$$
81-71012 \ldots 9780
$$

1981 Assessment Report

```
Tjtie: TOUGH OAKS PROPERTY
Claims: Tough Oaks 2-12, Bwinaby l-6
Glynnehill 1-4, Golden Toad
Location: Proken Creek, Osoyoos M.D.
82 E 5W
49 27'N 1199%48' W
By: L. Sookochoff, P.Eng.
Pan-American Consultants Ltd.
Vancouver, B.C., V6E 3P3
For: Tricor Resources Ltd.
    1620-701 West Georgia Street
Vancouvuer, B.C.
Dates of Vork: August 10, 1981 - September 30, 1981
Date of Report: November 13, 1981
```

INTRODUCTION ..... 1.
PROPERTY ..... 2.
LOCATION AND ACCESS ..... 2.
TOPOGRAPHY, WATER AND POWER- ..... 3.
TRANSPORTATION AND SUPPLIES ..... 3.
HISTORY ..... 4.
GEOLOGY ..... 6.
MINERALIZATION ..... 8.
DIAMOND DRILL PROGRAM ..... 12.
CONCLUSIONS ..... 14.
RECOMMENDATIONS ..... 16.
REFERENCES ..... 17.
STATEMENT OF COSTS ..... 18.
CERTIFICATE ..... 19.
DIAMOND DRILL LOGS 81-1 TO 81-4
ILLUSTRATIONS
MAP I LOCATION AND CLAIM MAP (INDEX) ..... 1 : 50,000
MAP 2 DIAMOND DRILL HOLE LOCATION ..... 1 : 2,500
on the

## TOUGH OAKS PROPERTY

## INTRODUCTIQN

During August and September 1981 a diamond drilling program was carried out on the Tough Oaks property held under option by Tricor Resources Ltd. The program was initiated upon the completion of localized magnetometer and VLF-EM surveys enveloping the Creek and Wheelbarrow showings.

The geophysical surveys indicated general anomalous areas with the mineralized Creek and Wheelbarrow correllating with a central northeast trending VLF-EM anomaly and with a general magnetic low. An I.P. chargeability high also correllates with the zone. The drilling program was carried out to primarily test the known gold bearing structures which then would facilitate the interpretation of the geophysical results which could give direction to possible future exploration work.

The drilling was accomplished utilizing $B Q$ size drill rod. A total of 958 feet ( 292 meters) of drilling was completed in four drill holes.

## PROPERTY

The property is comprised of 22 contiguous located claims staked under the two post system. Particulars are as follows:

| Claim name | Record No. | Expiry Date |
| :--- | :---: | :--- |
| Tough Oaks 2-12 | $8995-9005$ | September 10, 1982 |
| Bwinaby 1-6 | $17521-17526$ | October 11, 1982 |
| Glynnehill 1-4 | $17764-17768$ | October 13, 1982 |
| Golden Toad | 8994 | September 10, 1982 |

Assessment work has been applied to the claims on September 9, 1981 which is pending.

## LOCATION AND ACCESS

The property is located near the headwaters of Broken Creek, a westerly flowing tributary of Hedley Creek. Hedley is 14 km to the southwest.

Access is from Hedley by secondary four wheel drive road approximately 10 km nothward along Hedley Creek, five km westward and two km northward to the property. An alternate route is from the Apex Ski Hill parking lot northward via Nickel Plate Lake for approximately 10 km . The Apex route is also a four wheel drive access road.

TOPOGRAPHY, WATER AND POWER

The claims cover a low to moderate sloped wooded area with elevations ranging up to 2,000 meters and a maximum relief of 150 meters.

Sufficient water for all exploration purposes would be available from Broken Creek or other water courses covered by the claim group.

A power line parallels with Similkameen River and the No. 3 Highway some 14 km to the southwest.

## TRANSPORTATION AND SUPPLIES

The property is within 5 km of the Apex Ski Hill road which is accessible by all-weather secondary road from the South Trans Provincial Highway, 41 km east of Hedley. Hedley is 331 km east of Vancouver.

Most supplies would be obtainable at Princeton 38 km west of Hedley.

## HISTORY

The history of the immediate area is centered around the gold deposts on Nickel Plate Mountain all within five km northeast of Hedley. The Nickel Plate system of orebodies was discovered in 1898 with production commencing in 1904. Operations were shut down in 1930 to 1934 and again in 1955. To the end of 1954 total production from all operations on Nickel Plate Mountain was approximately one and one-half million ounces of gold. The ore average was . 45 oz Au/ton.

Nickel Plate Mountain is 12 km southwest of the Tough Oaks property.

The Hedley area is presently being re-examined and explored. A Vancouver based mining company is currently evaluating the former ore deposits of Nickel Plate Mountain. A percussion drill program has been completed with reported encouraging results.

The Tough Oaks claim group is adjacent to a group of local crown granted claims which have been worked periodically since the early 1900 's.

Former work on the property consisted of trenching and blasting on various mineral showings. Umex carried out a local soil sample survey over the Wheelbarrow showing. The results are not availble to the writer.

Previous work carried out by Tricor Resouces included a magnetometer and VLF-EM survey completed during the 1980 field season. A localized I.P. survey was completed in August 1981.

The VLF-EM survey indicated a central northeast trending anomaly from the westernmost pit to the northwest of the Creek and Wheelbarrow showings. An anomalous zone trends northwestward from the mid portion of the central anomaly and parallels Broken Creek to the south. An intersecting structural feature may be represented.

The magnetometer results indicate a general "low" correllating with the indicated EM fault intersection. The Creek show occurs along the eastern periphery of the "low" with the Wheelbarrow show within an embayment of the southern perihery.

The I.P. results indicated a general chargeability high trending parallel to and encompassing the Wheelbarrow and Creek showings. The anomaly also correllates with a diorite-chert and siltstone contact.

## GEOLOGY

The property is within an area generally underlain by Triassic or earlier sedimentary rocks enveloped by a batholith and/or intruded by stocks and plugs of the Coast Intrusives.

At Nickel Plate Mountain and more specifically at the Nickel plate Mine, the rocks are composed of a thick pile of Triassic limestone, limy argillite and quartzite, resting on a flattish floor of granodiorite. A host of porphyritic sills and dykes of gabbro-diorite composition is associated with the sediments. The Bradshaw Fault a steep westerly dipping thrust fault from which flatter thrust slices angle up to the east through the formations, trends northeasterly south of Nickel Plate Mountain

The ore bodies at Nickel Plate occur in a sedimentary strata of light grey very fine-grained quartzites with included small amounts of carbonate. Occasional narrow bands of impure limestone also occur. South of the Nickel Plate fault, the beds include metamorphic minerals of garnet, epidote and other metamorphic silicates.

The contact metamorphic deposits "consists of goldbearing arsenopyrite in a gangue of metamorphic silicates and occur in a group of sedimentary rocks amongst which a nearly equal volume of igneous rock has been intruded in the form of sheets."

The five irregular sheet-like ore bodies occur in an elongated zone " 350 feet horizontally, 215 feet thick, and 2,000 feet long approximately."

## MINERALIZATION

On the Tough Oaks property, mineralization consists of arsenopyrite and pyrite occurring within quartz and/or silicified zones within a formation of cherts, quartzites, pelitic sediments, and narrow limestone units.

Two significant showings within this formation are the Creek and the Wheelbarrow showings. Descriptions of the showings as indicated on the accompanying map are as follows:

## Creek Show

Exposed in a pit adjacent to and west of Broken Creek. The exposed one meter wide zone contains discontinuous, and irregular quartz veins less than two cm wide random and oriented at $050^{\circ}$ in a vertical dipping zone hosted by a grey to reddish quartzite.

Mineralization consists of occasional blebs tetrahedrite with rare disseminations of arsenopyrite within the quartz veins. The irregular and veins quartz are spaced at approximately 15 cm and constitute $10-15 \%$ of the zone.

A select sample of quartz taken by the writer from the zone assayed. $01 \mathrm{oz} . \mathrm{Ag} /$ ton and $.001 \mathrm{oz} . \mathrm{Au} /$ ton.

Reported assays from this zone returned up to . 236 oz . Au/ton. The assay results were provided by Granges.

## Wheelbarrow Show

Appears to be on strike 250 meters southwest of the Creek show. Consists of a siliceous and narrow quartz vein zone trending at $060^{\circ}$ and dipping $80^{\circ}$ E. Host rock is black quartzite and chert with silicified argillite with bedding at $45^{c}$ E.

Mineralization is of fine grained and stringers pyrrhotite with rare disseminated arsenopyrite. Samples taken by the writer from the zone returned.

| Width | Assay |  |
| :--- | :---: | :---: |
| 2 meters | $\frac{0 z \mathrm{Ag} / \text { ton }}{.03}$ | $\frac{0 z \mathrm{Au} / \mathrm{ton}}{.046}$ |
| Grab sample | .03 | .114 |

(quartz veins in dark
grey quartzite)

Other showings include:

1. A pit at 225 meters SW of the Wheelbarrow show excavated on a lightly siliceous limonite stained zone within argillite and greenstone. A sample of siliceous and limonitic material from the pit returned. $01 \mathrm{oz} . \mathrm{Ag} /$ ton and $.001 \mathrm{oz} . \mathrm{Ag} /$ ton.

A smaller pit within 25 meters exposes an argillite-tonalite contact with associated epidote alteration and silicification. The tonalite is medium grained allotriomorphic textured with predominantly biotite as the mafic mineral.
2. The Sitting Rock showing is east of the Creek show. This zone was not included in the recent geophysical surveys. The showing occurs within calcareous units with a course grained limestone exposed in association with a skarn zone. A relatively sharp irregular limestone-skarn contact is exposed. The skarn is dark brown with included calc-silicate minerals and pockets of garnet. Lenses and contact concordant skarn stringers occur within the unaltered limestone. As adjacent pit exposes a quartzite with rare blebs of chalcopyrite. A sample of skarn material returned an assay of $.01 \% \mathrm{cu}, .004 \mathrm{oz}$. Au/ton and . $48 \% \mathrm{~W}$.

## Blacksmith Showing

The Blacksmith showing is located to the east of the Creek show and north to northwest of the Sitting Rock showing. A number of open pits, trenches and adits extend over aproximately 250 meters from 300 to 400 meters east of Broken Creek. The workings are predominantly within a silicified siltstone and locally chert with occasional intruding dioritic fingers.

Assays of samples from the workings returned from .03 to . 160 p.p.m. A sample of chert from the eastern most working assayed . 15 oz . Au/ton.

## DIAMOND DRILL PROGRAM

Diamond drill holes 81-1 to 81-4 were located to test the Creek show, extensions thereof, and the Wheelbarrow show. Details are as follows:
D.D.H. 81-1

Location: $1205 \cdots 0+56 W$ (Creek Zone)
Bearing: $018^{\circ}$
Dip: $\quad-50^{\circ}$
Length: 293 feet
Results: Contact zone between a meta diorite and a meta siltstone-chert with 3 to $5 \%$ pyrite in addition to pyrrhotite in the diorite and lesser sulphides in the siltstone-chert. The highest values were .015 p.p.m. Au and .7 p.p.m. Ag and .7 p.p.m. Cu in separate samples. No distinct mineralized zone to correllate with surface Creek zone.

## D.D.H. 81-2

| Location: | 75S $0+08 \mathrm{E}$ ( Creek Zone) |
| :---: | :---: |
| Bearing: | $198{ }^{\circ}$ |
| Dip: | $-50^{\circ}$ |
| Length: | 203 feet |
| Results: | Siltstone-chert to meta diorite contact zone |
| - . ${ }^{\text {- }}$ | with light to moderate pyrite. Most significant |
|  | assays of samples from a cherty zone adjacent to |
|  | the diorite returned . 003 oz . $\mathrm{Au} /$ ton. A sample |
|  | of diorite with moderate pyrite and disseminated |
|  | chalcopyrite returned .07\% Cu. |

D.D.H. 81-3 (Creek Zone)

Location: $0+76 \mathrm{~S} \quad 0+48 \mathrm{E}$ (Creek Zone)
Bearing: $198^{\circ}$
Dip: $\quad-50^{\circ}$
Length: 202 feet
Results: Siltstone-chert to meta diorite contact zone. Absence of a distinct mineralized zone. Most significant assay - . 020 p.p.m. Au.
D.D.H. 81-4 (Wheelbarrow Zone)

Location: $\quad 1+37 \mathrm{~S} 3+07 \mathrm{~W}$
Bearing: $170^{\circ}$
Dip $-45^{\circ}$
Length: 260 feet
Results: Siltstone with cherty sections with up to $1 \%$ pyrite and locally greater. Diorite, syenite and hornfelsic zones. A sample of chert with arsenopyrite disseminated within quartz stringers assayed .075 oz . Au/ton, . $02 \mathrm{oz} . \mathrm{Ag} /$ ton and $.01 \%$ Cu across 3.5 feet. This zone appears to correlate with the surface open-pit zone which assayed . 046 oz . Au/ton across 6.5 feet. The sore is stored on the property
FUSIONS

## CONCLUSIONS

The results of the diamond drill program indicate that the mineralized Creek zone is discontinuous to depth and along strike. The Wheelbarrow surface zone is continuous to depth, however is not sufficiently significant at this location to warrant additional testing.

The mineralize zone is controlled by the diorite-chert contact with the chert hosting the gold bearing zone. The contact zone would be explored for potential economic grades of gold mineralization. As the known zone appears erratic, more favorable host rocks such as limey sedimentary stratum along the contact may be host to continuous economic zones.

A secondary potential for mineralization could occur within the diorite. The alteration pattern as determined from the drilling such as the propylitic alteration, the silicification and the pyrite, in addition to the occasional signs of argillic alteration and copper-silver mineralization, is indicative of a peripheral zone to porphyritic copper mineralization with commonly associated gold and silver values.

Additional exploration on the property is warranted, however the financial commitments to a large exploration program could be quite burdensome to a junior company under present economic conditions.

Ongoing exploration would involve a large scale percussion or diamond drilling of anomalous areas which would be determined by a soil sampling program.

## RECOMMENDATIONS

It is recommended that Tricor Resources Ltd. not commit any additional funds to the project but attempt to farm out the property.

Respectfully submitted,


Laurence Sookochoff, P.Eng. Consulting Geologist

CLAIM NO....-fough-oaks 4
DIAMUND
PROPERTY Tough-Uakes
HOLE NO. $81-$
latitude
elevation
bearing 018
epth 293 feat started nugust 22/81
completed Iugust 26/81
 DIP $-50^{\circ}$ driled by Maclean Diamond Drilling logged by L. Saokochoff, P.E国.


latitude
elevation
bearing $198^{\circ}$ DEPTH.......202...feet... STARTED Septamber 4/81. completed Saptember 8/8.
departure.
SECTION
DIP.... $-50^{\circ}$
driled by Maclean Diamond Drillinglogged by h. ..... Saokochoff, p. Eng. ......





## REFERENCES

BARR, D.A. - Gold in the Canadian Cordillera, C.I.M. Bulletin, June, 1980 p.p. 59-76<br>BOSTOCK, H.S. - Geology and Ore Deposits of Nickel Plate Mountain, Hedley, British Columbia. G.S.C. Summary Report 1929 A<br>SOOKOCHOFF, L. - 1980 Assessment Report, V.L.F.-E.M. and Magnetometer Survey, October 3, 1980

TRICOR RESOURCES LTD.

## 1981 Diamond Drilling Project <br> Statement of Costs

Diamond Drilling 958 feet at \$18 ..... \$17,244.00
Mobilization and demobilization ..... 4,500.00Caterpillar rental$2,200.00$
Engineering and Supervision ..... 2,575.00
August 10 to September 18, 1981
Travel and accommodation expenses re Engineering ..... 705.63
Assays ..... 561.25
Draughting - rough and final ..... 275.00
Report ..... 975.00

## CERTIFICATE

I, Laurence Sookochoff, of the City of Vancouver, in the Province of British Columbia, do hereby certify:

That $I$ am a Consulting Geologist with the firm of Pan-American Consultants Ltd. of 2602-1055 West Georgia Street, Vancouver, B.C.

I further certify that:

1. I am a graduate of the University of British Columbia (1966) and hold a B.Sc. degree in degree in Geology.
2. I have been practising my profession for the past fifteen years.
3. I am registered with the Association of Professional Engineers of British Columbia.
4. The information for the accompanying report is based on property examinations carried out in August 10, 1981 - September 30, 1981 and from a supervision of the 1981 diamond drilling program.
5. Neither $I$ or Pan-American has direct or indirect interest in the property described herein, or in the securities of Tricor Resources Ltd.

November 13, 1981
Vancouver, B.C.


