

82E/1E
82ENE 50-58 FRANKLIN 'CAMP'

Fri. July 31/87

- PLATINUM BLONDE PROJECT - 182 E/W/101 (1)

Personnel: Placer Development - Bob Pinsent, Al Potter,
Myra Keep (M.Sc. candidate - UBC), Keith (UBC Engineering)
Olive (cook - Toddogque [mets])

ACCESS: Paved road for 44 km; good gravel rd.
for 25 km (turn left [west] up Franklin Ck.
(~1 hr. drive from Grand Forks) NTS 82E/9W

HISTORY: - Most cls. staked 1896 to early 1900's
- bulk of production less than 181,400 tonnes (200,000 tons)
of Au, Ag, Pb, Zn ore mined from UNION mine
during 1931 to 1933. Between 1933-1936 some
tailings were retreated.
1970 - unsuccessful attempt to heap leach tailings
using a cyanide system.
1940-42 - Union mine leased + u/g work + 8,170 tons ore shipped
1984 - Pearl Res. - u/g rehab., expln. + mapping

1986 - Longreach Res. (Van.) put together package
of cls. surrounding the Union mine but
not including it + optioned package to Placer.
- Longreach drilled 31 holes totalling 6100 ft,
in Oct. One hole encountered 2 ft. of Cu-bearing
nonz. grading 0.14 oz. platinum g/m metals
(maple leaf showing).

1987: Being prepared for heap leaching of tailings

PRODUCTION: UNION MINE (see M.I. 82ENE 003)

~ 171,165 tonnes (188,670 tons) mined;
[125,579 tonnes (138,400 tons) milled yielding 1,713,712g
(55,097 oz) Au; 42,920,955 g (1,379,961 oz) Ag;
12,665 kg (27,921 tons) Cu; 168,573 kg Pb; + 299,486
kg Zn.

GEOLOGY: Miocene, dxes + plags
Pulaskite, pyrox, syenite
Early Tertiary
Vithalia - Granites
Cretaceous
Nelson Intrusions
Gd + Qtz. db.

Miocene: 'Phoenix Volcanic Gp.'
and; trachytes, bs. ft. + minor shales + tuffs
Eocene: Kettle River Fm.
Cgl., rhy., dac., ss., sh

UPPER PALEZOIC (Permian): 'Anarchist' Gp.
Gnssn., quks, lst, cherty cgl., argill., ands.

STRUCTURE: Graben structures with steep normal faults
 → may be a northward extension of the important REPUBLIC Graben in Washington State which contains similar vein-type deposits (as Union).

MINE RALIZATION: 1) vein, fissure (eg. Union) - epithermal
 2) PGM assoc. with syenite / pyroxenite - 'segregation type'
 3) skarn - Cu-Fe (very small)

1) VEIN - epithermal Au-Ag in qtz. vein with assoc. sil.
 (py, ZnS, cpy, PbS, argentite) i.e. low-level epithermal
 - Au assoc. with cpy.
 - Au (I.D. by Harris) as isolated grains up to 200 microns, as composite grains with py, as intimate mixtures with tuby silver, + inclusions in magnetite.
 - No U.G.

Potential (Union Mine: (min)) 7,500 tons @ .66 Au + 36.5 Ag over 1.5m width
 (south) 7,000 tons @ .255 Au + 8.59 Ag
 (up to 1.218 oz/t Au + 37.3 Ag)

Sumac Res.
 (Bob Seraphim)

Dumps - 18,000 tons @ .065 Au + 1.9 oz Ag
 (prelim. leach-tests = very poor recovery)

Tailings - 2 profile back-hoe trenches dug + hand dug holes = 77,000 tons @ .044 Au + 1.43 Ag
 Possible recoveries = 74% Au + 71% Ag ≈ \$750,000

∴ Total ~ 10,000 tons reserves of ~.6 to .8 oz/t Au from main zone plus tailings (heap leach)

→ Targets on Franklin mtn. for Gold-Silver - Placer Dev.
 (assoc. with alkalic intrusions)
 - also reactive rx. such as 1st. + cgl. (Kettle R.)

2) 'Segregation-Type': PGM assoc. with pyroxenites cut by monzonitic dykes
 - Large 'cumulate' body of monzonite - pyroxenite has been 'segregated' + broken - with cpy + minor bn + py gangue of shonkinite-pyroxenite or 'black lead' → basic marginal differentiate from same parent magma as auriferous syenite.

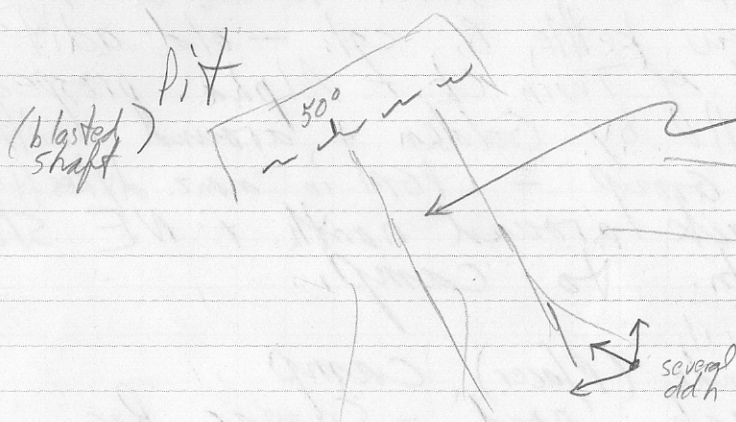
cut by pulaskite dykes.

Correspondence/Notes

FRANKLIN 'CAMP' (cont'd)

(2)

→ Maple Leaf Prospect - east flank of Franklin Mtn.
MI 82E/NE/009 Hill



Monzonite dyke
with crse. bladed
fsp. xls + dissem.
+ frac. cpy.
Note: Fault has cut
off dyke + min.
1986 ddh could not find

- attempt to reopen an old inclined shaft where near-surface footwall assayed 0.16 oz PGM + Au
- other hole gave 0.8 oz Au over 1.5 ft. ('rare')
- Platinum-palladium ratios are unusually high + are often less than 1:3 + are often 1:1
- Previous described 4.5 mile long pyroxenite dyke, or silk is really a phase of the complex intrusive rocks (see Drysdale's map).
- sperrylite (common platinum arsenide) noticed in petrographic work.
- alkalic host rock.

→ MI 82E/NE/007

→ Averill Group Prospect - NW flank of Franklin Mtn.

- Monzonite dykelets cutting pyroxenite 'segregation'
- several 1986 ddh tested zone = erratic.
- PGM assoc. with cpy in veinlets!

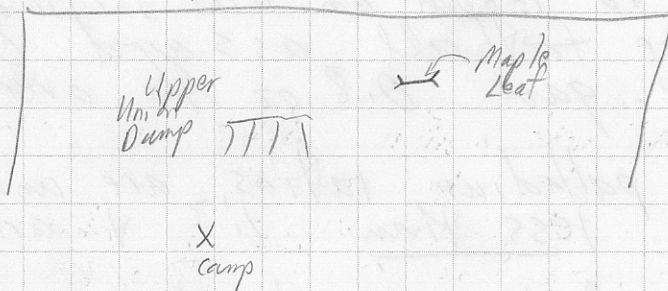
3) SKARNS - small pits - mainly gnt, cpy, Fe (py)
- note: 1st. units may offer potential

(OVER)

July 31/87 visit - toured by road around Franklin Mtn:

- Photo - Maple Leaf prospect (PGM - monzonite)
 Photo - Union mine - upper level of open cut
 - Home Stake - silic. in alt'd tuff just below kettle, R. cgl. - old adit & pits
 - around head of Twin Cr. + Alpha prospect
 Photo - up over hill by Golden + around north slope to Averill Group - PGM in monz. dykes (+cp) in pyrox.
 - Averill back around north + NE slope of Franklin Mtn. to camp.

- Photo - Platinum Blonde (Placer) camp
 Photo - Heap leach 'pond' - Sumac Res.
 Photo - Looking westerly ~~to~~ Franklin Mtn.



Myra Keepr: - M.Sc. candidate (UBC) - under Kelly Russell
 - petrographic + mapping study of intrusive rx.
 (many phases!)

Atholl Sutherland Brown: Mapped Franklin Mtn. for ~ 40 days
 - identified many phases of intrusives, incl. younger ones

REFERENCES:

* ① Drysdale, C.W. (1915) - GSM Memoir 56

② Lisle + Chilcott (1965) - AR 637

③ Lisle + Seraphim (1980) - AR 9115

④ Norman (1968 + 1969) - AR 1688 + 1845

* ⑤ Brown (1985) - AR 13, 710