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PROSPECTING REPORT

ON

HEDLY NORTH, HEDLY SOUTH AND WINTERS GOLD

MINERAL CLAIMS

OSOYOOS MINING DIVISION

N.T.S. 92H/8E

49°20' N. 120°03' W.

OWNER OF CLAIMS

ZURICH ENERGY CORPORATION

OPERATOR

B.A. FENWICK-WILSON

BY

B.A. FENWICK WILSON

AUGUST 10, 1982

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

11,186

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SUMMARY

The Hedly North, Hedly South and Winters Gold mineral claims are located on the east side of the Similkameen River, 3½ km. southeast of the old gold mining town of Hedley, B.C.

The claims are underlain by Upper Triassic, Nicola Group meta-sediments intruded by Mesozoic dykes, sills and stocks of granodiorite and gabbro.

Skarn altered limy sediments occur in various areas within the claim groups. They are strongly mineralized with pyrrhotite and lesser amounts of chalcopyrite, bornite and arsenopyrite.

The geological setting of these claims is akin to that of the Nickel Plate, Good Hope, Canty and French mine environments.



Figure 1
 LOCATION MAP
 Hedly North, Hedly South and Winters Gold Claims
 Hedley Area
 Osoyoos M.D.
 1:1,900,800

INTRODUCTION

2

This report is based upon the results of initial prospecting traverses over the Hedly North, Hedly South and Winters Gold claims between June 10th and July 11th, 1982.

Beside prospecting, the base lines were run with Brunton and chain with wooden pickets at 100 meter intervals. Laterals were run from these 100 meter stations and ribboned every 30 meters, preparatory to a geochemical survey.

The S.W. and N.E. legal survey corners of C.G. 3467 were located. A survey was made to tie in the common legal corner post of the Hedly North and Hedly South claims to the S.W. corner of C.G. 3467.

This report is being used for assessment purposes for these claims.

LOCATION AND ACCESS

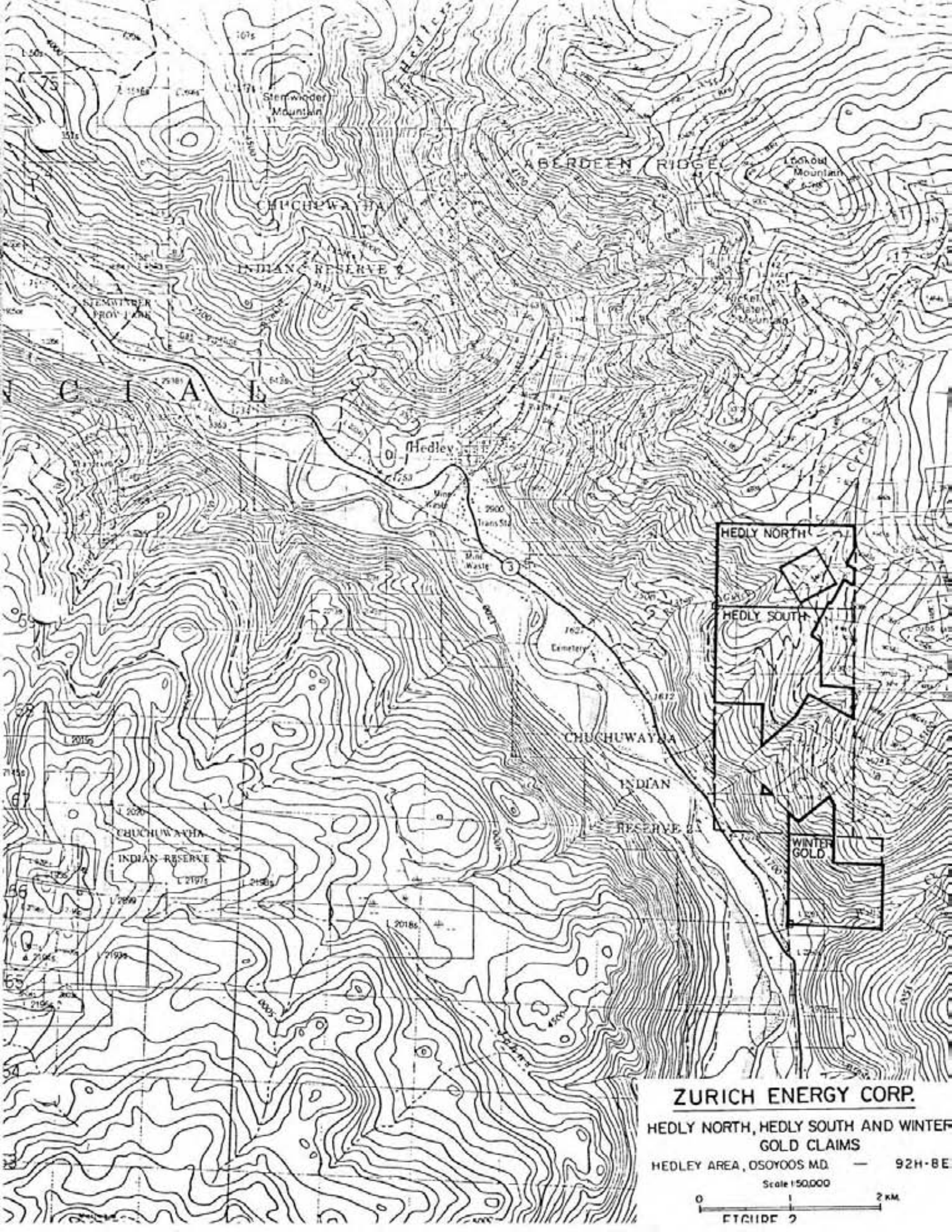
The claims are located southeast of Hedley in southern British Columbia, some 20 km. east of Princeton and approximately 215 km. east of Vancouver. (Map #1)

The middle of the claim block is approximately 4 km. south-east of Hedley. The claims lie immediately east of and adjoining the Churchwayha Indian Reserve No. 2. (Map #2)

Excellent access to the general area is provided by Highway #3 from Vancouver. Local access is also good. Hedly North and Hedly South claims are traversed by the Nickel Plate Mine road. This is a good gravel road which leaves Highway #3 near Redtop Gulch creek some 2½ km. southeast of Hedley. This road switch-backs it's way up the steep road through the claims and then on to the Nickel Plate, Canty and other claims being developed in that area, and then continues on past Apex Mountain to Penticton. Where this road crosses the Hedly South claim branch roads lead off to the Good Hope and French Mines which provide additional access to various parts of the Zurich Energy property.

The Winters Gold claims lies immediately east of Highway #3 and is accessible from it by a short farm road just north of Winters Creek. Good access to this claim is provided by the old Victoria Mine pack-trail and which is now used as a cattle trail to the summer range higher up. The trail follows Winters Creek along its bank, quite high above the creek bottom.

The Hedly North, Hedly South and Winters Creek claims are covered by National Topographic Series map 92H/8E. Geographical co-ordinates: Latitude: 49⁰20' north: Longitude: 120⁰02' west:



Stenwider Mountain

ABERDEEN RIDGE

Lookout Mountain

CHUCHUWAYA

INDIAN RESERVE

Hedley

HEDLY NORTH

HEDLY SOUTH

CHUCHUWAYA

INDIAN

RESERVE

WINTER GOLD

CHUCHUWAYA
INDIAN RESERVE

ZURICH ENERGY CORP.

HEDLY NORTH, HEDLY SOUTH AND WINTER GOLD CLAIMS

HEDLEY AREA, OSOYOOS MD. — 92H-BE

Scale 1:50,000



ETCIDE 2

PHYSIOGRAPHY

The claim area is located on the easterly side of the Similkameen River and occupies in the lower portions steep slopes which are characteristic of this area. The upper portion of the Hedly North and Hedly South claims are a more moderate terrain.

Douglas Fir, Aspen and sparse Ponderosa Pine cover the lower slopes. While fir predominates on the upper, moister, levels. A large portion of the claim is open grassy slopes between the trees and rock covered areas.

The Hedly North and Hedly South claims have large rock outcrops and cliffs. The rest of the surface coverage is mostly sandy loam and residual gravels, except that portion of the Hedly South claim which lies south of Cahill Creek. Here, the soil coverage is largely glacial till of possibly considerable depth. The principal outcrops are intrusive, whereas the sedimentary series are more eroded and consequently have sparser outcrops.

The Winters Gold claim has much cliffs and rocky outcrop on its lower slopes and the balance of this portion consists of talus or light sandy fragmental soil. There is sparse scrubby Pine and Fir. In the upper portion adjacent to the French Mine, the timber becomes heavier, the soil cover deeper and rock outcrops less prominent.

The Hedly North and Hedly South claims are drained by Redtop Gulch, Cahill Creek and their tributaries. Winters Gold claim is drained by Winters Creek. All these creeks drain into the Similkameen River.

Elevations vary from about 475 meters on the Winters Gold claim near the Similkameen River to 1400 meters on the north part of the Hedly North claim.

PROPERTY AND OWNERSHIP

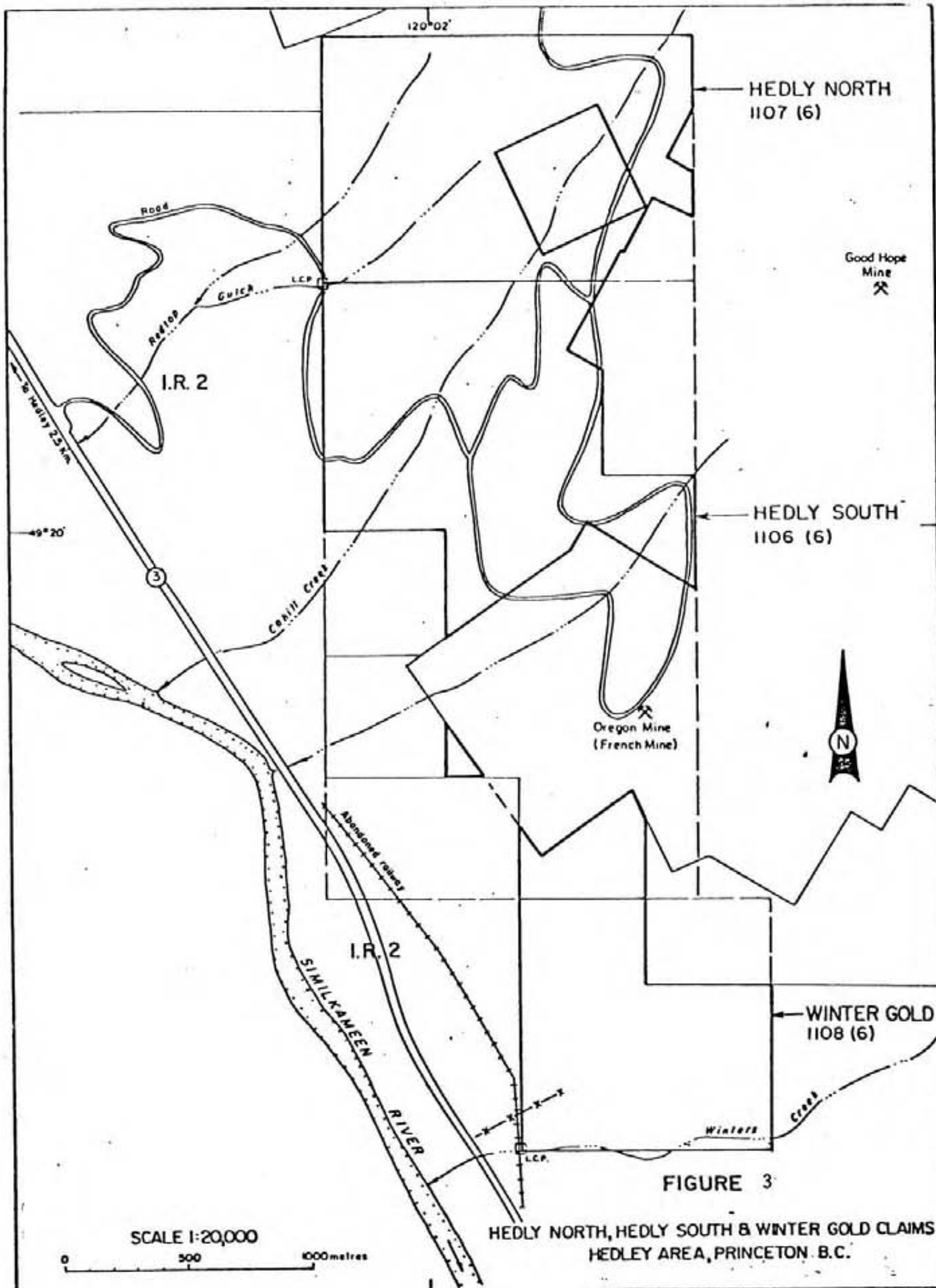
The property is comprised of three claims totalling twenty-five units.

<u>Claims Name</u>	<u>No. of Units</u>	<u>Record No.</u>	<u>Expiry Date</u>
Hedly South	15	1106(6)	June 19, 1983
Hedly North	6	1107(6)	June 19, 1983
Winters Gold	4	1108(6)	June 19, 1983

These claims are owned by: Zurich Energy Corporation,
809-837 West Hastings Street, Vancouver, B.C.

A portion of these claims overlap pre-existing crown-grants and staked claims.

All Legal Corner Posts were located and were noted to be inscribed according to the B.C. Mineral Act.



HISTORY AND PREVIOUS WORK

The discovery of gold in placers along the Similkameen River in the 1860's led to the search for the lode deposits. The discovery of the Nickel Plate mine in 1897 marked the beginning of mining operations in the Hedley Mining Camp, which continued until 1955. The Nickel Plate Mine was operated by several interests until 1931 when it was thought the ore reserves had been exhausted. In 1932 Paul Billingsley and Augustus Locke began a thorough study of the mine and structural control of the gold orebodies. As a result several large new ore zones were discovered and the mine re-opened in 1934 and continued production until 1955. A new value to the price of gold has resulted in a recent revival of the Hedley area.

The Nickel Plate Mine was operated in conjunction with the Hedley Mascot and together they mined nearly 4,000,000 tons which yielded some 1,557,000 oz. of gold and about 200,000 oz. of silver.

Other mines have produced in this area; most notably the Canty and Good Hope.

The French Mine, which is located within the overstaked southeastern part of the Hedley South claim, was originally discovered in the early part of this century. But was only put into production from 1950-61 and produced some 72,000 tons yielding about 43,000 oz. of gold and 1,500 oz. of silver.

Mineralization in all of the above mines consisted of gold-bearing arsenopyrite and chalcopyrite and pyrrhotite in a gangue of garnet-pyroxene-epodite skarn. At the Nickel Plate and Hedley Mascot Mines the skarn formed as a massive replacement

HISTORY AND PREVIOUS WORK

of limy beds. However, at the Oregon (French) Mine it formed in part along fractures rather than as a consistent replacement of beds. In the latter mine there is not, therefore, necessarily a direct relationship between the distribution of mineralized skarn and the attitude of bedding. Gold in the French Mines was found to occur associated with arsenopyrite but was also found in some areas in which arsenopyrite and other sulfides were absent.

The Victoria Mine, located 500 m east of Winters Gold claim, contains a quartz vein in argillite and argillaceous quartzite. The vein varies from 2 to 66 cms in width and carries low values in gold associated with chalcopyrite and pyrrhotite.

No previous reports of workings on the Hedly North, Hedly South, or Winters Gold claims could be found in the various publications consulted. However, pits, trenches and one short adit were located during prospecting traverses, others were reported on verbally by a local resident.

Within the last ten years, since the rise in the price of gold, active exploration has been carried on within a large radius of Hedley. In particular, on the Mickel Plate and Mascot Mines where intensive new work is believed to have proven extensive reserves. In 1981 the Good Hope mine shipped ore to the Dankoe Custom mill at Cawston for milling. The French Mine mine has been drilling, and Banbury Mines on Henri creek has had some success in developing their property.

In the course of prospecting traverses old placer workings were found on the Hedly South claim on Cahill Creek, some 600 meters downstream from the S.E. corner of C.G. 3467.

HISTORY AND PREVIOUS WORK

Extensive very old placer workings on Winters Gold claim above Highway #3 were noted. The creek had been diverted in several places and large areas of the flat worked over.

In 1981 Zurich Energy excavated two pits and three trenches with a backhoe on the Hedly South claim east of Cahill Creek.

GEOLOGY

GENERAL GEOLOGY

The Hedley area is underlain by Upper Triassic Nicola Group volcanics and sediments into which were intruded small ultra-basic and large granitic bodies of late Mesozoic age. The latter intrusives almost surround the Nicola Group rocks.

Structurally, the Nicola Group rocks form a part of the gently dipping west limb of a north-striking anticlinal fold. The continuity of the strata of the fold is broken by the large bodies of intrusive rock located along its fold axis and about the west side in particular.

In addition to the large granitic bodies, the sedimentary strata were intruded by innumerable diorite-gabbro sills and dykes producing a pronounced layered appearance. This is clearly visible from the highway at Hedley.

The Nicola Group, in the general Princeton area, consists of a thick succession of lavas through which are irregularly distributed lenses of tuffaceous and argillaceous rocks and occasionally beds of limestone. However, in the Nickel Plate Mine area at Hedley, the sedimentary strata is relatively free from volcanic material. It consists (Rice 1960) "of approximately 2745 m of limestone, thin-bedded quartzite, argillite, tuff, and breccia, in part much silicified. The production zone (at the Nickel Plate Mine), lying 365 m above the base, has been subdivided into the Sunnyside limestone, the Middle member, and the Upper member, in all some 350 m thick. The base of Nickel Plate Mountain consists of a large body of granodiorite whose upper margin roughly follows the bedding in the overlying intruded sediments. Dykes and sills

GEOLOGY

GENERAL GEOLOGY

from this body cut the sediments, but are not abundant, and only one of notable size cuts the ore zone".

Most of the sedimentary strata in the Hedley area has been strongly metamorphosed by the intrusion of the many sills and dykes into impure limy sediments. In the Nickel Plate Mine mineralization occurs in skarn altered limestone and impure limy sediments adjacent to diorite-gabbro sills and dykes. In order of abundance, the sulfide minerals include arsenopyrite, pyrrhotite and chalcopyrite. Gold occurs associated with arsenopyrite. Lesser amounts of cobaltite and bismuth telluride are also present. The contact between the mineralized skarn and the unaltered limestone is sharp and has been referred to locally as the "marble line".

At the French Mine the host rock is also metamorphosed limy sediments. In one portion of this mine there is a strong fracture zone with coarse bornite and chalcopyrite along with arsenopyrite and pyrrhotite in a zone of massive garnet-epidote skarn. Here the gold occurs with the arsenopyrite. But gold also is present in the absence of this sulphide. Gold exists in a free state throughout much of this property, not only in concentrations of sulphide, but also both where there is little mineralization and also it is found in other places in limy sediments where there is a total lack of sulphide mineralization.

The French Mine environment resembles that on the west portion of the Hedley North and also that of the upper areas of the Winters Gold claim which lies close to the south border of the French Mine.

LOCAL GEOLOGY

Reconnaissance traverses were made across the Hedly North and Hedly South claims and two over the Winters Gold claim. In addition all the principal roads, were examined and mapped. (Map #4 in pocket)

Inspections were made of the Nickel Plate, Canty, French, and Good Hope Mines as a guide for relating their mineralization to that discovered on the Zurich Energy property.

These traverses were controlled by the two new baselines and also by the legal corners of C.G. 3467.

Prospecting showed that on the Hedly North and South claims a large portion is underlain by granite and granodiorite. Metasediments were observed on the Hedly North's northwesterly portion. These sediments included dark fine-grained tuffs, light green well-bedded tuffs, minor quartzite and considerable limestone, all containing pyrrhotite of varying intensity. These sediments are strongly silicified, except some of the limestone which was marbilized and now is soft and crumbly near the west corner of the Hedly North claim.

G.S.C. Map 568A shows a body of diorite-gabbro partly in the northwest corner of the Hedly North claim and partly outside the claim boundary.

LOCAL GEOLOGY

From near the N.W. corner of the Hedly North claim a traverse was taken downhill in a westerly direction towards the Hedly North legal corner post. Along this line there was observed tuffaceous rocks overlain by grey-blue marbilized limestone which form prominent bluffs on the west side of an unnamed creek gully. Overlying the limestone, but poorly exposed in rubbly outcrops and slumped pits, are small outcrops of interbedded, dark siliceous tuffs, limestone, silicified limestone and garnet-epidote skarn. The latter rock varies from fine to coarse grains of garnet and epidote in light grey siliceous limestone to massive garnet-epidote skarn. The metamorphosed limy sediments are well mineralized with pyrrhotite and minor bornite and chalcopyrite. Locally there is arsenopyrite. An old adit, approximately 15 m long, was located in the above area. It is collared in heavily iron stained dark siliceous to cherty tuffs (argillites?) and follows a $N20E/90^{\circ}$ fracture or shear. The country rock is well mineralized with pyrrhotite and pyrite.

Apparently this adit was driven to intersect the downward extension of some well mineralized skarn up the hill above it.

To the east of the above metamorphosed sediments, across the unnamed creek, abundant granodiorite outcrop was located forming the ridge between the above creek and Redtop Gulch, cliffs along both sides of Redtop Gulch, and all of the high ground between Redtop Gulch and Cahill Creek. It also forms high cliffs along the west boundary of Hedly South claim, both above and below the access road. This is a grey and buff coloured weathering granodiorite. A strong shear zone trending about $030^{\circ} - 045^{\circ}$ occurs along the access road in the east central sector of the Hedly South claim across some 100 metres of width. A northwesterly pattern of jointing and attendant shears is

LOCAL GEOLOGY

also present in this zone. The granodiorite is highly altered to a brownish, crumbly, granular groundmass at several locations in this shear zone.

Scattered outcrops of similar intrusives were located along the top and lower roads to the French Mine. Along these roads small poorly exposed sections of quartzite and tuff were observed in the gaps between good intrusive outcrops. If these sediments are in place the intrusives must be in the form of numerous, wide sills. On the lower road a gabbro sill of at least $3\frac{1}{2}$ meters wide was discovered.

While no contact was found on the west side of the property between the metasediments and the intrusive it must lie slightly east of the unnamed creek gully and trend south-westerly. To the north the contact appears to swing eastward and then to the north-east near the upper road crossing of Cahill Creek. On the east side of Hedly South claims, on the lower road to the French Mine, a sharp contact was seen between the intrusive and the sediments. This contact strikes N10E/35W. Further east along this road the sediments were observed to dip both to the east and west, indicating folding in these rocks near the contact. No outcrop was observed within the central part of Hedly South claim. This area is mostly open thin forest and grassy meadows. Road cuts through this section show only coarse boulder till.

It is believed that sediments underlie the open grass-lands immediately east of Cahill Creek in the central and northeasterly portion of the Hedly South claim. On this claim's east boundary, there are old caved pits with meta-sediments on the dump.

LOCAL GEOLOGY

A traverse along the westerly base of the mountain on the Winters Gold claim indicated that a large part of its base is underlain by granodiorite. Towards the north end of this claim the contact between the intrusive and the sediments appears to swing north-easterly up the hill and then is cut off by a northwesterly striking fault. South of this fault is heavily iron-stained quartzite on contact with this granodiorite. Interbedded with narrow sills of quartzite. To the east of there is a wide band of limestone. Skarn, as well as the above sediments, is prominent in the talus slides at the base of these cliffs.

Limestone, limy sediments and minor quartzite outcrop all along the steep old Victoria mine pack-trail which winds along the north bank of Winters and across the south portion of the Winters Gold claim. Near the east side of this claim there is a northeast striking contact with dark siliceous tuffs. Silicified limestone with skarn replacement containing garnet and epidote and well mineralized with pyrrhotite was seen in the talus in several locations along this trail.

A review of G.S.C. Map 568A, generally confirms the geology as noted during several prospecting traverses. The sediments mapped in the northwestern portion of the Hedly North claim belong to the Redtop Formation. Sediments to the east of Hedly South on the Winters Gold claim and in the vicinity of the French Mine are mapped as "Undivided" and include some or all of the sedimentary formations found in the Nickel Plate Mine area.

The most obvious geological difference between the examined claims and the Nickel Plate Mine area is the apparent absence of the numerous diorite-gabbro sills and dykes and their associated massive skarn replacements. However, the sills and dykes could be present on the Hedly North and South claims but were not observed due to limited outcrop exposure. This is probably the case since a small lenticular body of diorite-gabbro lies at the northwest corner of Hedly North claim. One gabbro sill was noted on the lower French Mine access road.

At the French Mine, gold is found in massive bodies of skarn, in skarn replacements along fractures and in relatively unaltered limestone. It has been determined that in this area gold is not necessarily associated with sulphide mineralization. At some other mines in this area it is in conjunction with a Tismuth telluride. Recently in the French Mine it has been discovered in areas with very sparse, or even no, sulphide mineralization.

DISCUSSION

The results of the prospecting and mapping so far indicates that the Hedly North, Hedly South and Winters Gold claims are in a favourable geological environment similar to the Nickel Plate and Good Hope Mines, but in particular to the French Mine. The different mineralization of the above areas can be summarized as follows:

1. Nickel Plate, Mascot and Canty Mines.

Here the gold is associated with arsenopyrite, and also chalcopyrite and pyrrhotite in a gangue of garnet-pyroxene-epidote skarn. The skarn was formed by the massive replacement of limy beds.

2. Good Hope Mine:

Here the gold occurs both with heavy arsenopyrite and also in a free state. It is in places in a telluride.

3. French Mine:

In this area the gold can be found in a free state with little or no sulphide mineralization. Generally the French Mine's mineralization is quite complex and varied. In part entirely as a replacement of limestone beds. One of the richest of the originally mined parts was a fracture zone in skarn with arsenopyrite and coarse bornite. In other zones in this mine, gold is with arsenopyrite and also in a free state in massive replacement of limy beds.

4. Victoria Mine:

This lies just east of the Winters Gold claim and is a quartz vein within argillites and argillaceous quartzite. Vein varies from 2-65 cms in width.

CONCLUSION

The Nickel Plate and Canty Mines lie to the northeast of the Hedly North claim. The Good Hope Mine ground lies just to the east of the Hedly South claim. The Hedly South and Winters Gold claims lie to the south, north and west of the French Mine area.

The geological setting on the Hedly North, Hedly South and Winters Gold claims has many similarities with that in the Nickel Plate, Canty, Good Hope and in particular with the French Mine areas. All are underlain by limy sediments and a variety of intrusives. Sulphide mineralization is also similar in all areas except as yet no heavy concentrations of sulphide have been discovered on the Zurich Energy Group of claims.

The original exploration efforts were orientated towards the discovery of massive sulphide replacements and gold-bearing quartz veins. Recent exploration has discovered that gold exists within this area in a free state in places not only with a minimum of sulphidé mineralization, but also where there are no sulphides.

Thus any future exploration programmes must be designed with this new knowledge in mind. Besides exploring for massive sulphides, particular emphasis should be directed to locating gold in areas of minor sulphides and even limy rocks quite devoid sulphide mineralization.

Initially a combination of a soil and rock geochemical programme together with geological mapping should be used to delineate the areas for follow-up work.

CONCLUSION

Prospecting so far has located three areas which require detailed follow-up.

1. Winters Gold: - The easterly half of this property is composed of mixed sediments containing skarn zones in an environment reminiscent to that of the adjacent French Mine.
2. Hedly North: - From the westerly contact of the intrusive to the west and north boundaries: - outcrops in this area are principally limy sediments well mineralized with pyrrhotite and locally minor bornite, and chalcopyrite. A strong skarn zone outcrops west of and adjacent to a prominent gully which is hypothesized to be the contact between these sediments and the intrusive. A wide, well mineralized skarn zone outcrops north of this gully just outside and paralleling this claims north boundary for at least 100 meters. It is reasonable to conclude that this skarn continues downhill through the Hedly North property.
3. Hedly South: - The ground from the southeasterly side of Cahill Creek through to the area of intrusive sills along the French Mine road is covered by overburden. However, uphill from here are the Good Hope claims and it appears that these sediments continue westerly down hill onto the Hedly South claims. The area around the gabbro sill on the lower road to the French Mine should be investigated.

REFERENCES

B.C.M.M. Annual Reports 1913, 1917, 1930-36, 1955-60, 1970-73

Camse11, C. (1910) - geology and ore deposits Hedley Mining District, Geo. Survey, Can. Mem. No. 2

Rice, H.M.A. (1960) - Geology and Mineral Deposits of the Princeton Map Area.
Geo. Survey Can. Mem. 243

Maps: 568A, 888A, 889A, Geo. Survey Can.
Geology Maps.

STATEMENT OF QUALIFICATIONS

I, Brian Fenwick-Wilson of Mount Baldy Ski Area, Box 687, Osoyoos, B.C., do hereby certify that:

1. I took two years geology at Lancing College, England.
2. I have been engaged as a prospector and geological technician for 36 years. My career to date in the mineral exploration field, may be summarized as follows:
 - (a) 1946-1952 Self-employed prospector
 - (b) 1952-1966 Exploration manager & director of several syndicates and private companies.
 - (c) 1967 Utica Mines and exploration syndicates.
 - (d) 1967-1971 Amax Exploration
 - (e) 1971-1973 Cerro de Pasco
 - (f) 1974 Newmont Mining and private companies.
 - (g) 1975-1977 Self-employed, with 2 exploration syndicates.
 - (h) 1978 Director of American Fluorite and a director and exploration manager of other public companies.
 - (i) 1980-82 Director and Exploration manager of several public and private companies.
 - (k) I have conducted many and extensive exploration programmes during the past 12 years.
3. The facts and opinions expressed herein are based on my personal knowledge, work on the ground and reviews of published maps and reports.

B. Fenwick-Wilson

B. FENWICK-WILSON
Geologic Technician & Prospector

STATEMENT OF COSTS

Wages:

June 10-14, July 4-8, 1982
8 days/1 man @ \$125/day \$ 1,000.00

July 4-8
4 days/1 man @ \$75/day 300.00 \$ 1,300.00

Food & Accommodation:

Motel 200.20
Meals & Groceries 285.40 485.60

Transportation:

Truck 4 x 4 390.00
Gas 235.90 625.90

Assays:

Drafting 45.00
Report preparation 200.00
Typing 62.00

Supplies:

Flagging Meter string, maps, etc. 11.40
Phone Calls 6.30

Rental:

Chain-Saw, Oil & Gas, etc. 35.25

W.C.B.

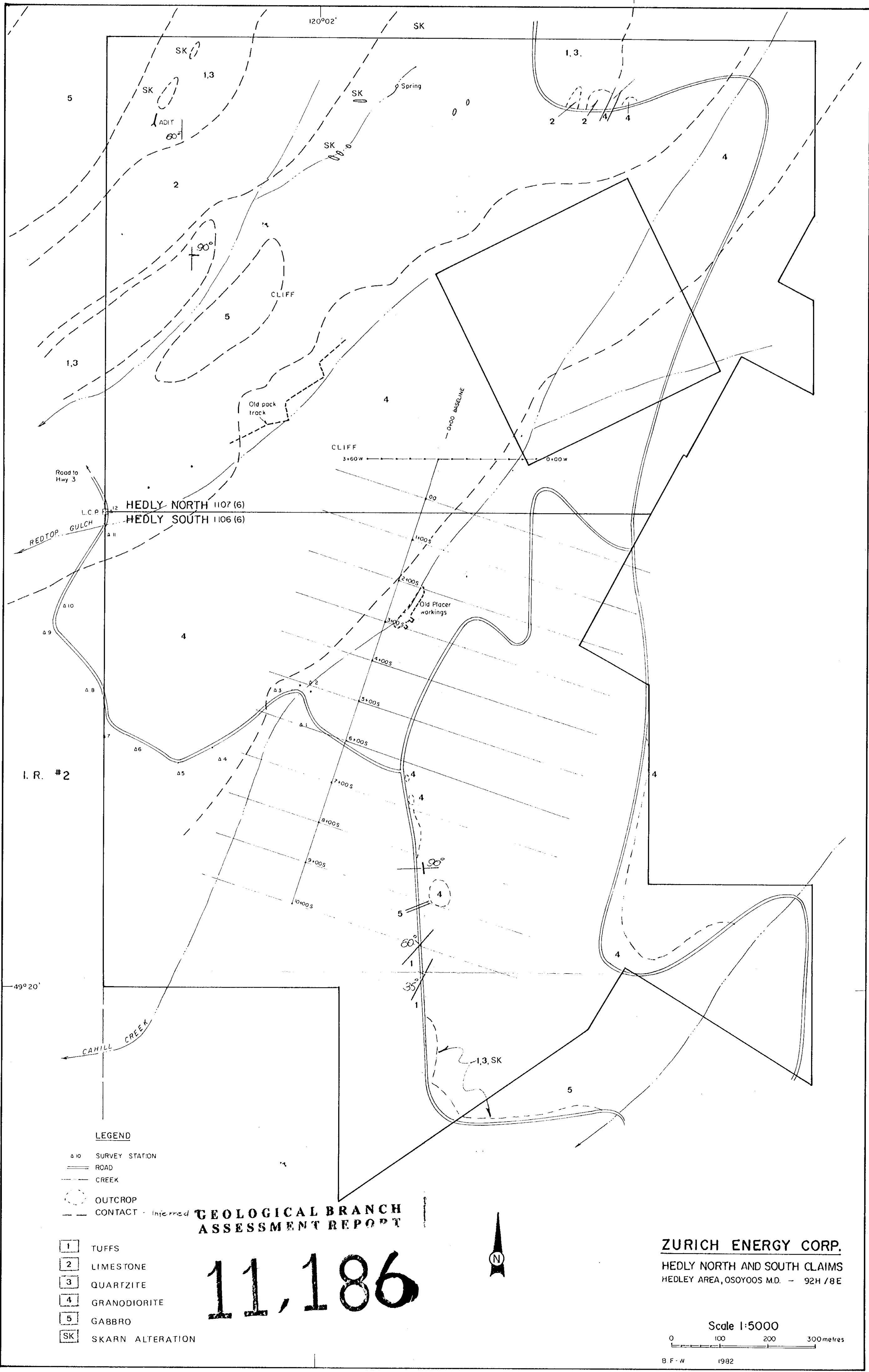
70.00

\$ 2,903.15

+ LINE

3070.75

5973.90



LEGEND

- Δ10 SURVEY STATION
- ROAD
- CREEK

- OUTCROP
- - - CONTACT - Inferred

- 1 TUFFS
- 2 LIMESTONE
- 3 QUARTZITE
- 4 GRANODIORITE
- 5 GABBRO
- SK SKARN ALTERATION

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

11,186



ZURICH ENERGY CORP.
 HEDLEY NORTH AND SOUTH CLAIMS
 HEDLEY AREA, OSOYOOS M.D. - 92H / 8E

Scale 1:5000



B.F.W. 1982

B.F.W. July 1982