ASSESSMENT REPORT

DRILLING WORK

ON THE SOMERVILLE LAKE CLAIM GROUP (80 Units)

CLAMS
J&J #6   8018(9)   20
J&J #7   8019(9)   20
J&J #8   8020(9)   20
J&J #10  8068(9)   20

KAMLOOPS MINING DIVISION

AFTON - STUMP LAKE AREA, BRITISH COLUMBIA

NTS 921/9W

LOCATION: 15 km SSE OF KAMLOOPS, B.C.

LATITUDE 50 DEG. 32' N

LONGITUDE 120 DEG. 47' W

SOUTH CENTRAL BRITISH COLUMBIA

Work between Aug. 23 - Sept. 6/89

On Behalf of
Messrs. Harold Jones and Jimmy John, Claim Owners
VANCOUVER, B.C.

By: Jimmy John, Prospector
2993 Cedar Hill Road
Victoria, B.C.

Fieldwork: Aug. 23 - Sept. 6/89

Report Date: Dec. 6/89
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Abstract
The Somerville Lake claim group covers about 4,000 acres of contiguous claims (80 units) regionally mapped as underlain by late Paleozoic Cache Creek sediments, intruded on the West by the Iron Mask batholith, and on the East by the much larger Wild Horse Mtn. Batholith, both of Coast Range Intrusion age. Just south of the claims, at the South end of Shumway Lake, the Cache Creek is shown as overlain by massive volcanics of the Nicola Group.

Remnants of the Tertiary Kamloops Group volcanosedimentary unit are shown unconformably overlying the Coast Range Age Intrusions in the area. A syncline is mapped following the valley-lake line followed north from Stump Lake, whose axis passes just east of Shumway Lake.

The Shumway Lake area section is a West dipping northerly striking series of highly indurated dark grey slightly siliceous lithic tuffs and/or argillites.

The Somerville Lake claim group lies on the Interior Plateau peneplane surface, west of Shumway Lake, (Somerville, Hull, McLeod, Nichol Lake area) surfaced by drift and thin recent amygdaloidal grey trachyte flows.

The 1988-89 fieldwork program on the Somerville Lake claim group consisted of prospecting and drilling four short (70 foot) vertical B-core diamond drill holes (total footage 273' = 91m) on exposures of the Tertiary trachyte surface on the J&J #8 claim (See Fig. 4 for collar locations). Mr. A. Babiya drilled the holes and took a chip sample along each core. The four representative core asmples were assayed at Kamloops Research and Assay Laboratory Ltd. in Kamloops, B.C. See Assay Reports K9805 and 62200, Oct. 30/89, attached. No significant mineralization was encountered.

Expenditures of $8190 related to the prospecting, sampling and drill program were recorded in an Aug. 29/89 Statement of Work for the J&J #8 claim. With assaying and report, this comes to $8920.

Annual cost in Year 1 for 80 units is $8,000. Thus the work recorded in the Statement of Work holds the Somerville Lake claim block (of which the J&J #8 claim is a part) for one year.

Interest in the property is based on the existence of possible subsurface sills, in the underlying volcanosedimentary series, as are exposed east of Shumway Lake.

Introduction
A. Location, Access, Physiography
Claims are located 3 km west of Highway 5A in the Shumway Lake area, 15 km SSE of Kamloops, B.C. Highway 5A follows a valley northward from Nicola Lake, Stump Lake, Trapp Lake and Shumway Lake, marking a syncline in rocks mapped by Rice as the Cache Creek and Nicola rocks. Claims are South and East of the Afton Mine ground. See Figure 2, Claim Map NTS 921/9W for locations of
Somerville Lake Group claims.

Access from Vancouver is by road by way of the Coquihalla Highway from Hope, then following Nicola Valley, Highway 5A or by Highway 1, then south from Kamloops on Hwy 93. Figure 1 shows access routes to area.

Immediate access to the claims is south by Highway 5A from Kamloops, then by gravelled and dirt side roads to Edith Lake and MacLeod Lake, 2 small lakes on the rolling plateau west of Shumway Lake. Access is by 2WD. Local climate is a dry Interior one, with less than 20 inches of precipitation per year. Lower elevations are rolling ranchland. Rounded ridges are capped by open pine forest. Physiography is that of fairly rounded northerly elongate ridges and rolling Interior Plateau topography. Rock outcrop is largely this recent residue of trachyte flows lying on the old Tertiary surface. Outcrops in this unit were found to be barren.

_STATUS OF PROPERTY_
The Somerville Lake claim group consists of four 20-unit contiguous modified grid claim blocks. See Figure 2, Claim Map.

**Modified Grid Claims**

A/On Claim Map M 92I/9W

<table>
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<tr>
<th>Claim</th>
<th>Block</th>
<th>E-W</th>
<th>N-S</th>
<th>Units</th>
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<tr>
<td>J&amp;J #6</td>
<td>8018(9)</td>
<td>5N x 4E</td>
<td></td>
<td>20 Units</td>
</tr>
<tr>
<td>J&amp;J #7</td>
<td>8019(9)</td>
<td>5S x 4E</td>
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<td>20 Units</td>
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<td>J&amp;J #8</td>
<td>8020(9)</td>
<td>5N x 4W</td>
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<td>20 Units</td>
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<tr>
<td>J&amp;J #10</td>
<td>8068(9)</td>
<td>5N x 4W</td>
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<td>20 Units</td>
</tr>
</tbody>
</table>

Total area is a contiguous block of 80 units (about 4,000 acres). The 1988-89 drilling was carried out on the J&J #8 claim.

Figure 2 - Claim map, in the south central portion of M 92I/9W, shows location of the Somerville Lake claim group, outlined by a double-line block. Recorded work was done on the J&J #8 claim.

**History - Sources for the Report**

Largest mining development in the area is the Afton open pit copper (gold) mine, some 6.5 km south of Kamloops. Before the turn of the century, the general area had been prospected for Au-Ag (plus base metals) in fault veins cutting the Nicola and Cache Creek groups (such as the old Au-Ag mines at Stump Lake), mercury in the Kamloops volcanics, and copper-iron (gold) veins and fracture fillings in and margining the Iron Mask batholith, a 'wet' batholith of Coast Range age. Commercial coal seams are found in a number of small Tertiary basins in the Kamloops area. The one at Hat Creek has been recently evaluated for a major thermal station, though found to be too high in sulfur for the purpose. No surface mineralization has been noted so far on the Somerville Lake claim group.
D. References
2. Northern Miner, Sept. 11, 1980 (Afton Mine)
3. Kamloops Lake, British Columbia. (Map)
   Scale 1" = 2 mi. Mineral Commodity Map.
   (165 mineral locations, including Afton, Stump Lake Mine),
   1968
   12/10/87, NTS 92I/10E.
5. W.E. Cockfield. Map 887A (Regional Geology, Mineral
   Locations Scale 1" = 4 mi.), 1946. Nicola, Kamloops and Yale
   Districts. Accompanies GSC report on Nicola area. 92I/E 1/2.
6. Assessment Report, Geological, Metallurgical, Drilling Work,
   Shumway 2 Group, W.D. Groves, Aug. 9/89.

E. Summary of Work Done
This is year 1 for the claims, by the present stakers. Reconnaissance
and prospecting of the 20 units of the J&J #8 claim, and
drilling of the four 70 foot vertical B-core diamond drill holes
on the J&J #8 claim, core assaying and core sampling for the
report were carried out by Mr. A. Babiy, Kamloops prospector.
Drilling is charged @ 273', at loaded cost of $30/ft. Another
$730 was spent on the report (drafted by Dr. W.D. Groves, word
processing and drafting by RPM Mapping, and assays by Kamloops
Research & Assay Laboratories Ltd.)

Assay costs at Kamloops Research and Assay Laboratory Ltd. (4
chip core samples AA ppb Au, plus base metals) totaled $80.
Summary of work costs are given in Appendix I - Work Cost State-
ment.

Technical Data and Interpretation
Essentially excerpted from Ref. 6)

A. Geology
1. Regional Geology

Figure 3 shows Regional Geology as mapped by Cockfield of the
GSC. Oldest unit in the area (and the one mapped by Cockfield as
underlying most of the subject claim area) is the allochthonous
upper Paleozoic marine Cache Creek, found by Danner and co-
workers to contain, in its western (deep sea radiolarian chert) phase,
Tethyan fusilinids and other marine fossils. The Tethys
sea was a Paleozoic continental rift basin sea in what is now
about mid-Pacific location: the Cache Creek unit was eventually
obducted onto the North American continent in Late Paleozoic
time. Locally the Cache Creek consists of dark, sometimes color-
banded and highly indurated and somewhat silicified lithic tuffs
or turbidites, intercalated with dark colored fairly basic mas-
sive flows or sills, with a syngenetic sulphide content. The
Cache Creek is now highly deformed on generally northerly axes
(locally dips are 40–60 West), and shattered and sheared along the margins of the Coast Range age batholiths now engulfing much of it. To the NE, the Cache Creek includes limestone beds with marine fossils, and some volcanics.

Large scale plunging folds, etc., show a fairly complex deformation pattern now exists in the unit: deformation induced by both obduction and later continental tectonism. Generally overlying the Cache Creek (and perhaps crosscutting it), is the Triassic Nicola volcanics, a submarine greenstone unit with intercalated tuffs. Pebble and sharpstone conglomerate horizons in the Cache Creek suggests a complex and local depositional history, including periodic uplifting to form beach facies. Nicola greenstones are more or less disconformable above the Cache Creek, but the transition is indistinct; the contact is mapped in the field at the first massive greenstone unit in the section. In places a pebble conglomerate unconformity marker marks the contact, and Nicola flows cover a variety of lithologies of the Cache Creek, but it is possible the Nicola Volcanics (flows, tuffs and a few other intercalated sediments), represented a basin-rifting event in Tethyan time, and that the Nicola, in which greenstones, i.e. submarine basalts, are prominent, piggybacked structurally on the Cache Creek and is thus affected by the same obduction deformation, except perhaps less extremely, being more competent.

The obducted volcanosedimentary sequence was then massively intruded by Coast Range age batholiths. Locally these are lightly tectonized and were evidently 'wet' melts: mafic transition metal content was remobilized as late copper (gold, silver)–magnetite–zeolite-epidote-phase mineralization into late fractures and faults, as well as disseminated deposits in the batholith margins, a fact of great local economic significance.

A lower Cretaceous continental volcanosedimentary unit, with continental plant fossils and coaly horizons in interflow sediments, the Kingsvale, is not locally mapped by Cockfield. A later (early Tertiary) Kamloops volcanics interruptive unit, characterized by late fracture and fault mounted hotspring mercury mineralization, also rifted older rocks in the Kamloops area. Erosional remnants of this unit are mapped cutting the Coast Range intrusives in the area.

Difficulty of making definitive distinctions in the field between, in particular, dark sediments of Cache Creek, Nicola, Kingsvale and even Kamloops units makes the author cautious about the exact allocation of the local sediments, until more local field relations are established. 1988 diamond drilling east of Shumway Lake (a 1000' vertical hole on the ROAD 4 claim) shows a rhythmically intercalated tuff–dark argillite sequence, including coaly wisps, which looks like Kingsvale group.

2. Property Geology
The physiography of the claim area is Tertiary Interior Plateau peneplain, with small lakes in hollows, in places overlain by thin amygdaloidal trachyte flows. Property geology is not yet known in any detail since subsurface geology is largely obscured by Plateau drift and the recent trachyte flows over the older basement rocks described above. However, the area is believed to
be underlain by the sill-intruded volcanosedimentary sequence seen east of Shumway Lake. The claims discussed are held for this reason.

B. Assaying — Laboratory Analysis of Core Chip Samples (Methods)
In analysing the core chip samples, one half gram pulverized samples were digested in Aqua Regia and tested for Au (ppb) (and in some cases Ag (ppm)), by Atomic Absorption Spectroscopy (AA). In testing the 37 core chip samples, precious metals were collected with a small (10 mg Ag per 1/2 assay ton) silver inquart, and the precious metals read by dissolving the dore bead in Aqua Regia and reading the results by AA.

Conclusions
No surface mineralization was encountered on the Somerville Lake group claims, but subsurface geology is of interest as a possible west-extension of the norite sill-bearing volcanosedimentary series of interest, which lies east of Shumway Lake.
Appendix I. Work Cost Statement
Drilling four 70' vertical diamond drill holes
(total 273' = 91m), loaded cost $30/ft.
Total field expenses $8190

Assay Costs (this report)
Kamloops Research & Assay Laboratory Ltd.
4 Au/base metal geochem assays @ $20 80

Assessment Work Report by Jimmy John, Prospector
(contract work by Dr. W.D. Groves, P.Eng. - 1 D) 400

Word Processing, Computer Drafting 250

Total Expenditure $8920

Respectfully Submitted,

Jimmy John, Prospector
Appendix II Certificate (Jimmy John)

CERTIFICATE

I, Jimmy John, do hereby certify that:

1. I am a professional prospector and mining executive, residing at 2993 Cedar Hill Road, in Victoria, British Columbia.

2. I have practised my profession for over 20 years.

3. I supervised the drill program on the Somerville Lake claim group area during June 1989, including working with prospector/driller Andrew Babiy, of Kamloops, B.C.. I have made several 1-day property visits to supervise the sampling program. Dr. W.D. Groves, who assisted in compilation of the report is also presently working in the area and has visited the claim in question.

Dated the 6th day of December, 1989 at Vancouver, British Columbia.

Jimmy John, Prospector
KAMLOOPS
RESEARCH & ASSAY
LABORATORY LTD.

To: MR. A. BABIY
1065 SINGH ST.,
KAMLOOPS, B.C.
V2B 5E3

Attn: - %-
B.C. CERTIFIED ASSAYERS
I 912 - 1 LAVAL CRESCENT, KAMLOOPS, B.C. V2B 5E5 PHONE (604) 372-2784 FAX 372-1112

** GEOCHEMICAL REPORT **

Number: G 2200
Date: OCT. 3, 1989
Proj: 

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IN Au COLUMN 3 INDICATES <5 PPM

KAMLOOPS
RESEARCH & ASSAY
LABORATORY LTD.

To: Mr. A. Babiy
1065 Singh St.,
Kamloops, B.C.
V2B 5E3

Attn: - %-
B.C. CERTIFIED ASSAYERS
I 912 - 1 LAVAL CRESCENT, KAMLOOPS, B.C. V2B 5E5 PHONE (604) 372-2784 FAX 372-1112

** ASSAY CERTIFICATE **

Number: K 9805
Date: Oct. 3, 1989
Proj: 

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B.C. Certified Assayer
FIGURE 2
CLAIM MAP
Somerville Lake Group
Scale 1:50,000
J-J 67810

Hull Hill

Drop 2
1988(8)

Mineral Claim
MAP 46179W(E)
John, J.
2993 Cedar Hill Road
Victoria, BC
V8T 3H8

March 19, 1990

Mr. T.E. Kalnins, P.Eng.
Mineral Resources Division
Gold Commissioner’s Office
Ministry of Energy, Mines & Petroleum Resources
Parliament Buildings
Victoria, BC
V8V 1X4

Dear Mr. Kalnins:

Encl. see yours: File No. 2500-03-AME, TK to John, J., Feb. 09/90 (60 days, approx. Apr. 10/90). Questions noted (1) through (5) on text of your letter.

Questions (1) through (5) are in essence clearly answered by Abstract paragraph V in particular (encl., Par. V), and Appendix II: Certificate (Jimmy John), including qualifications of driller-prospector Andrew Babyi, who drilled the holes (encl.).

In essence, the work was a 'null-case': four shallow vertical holes drilled in a flat plain of recent unmineralized trachyte flow rock, of uniform consistency (i.e.: once described, the core showed no local variation). As stated in the report, one chip sample was taken along the core of each hole (4 samples from the core of 4 holes), assayed, and the (essentially null) assays marked hole 1, hole 2, hole 3, hole 4, on the assay sheet. The holes were VERTICAL, as is stated in the report. They were singularly in the same (sic) rhyodacite flow. The location of these collars is marked on Fig. 4 and labelled Holes 1,2,3,4. All this information is in the report, as you can ascertain.

The interest in the claim is in what may UNDERLIE the trachyte flow cover. This was also stated IN the report (Abstract Par. VIII).

The qualifications of John (and Babyi) are GIVEN in the author John’s certificate (ENCL.). They are both prospectors: Babyi is a prospector/driller.

Both could produce lengthy accounts of WHERE they have prospected and for what, during the last 20 years or so, but both are qualified to drill core and log geology adequately to get representative chip samples of an unmineralized lava flow, which was what samples 1,2,3,4 were, as borne out by KRAL assay tests K3805 (for hole #1), and G2200 (for holes 2,3,4, so noted on assay sheets enclosed in report.)

The only information missing from Fig. 4 (blown up from the 1:50,000 topo map, is that holes 1,2,3,4 were drilled on a flat, lava-covered plain, just N of Somerville Lake (pond) all between the _____ and ______ contours on the 1:50,000 contour map. The
fact that they were drilled on the lava flat (Interior Plateau peneplane surface) covered locally by exposed Tertiary Trachyte is covered in the report (Abstract Par. V).

**Pointwise**

(1) Four VERTICAL 70' holes were drilled IN FEATURELESS TRACHYTE. These holes were logged and sampled by A. Babiy - qualified as a prospector/driller. See his attached Certificate, attached.

(2) Regarding hole inclination, azimuth and dip tests - as stated the 70' holes were all VERTICAL. Inclination is therefore 90°, azimuth is irrelevant, and while no dip tests were done, there cannot have been much deflection in a 70' vertical hole. Also, the core material was unmineralized. Collar elevation can be reliably estimated from the top map.

(3) Drill core logs were obviated by the fact that all four holes were in featureless, barren trachyte. One could mark each hole as:

```
Featureless barren trachyte
0 - 70', chip sample 'hole n'
Assay # hole #.
```

but it is difficult to see how this would elucidate beyond Abstract Par. V. I can send 4 such sketches, signed by Andy Babiy, prospector/driller, if you would like, but feel that this would add nothing to the sense of the report.

(4) The core is stored at Andy Babiy's residence on Singh Ave., Kamloops, where it can be inspected at will. Again, the core was barren.

(5) This has been done. Assay certificates K9805 (hole 1) and G2200 (holes 2,3,4) encl., and hole number noted on assay sheets. (Null) results can thus concur with logs.

Yours sincerely,

J. John

*Note: if in light of this FAX, you still require more details, please inform me at once.*
Four Diamond Drill Holes

J&J #10
8068(9)
5N x 4W

Hull Lake

LCP J&J #10

J&J #8
8020(9)
5N x 4W

Samerville Lake

DDH #1 #2 #3 #4

J&J #6
8018(9)
5N x 4E

Nichol Lake

J&J #7
8019(9)
5S x 4E

Fig. 4
CLAIMS PLAN MAP
SHOWING DRILL HOLE LOCATIONS
ON J&J #8 CLAIM

(NTS 92/9W)