

Report on  
Diamond Drill Hole 82-1  
Amy-Dee 1 - 4 Claims  
White Bluffs, Adams Lake Area,  
Kamloops Mining Division, B. C.

NTS Map 82M 51°07'N, 119°41'W

Owner and Operator: Casa Del Oro Resources Inc.,  
18124 59A Avenue,  
Surrey, B. C., V3S 4V5

Report Prepared By: Erik Ostensoe, geologist  
4306 West 3rd Avenue,  
Vancouver, B. C., V6R 1M7

November 3, 1982.

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**10,782**

*Erik A. Ostensoe*

## CONTENTS

	page
1. INTRODUCTION	
(a) Introduction	1
(b) Claims and Location	1
(c) Previous Work	2
2. REGIONAL AND LOCAL GEOLOGY	
(a) Introduction	2
(b) Diamond Drill Hole 82-1	4
(c) Summarized Core Description	4
3. CONCLUSIONS	8
4. REFERENCES	8
5. STATEMENT OF COSTS	9
6. STATEMENT OF AUTHOR'S QUALIFICATIONS	9

## ILLUSTRATIONS

Table 1. Amy-Dee Claims	2
Figure 1. Location Map - Amy-Dee Claims	follows 2
Figure 2. Amy-Dee 1 - 4 m.c., Kamleops MD	" 2
Figure 3. Sketch showing distribution of main geological units, scale 1:250,000	" 3
Figure 4. Sketch of Geology of Drill Hole 82-1	" 4

## 1. INTRODUCTION

### (a) Introduction

Casa Del Oro Resources Inc. of 18124 - 59A Avenue, Surrey, B. C. is the owner of the Amy-Dee 1 - 4 mineral claims situated at White Bluffs, west side of Adams Lake, Kamloops Mining Division, British Columbia (figure 1). During August 1982 that company engaged G & D Diamond Drilling Ltd. of Williams Lake and Surrey, British Columbia to drill one vertical diamond drill hole to approximate depth of 300 metres to test the possible down-dip continuation of a surface exposure of zinc mineralization. The writer was engaged by Casa Del Oro Resources Inc. to examine and log core from the drill hole and to prepare a brief report. The writer has not visited the site of the drilling work and has relied extensively upon published sources and verbal descriptions for information concerning the geology of the Amy-Dee area.

### (b) Claims and Location

The Amy-Dee 1 - 4 mineral claims (Table 1) include a total of 64 modified grid system claim units. They are located at White Bluffs on the west shore of Adams Lake, 50 km due south of Vavenby and 31 km east of Barriere, B. C. They lie between Samatsum Creek to the south and west and Brennan Creek to the north. NTS Map 82M coordinates are 51°07' North and 119°41' West. The northwest corner of Amy-Dee 1 claim is close to the eastmost portion of Johnson Lake and parts of Amy-Dee 3 and 4 project into Adams Lake. Claims are shown on British Columbia Ministry of Mines claim map 82M/4E and on figure 2 of this report. Geological Survey of Canada Open File 637 includes the Amy-Dee mineral showing as "Occurrence 097, Rose Group".

Claims have been grouped according to Mineral Act regulations for purposes of applying assessment work.

The Amy-Dee 1 - 4 claims are accessible by road from Louis Creek, a village located 41 km to the west on Highway 5.

Table 1. Mineral Claims

<u>Name</u>	<u>No. of mgs units</u>	<u>Record No.</u>	<u>Record Date</u>	<u>Recorded Owner</u>
Amy-Dee 1	20	3818	Sept. 25	Casa Del Oro Resources Inc.
Amy-Dee 2	20	3819	Sept. 25	Casa Del Oro Resources Inc.
Amy-Dee 3	6	3820	Sept. 25	Casa Del Oro Resources Inc.
Amy-Dee 4	18	3821	Sept. 25	Casa Del Oro Resources Inc.

(c) Previous Work

The Amy-Dee mineral occurrence is in an area of previously reported zinc mineralization. Prior to the 1982 diamond drilling program the zone of outcropping mineralization had been explored by means of a bedrock trench in which sphalerite is reported to be present in an east-west trending band that dips to the north at a gentle angle, estimated at 20° to 25°. The writer has examined a large specimen of mineralized rock from the trench in which discontinuous layered strands of dark-brown to grey-black coloured sphalerite occur throughout dense white vein quartz.

Because of its accessibility and location in an area of active mineral search it is probable that the Amy-Dee prospect has been subject to much prospecting and other unreported work.

2. REGIONAL AND LOCAL GEOLOGY

(a) Introduction

The Amy-Dee claims are located in the Shuswap Highlands physiographic province of central British Columbia. They are in an area of Shuswap geological terrain, a term that has been applied to a series of highly metamorphosed rocks of uncertain origin and history. Within the terrain, Jones<sup>1</sup> recognized three somewhat distinct groups of rocks of similar gross lithology but whose stratigraphic relation one to another could not be determined. These were designated the Monashee Group, the Mount Ida Group and the Chapperon Group. Subsequent workers in the Shuswap terrain have tackled the problems of subdividing and

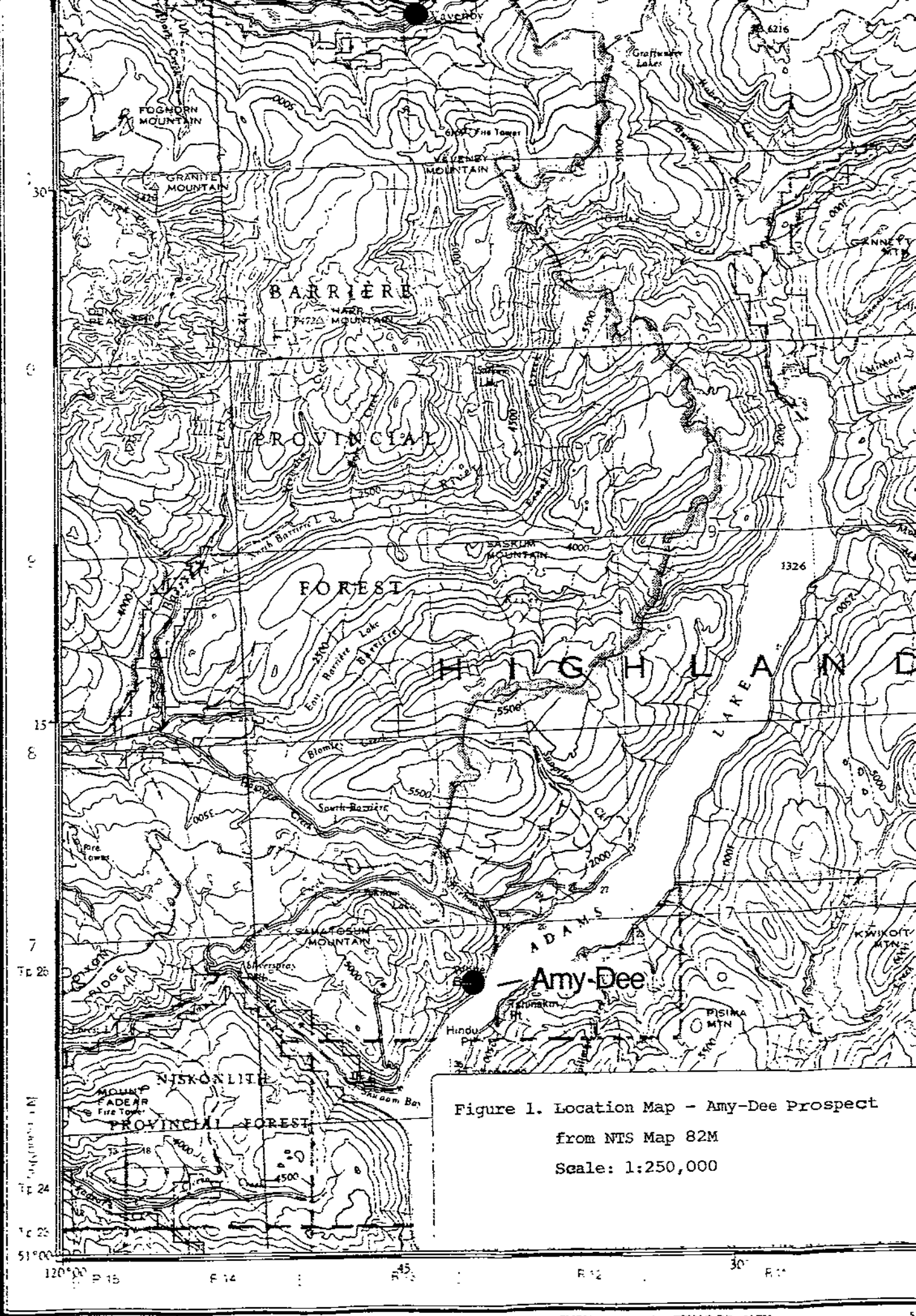
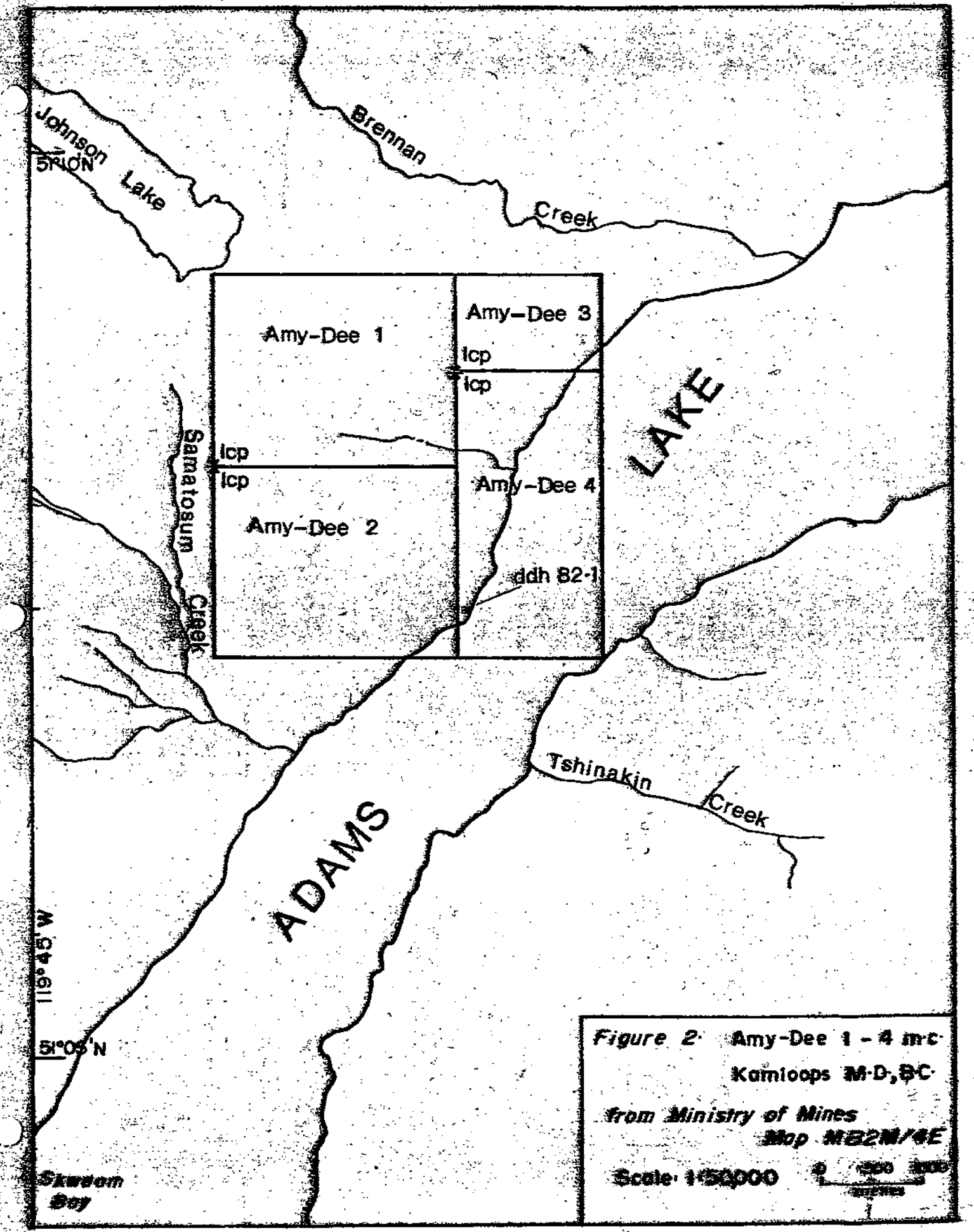


Figure 1. Location Map - Amy-Dee Prospect  
 from NIS Map 82M  
 Scale: 1:250,000



**Figure 2: Amy-Dee 1 - 4 mrc  
Kamloops M-D, BC  
from Ministry of Mines  
Map MB2N/4E  
Scale: 1:50,000**

more precisely defining the Groups and members within the Groups. In particular, R.B. Campbell<sup>2</sup> and A. V. Okulitch<sup>3,4</sup> of the Geological Survey of Canada, the latter with assistance from K. Daughtry, have refined the northern portion of the Shuswap terrain but the writer is not aware of published material that applies specifically to the White Bluffs area and Figure 3 that accompanies this report is a reproduction of geological features as shown in Okulitch's Open File Report No. 637<sup>4</sup>.

In the Adams Lake area, regional geological structural trends are west-northwesterly but individual members of the Shuswap terrain formations are locally strongly distorted. Rocks that formerly would have been assigned to the Mount Ida Group (i.e. Jones, 1959, p. 17<sup>1</sup>) and now designated as the Eagle Bay formation (Okulitch, 1979<sup>3</sup>), dominate, especially in the White Bluffs-Skwaam Bay area.

The Eagle Bay formation consists of "...Chloritic and sericitic phyllite, limestone, quartzite, mica schist, argillite, minor conglomerate" (from legend to accompany report by Okulitch<sup>3</sup>) and a Cambrian-Ordovician age has been assigned. At White Bluffs this formation is represented by massive white crystalline limestone of the Tshinakin member, with minor greenstone and greenschist.

Many mineral occurrences are found within the Eagle Bay formation but to date no substantial mines have been developed. Okulitch<sup>3</sup> commented as follows:

The numerous carbonate and calcareous members of the Eagle Bay Formation are potential hosts for stratabound lead-zinc-silver deposits, or possibly local sources for vein and shear zone occurrences.

The Amy-Dee mineral showing that has been explored by trenching and drilling occurs in massive white to grey coloured limestone of the Tshinakin member. There is no useful information available concerning the source of either the zinc sulphide mineralization or its quartz host.

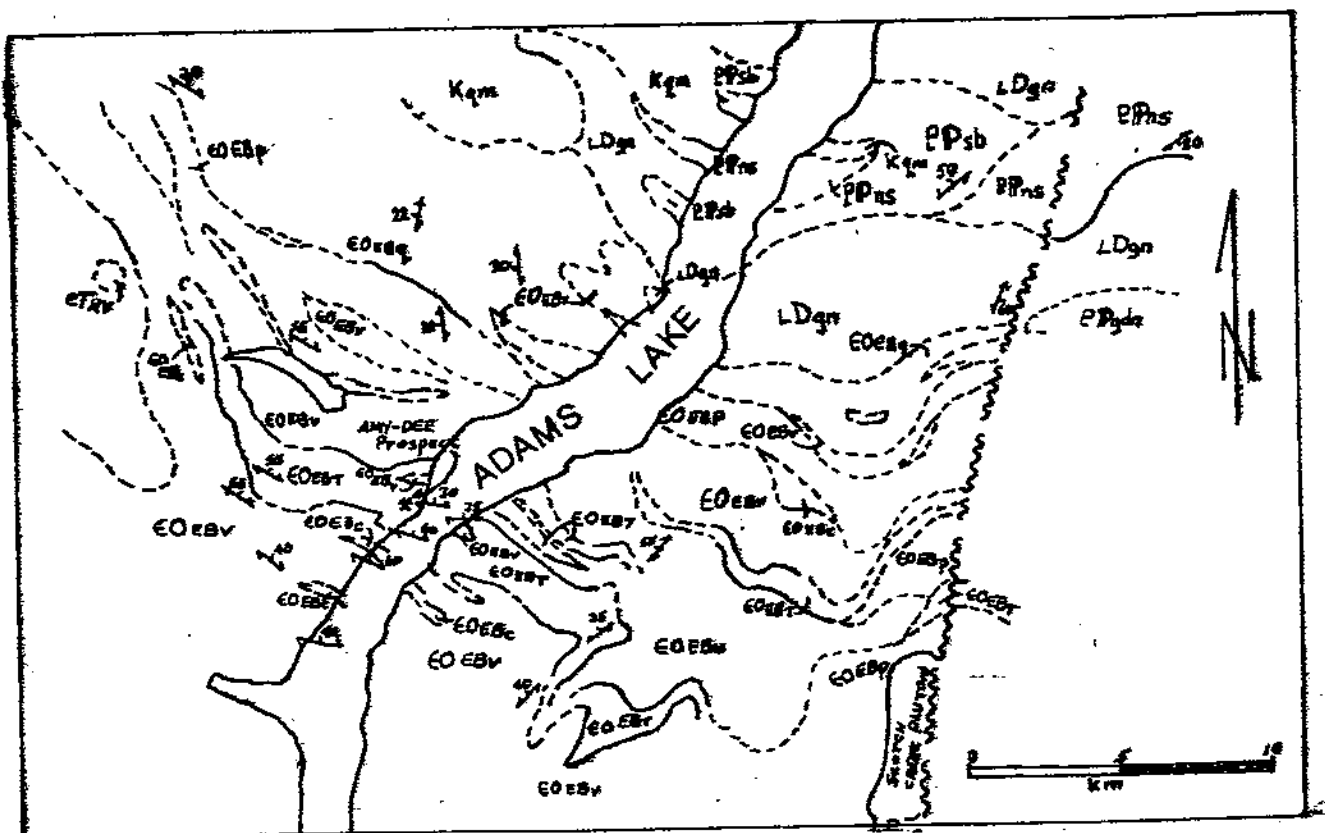


Figure 3. Sketch of Distribution of Geologic Units in Vicinity of Amy-Dee Prospect, White Bluffs, Adams Lake Area, Kamloops M.D., B.C. Scale: 1:250,000 data traced entirely from Map B - Open File 637, Geol. Surv. Can. 1979.

- eT<sub>kv</sub> Kamloops Group - andesite, basalt, dacite
- Kqm Baldy Batholith and satellitic stocks  
quartz monzonite, granodiorite
- LD<sub>gn</sub> Late Devonian foliated and lineated leucocratic granite, granite  
feldspar porphyry, Q monz, granodiorite
- E O Eagle Bay Formation - Cambrian-Ordovician age
- E O<sub>EBq</sub> sericitic, silic. phyllite, quartzite, Q bio. schist
- E O<sub>EBv</sub> greenstone, chloritic phyllite,
- E O<sub>EBc</sub> black argillite, argillaceous phyllite
- E O<sub>EBt</sub> massive white crystalline limestone, dk grey foliated limestone
- E O<sub>EBs</sub> Tshinakin Limestone member, massive white crystalline limestone,  
minor greenstone and greenschist
- E P Shuswap metamorphic complex, Proterozoic and Paleozoic age
- E P<sub>ns</sub> undivided, granitoid gneiss, paragneiss
- E P<sub>gd</sub> granodiorite, diorite, tonalite gneiss, augen gneiss
- E P<sub>sb</sub> quartz mica schist

- geological boundary, assumed
- ~ foliation, schistosity, gneissic layering or cleavage
- ∠ inclination in degrees
- ~~~~ high angle fault, approximate



(b) Diamond Drill Hole 82 - 1

Diamond drill hole 82 - 1 was collared about 50 metres south of a bedrock trench that exposed a two metre width, not true thickness, of white quartz and dark coloured sphalerite. The hole was drilled vertically to 306 metres total depth and the mineralized quartz layer (vein?) was intersected between 130.5 m and 133.65 m, generally consistent with its reported dip of 20° to 25° to the north (figure 4).

BQ - size core was recovered and core recovery was excellent throughout the drill hole, approaching 100%. Three core samples were submitted for assay purposes but results were not available at the time of preparation of this report and assay costs are not included in the Statement of Costs that forms part of this report. Core is stored at 18124 - 59A Avenue, Surrey, B. C.

A detailed core description was prepared but has been shortened for convenience and to avoid needless repetition in this report.(next section).

Drill hole 82 - 1 was collared in marblized limestone and remained in that unit to depth of 291 m where it entered a green gneissic and serpentinous meta-sedimentary rock type that persisted to the toe of the drill hole. The target band of sphalerite mineralized quartz was cored and is visually estimated to contain several percent zinc.

(c) Summarized Core Description

0 - 8.5m - no bedrock recovered

8.5- 12.0m - grey-white to beige coloured marblized limestone with fine to very fine grained texture. Fragments of limestone are cemented by white crystalline calcite which causes a crushed appearance. Some solution cavities have resulted from leaching by surface waters. Core is weakly foliated at 45° to core axis. Minor amounts of clay are present in cavities.

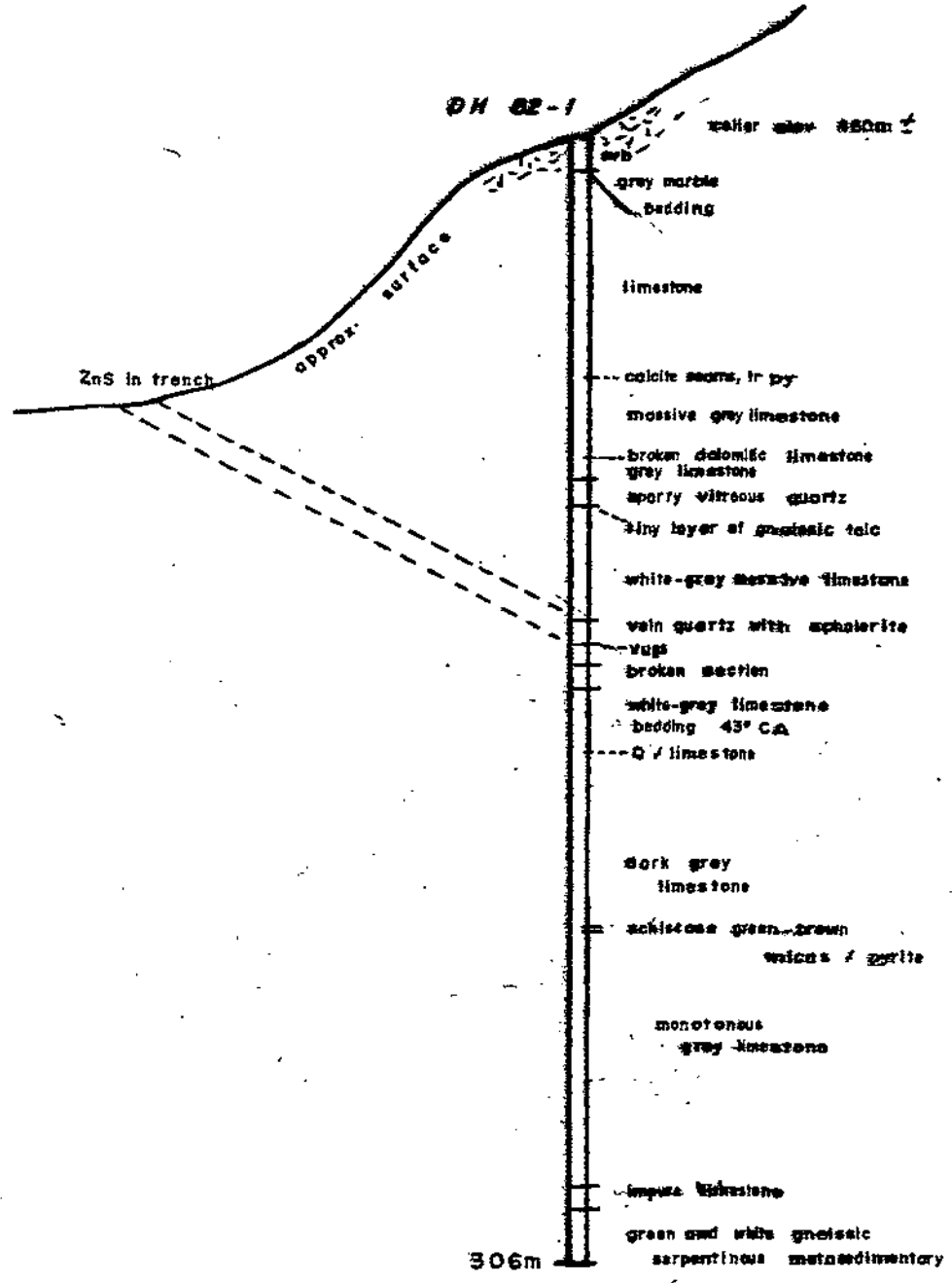


Figure 4  
 Sketch of Drill Hole 82-1  
 AMY-DEE Prospect  
 View looking West

Scale = 1:2000

(1 inch = 166 ft. approx)

- 12.0 - 12.62m - At 12.0m rock changes from grey marble to coarse-grained limestone/sandstone comprised of sand-sized angular limestone particles in matrix of sericitic claystone and mud fragments with minor plant fragments. Bedding folia are very weakly developed at 80° to core axis.
- 12.62- 64.92m - At 12.62m return to white-grey coloured marblized limestone. White calcite veins parallel core axis and core is cut by a few irregular tiny orange-coloured streaks, probably comprised of dolomitized calcite. From 16.46 - 16.76m bedding at 50° to core axis is marked by narrow greenish-grey layers of impure limestone, followed to 64.92m by monotonous white-grey limestone. Variations are due only to grain size differences, impurities and the amount of recrystallization that has occurred.
- 64.92 - 65.17m - Light brown coloured limestone and dolomitized limestone is cross-cut by white calcite seams and orange-brown stained fractures. Contains a few very small pyrite grains and one 2cm X 1mm pyrite seam.
- 65.17 - 85.04m -Return to monotonous massive grey limestone, apparently of very high purity. 75.90 - 76.50m - limestone with gneissic sericitic partings and small amounts of pyrite. Few concentrations of pyrite - up to 20% over 1 cm widths.
- 85.04 - 87.48m -Buff-brown coloured dolomitic limestone that is very broken but not sheared. Amount of dolomitization decreases to 87.48m where the normal grey limestone reappears and is solid as compared to the broken nature of the dolostone.
- 87.48 - 93.57m -High purity limestone is variously mottled white, and grey and white.
- 93.57 - 99.97m -Veins of coarse, sparry, vitreous quartz contain calcite but no pyrite in marblized limestone.
- 99.97 -100.03m -Very narrow section of gneissic talc with trace amounts of pyrite.

- 100.03 - 130.45m - White-grey massive limestone, minor broken and weakly sheared sections, few quartz veins and very minor amounts of pyrite. Apparent purity of limestone is noteworthy.
- 130.45 - 131.98m - White sparry vein quartz, fractured at 48° to core axis.
- 131.98 - 133.65m - White sparry vein quartz with irregular streaks of medium to fine-grained yellowish-brown sphalerite.
- 133.65 - 137.77m - At 133.65m return to grey limestone with irregular blebs and seams of white calcite. Broken core from 133.65m to 133.81m; ground core at 135.94m to 136.55m. Between 135.95m and 137.77m rock has partial vuggy texture with calcite crystals lining cavities. Rock has undergone brittle fracture without any shearing.
- 137.77 - 149.66m - Homogeneous grey-white limestone with broken section between 143.87m and 144.12m; cavities at 144.78m and very broken core with some core losses between 146.46m and 149.66m.
- 149.66 - 157.37m - White-grey limestone.
- 157.37 - 163.74m - Mottled grey partially recrystallized limestone; at 157.89 - bedding/layering at 43° to core axis. From 158.80m to 163.74m - grey to dark grey limestone which gradually becomes lighter in colour to almost white at 160.93m where it is accompanied by irregular and weakly developed quartz veining.
- 163.74 - 165.81m - Almost entirely white quartz, no sulphides.
- 165.81 - 166.42m - Mixture of white quartz and white limestone.
- 166.42 - 172.97m - Grey limestone with irregular swirled patterns.
- 172.97 - 176.63m - Solid white marble with small amounts of very fine-grained grey-brown, brassy coloured sulphides.
- 176.63 - 187.15m - Dark grey limestone with occasional fragmental textures.
- 187.15 - 215.86m - Off-white coloured limestone - monotonous appearance.

- 215.86 - 216.10m - Sharply defined band of beige-brown waxy schistose green micas (mariposite?) and fine-grained sulphides - apparently all pyrite.
- 216.10 - 222.80m - Light coloured limestone with fracturing and weak shearing. In part has powdery texture.
- 222.80 - 290.78m - Return to solid homogeneous grey limestone.
- 224.94 - 225.09m clayey seam
- 226.77 - 229.06m grey patterning in white limestone
- Section between 243.84 and 261.52m has gradual darkening of colour of limestone.
- 257.56 - 261.21m - sand-sized particles and granular texture; pattern of distorted bedding at 75° to 85° to core axis
- 261.52 - 267.61m - light coloured limestone with swirled patterns of extremely distorted bedding
- 267.61 - 284.99m - white limestone apparently of high purity - more broken than the brownish coloured phase.
- 284.99 - 290.78m - increasing amounts of impurities in this section, minor schistose layers
- 290.78 - 306.32m - Sharp contact with green gneissic serpentinous meta-sedimentary rock. Contact area is virtually pulverized but despite moderately strongly developed shearing there is no evidence of displacement. Foliation is strong at 70° to core axis. Green and white colour banding results from irregular interlayering of limey beds and conformable calcite veins. Occasional minor quartz veins and blebs. Rock breaks into thin wafer-like fragments.

### 3. CONCLUSIONS

The Amy-Dee 1 - 4 mineral claims, comprising 64 claim units, cover an area of Shuswap Metamorphic terrain. Geology of the immediate vicinity of the White Bluffs portion of the area is dominated by limestone of the Tshinakin member of the Eagle Bay formation of Cambrian-Ordovician age. Brown-grey coloured sphalerite occurs with white vein quartz in a conformable layer about two metres in thickness in the limestone. Zinc content is estimated to be several percent.

Drill Hole 82-1 was successful in testing and proving the down-dip extension of the sphalerite bearing quartz layer for a distance of about 130 metres. Further exploration efforts should be directed to investigating the mineralized structure along both its strike and its dip dimension. Widths and metal contents indicated by work to date are not sufficient to support a viable mining operation and efforts must be directed to discovery of thicker and richer portions of the structure.

### 4. REFERENCES

1. Jones, A. G., 1959, Vernon Map Area, British Columbia, Memoir 296, Geol. Surv. Can.
2. Campbell, R. B., 1964, Adams Lake and Canoe River Map Areas, Summary of Activities, Field, 1963, Geol. Surv. Can.
3. Okulitch, A. V., 1974, Stratigraphy and Structure of the Mount Ida Group, Vernon (82L), Seymour Arm (82M), Bonaparte Lake (92P) and Kettle River (82E) Map Areas, British Columbia, Geol. Surv. Can. Paper 74-1, Part A.
4. 1979, Thompson-Shuswap-Okanagan, Open File 637, Geol. Surv. Can.

5. STATEMENT OF COSTS

The following costs were incurred in drilling hole 82-1 on the Amy-Dee prospect, Adams Lake area, Kamloops Mining Division, B. C.:

Mobilization and removal of diamond drill and equipment from Williams Lake to prospect and return to Williams Lake,  
 lump sum charge: \$ 2,000.00

Contract drilling price of \$30.00 per foot (\$98.42 per metre) including labour, fuel, water supply, drilling muds, core boxes on the job transportation, accommodation and meals for drill crew, supervision 30,150.00

Total cost for 1005 feet (306.32 metres).....\$32,150.00

6. STATEMENT OF AUTHOR'S QUALIFICATIONS

Erik A. Ostensoe, B. Sc., Geologist

Education: Completed B.Sc.(Hons.) course at Univ. of British Columbia, Vancouver, B. C., May, 1960.

Completed course requirements for M.Sc. degree at Queen's University, Kingston, Ontario in 1966. Thesis incomplete.

Professional Associations:

Member: Canadian Inst. of Mining and Metallurgy,  
 Association of Exploration Geochemists  
 Geological Association of Canada.

Work History:

May, 1960 - August 1964 - employed by Newmont Mining Corporation of Canada Ltd. as geologist in Granduc Mine area, B.C. under direction of D.M. Cannon, P. Eng., and G.W.H. Norman, PhD, P.Eng.

Summer, 1965 - employed as geologist by a Yukon based exploration syndicate

Summer, 1966 - employed as geologist by exploration syndicate working in northwestern British Columbia

October 1966 - June 1978 employed by Hecla Mining Company

of Canada Ltd. and Granduc Mines, Limited as exploration supervisor and chief geologist, respectively, under the direction of P.I. Conley, P. Eng.

August to November, 1978 - employed on contract basis by Union Oil Company of Canada, Ltd. as geologist in charge of field program at Beaverdell, B. C.

April 1979 - September 1982 - employed by Armco Mineral Exploration Ltd. as senior geologist, assigned to projects in north-central British Columbia and Yukon under direction of P.I. Conley, P. Eng.





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