

Summary

Over 1,000,000 tons of gold ore were produced from the Surf and the Pugsley Mines prior to 1942. In 1946 and 1947 further underground work established new reserves and ore potential at depth in the Pugsley Mine. Exploration for extensions of ore zones in the lower levels of the Surf Mine at that time was limited by the presence of the property boundary.

The present Surf Inlet Property includes all areas adjacent to and down-dip of the Surf and Pugsley deposits. A detailed study of mine plans, sections and drilling information has resulted in well-defined exploration targets in these areas. The potential for finding additional ore shoots of significant tonnage and grade is considered excellent.

LOCATION AND ACCESS

The Surf Inlet property is located on Princess Royal Island 650 km northwest of Vancouver, British Columbia. The main supply base is approximately 160 km to the northwest at Prince Rupert (Figure 1). Princess Royal Channel, along the east coast of the island, is part of the "Inside Passage" for ocean-going ships travelling between Vancouver and Prince Rupert. Ships called at the head of Surf Inlet when the mines were in production.

The minesite is 13 km from tidewater. Access is by air or by water. A 500 metre road from the head of Surf Inlet to Cougar Lake was completed in 1987. This road provides a barge plus road access route to the main part of the property (Figure 2).

PHYSIOGRAPHY

The Surf and Pugsley mines, are located 500 metres apart on either side of the Paradise Creek valley. The Surf mine is situated on the northern side and the Pugsley on the south. Topography is very rugged with steep-sided peaks rising to a maximum elevation of 1,100 metres above sea level.

Annual rainfall is 430 to 500 cm and snowfall is 60 to 120 cm per year. Temperatures are moderate at the elevation of the main portals and allow year-round operations. The average mean daily temperature is 2.7°C in winter and 13.2° in summer.

PROPERTY AND TITLE

The property has a total area of 3,250 hectares owned by or under option to Surf Inlet Mines Ltd. The tenure includes 23 mineral claims, 21 crown grants, 7 district lots, foreshore rights for docking facilities and power and storage rights for the dam at the head of Surf Inlet.

HISTORY

The Surf and Pugsley Mines operated from the early 1900's to 1926 and from 1936 to 1942. The ore was mined from underground workings. Seven levels were developed in the Pugsley and 14 levels in the Surf. The lowest level in the Pugsley Mine is the 1,500 level, which is 500 feet (152 m) below sea level. The lowest level in the Surf Mine is the 1,400 level and is 275 feet (84 m) below sea level. Access below 900 level is from internal inclined shafts. The entire operation was electrified from a nearby hydroelectric plant.

The mine was closed in 1942 due to a scarcity of labour and general war conditions. Total recorded production from the property is 1,091,131 tons, of which 169,886 tons came from the Pugsley and the remaining 921,245 tons from the Surf ore body. From this ore were recovered 382,351 ounces of gold, 208,752 ounces of silver, and 6,314,341 pounds of copper.

In 1946 and 1947 underground work was carried out, mainly in the Pugsley Mine establishing ore reserves and new ore potential. Reserves as calculated by mine staff at that time are 47,250 tons in the Pugsley and 3,800 tons in the Surf Mine at an average grade of 0.4 oz Au/ton. Exploration and development at the lower levels of the Surf ore zone was limited due to the presence of the boundary of a northerly trending group of claims owned by a man named Wells. As a deal with Wells could never be completed, this ground has never been explored.

In 1981, Cominco Ltd. and Placer Development Limited carried out an exploration program consisting of geological mapping on surface and underground, sampling of surface showings, limited geochemistry, and ten shallow diamond drill holes totalling 1,526.4 metres. The Cominco-Placer work was directed toward outlining a large tonnage open-pit deposit.

Surf Inlet Mines Ltd. began work on the property in 1985. Sampling programs, surveys and metallurgical testwork were done to evaluate the tonnage and grade of the stockpiles and tailings on the Surf Inlet property (Figure 3). Mine Dumps near the 550 Portal of the Surf Inlet Mine are estimated to contain 150,000 tons (136,000 tonnes) of material at an approximate grade of 0.1 oz Au/ton. Tailings remaining in the area at the mouth of Paradise Creek are 187,000 tons (170,000 tonnes) at an average grade of 0.033 oz Au/ton.

MINERALIZATION AND STRUCTURE

The property is underlain primarily by granitic rocks of the Coastal Plutonic Complex. The main rock units are competent diorite and gneiss.

The dominant structure consists of a fault zone, visibly traceable for approximately 4,400 metres horizontally and 1,000 metres vertically. In the vicinity of the Surf and Pugsley Mines, the fault system is broadly

convex towards the west, striking approximately N23°E at the north and north-south at the central section and approximately N18°W at the south end. Dips range from 30° to 60° west, but average 45° west.

Within the Surf Mine the fault zone splits or splays into main footwall and hanging wall shears. The split is caused by a change in strike of the structures. The zone of the intersection of these two shears appears to rake south within the area between the two major shears (Figure 4). Mineralization consisting of quartz, pyrite, and minor chalcopyrite is emplaced within these shears and associated structures. The ore shoots vary in thickness from 1.5 metres to over 15 metres.

Similar structural patterns are observed in the Pugsley Mine area (Figure 5). The ore shoots are generally 1.5 metres in thickness and the stopes are less continuous along the dip than in the Surf Mine. However, there are several shoots which continue through the lower workings and appear to have good depth potential.

Other gold quartz showings of significance outcrop along the shear, south of the Pugsley Mine. Showings outcrop on the Independence Fr., Anaconda, Bonanza, Summit, and Cassie claims, the last of which occurs 600 metres south of the end of the most southerly exploration drift.

METALLURGY

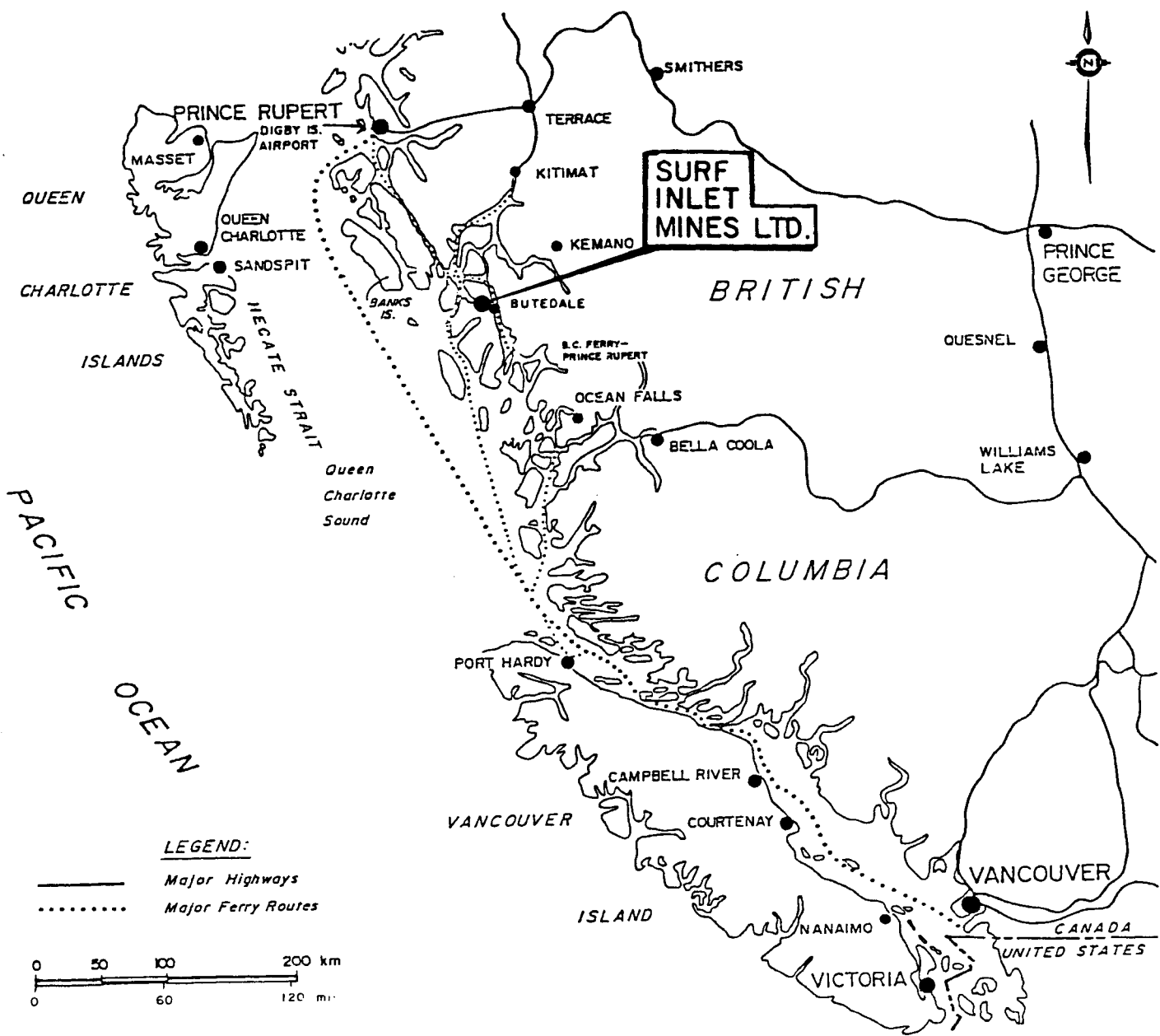
Gold mineralization occurs with pyrite in the veins. The metallurgy is simple; a basic flotation circuit was used during previous production with recoveries of 92% at an average head grade of 0.425 oz Au/ten recorded in 1917. It is believed that with current technology 92% recovery or better can be achieved.

EXPLORATION POTENTIAL

David R. Bell, a well-known geologist in the mineral industry, reviewed the data on the Surf property and concluded that there is excellent potential for the occurrence of additional ore zones of similar value both along strike and at depth.

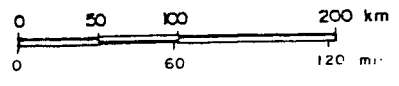
In the Surf Mine, previous drilling from the 1,000 foot level, as well as structural control and mode of emplacement of ore shoots indicates a new ore shoot may be present below this level north of the present workings (Figure 6). This ore shoot has the potential for size and grade similar to that of the main ore body. Diamond drilling from cross-cuts on the 900 foot level at sections 6600 N and 6800 N would test this zone.

Approximately 45,000 tons of reserves have been outlined in the Pugsley Mine from historical data (Figure 7). The extensions of these ore zones require testing. This work would include dewatering to below the 1,100 level and establishing crosscuts along sections 600 N, 750 N, and 1,000 N. This would facilitate diamond drilling from 1,000 to 1,500 level. Initial drilling of the area north of section 1,200 N could be completed from the existing 1,100 level drift.

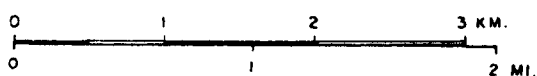
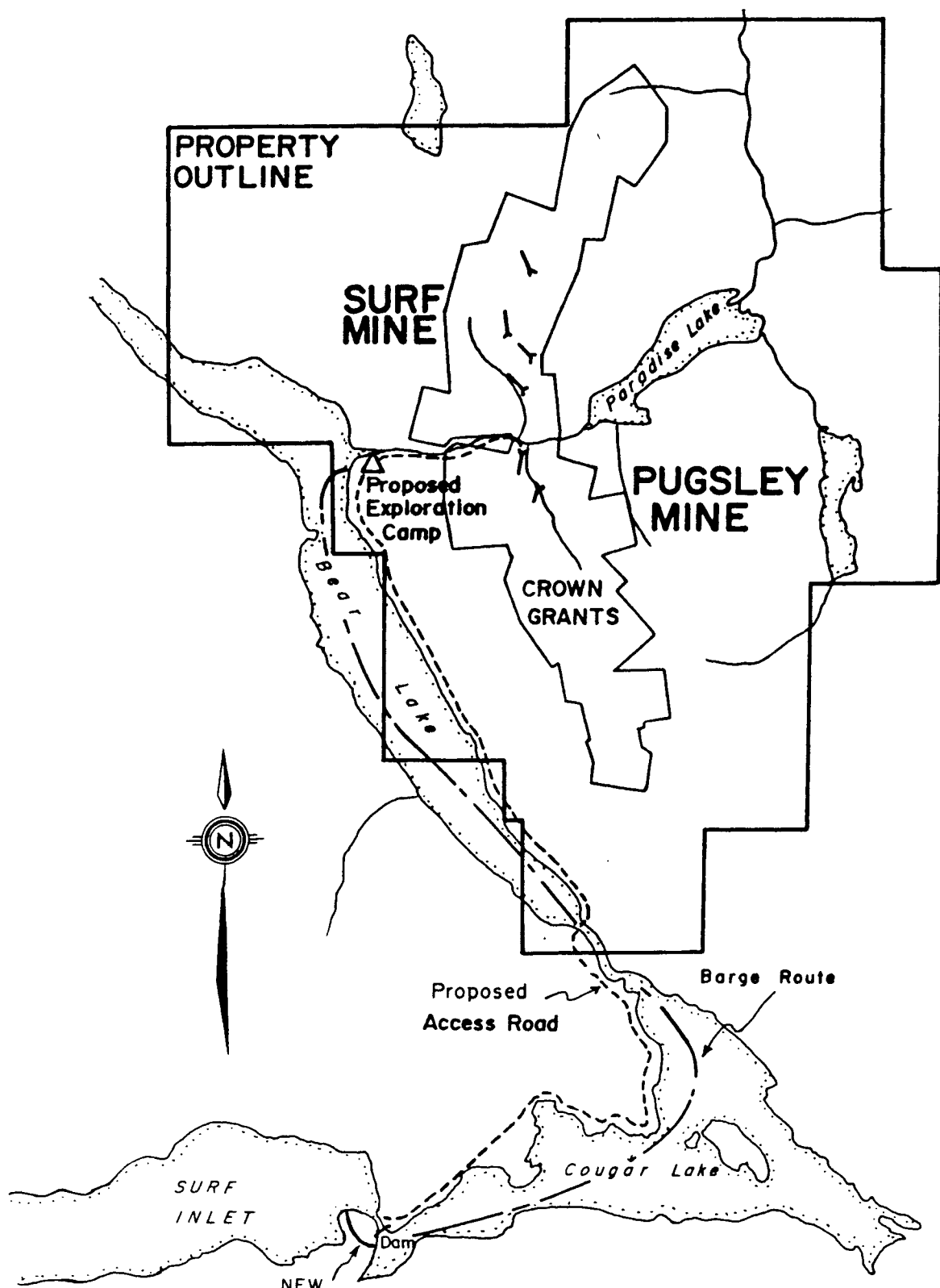


LEGEND:

- Major Highways
- Major Ferry Routes



SURF INLET MINES LTD.
LOCATION MAP
PROJECT: SURF INLET
ENG. TVW ENGINEERING LTD.
FIGURE N ^o : 1



SURF INLET MINES LTD.	
PROPERTY MAP	
PROJECT :	SURF INLET
ENG. :	TVW ENGINEERING LTD.
FIGURE NO. :	2

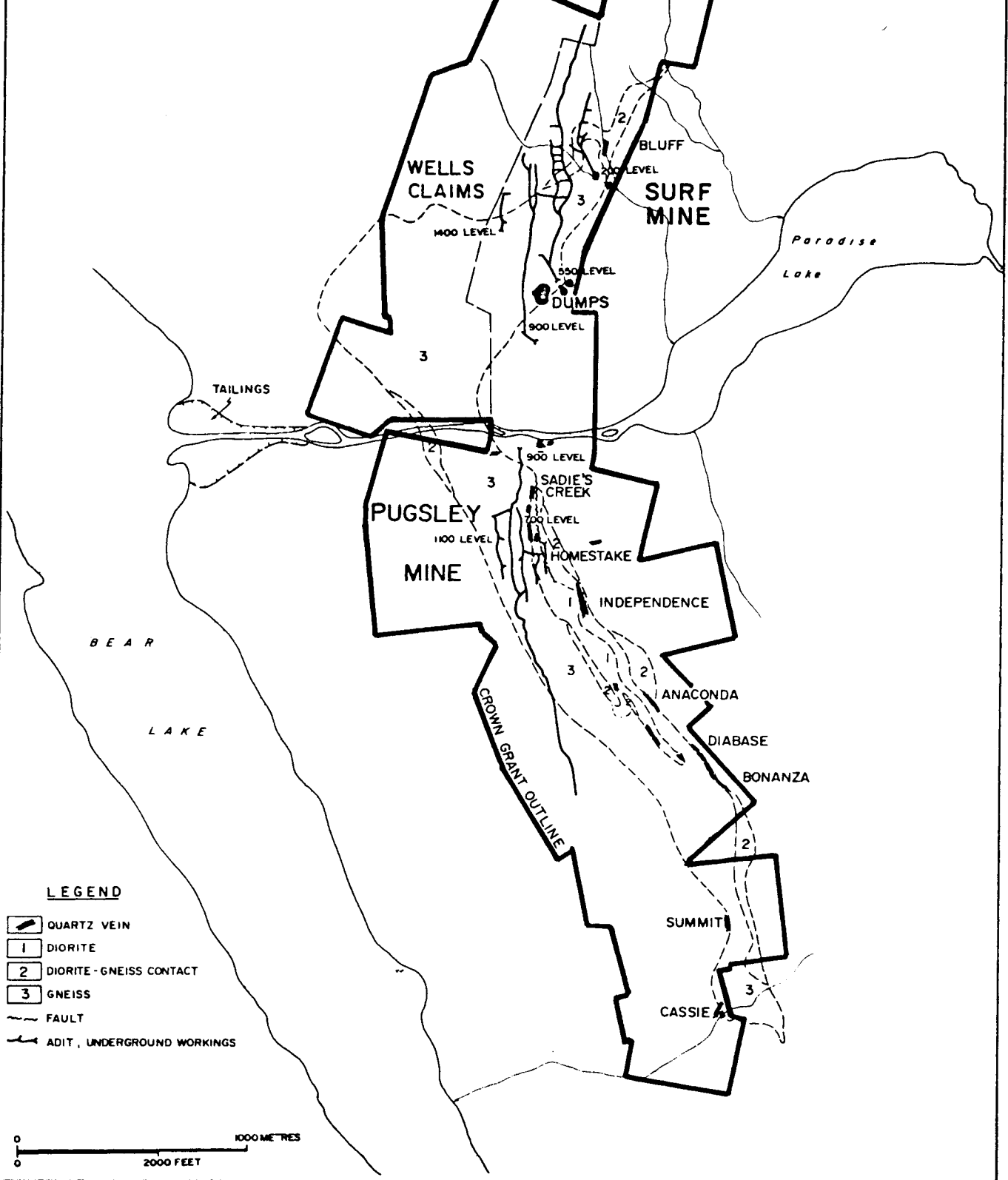
SURF INLET MINES LTD.

SITE COMPILATION MAP

PROJECT: SURF INLET

ENG.: TVW ENGINEERING LTD.

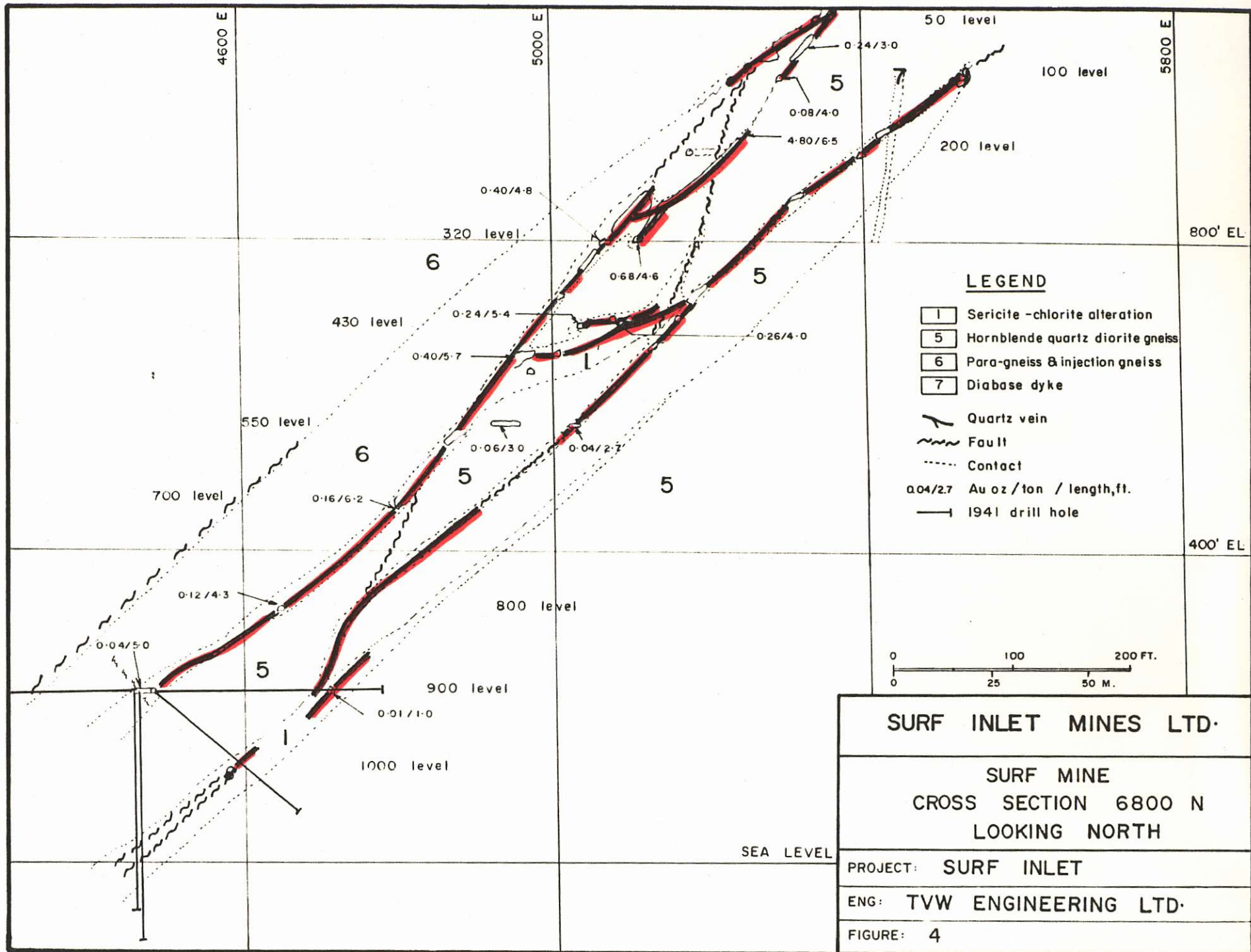
FIGURE 3

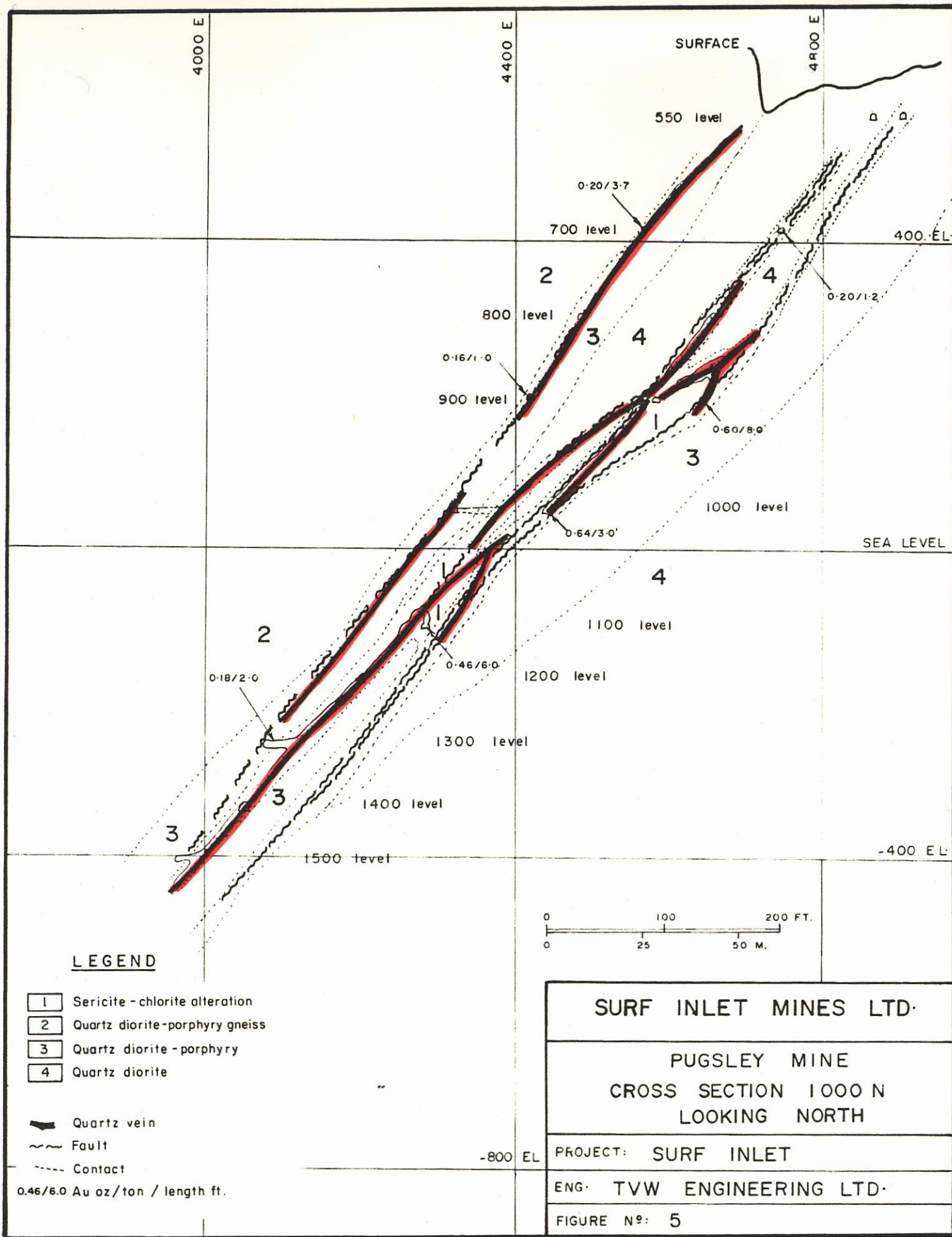


LEGEND

- QUARTZ VEIN
- DIORITE
- DIORITE - GNEISS CONTACT
- GNEISS
- FAULT
- ADIT, UNDERGROUND WORKINGS







4000 E

4400 E

4800 E

SURFACE

550 level

0.20/3.7

700 level

400 EL

2

4

0.20/1.2

800 level

0.16/1.0

900 level

0.60/8.0

1000 level

SEA LEVEL

4

1100 level

0.18/2.0

0.46/6.0

1200 level

2

1300 level

1400 level

3

1500 level

-400 EL



-800 EL

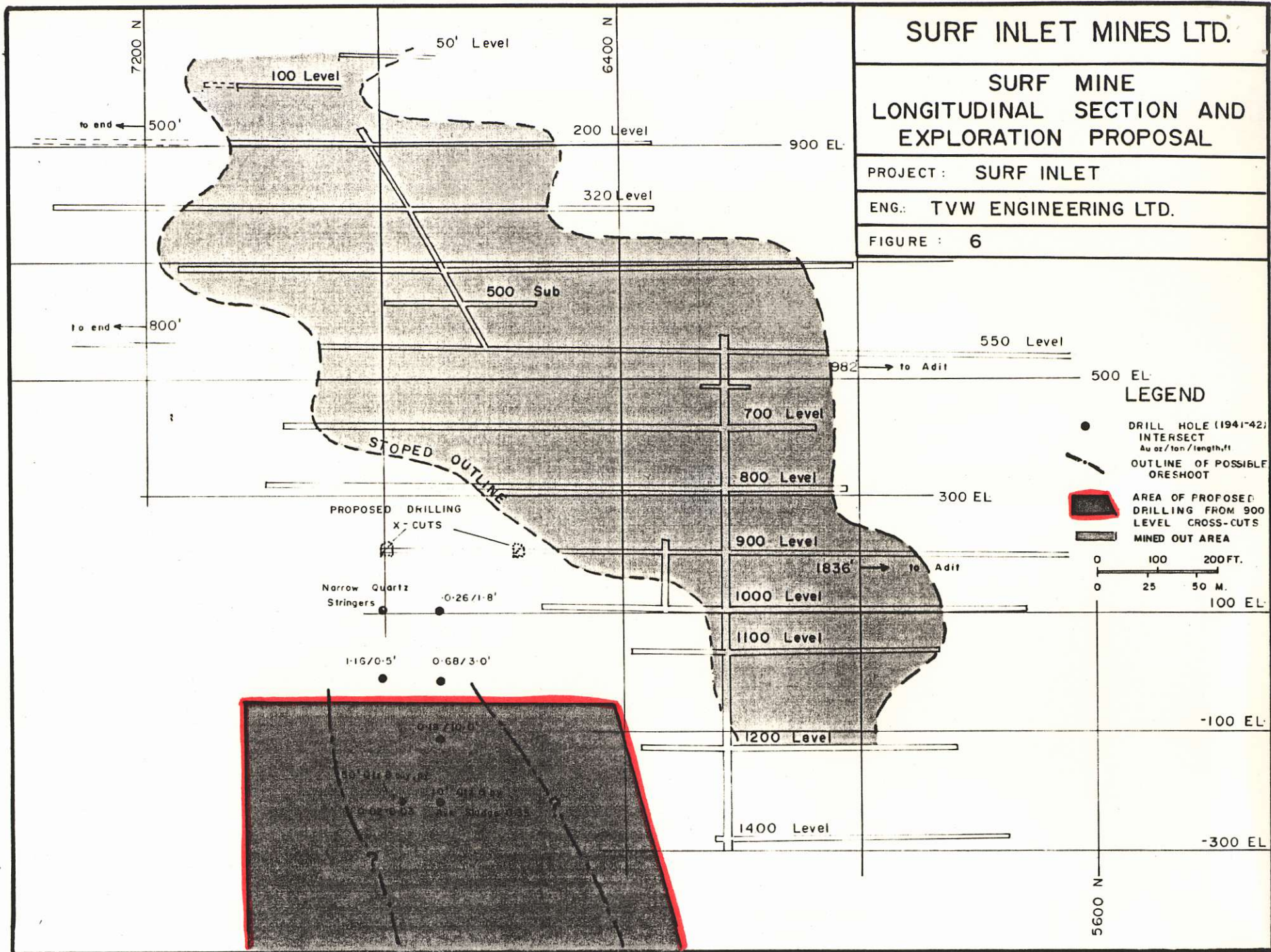
SURF INLET MINES LTD.

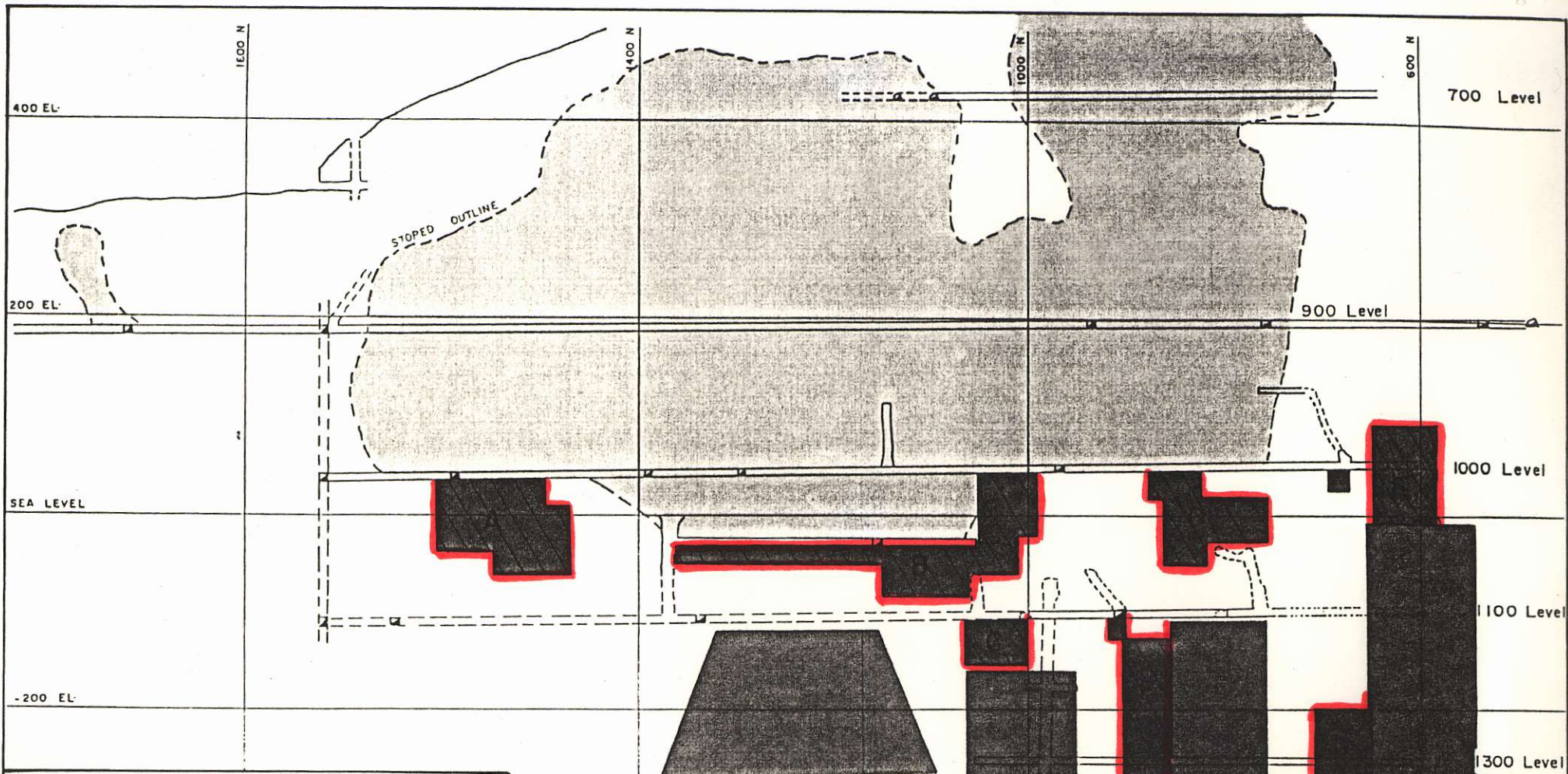
SURF MINE LONGITUDINAL SECTION AND EXPLORATION PROPOSAL

PROJECT: SURF INLET

ENG.: TVW ENGINEERING LTD.

FIGURE: 6





SURF INLET MINES LTD.


**PUGSLEY MINE
LONGITUDINAL SECTION AND
EXPLORATION PROPOSAL**


PROJECT : SURF INLET


ENG. : TVW ENGINEERING LTD.


FIGURE NO. : 7

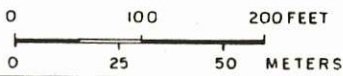
LEGEND

 KNOWN RESERVES

 AREAS OF PROPOSED DRILLING

 PROPOSED DRIFTING & CROSSCUTS

 MINED OUT AREA



BLOCK	A	5000 tons - 0.45 oz/ton	} TOTAL = 30000
"	B	8600 tons - 0.43 "	
"	C	1400 " - 0.21 "	
"	D	4600 " - 0.41 "	
"	E	2250 " - 0.31 "	
"	F	2900 " - 0.39 "	
"	H	5250 " - 0.47 "	
STOPE REMNANTS & OTHER VEINS			
TOTAL RESERVES			45000 tons