

889776

June 26/93

PhotosWOLF

WD-BL-93-

- | | | | |
|-----|------------------|--|----------------------|
| 1. | 7a | 'Rice Crispy Bx' | Ridge Zone - 'ledge' |
| 2. | 7a | " (with jacobinite) | " |
| 3. | 19 | Banded, flooded, silica + replaced calcite blocks | " |
| 4. | 5 | Banded, chaledonic vein in silic. rhy. | " |
| 5. | 18 | | " |
| 6. | 4 | Qtz vein with black 'borders' | " |
| 7. | 2 | Tuffaceous sediments | |
| 8. | 10a | Flow banded rhy with Qtz veinlet | |
| 9. | 12 21 | Flow banded rhy Black sil. + py-rich bx | Blackfly zone |
| 10. | 12 | Qtz phyric rhy. flow | " |
| 11. | 1A | " | - Ridge zone |
| 12. | 1 | " | " |
| 13. | 11 | 'crowded' coarse gr. zoned por. | Ridge Zone - South |
| 14. | WOLF | Rhy bx + silica | " |
| 15. | 37 | 'B' por (mega) | Ridge |
| 16. | 29 | sed-s-wackes | (Main) Ridge zone |
| 17. | 26 | flow banded rhy (DCH #1) | " |
| 18. | 23 | Green (apple) Qtz phyric rhy + Qtz veinlets + min. | Ridge - eastern end |
| 19. | 28 | Vitric tuff | long trench |
| 20. | 27 | 'G' por. dyke | Ridge |
| 21. | 25 | lapilli bx with Qtz veinlet | " |
| 22. | 24 | Vitric tuff | " |
| 23. | 15 | Por with Qtz (+bladed) veinlets | " |
| 24. | 16 | Silic. (+min) bx | " |

no photo

KEG '93

Apr. 20/93

WOLF - Dave Heberlein

stack
dyke
sill



Flow banded rhyolite, autochthonous bx.

QF Per

Q-phyric rhy, Bx

-excellent
aerial
shot

odor

Xl. tufts, welded tufts

Ash Tuft

Trifacian ss, ss, xl, ash & heterolithic cy.

Heterolithic bx

Hez.

Augite or hbl phytic andst Per. felsic
intr. (Cret.)

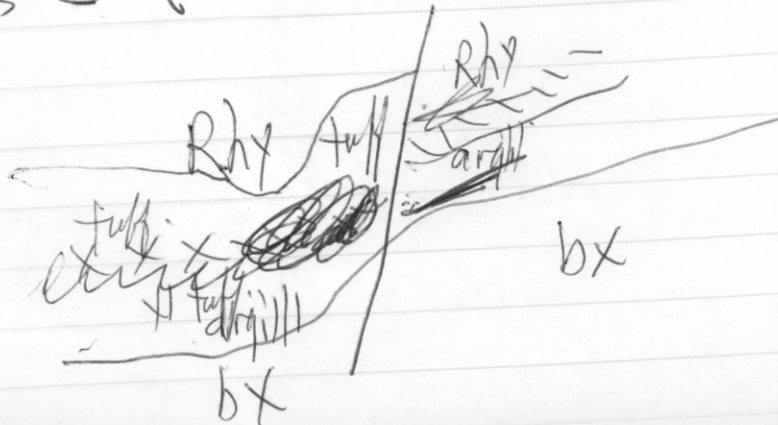
Facies changes important

Co-magmatic - tufts & QF P

Chemistry?
(BS)

Ridge & Pond zones - all one now.

- dark gtz eyes - (cf. Cinola - 'brown' gtz)



(2)

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300m x 300m at pres.

Mineralogy :- see Dunge's thesis

- naumantite (Se)

- aquilexite

- Cu , Pb , Ba , Ag

- electrum, native Au, Ag

- acanthite

rare py

- gtz, chal, adularia

Analogy: Sleeps

- boiling - blading.

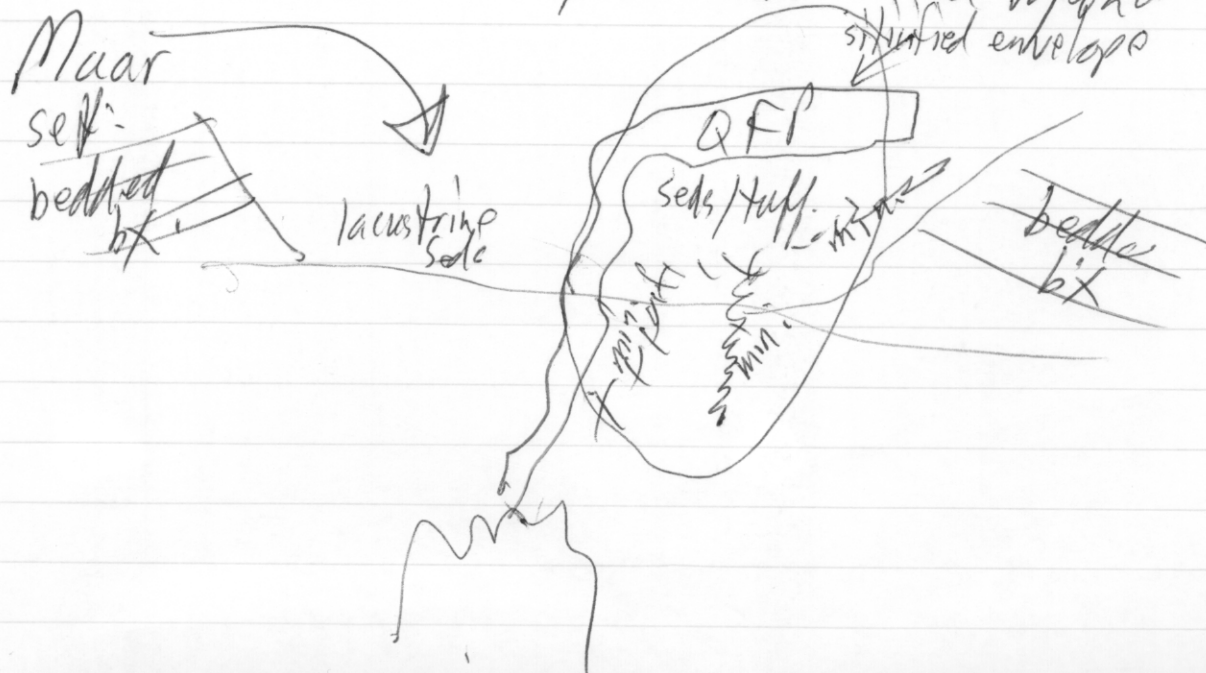
HW - bx of rhy cealed by blue-grey chalcedony

→ Au with silica precip replacing calcite

- Hydro. system oper. during both sedst & rhy t_h

(but after empl. of QFP sill is a 'cap'?)

- gas phase bx. = boiled "rice crispy" bx.
(formed by steam - held together by silica)



300m x 300m

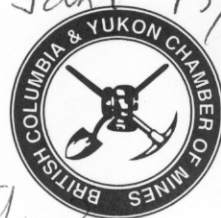
Sonora

Sonora Mining Seminar

Vancouver, Canada

November 10, 1992

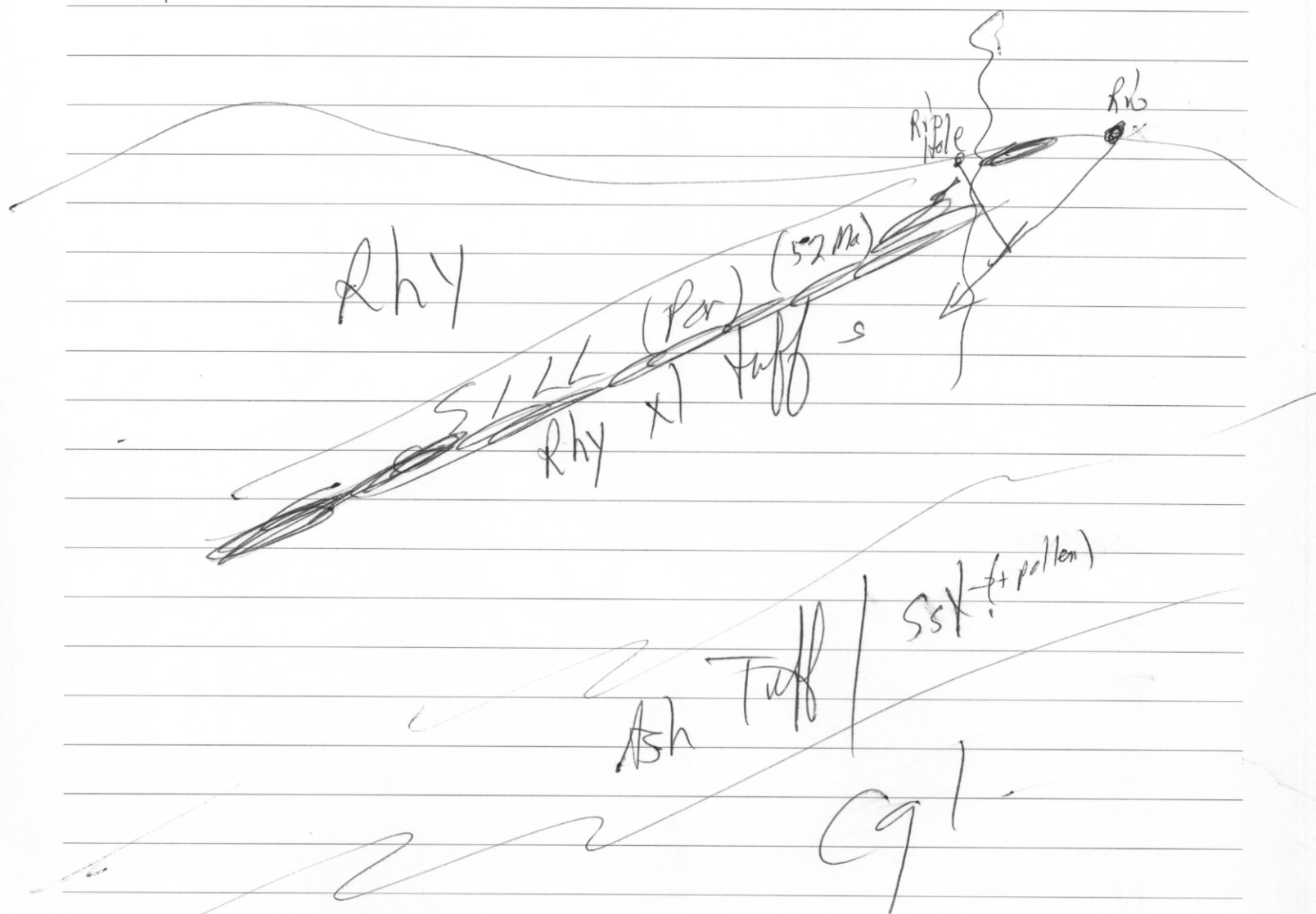
Jan 13/93



- Rio hole missed
by 15 ft.

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Rio camp - top of Blackfly cone



Cgl.

- thinning to N
- source - to SW?

- west - down dropped ash flow tuff (à la Bishop's Tuff)
- ignimbrite



Sonora Mining Seminar

Vancouver, Canada

November 10, 1992

WOLF



Jan. 12/93

- Geochem - no deleterious (As, Hg, Pb)
- also no Ba, Ag

- very low sulphide

- Biogeochemistry worked excellent -
cut off (chip off) bark (outside) from tree (lodgepole
pine) stations on line every 25 m.

- highest gold anomaly in world
(72 ppb Au) from bark

→ Sig. of NE-SW (plan) trending rhyolite
porphyry or sill, as an impervious
cap to mineralizing fluids
i.e. Au min. 'ponded' in ash flow & tuffs
& intraformational conglomerate at base
of Ootsa Lk. (?) Gp.

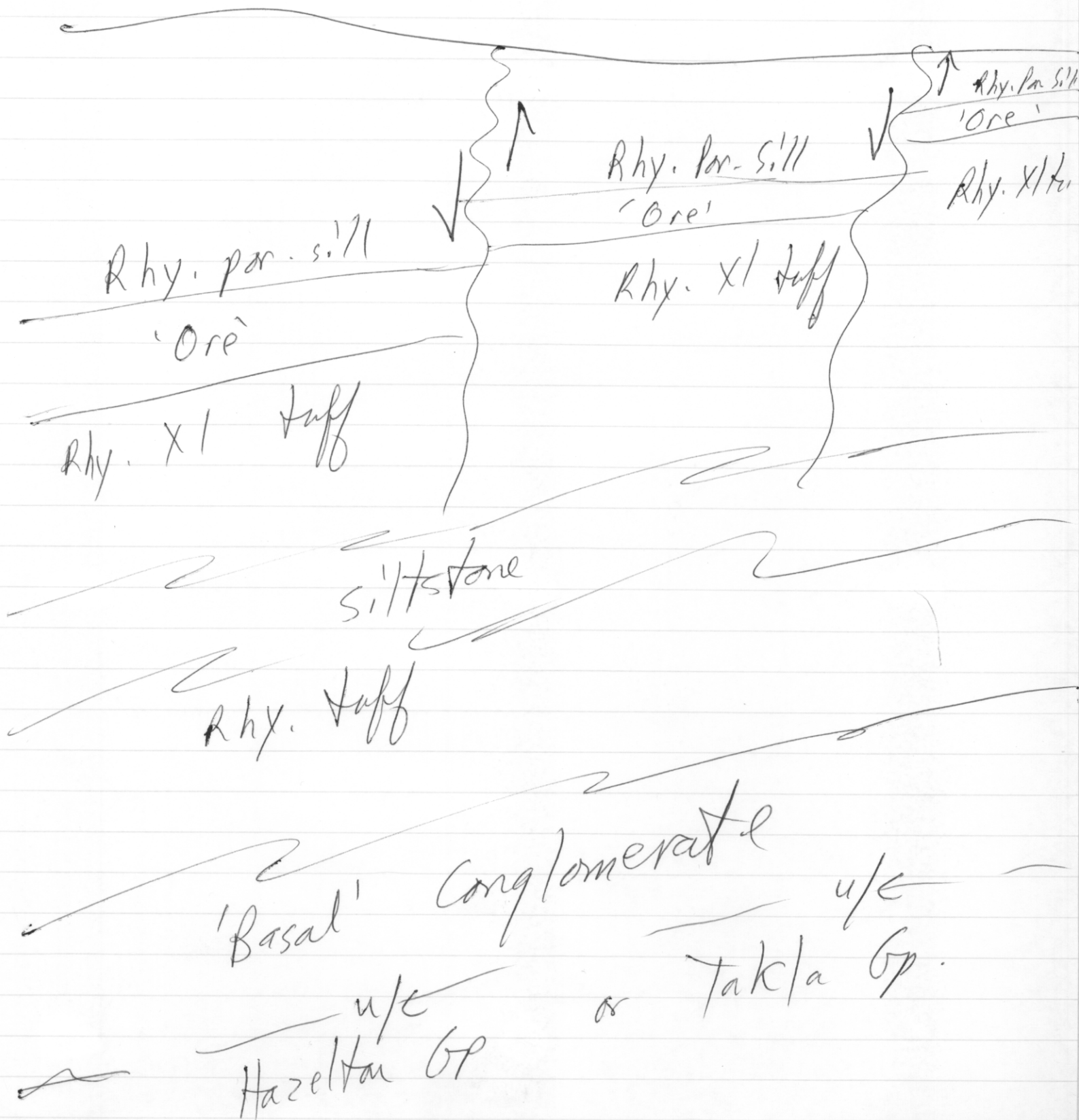
- Compositions of rhyolitic units - megascopically
similar → need lithogeochem data.

- N-S trending silica 'zones'

- Best ddh = #13

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Longitudinal section



Inventory Potential: 20 tonnes @ 2.3 g/t Au

- column leach tests (prelim.) suggest good recoveries //
> 80% Au

(0.067 gpt Au)
1,341,694 oz cont'd Au

Jan. 6/92

Jim Dawson

Note: Cathy Hickson
interested in
conglomerate

June '93

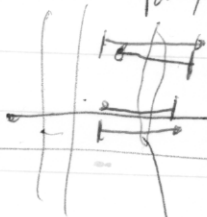
Possible
50 to 100 m
@ 2 g/t
(J.D.)

F

Blackfly



Lead/Ridge Zones



* Age of Mineralization
45 ma or younger

- Geophysics (resistivity) (i.e.)

W
Blackfly (Lake)
showing

100m-spacing ddh

steep fault offset ~ 20 ft
(i.e. no thrust)

45 Ma
12 - 15 Ma
pollen date - wrong! (leakage)

ZONE: 300m x 7.6m x 240m down dip
SW oct. 20/92

'wide open'

Epithermal
'Feeder' (pipe)

~~no deleterious elements~~

Conglomerate hosts mineralization
below impervious cap
of felsic
rhyolite porphyry
sill.

Stratigraphy

Impervious 'cap'
- rhyolitic sill (Coka Lk. Gp.)
volcanic tuffs
conglomerate
(incl. pebbles/boulders of
intrusive rx. + ands. + trhy.
(Hazelton Grp.?)
Hazelton Grp. - basement?

mineralized
Replacement
Zone 5-30m thick

± 50m

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Sept. 21/92

- Dave Heberlein

Note: Rio drilled
6 holes
previously
in 1984

- * Drilled ~~22~~ 15 holes totalling 2000m in 1992
- * Trenching on Ridge, Pond, + Lookout zones dispelled the "thrust" concept. The 'underlying' sediments are also mineralized, incl. min. breccia fragments (rounded = conglomerate)
- * Minnova now feel the Ridge, Pond, and Lookout zones are all "one", i.e. stratabound control
- * Also drilled new Black fly zone near old Rio camp. — Low but anomalous results
- * Lots of IP anomalies

Potential for: ① 'Bonanza'-type (high-grade) veins
② Bulk-mineable (leachable) @ $< 1 \text{ g/t Au}$

* Min. dips shallow $15^\circ - 20^\circ$ to west like a sheet i.e. amenable to open pit mining (leaching).

* Minnova very keen on this project!

Nov. 9/92 Jim Dawson — current potential

10 to 15 million tonnes @ 1 to 3 g/t Au

(i.e. 500,000 to $> 1 \text{ m oz Au contained}$)

0.029 g/t to 0.088 g/t Au

*August Report
1992*

On August 1st Bob Lane and I visited the Wolf epithermal prospect, located about 200 km south (2 to 2 1/2 hr. drive) of Vanderhoof (via the Kluskus-Malaput Forest Service road). Minnova currently have the property under option and had recently completed a trenching and mapping program, as well as a new type of geophysical survey (a combination of IP and resistivity) designed to test a system or zone at a particular depth (eg. 200m). Apparently Minnova has recently had good results with it at their Clisbako property. Denis Morrison (CCE Geophysical) is the pioneer person and he is working with a chap from Albania. If good results are achieved this system could 'revolutionize' other epithermal vein camps in BC (eg. Toodoggone) and the world. Cam Clayton is the geologist in charge. They hope to start drilling by mid-August and are very excited and anxious to test the new geophysical anomalies.

Minnova has discovered a new showing ('Blackfly') very close to the old (1985) Rio Algom camp. It is a 'nice' looking black (fine sulphide/sulfosalt?) matrix breccia. With preliminary interpretations from the geophysics, Minnova now suspects that the style of mineralization may be 'sulphide-high' rather than previously believed 'sulphide-low'. Surface grab samples have assayed up to 60 g/t Au with best chip intervals running 20 g/t Au.

Significantly, Minnova feel they have dispelled (proved) a previous interpretation of a 'thrust fault' cutting off mineralization and thus future size potential by observing angular (brecciated) clasts of sedimentary rocks contained within the silicified (mineralized) zones, i.e. the mineralizing event is younger than the sedimentary rocks. It is readily apparent that this system 'blasted' its way upwards. Also core contacts between the sedimentary rocks and the siliceous rocks are sharp (not fault-like). It will be interesting to see the next phase of drilling on this property.

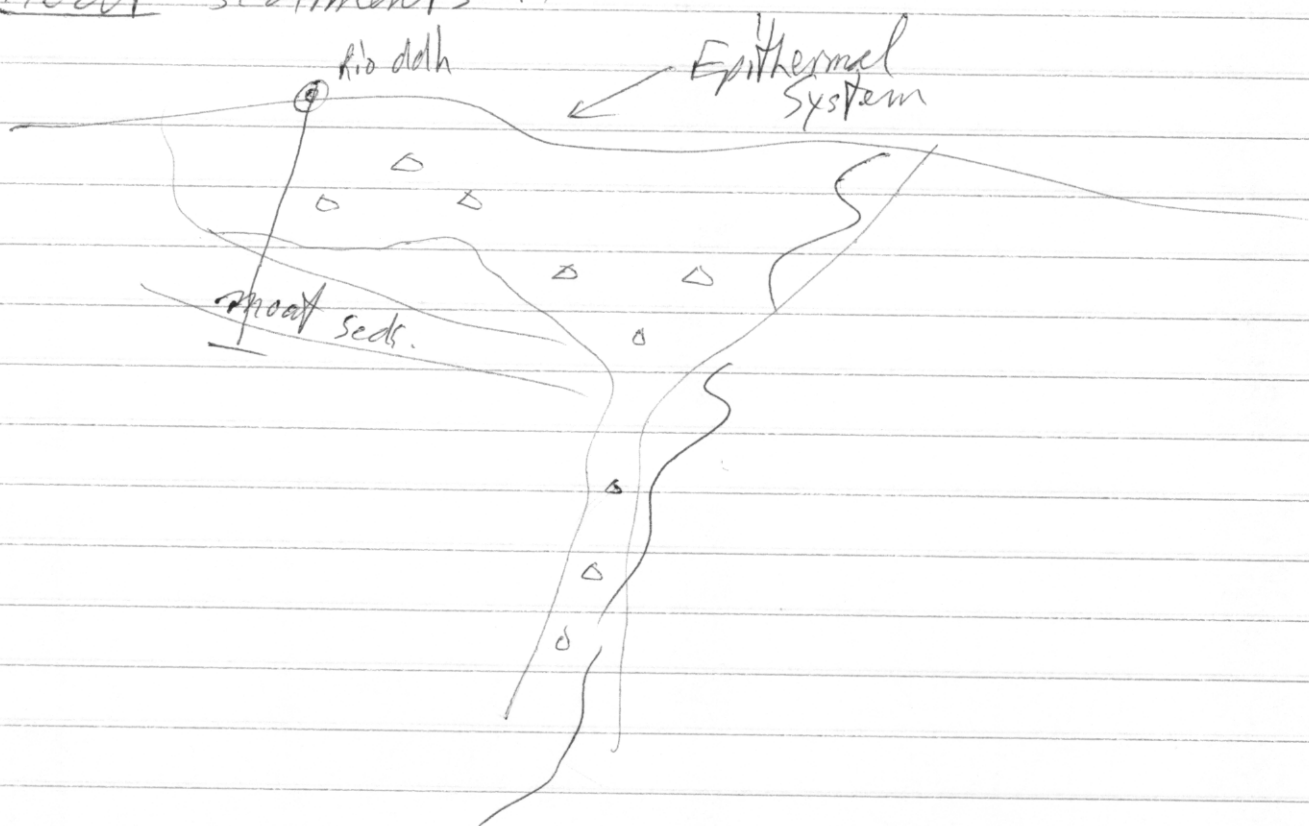
[Ref: Geol. Fldwk., Paper 1986-1, P.317-320 plus Lucero Res. Corp. Prospectus, 1987]

→ Wolf

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Nov. 1/91

- discussions with Dave Heberlein
- done recent airborne surveys
- re-eval. of drilling etc. explains Rio Algom 'supposed' thrust fault → simply an overflow of rhyolite by over caldera moat sediments.



- Dave believes Wolf has the best potential!
- caldera setting.

1992 Project: Cam Clayton / Dave Heberlein (681-3771)
(Tel. Jan Pirie - July 29/92)

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Clark Patterson

wm

left at ~~SSQ~~ ^{Shell} in Vanderhoof

thru Stoney Cr. Ind Res

~25 km - Jct.

left - Ootsa - Kluskas Foresty

stay km 142 - Jct.

→ H → Kluskas Malaput Acres

18-20 km — new rd.

Res - Gold

Oct. 13/88

PM
WOLF - ^{from Rousse} Pollen results (2) ~18 Ma from sedr. underlying 'oats'
rhyolites i.e. major thrust? → from 'POWD' zone

Gatchell - realgar formed as low as 70°C
- most Au precip @ 200 to 250°C

Post - core shack - ~1430' deep - diorite intr
± skarn - up to .9 opt Au in intrusiv
(at vent)

Rk. Gerdin
- arlin - oxide ore ~250 ppm Zn
Sb increases higher in system eg. 80 ppm
Ba - highest in jasperite 700 to 800 ppm