REPORT ON THE

KIN NO. 1-16 CLAIM GROUP
McKINNON CREEK
INDIAN RIVER AREA
DAWSON MINING DISTRICT
YUKON TERRITORY

N. LAT. 63°-42' W. LONG. 139°-06'

FOR

YUKON REVENUE MINES LIMITED
(N.P.L.)
117 INDUSTRIAL ROAD
WHITEHORSE, YUKON TERRITORY

BY

DONALD W. TULLY, P.ENG.

JANUARY 24, 1974

WEST VANCOUVER, B.C.
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## MAPS

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- CLAIM MAP ..................................................................... (Following Page 3)
- TOPOGRAPHIC MAP 115-0-11 Scale 1" = 50,000. (Following Page 4)
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INTRODUCTION

Mr. Harry C. Fromme, President, Yukon Revenue Mines Limited, requested the writer to study the results of previous development on the KIN claim group on McKinnon Creek and determine the need for further investigation of the gold-bearing occurrences on this property.

Higher prices for gold have postulated a re-appraisal of gold deposits particularly in the Dawson area of the Yukon Territory.

SUMMARY AND CONCLUSIONS

The KIN claim group consists of sixteen unpatented mining claims.

Previous development dates back to the year 1900. Two shafts were sunk.

Geological evidence suggests the gold-bearing conglomerate is evidence of a pre-Pleistocene deposit of thick weakly consolidated beach stream gravels, sandstone and thin coal seams later covered with andesitic lavas. In places the conglomerate is composed chiefly of quartz pebbles. Dikes of andesitic composition may intrude the conglomerate. The conglomerate has a silicified aspect in some exposures suggesting a northeast trending fracture zone.

Gold assays up to 48 ounces per ton with substantial silver content have been reported from the conglomerate. The average gold content is no doubt somewhat lower.
It is concluded the KIN claim group warrants a program of exploration for a large tonnage gold deposit.

The estimated cost of the proposed work program is $153,000.00.

PROPERTY - LOCATION, ACCESS, TOPOGRAPHY

The KIN claim group is situated about twenty-five miles southeast of Dawson City in the Dawson Mining District, Yukon Territory. The claims are located two and one-half miles south of the mouth of McKinnon Creek on the Indian River. Haystack Mountain is three miles to the south.

A good trail leads from Dawson City southward along Bonanza, Eldorado, Calder and Quartz Creeks to the Indian River and thence some two miles to McKinnon Creek. Lack of a bridge across the Indian River in the area of Quartz Creek necessitates fording the Indian River when water levels are low. The trail between the headwaters of Eldorado and Calder Creeks required considerable rehabilitation when the writer examined the property early in June 1968.

Helicopter is the handiest method of travel.

Topography slopes gently northward between elevations of 2000 and 1700 feet above sea-level. The landscape is generally sparsely forested with second-growth spruce and poplar.

Overburden appears to be relatively shallow. No doubt permafrost exists to the usual regional depth in this area.
CLAIMS

The office of the Mining Recorder, Department of Indian Affairs and Northern Development, Dawson City, Yukon, reported the following information on January 22, 1974 to the writer:

<table>
<thead>
<tr>
<th>CLAIM NAME</th>
<th>GRANT NUMBER</th>
<th>STAKER'S NAME</th>
<th>DATE RECORDED</th>
<th>RECORDED HOLDER</th>
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<tbody>
<tr>
<td>KIN #1-8</td>
<td>Y65020-Y65027</td>
<td>Harry Johannes</td>
<td>June 24/71</td>
<td>B/S dated June 2/72 to Yukon Revenue Mines Limited</td>
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<tr>
<td>KIN #9-12</td>
<td>Y65028-Y65031</td>
<td>Glen Harris</td>
<td></td>
<td></td>
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<tr>
<td>KIN #13</td>
<td>Y65032</td>
<td>R.A. Granger</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KIN #14-15</td>
<td>Y65033-Y65034</td>
<td>Glen Harris</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KIN #16</td>
<td>Y65099</td>
<td>R.A. Granger</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The claims are held in the name of Yukon Revenue Mines Limited and are shown on Yukon claim sheet 115-0-11.

HISTORY - PREVIOUS DEVELOPMENT - REFERENCES

Donald MacKinnon and his brother of Vancouver are reported to have staked the original group of claims on McKinnon Creek around the year 1899. The MacKinnon brothers erected a small gold mill in 1911 on the Britannia Crown Grant Lease and are reported to have milled 2½ tons of gold ore from the 60-foot level of the Britannia shaft on the east side of McKinnon Creek. Recovery was reported at 40 cents per ton.
Adjacent to the Britannia claim on the west, on the Andromeda claim a 100-foot shaft was reported. This shaft was known as the Winchester. Another 100-foot shaft was also reported on the nearby Arctic claim.

Various assayers reported gold assays from samples from the Britannia, Andromeda and Arctic claims between $2.10 and $7.15 per ton at the prevailing gold price of $20.67 per ounce.

About a week following this writer's examination of the shaft areas and the rocks along McKinnon Creek, the MAC claim group 1-16 were staked. Cominco Ltd performed eleven years of assessment credit on the MAC claims in August, 1968.

H. Johannes and R.A. Granger staked the KIN claim group on June 24, 1971 and transferred them to Yukon Revenue Mines Limited on June 2, 1972.

Evidence of old trenches and two shafts (caved-in) were seen by this writer.

The following references provide data pertinent to the KIN claim group 1-16.

Geological Survey of Canada Map 711A (Ogilvie) Scale 1" = 4 mi.
G.S.C. Memoir 284, pp 237-238
Lode Mining in the Yukon, Canadian Department of Mines Bulletin 222
Geological Survey of Canada Open File Report 161
Yukon Claim Sheet 115-0-11
FROM PART OF G.S.C. MAP 711A

E - Yukon Group, gneiss, schist
D - Yukon Group, limestone
C - Gabbro
B - Klondike Schist
A - Granite Gneiss
3 - Eocene Conglomerate
4 - Post Eocene Andesite
7 - Tertiary Stream Deposits
GEOLOGICAL SETTING

An examination of the ground now held by the KIN 1-16 claim group showed two lithological units, conglomerate and andesite. The oldest rocks are conglomerates. The basement rocks of Yukon Schist do not outcrop.

W.P. Armstrong, Geological Engineer for Cominco Ltd. has described the geology in detail in his report dated February 26, 1969 as follows:

"According to a geological survey map, Ogilvie sheet 711A by H.S. Bostock, the property is underlain by a sheet of indurated Eocene conglomerate, capped and intruded by sheets of andesite and rhyolite. The conglomerate rests upon a basement which is not exposed on the property but is presumed by Bostock to consist of Yukon Group metamorphic rocks and intrusives. Bostock proposed that the conglomerate was deposited as an extensive sheet in the Haystack Mountain area. Later volcanism covered much of the conglomerate and produced two prominent andesite cones in the basin. Other workers, including McLean, feel that the conglomerate was deposited as a beach deposit on both the Yukon Group rocks and on Tertiary volcanic rocks, since the conglomerate appears to overlay volcanic rocks in the McKinnon Creek valley. Andesite occupies the lowest level to which workings have penetrated in the McKinnon Creek valley, that is at the bottom of the Winchester shaft. Bostock apparently regards the presence of volcanic material in the creek bottom as a dike. The author considers it to be a remnant of a flow which occupied the creek valley.

A typical geologic section in the McKinnon Creek valley would be as follows: Basement rocks, which do not outcrop on the property, are composed of Yukon group metamorphics, chiefly gneisses and quartz-mica schists. Overlying the basement unconformably is the Eocene conglomerate, which is the formation of interest in the Mac claims. The thickness of this unit is unknown. Deposited on top of the conglomerate are intermediate to acid Tertiary flows of the Carmacks group. Extensive benches of Tertiary and recent stream deposits lie along the lower reaches of McKinnon Creek in the valley of the Indian River. The writer has seen no better evidence for suggesting the conglomerate constitutes an extensive beach deposit than that which could also suggest that the conglomerate was formed by water courses which drained the Eocene topography."
The oldest rocks in the property are the conglomerate rocks of Eocene age. The large size fraction of the conglomerate is composed mainly of well rounded white quartz pebbles of variable size."

"The matrix of the conglomerate is quite variable. Occasionally the matrix consists of sand to silt sized clastic debris, and is moderately indurated, presumably with a silica cement. This type of matrix is found on the east side of McKinnon Creek in the trenches on claim Mac 16. Another type of matrix is characterised by an abundance of bluish finely divided mica giving the rock a dark purplish colour. The matrix has also been silicified and the rock is indurated to a variable degree.

Strong silicification of the matrix has taken place in the conglomerate on claims Mac 4 and 6. Here the conglomerate is so indurated that it resembles a quartzite."

Structurally, there is a strong possibility a northeast striking fracture zone extends southwestward up the valley of McKinnon Creek along the area of gold mineralization.

**MINERALIZATION**

Rock outcrops are relatively few and poorly exposed.

Grab samples of conglomerate were taken for assay from dump rocks near both shaft areas and from trenches on the east side of McKinnon Creek. Fire assay results showed gold content varying between trace and $2.45 per ton at the prevailing gold price of $35.00 per ounce.

Silicification was noted by the writer in two poorly exposed outcrops of conglomerate between 300 and 800 feet north of the old shaft on the west side of McKinnon Creek.
CONGLOMERATE CROSS-SECTIONAL KINETIC CLAIMS 1-16

After W.P. Armstrong.

YUKON REVENUE MINES LTD

Scale: Diagrammatic January 24, 1974.

DONALD W. TULLY, P.ENG.

Drafted by 2 HANDS.

CROSS-SECTIONAL SKETCH

KIN CLAIMS 1-16

After W.P. Armstrong.

YUKON REVENUE MINES LTD

Scale: Diagrammatic January 24, 1974.

DONALD W. TULLY, P.ENG.

Drafted by 2 HANDS.
It is concluded the conglomerate is gold-bearing and is probably composed of paystreaks of gold in what was once a well-sorted gravel deposit.

**RECOMMENDATIONS**

Survey claim location lines and establish the boundary of the property and mound the claim posts.

Bulldoze two exploratory trenches on both the east and west sides of McKinnon Creek to expose the conglomerate and andesite. Cross-trenches may also be necessary to delineate the areas of andesite outcrop.

Establish a control grid network on 200-foot centres in the area of the Winchester and Britannia shafts and the trenched area along McKinnon Creek.

Diamond drill a north-south section of five holes at 500-foot intervals to the basement Yukon Schist horizon at probably 500 feet below surface as a preliminary test in the known area of gold mineralization. The drill should be a combination diamond drill and percussion drill type.

Once the Yukon Schist basement rock horizon has been established below the overlying conglomerate and the gold-bearing zones established, it is proposed to check these gold zones with a percussion drill and switching to core drilling to improve recovery in the gold horizons where necessary.
ESTIMATED COSTS OF THE PROPOSED WORK PROGRAM

1. Establish camp for 8 men for 6 weeks
   (Tents, supplies, transport, etc.) $3,600.00
2. Survey claim location lines with chain
   and compass and mound claim posts
   (4 men x $50/day x 2 days) $400.00
3. Bulldozer trenching
   (including mobilization and demobilization
   300 hours x $40/hour) $12,000.00
4. Core-percussion drilling program in
   mobilization and demobilization
   - BX core (5,000 feet x $12.50/foot overall) $62,500.00
   - Percussion (5,000 feet x $7/foot overall) $35,000.00
   - Assaying (3,000 samples x $3.50/ea. (Au)) $10,500.00
5. Engineering and Administration $3,500.00
6. Contingency @ 20% $25,500.00

TOTAL: $153,000.00

Respectfully Submitted,

Donald W. Tully, P.Eng.

January 24, 1974
CERTIFICATE

I, DONALD WILLIAM TULLY, of the Municipality of West Vancouver, in the Province of British Columbia, hereby certify as follows:

1. I am a Consulting Geologist with an office at Suite 102, 2222 Bellevue Avenue, West Vancouver, British Columbia.

2. I am a registered Professional Engineer in the Provinces of British Columbia and Ontario.

3. I graduated with a degree of Bachelor of Science, Honours Geology, from McGill University in 1943.

4. I have practiced my profession for twenty-eight years.

5. I have no direct, indirect or contingent interest in the KIN claims 1-16 or in the shares of Yukon Revenue Mines Limited (N.P.L.), nor do I intend to receive any interest.

6. This report dated January 24, 1974, is based on a study of the available published data on this particular area of the Yukon, a personal field examination of the ground around the Winchester and Britannia shafts on June 13, 1968 and information gathered from personal communications. I have not examined the Mineral Leases in the field.

DATED at West Vancouver, British Columbia, this 24th day of January, 1974.

Donald W. Tully, P.Eng.
Consulting Geologist