hewitt has been obtained almost entirely from two separate ore sections along the Hewitt shear or "lode" zones. These have accounted for 95 percent of the production obtained and are known as the eastern and western ore sections (figure 3). The eastern section has produced some 30 percent of mine output and the western section 65 percent. The limits of both sections are well defined and are controlled by geologic structure. Also for this reason, ore shoots within the two sections possess a pronounced rake to the northwest (figure 3).

As noted previously, economic silver-lead-zinc mineralization is present in the floor of the lowest level driven in the eastern ore section. Data presented on available pre-1930 assay plans and sections indicate appreciable silver-lead-zinc values in and adjoining the lowest workings of the western ore section. In addition, No. 10 level west cross-cut driven in 1929 is shown on an old assay plan to have encountered silver, lead and zinc values where it intersected the Hewitt lode.

#### PROPOSED PROGRAM

#### Introductory Statement

The program described herein is designed to develop potential reserves of ore on and above No. 10 level west and down rake from past production on and from higher levels. Basically, the program involves the following stages (figure 3).

- 1.) The driving of No. 10 level west to the western limit of the downward projection of the western ore section.
- 2.) The continued driving of No. 10 level west through the downward projection of the western ore section.
- 3.) The connecting through of No. 10 level west with No. 10 level east for purposes of safety and ventilation.

#### Objectives

There are no proven reserves in the Hewitt mine. The average grade per ton of the objective ore is estimated at:

Silver										1.	5 ounces per ton
Lead											5 percent
											7 percent

The secondary objective of the proposed drive of No. 10 level west is to investigate the possibility of down-rake reserves of ore below the No. 10 level west in the western ore section. As previously mentioned, potential reserves are also present below 13 level east which has ore in its floor. Should the western ore section continue downward on rake below 10 level, then a future program involving the driving of a lower adit level to provide access to both ore sections should be considered.

#### Cost Estimates

The No. 10 level west drive considered herein is the first stage of the proposed Hewitt west development. If successful, it will obviously be followed by raising upward, etc. in a second pre-production stage.

The cost estimates involved in the initial stage are as follows:-

	· Item	Estimated Cost	Cost/feet
1)	Set-up.	\$ 20,400.00	_
2)	Rehabilitate existing No. 10 west tunnel	31,600.00	\$21.00
3)	Drive 800 feet to objective zone.	52,000.00	65.00
4)	Drive 750 feet through objective zone.	49,000.00	65.00
5)	Drive 250 feet to No. 10 level east.	16,000.00	65.00
6)	Contingency, overhead, etc.	31,000.00	
		\$200,000.00	

#### CONCLUSIONS AND RECOMMENDATIONS

A joint venture between Arjan Pacific Ltd. and Surfside Explorations Ltd. has been proposed for the purpose of the rehabilitating and driving ahead of No. 10 level west of the Hewitt mining property for the purpose of developing potential reserves of silver-lead-zinc ore. The potential reserves are located along the geologically controlled down-rake projection of silver-lead-zinc ore mined in and prior to 1929. During 1929, the porject as it is now conceived was initiated and was suspended because of the general depression.

The program as proposed represents a joint venture, low risk development project involving no significant surface plant and equipment expense and equal sharing of costs and profits without any overriding interest other than a net operating profits property payment. It is therefore recommended to Arjan Pacific Ltd.

Respectfully submitted,

"J. D. MASON"

J. D. Mason, P. Eng.

## CERTIFICATE I, J. D. Mason of 810 - 955 Marine Drive, West Vancouver, hereby certify THAT I am a graduate in Geological Engineering from the University of Alberta having 1. received a B. Sc. in Geology in 1937. THAT I have followed my profession continuously since that date and have been engaged as a consultant since 1955. THAT the attached report on the Hewitt property is based on knowledge gained from work 3. on the property during 1950 and 1951 plus a recent examination made in the spring of 1970. THAT I am a Registered Professional Engineer in the Provinces of British Columbia and 4. Ontario. THAT I have no interest in the Hewitt property or in the securities of either Arjan Pacific . 5. Ltd. or Surfside Explorations Ltd. nor do I expect to obtain any interest in the future. "J. D. MASON" J. D. Mason, Professional Engineer February 20, 1971. - 24 -