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CONFIDENTIAL

A REPORT
on the
TAS PROPERTY - ORE RESERVES
for
BLACK SWAN GOLD MINES LTD.
by
R. Somerville, P. Eng.

March 31, 1989

N.T.S. 93 K/16
OMENICA MINING DIVISION
55° 52' N
124° 16' W



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INTRODUCTION

SUMMARY

The TAS property, 50 km north of Fort St. James and 150 km northwest of Prince George is a recent gold copper skarn discovery. The deposit is hosted within the Takla Group Volcanics, a sequence of Mesozoic volcanics, volcanoclastics, and related sediments located in the northwesterly trending Quesnel Trough. This sequence is intruded by Omineca intrusions of Upper Mesozoic age.

The TAS gold deposits are hosted by a sequence of intermediate tuffs, flows, and siltstones which have been strongly hornfelsed by a stock of granodiorite to diorite composition. It is assumed that, initially, this stock fractured and invaded the host rock with a swarm of dykes and sills, then, apparently, hot fluids were forced into the host rock, causing hydrofracing, hornfelsing, and metasomatism of the dirty calcareous sediments, and alteration of the intrusive sills and dykes, and subsequently depositing sulphides in open fractures and as replacement deposits.

To date, four zones of mineralization have been located on the TAS property: the East, Mid, 19, and West Zones. At present each of these zones appears to remain open laterally and vertically. Approximately 10,400 feet of drilling has been completed in 43 holes in all areas on the property. Black Swan Gold Mines Ltd., in its 1988 program drilled 4,108 feet (1252 m) of drilling in 21 holes, did some trenching and stripping on the known zones, and surveyed some of the main features on the property.

Table I summarizes the preliminary estimate of the ore reserves, which were calculated based on the exploration to date.

Results of the surface sampling and drilling combined with the ideal location of the TAS property make it one of the most exciting new gold and copper prospects to be found in British Columbia over the past few years.

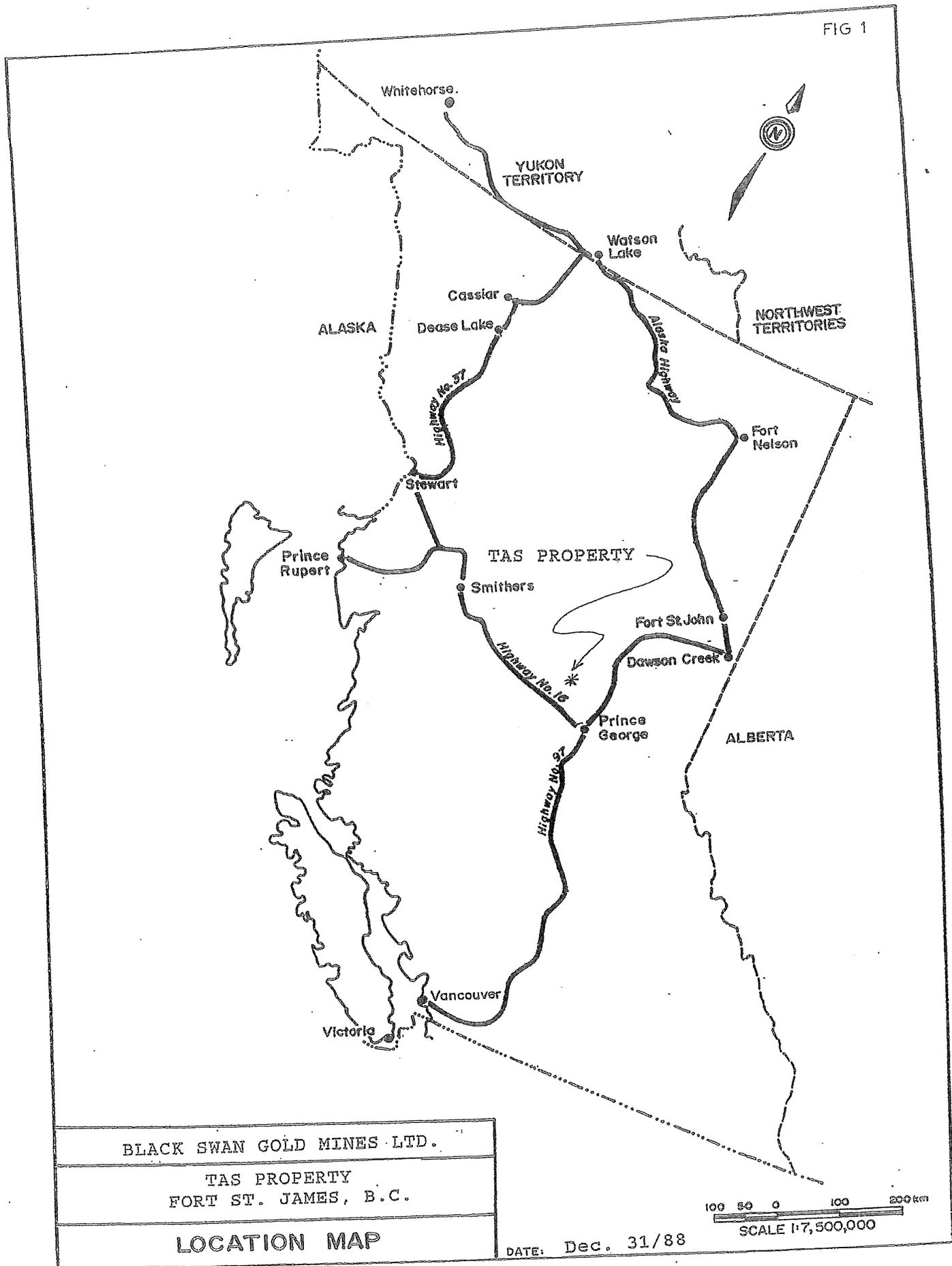
CONCLUSIONS

1. A small ore reserve of 60,110 tons (in all categories) @0.233 oz Au/ton exists in four north-striking, steeply dipping zones.

2. In two of the four zones, the gold ore zone appears to be widening with depth. In the case of the other two zones, not enough information is available to make a judgement.

3. All the zones appear to show an increase in copper content, sulphide mineralization and alteration with depth. Hole 88-31 had an average grade of 2.27% copper over 11.2 ft., indicating the possibility of economic grade copper with depth.

FIG 1



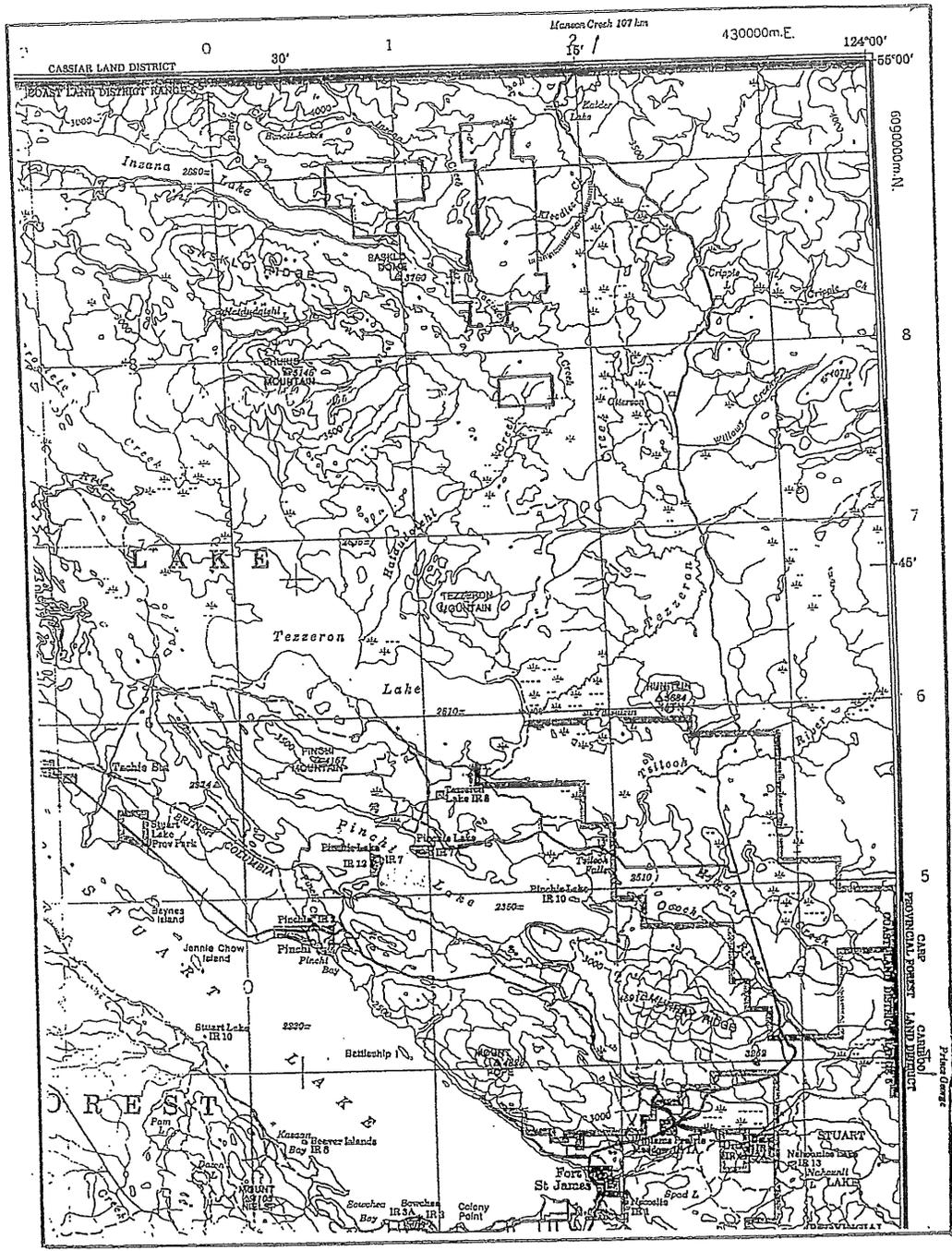
BLACK SWAN GOLD MINES LTD.

TAS PROPERTY
FORT ST. JAMES, B.C.

LOCATION MAP

DATE: Dec. 31/88

100 50 0 100 200 km
SCALE 1:7,500,000



TAS PROPERTY
 CLAIM LOCATION MAP
 Figure 2

LOCATION AND ACCESS

The TAS property is situated 60 km north of Fort St. James and 150 km northwest of Prince George, in British Columbia. The property is accessed by The North Road highway out of Ft. St. James, and the Inzana Lake logging road. Both roads are accessible all year round by two-wheel-drive vehicle. On the property the rougher cat built roads are easily travelled by four wheel drive vehicle.

TOPOGRAPHY

The area around the TAS property consists of swampy and forested flat areas broken by low ridges of resistant rock. Towards the north and west the terrain becomes steeper, while to the south and east the terrain becomes typically flat interior plateau. The topography of TAS consists of roughly east-west striking parallel ridges with low lying drainage areas in between.

The area is thickly treed by spruce and balsam with isolated stands of poplar. Underbrush is sparse and consists mainly of blueberry bushes and Labrador tea.

THE PROPERTY

The property consists of three claims blocks covering a total of 6,325 Hectares.

CLAIMS

NAME	UNITS	RECORD #	RECORD DATE	DUE	AREA(Ha.)
Ha 1	18	7705	June 30	1989	450
Tas 1	9	8142	January 27	1991	225
Tas 2	12	7448	December 30	1990	300
Tas 3	9	7449	December 30	1990	225
Tas 4	12	7450	December 30	1990	300
Tas 5	8	7451	December 30	1990	200
Tas 6	15	7700	June 24	1991	375
Tas 7	20	7701	June 24	1991	500
Tas 8	20	7702	June 24	1991	500
Tas 9	20	7703	June 24	1991	500
Tas 10	15	7704	June 24	1991	375
Tas 11	20	7959	September 17	1990	500
Zana 2	20	8099	December 4	1989	500
Zana 3	20	8100	December 4	1989	500
Zana 4	15	8101	December 4	1989	375
Zana 5	20	8247	March 24	1990	500

PREVIOUS WORK

The property received little attention until 1969, when the N.B.C. syndicate ran VHEM, magnetometer and geological surveys over the HAT claims to investigate a copper showing now covered by the Ha 1 claim. In 1981 Selco contracted an airborne EM and magnetometer survey. This led to staking of the SASK claims north of Ha 1, and HLEM and ground magnetometer surveys. In 1982, bulldozing on the new Inzana Lake forest road revealed scattered copper mineralization near the present Freegold zone. The area was staked, allowed to lapse, then re-staked by A. Halleran following anomalous gold values in rock from the same zone. Subsequent prospecting found visible gold in quartz vein material.

Noranda optioned the property in 1985. After the geochemical results from a small followup programme around the Freegold Zone were seen to be promising, the old grid was extended to 87.5 km of line and a new grid established to cover the current Ridge zone. The new grid allowed for 60.75 km of line with closer spacing than the old grid. Grids were also established on the Zana and Ha 1 claim blocks for a total of 24 km and 12.25 km of line respectively. In 1986 soil sampling over the Ridge outlined a strong geochemical anomaly over a length of 1.5 km, coinciding with a marked I.P. and magnetic signature.

In the summer of 1987 Noranda continued their programme with bulldozer trenching, 3898 feet of diamond drilling, and 1280 feet of percussion drilling, concentrating on the Freegold zone and the anomalous Ridge zone. After 17 diamond drillholes, three strong gold-bearing zones were indicated: the East Zone, the Mid Zone and the West Zone. Nine percussion drill holes were attempted on the flatter ground below the Ridge zone, but all were unsuccessful owing to poor recovery, caving, or deep overburden.

Goldcap Inc. optioned the property from Noranda, and drilling continued in the winter of 1988, with Noranda as operator undertaking a small programme of 1314 feet of diamond drilling in five holes and further I.P. surveys. This programme indicated a possible fourth zone between the mid and west Zones by an intersection in hole 88-19.

In the fall of 1988 Black Swan Gold Mines Ltd. entered into an agreement with both Goldcap Inc. and Noranda Exploration Ltd. to acquire a controlling interest in the TAS property and operatorship of the joint venture.

TABLE 1
 PRELIMINARY ESTIMATE of the ORE RESERVES
 TAS PROPERTY - March 31, 1989

ZONE	TONS		GRADE	
	Probable	Possible	Probable oz Au/ton	Possible
Mid	3,780	4,000	0.62	0.25
19		3,000		0.45
West	18,980	5,000	0.17	0.20
East	20,350	5,000	0.20	0.20
Total Probable	43,110		0.224	
Total Possible		17,000		0.257
TOTAL ALL CATEGORIES 60,110 @ 0.233 oz Au/ton				

ORE RESERVES

General

Four zones were confirmed as having a significant ore reserve and the potential for expansion. These are the East Zone, Mid Zone, 19 Zone and West Zone. The current ore estimation is summarized in Table 1.

Ore Reserve Calculations

The criteria used in calculating the reserve is as follows:

1. Boundaries of ore reserve blocks are not projected more than 15 m from ore grade intersections;
2. Internally, within the ore reserve block, no projection was made more than 20 m between ore grade intersections;
3. Ore grade intersections that were less than 1 m in true thickness and were used in the reserve calculations were diluted to a minimum 1 m of true thickness using the wall rock grade or zero grade where no information was available;
4. The external grade cutoff was restricted to 3 gm Au/ton.
5. The high copper values encountered in the Mid Zone were not considered in the calculation.

MINERALIZED ZONES

The East Zone

The East Zone appears to have been terminated by a Noranda Hole 87-3 on the south end of the zone. However, the location of this hole is in doubt, and on the surface, ore grade material is exposed for 15 m further south than the supposed position of this hole. The northern extension of this zone is apparently cut off

by Hole 87-11, but again the location of this hole is in doubt. Certainly the East Zone is open to depth extension, and the alteration and the mineralization appear to be intensifying with depth.

The Mid Zone

The Mid Zone is a very attractive exploration target. The gold grade increases dramatically in the lowest diamond drillhole (88-31) and the copper has increased from trace amounts at surface to an average of 2.27% over 11.2 ft. in the same hole. Also, the width of the alteration and mineralization appears to have increased significantly from Hole 88-30 to Hole 88-31, suggesting an intensity of mineralization with depth. A number of diamond drill holes should be drilled on this target both along strike and down dip.

The 19 Zone

The reserves outlined on the 19 Zone are weakly based on 3 diamond drill holes. The fourth and only other hole in this area also has intersected ore grade mineralization, but the continuity with the other three is suspect (possibly fault offset). It would appear that this zone has considerable depth potential. The surface expression of this zone does not compare in sulphide or alteration intensity with the drill holes 88-19 and 88-34.

The West Zone

The West Zone has been largely stripped, and is clearly traceable on the surface for over 50 m. Over this length, Noranda holes 87-14 and 97-15 were drilled in the wrong

direction, and missed the zone. Black Swan Holes 88-35 and 88-36 indicate a very strong sulphide zone widening and intensifying with depth. North of Section 3, Holes 88-38 and 88-39, together with the surface geology, strongly suggest that this block has been downfaulted and shifted to the west. On the extreme north beyond Section 4N, a deep trench uncovered a mineralized section of undisclosed thickness, grading 5.53 g/t. Again, it would appear that while the strike potential is still open, the possible depth extension of this zone holds the maximum potential.

CERTIFICATE

Re: A Report on the TAS Property - Ore Reserves for Black Swan Gold Mines Ltd. dated March 31, 1989.

I, Richard D. Somerville, residing at 1052 Esquimalt Avenue, West Vancouver, British Columbia, V7T 1J8 certify that:

1. I am a practicing Consulting Geologist with offices at 103 - 255 West 1st Street, North Vancouver, B.C.
2. I am President of R. Somerville Geological and Mining Engineering Ltd.
3. I am a Registered Professional Engineer of the Province of Ontario and British Columbia.
4. I am a Fellow of the Geological Association of Canada and a member of the Canadian Institute of Mining & Metallurgy.
5. I am a graduate of Queen's University at Kingston, Ontario, having received a B. Sc. (honours) degree majoring in Geology, and a B.A. degree majoring in physics and mathematics.
6. This exploration work was conducted under my direction. I have visited the property, and I am satisfied that the work was conducted in a proper and professional manner.

West Vancouver, British Columbia
March 31, 1989

R. Somerville, P. Eng.

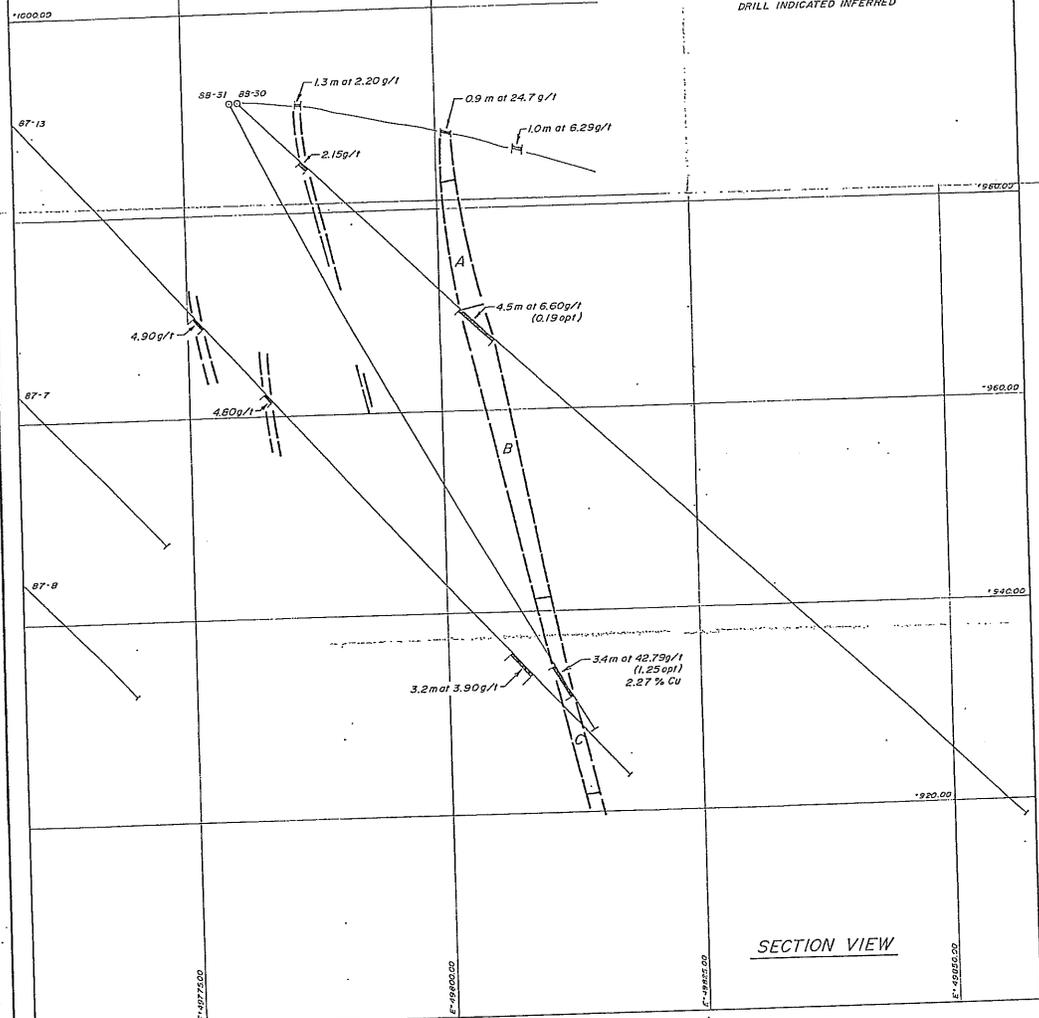
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- SEPT. 1988 Report of Work on the TAS Project by Gordon Maxwell and Lyndon Bredish for Noranda Exploration Company Ltd.

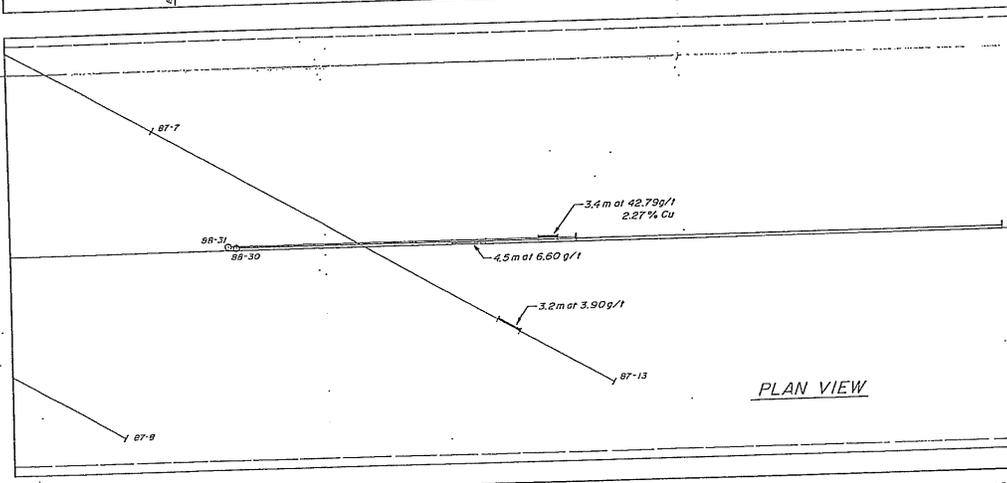
West Zone
ORE RESERVES

Category	Tonnage	Grade gm Au/t	
BLOCK A	Probable	918	6.6
BLOCK B	Probable	2012	19.7
BLOCK C	Probable	848	42.9
		3778	21.2

DRILL INDICATED INFERRED



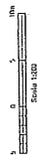
SECTION VIEW



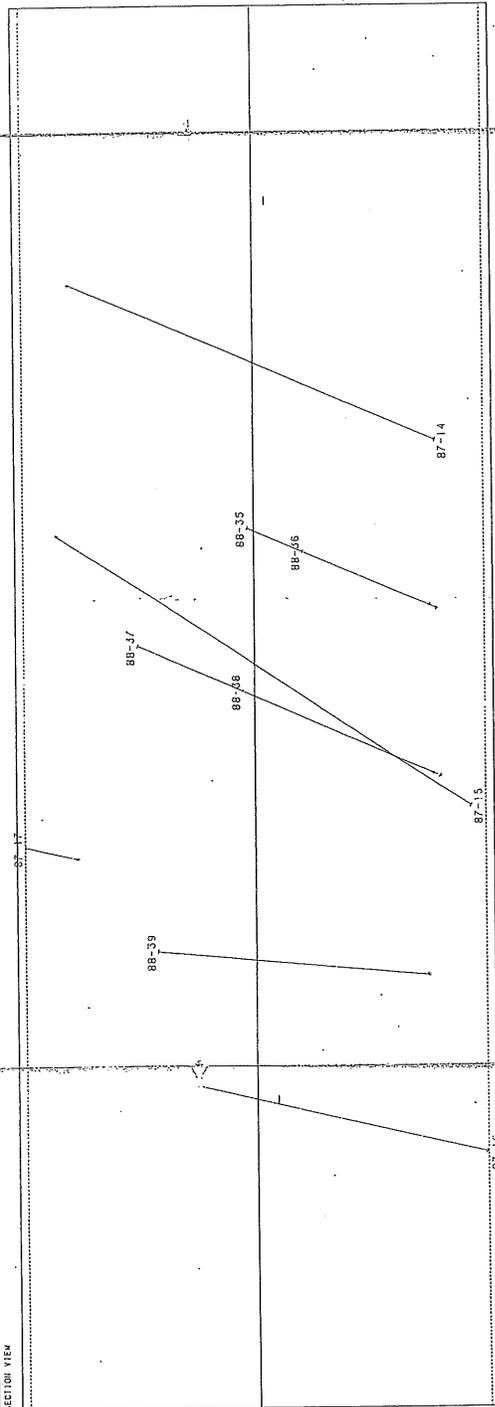
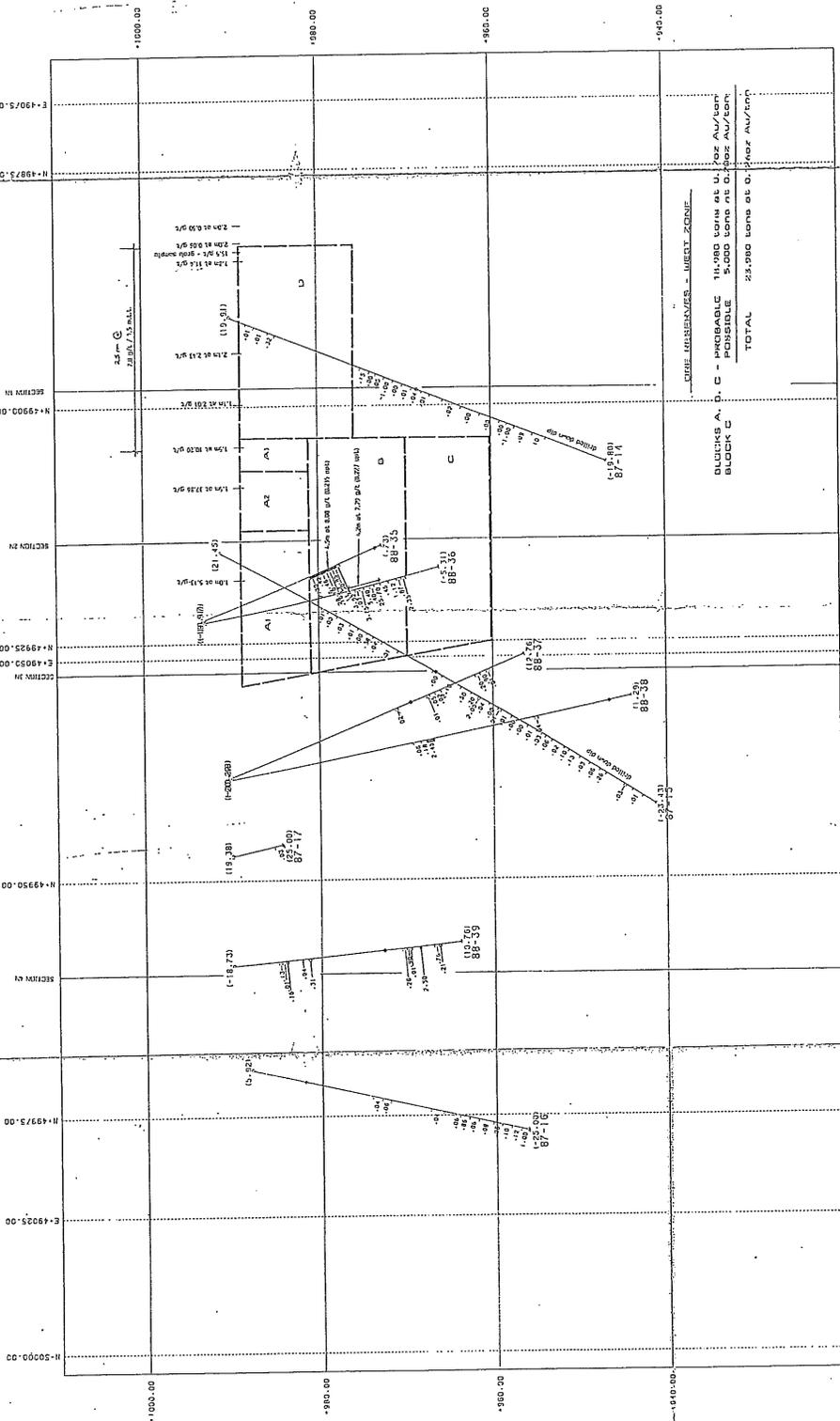
PLAN VIEW



Black Swan Gold Mines Ltd.
TAS CLAIMS
Mid Zone
ORE RESERVES
May, 1989
R. Somerville Geological & Mining Eng. Ltd.



UNION PACIFIC RAILROAD CO.
 The Claims
 UNDER THE PROVISIONS OF
 ACTS OF CONGRESS
 Relating to the
 WRECK ZONE
 AUTHORIZED BY ACT OF CONGRESS APRIL 11, 1907
 CASE NO. 1000
 E. Greenleaf Campbell & Philip J. Van
 No. 31/199



SECTION VIEW

PLAN VIEW

