### South Okanagan Project Summary

#### PROPERTIES

1. FERROUX (WT CLAIMS) Project 284

The claims were staked to cover anomalous drainages of a heavy mineral survey (see Appendix 1 for list of claims). The staking was somewhat limited to the SW due to the presence of existing claims. The area was mapped as Paleozoic volcanic and sedimentary rocks, Cretaceous(?) intrusions and Tertiary volcanic rocks.

The following samples are anomalous:

231 Au Ag Sb As Th
F31 Hg Pb Sb Zn Ag Cu U W
F33 Au
F34 Au As Th
F35 Au
F36 Hq

A brief inspection of the property by G. Evans revealed the following:

- an altered Tertiary(?) monzonite, centred(?) on a probable N-S fault, with anomalous Au and Cu values.

- good access and new rock exposures due to recent logging

RECOMMENDED WORK

- 1. base map at 1:5000
- 'recce-level' contour or grid (100 m X 100 m) soil sampling in anomalous drainages
- 3. prospecting and rock sampling along logging roads, with emphasis on areas of monzonite and favourable Tertiary rocks
- 4. research and examine any other claims/showings contiguous to property

ASSESSMENT WORK REQUIRED

\$ 7200 in 1989, the first amounts due by June 2

### 2. LOAK CLAIM Project 287

The claim was staked to partially cover anomalous drainages of a heavy mineral survey. A portion of the claim gained title when an official complaint by a third party nullified a previous claim. Minnova has been discussing a possible option on additional claims in the area.

The following samples are anomalous:

8723 As Au Cu Hg W F5 Au As Cu Hg W F7 Au W F8 As Au W

Anomalous samples within the possible option are:

8721 Au As Cu W
F4 As Sb W
8738 Au Ba W
8736 W Au Hg Sb
8737 Hg As Sb W

There is a strong skarn geochemical signature, but not much is known about the geology of the property at present.

## RECOMMENDED WORK

- 1. field inspection of claim to determine extent of ground held
- 2. base map at 1:5000
- 3. 'recce-level' contour or grid (100 m X 100 m) soil sampling in anomalous drainages
- 4. evaluation of property submittal from third party

#### ASSESSMENT WORK REQUIRED

\$ 1500 by June 15, 1989

## **REFERENCE:**

new GSC open file (#1969) covers this area at 1:250,000

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#### 3. YELLOW LAKE CLAIM Project 285

The claim was staked to cover the possible eastern extension of a strong multi-element heavy mineral drainage anomaly staked by QPX. The following samples in the area are anomalous:

8740 Au As Cu Pb Sb Zn Ag Hg Fe Ba
F1 Pb Au Ag As Sb Zn Cu
F2 As Cu Au
F3 Au As Cu Zn Ag Hg Pb Sb Fe Ba
8724 Zn
8725 Sb
8727 Cu Fe As Zn

A -60+150 HNN fraction was produced for samples 8740 and F3 and examined microscopically.

8740 1 coarse Au grain, abundant sulphides (including cpy) F3 no Au seen, abundant sulphides

The claim is in an area not effectively covered by the heavy mineral survey. A traverse by G.Evans down the anomalous drainage to the west encountered highly altered and mineralized rocks.

The geology of the area is mapped as Eocene volcanic rocks.

## RECOMMENDED WORK

- 1. field inspection of claim to determine extent of ground held
- 2. collect some heavy mineral drainage samples if possible
- 3. brief inspection of geology and extent of outcrop

ASSESSMENT WORK REQUIRED

\$ 600 by July 13, 1989

#### 4. GIL Project 282

The claims were staked to cover a known skarn that had been explored and drilled for tungsten. Also, an assessment report showed Au values in some silt samples and one rock sample.

In 1987 preliminary rock sampling gave anomalous values in Au, As and Cu. Further rock sampling and geological mapping was carried out in 1988. This report will be filed by G. Evans for assessment work. The results indicate that most of the anomalous Au values occur north of Gillanders Creek, in the lower grade metamorphic rocks (hornfels). Skarns seem to be related to quartz diorite intrusions and also occur in limestones in contact with volcanic rocks. No typical 'Hedley' rocks were encountered.

#### RECOMMENDED WORK

1. file assessment work - about 3 years

2. consider a detailed heavy mineral drainage/talus survey in area of greatest Au potential (the rugged topography and relative isolation will be a factor in any exploration work)

### ASSESSMENT WORK REQUIRED

\$ 2900 by June 9, 1989

# 5. RICHTER (RICH CLAIMS) Project 286

The claims (212 units) were staked to cover a large area of anomalous drainages of a heavy mineral survey. The presence of existing claims did somewhat limit the size of the property. The area has been mapped as Paleozoic sediments intruded by Mesozoic granitic rocks.

The following samples are anomalous:

240	Au	Ag	As	Cu	Pb			
286	Au	Ag	As	Cu	Pb			
239	Au	Cu						
285	Au	Ag	As	W				
282	Au	Pb						
283	Au	W						
8717	Cu	As	Au	Pb	Zn	Ag	Sb	W
287	Au	Pb						
288	Cu	As	Pb	Au	Ag	Fe	Sb	W Zn
289	Au	As	Cu					
290	Cu	As	Pb	Zn	Au	Ag	Fe	Sb W
291	Au	As	Cu					
8715	Au	Ag	W					
294	W							
8714	Au	Cu	Pb					
295	Au							
296	Au	Ba	Cu	As	W			
298	As	Cu	Au	W				
292	Ag	W						
293	WAu							
8716	Au	W						
317	Au	$\mathbf{C}\mathbf{u}$	Pb	W	Zn			
314	Au	As	Cu					
305	Au	Cu						
318	Au	As	Cu	Pb	Zn			
303	Au							
304	Au							

A -60+150 HNN fraction was produced for samples 239 and 240 and examined microscopically.

239 2 coarse Au grains, abundant sulphides 240 2 coarse Au grains, abundant sulphides

### RECOMMENDED WORK

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- 1. base map at 1:5000 or 1:10000
- 2. follow-up heavy mineral sampling in selected drainages
- 3. 'recce-level' contour or grid (100 m X 100 m) soil sampling in selected anomalous drainages
- 4. compile known geology on base map

#### **NEW REFERENCES:**

- 1. new GSC open file (#1969) covers this area at 1:250,000
- 2. new MEMPR open file(#1989-2) covers northern part of property
- 3. new MEMPR open file(#1989-5) includes the property area
- 4. thesis mapping by grad student (Andrew Buddington -Western Washington State) covers the extreme south part of the property. He has mapped the Similkameen pluton as a zoned (granite to pyroxenite) intrusive and has rocks available for analysis - see Appendix 2.

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#### ASSESSMENT WORK REQUIRED

\$21,200 in 1989, the first amounts by August 26

## 6. DUSTY MAC

In 1988 Minnova carried out a program of geological mapping and drilling. Although no new ore was discovered the results were encouraging and further drilling is planned. Minnova has indications that the mineralization postdates most (all?) of the rock units on the property - ie - is mainly structurally controlled. However significant mineralization might still occur in favourable stratigraphy - that is, in a more porous horizon, as at the Vault property. Alteration appears to be a useful guide to mineralizing structures.

#### RECOMMENDED WORK

1. Minnova plans to continue drilling ASSESSMENT WORK REQUIRED ? WORK COMMITMENTS IN 1989

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**REFERENCES:** 

Jones, H.M.	1985	Report on the Vaultfor Seven Mile High				
McClintock, J	1982	Vault Optionfor Riocanex A.R. 10968				
Oddy, R.W.	1984	Vaultfor Dome Exploration A.R. 12487				
Wilmot, A.D.	1984	Vaultfor Seven Mile High				
Wilmot, A.D.	1985	Vaultfor Seven Mile High				
V.S.E. prospectus, 1985, for Seven Mile High						
various maps, mostly cross sections of drilling						

# 7. JOLLY Project 283

The property was optioned by Brican after a property examination revealed interesting Au values in altered diorite(?). In 1988 Minnova carried out VLF, magnetometer and IP surveys as well as geological mapping and rock sampling. Exploration was conducted on only a portion of the property. A NNE trending diorite body is fault bounded by Paleozoic sediments, with volcanic rocks in contact with the sediments on the west. An airborne mag low, coinciding with an EW placer channel, cuts across the rock units. Drill targets outlined to date are:

- fault contact between diorite and sediments
- sediments/volcanic rocks contact VLF conductor, strong IP contrast
- east-west mag low
- shears within diorite

Overburden ranges from 5-15 feet, and up to 50 feet in the area of the mag low.

#### RECOMMENDED WORK

- Minnova has a proposed drill program costing about \$150,000.
- 2. consideration should be given to an orientation biogeochemical survey
- the EW mag low should be traced to the east where Tertiary rocks and a drainage anomalous in Au occur (Johnstone Creek)
- 4. the above mag low is also a probable placer channel and staking by placer claims should be considered.

#### ASSESSMENT WORK REQUIRED

none in 1989

WORK COMMITMENTS IN 1989

\$ 50,000 by August 1

#### PROPERTY PAYMENTS in 1989

\$ 15,000 on August 1

#### REGIONAL EXPLORATION

- 1. Minnova is still in acquisition mode in the South Okanagan Project.
- 2. Types of deposits of which JV should be aware:
  - epithermal Au in Tertiary rocks
  - Au skarn deposits in Triassic(?) rocks
  - Au in mesothermal veins/shears
  - porphyry deposits with good Au content
- 3. Regional exploration completed to date should be re-evaluate in light of new information available and further work carried out if warranted.
- 4. Areas of strong interest should be acquired by staking or option.
- 5. On areas not deemed worthwhile to acquire by option a 'claim watch' should be set up to monitor the lapsing of desirable claims.
- 6. A new set of heavy mineral maps has been completed (Dec/88) which is more interpretative than previous versions.
- 7. Discussions are ongoing with Kay Fletcher of UBC as to interpretation of heavy mineral results. He has a data set for statistical manipulation.
- 8. The following targets are also recommended for exploration.
  - i) Barnato/Kettle River graben area 82E/7W

A compilation of geology and showings of the area was begun. The area is strongly anomalous in heavy mineral drainage sampling as follows:

48 As Pb Ag Cu
40 Ba As
46 Ba As Fe Pb
41 Au As Sb W Ba Cu Fe Th
43 Au As Cu Sb Ag Pb Zn W
51 Au As

The geology has been mapped as Paleozoic volcanic and sedimentary rocks intruded by Cretaceous and Tertiary plutons and overlain by Tertiary layered rocks. However, a new GSC open file (#1969) shows an Upper Triassic fossil in the area. The most significant structural feature in the area is the Kettle River graben. ii) Tertiary rocks of the White Lake Formation are believed to be 'equivalent' to the Klondyke Mountain Formation in Washington State and therefore should a good exploration target.

iii) Skarns, especially those in Triassic rocks, are good targets for Au +- Cu deposits.

iv) Follow-up heavy mineral sampling on isolated anomalous samples.

a) China Creek #233 As Cu Sb Au Th b) trib. to Ed James Creek #14 Au Ba Fe Sb Th U W As

- Cu Pb Zn
- v) Kettle River graben/Williamson Creek area 82E/7W
   two Au heavy mineral anomalies (#38,272) near east bounding fault.
- vi) Okanagan graben much land alienated from staking could be evaluated by heavy mineral survey prior to contacting owners.
- vii) Rainer target 82E/6E
  - interesting Tertiary outlier, includes Corona and Inco/E&D properties as well as heavy mineral anomalies.

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W.R. Gilmour

Vernon, BC February 21, 1989

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c.c. Alex Davidson Graeme Evans Ken Daughtry Rick Wynne