93N002

NTS 93N/14W **LORRAINE** 885060 Feb. 13/96

- with Dan Mustard, Paul Richardson, Gerry Mitchell
  V.P.'s
- Compliments on CIM SV 46
- est. ~6 M tonnes @ > 0.4% Cu + ~ 0.25 g/t Au
  in (Upper) Main zone
  est./hope for ~ 3-5 M tonne in Bishop zone
  - pot. in Eckland +/- Weber zones
  - Cirque zone (to N) - old ddh = 150 m @ 3% Cu
→ Metallurgical studies on talus = 100% oxide (recoverable) — malachite
→ 'Economics' study in progress by Dan Nicol
- 'mistake' drill hole (95-33?) on Boot cls
  missed high-grade (bn) steep zone
  (i.e. drill beside it) → Dan very upset at female 'site' geol. who 'snuck' it in.
  → still lots of good potential!

1996 PLANS! ① Recce (property-scale) expl'n
② follow-up ddh on other zones,
Eventual — U/G expl'n (adit) between Main & Bishop Zones
TARGET → 25-30 MT @ ~0.8% Cu equiv.

LORRAINE

Oct. 18/08

- chat with Glen Garratt

→ crew on site today at "Mckenzie" showing (south) — 'massive sulphide' veins (Cu, Au)

→ hope to drill asap (geophysics early next yr.)

est. exp. ~ $0.08M

LORRAINE June 7/00

- chat with Don Mustard
- keynote at, willing to sell its back in interest to Lysander (eg. $200,000 cash/shares, plus total buy-out for $2M)

TGS talk with Bill Morton Oct 13/00
→ he just bought the equity from Lysander (thanks to help by Don Mustard)

LORRAINE Oct. 5/01

- 'Show + Tell' @ Eastfield (Garrett + Peatfield)

→ Looks like stacking (up to 4 'lenses'), all dipping (dip-slope for upper Main zone) to SW (i.e. previous drill holes drilled from E to W were "useless" in terms of crossing the zones of min.

→ Strong NW alignment (structural) of all zones — eventually may connect up i.e. HUGE tonnage pot.!

- 2001 SUCCESS

i) Bishop (Lorraine Extension) zone probably hooks up with Upper Main zone (e.g. DDH-01-57 from top of ridge = mineralized)

ii) DDH '01 → 'hooks up' Upper Main + Lower zones

iii) North Glacier Showing — sig. — no drilling yet

iv) 'Old Bald' Mtn. along strike to NW — good target - needs drilling (i.e. to W of camp)

v) Weber zone could be a subparallel zone

- Probably finished drilling for '01 now (weather)

→ Proj. needs ~2M to systematic drill, plus large 'regional' program on NW trend

(Note: Eastfield would love to option LAN property to NW (Lorraine)

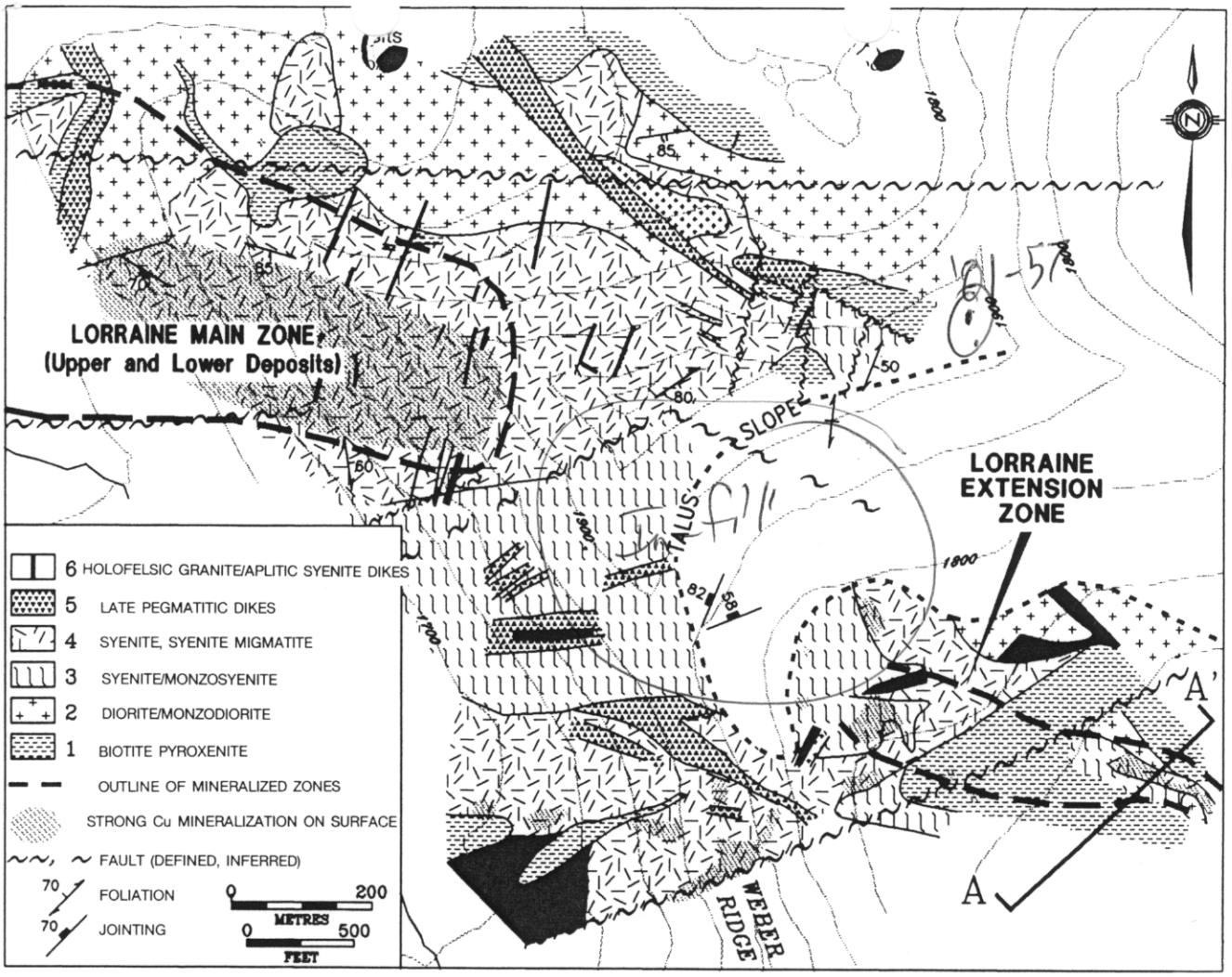

FIGURE 3. Lorraine Mountain: simplified geology.

Structure

Igneous contacts and all ductile and brittle structural fabrics exhibit prominent trends at 020°, 060° and 110° to 120°. The main foliation in syenite migmatite strikes west-northwest and dips gently to the south. The intensity of migmatite development, fracture density and frequency of pegmatite and granite dike intrusion is greatest in the Main zone.

Three significant east-west trending faults occur in the property area (Fig. 3). The first cuts the northern property area, and is indicated by sheared pyroxenite exposures and by a series of igneous contacts that mark a compositional change from syenite migmatite to diorite and monzodiorite. Minor late-stage copper mineralization is localized along this structure. The second fault, trending through the centre of the property, is steeply south-dipping and truncates mineralization in the Main zone to the southeast. A third east-west trending fault is interpreted to lie in the west-central property area and to truncate or displace Main zone mineralization to the south.

East-northeast trending structures are also prominent in the Lorraine property area. A major 060° trending fault was mapped across the middle of the Extension zone and through the ridges on either side of the zone (Fig. 3). Mineralization in the Extension zone is not offset across this fault and localized pockets of mineralization occur along this structure where it transects Weber Ridge.

North-northeasterly trending structures are also significant at Lorraine. A 020° trending fault, located immediately west of the map area (Fig. 3), parallels a tributary of Haha Creek (Fig. 1). Lower zone mineralization is interpreted to be bounded, or displaced to the west, by this fault.

Recent field work did not determine the relative ages nor the sense of motion of these structures. Outside the area of Figure 3, slickensides indicate oblique-slip (normal and left lateral) displacement on 060° trending faults.

Alteration

Three major alteration assemblages are represented at Lorraine: (1) early potassium metasomatism resulting in secondary biotite, (2) main-stage potassium feldspathization; and (3) late-stage, weak sericitization and propylitization (chlorite-epidote-carbonate). In addition, clay-sericite and quartz-sericite-carbonate alteration occur locally throughout the property. Minor quartz veins occur in the Main zone area. Melanite, a dark coloured, Ti-bearing, andraditic garnet that normally occurs in sodic igneous rocks, was observed in thin section in some samples (Leitch, 1992). The results of work completed to date have not indicated the presence of a systematic, property-scale, alteration zonation and evidence to define the temporal relationship of alteration assemblages is insufficient to propose a well defined paragenetic sequence of alteration.

Fine- to coarse-grained secondary biotite occurs as partial to near-complete replacement of pyroxenes in pyroxenite and melanocratic phases of the Duckling Creek Syenite Complex. Stringers and books of biotite are common in leucocratic phases. Potassium feldspathization, characterized by a pink-orange colour, is widespread and varies in intensity throughout the property. Potas-

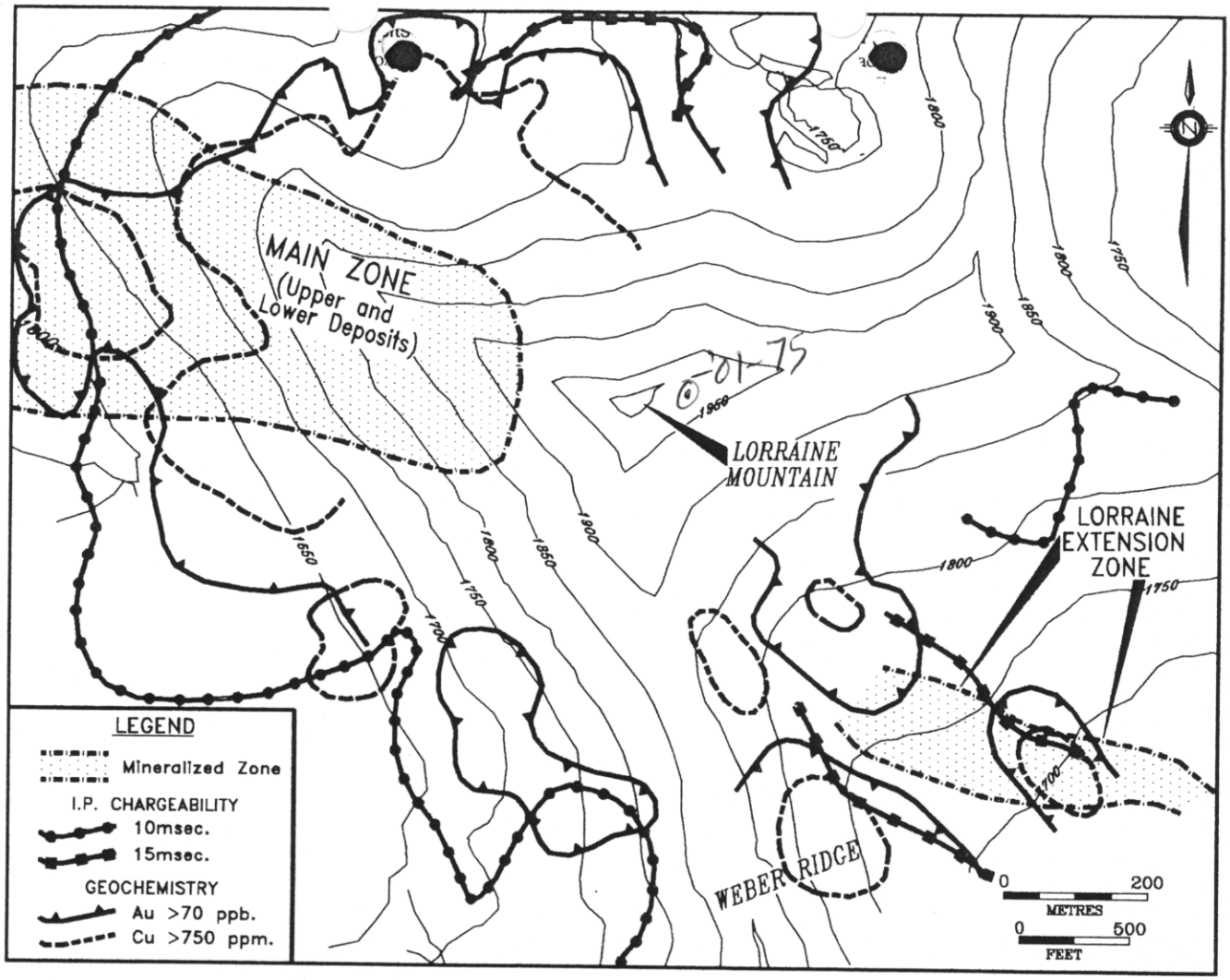

FIGURE 6. Geochemistry and I.P. chargeability compilation.

Trace element geochemistry of surface rock chip and diamond drill core samples from both the Main and Extension zones reveals significant inter-element correlations (>0.85) between Cu, Au, Ag, Pb, Sb, Bi and Te. This element suite is interpreted to reflect primary chalcocite, bornite and gold mineralization and subordinate Pb-Sb-Bi-Te sulphosalt mineral(s). Silver is probably associated with bornite mineralization and in the sulphosalt mineral(s). Anomalous lead concentrations (>50 ppm) also occur independent of these correlated samples, predominantly in the outlying Weber Ridge and Eckland Ridge occurrences. These are interpreted to reflect a possible camp-scale zoning of anomalous lead concentrations external to the copper-gold core mineralization in the Main and Extension zones. No obvious pattern of sulphide mineral zonation has been identified from the work completed to date in the Main and Extension zone areas.

Exploration Techniques

Since the initial investigation of malachite-stained bluffs at Lorraine Mountain, both prospecting and mapping have been effective tools for locating mineralization. These methods were responsible for the 1990 discovery of the Extension zone. Stream sediment and soil geochemistry also reflect the presence of significant copper-gold mineralization at Lorraine, the former at a regional scale and the latter at a property scale. Property-wide soil sampling completed in 1990 clearly outlines the Extension zone, the Main (Lorraine) zone and numerous smaller copper showings, each characterized by values exceeding 750 ppm Cu and 70 ppb Au (Archambault et al., 1991; Fig. 6).

An orientation time-domain I.P. survey, completed in 1990 over the Main zone Lower deposit, returned an anomalous signature over the area of known copper mineralization. Additional time-domain surveys, completed in 1991 and 1993, clearly identified the Main and Extension zones. The broad area of mineralization is signified by a 10 millisecond chargeability contour, while a 15 millisecond contour (with values ranging up to 26 milliseconds) defines higher grade zones (Fig. 6). Time-domain I.P. techniques have proven to be more effective than frequency-domain surveys, which were employed in the 1960s and 1970s, at identifying this low sulphide style (typically <2% sulphide) of mineralization.

Previous ground magnetometer surveys have identified several magnetite-rich migmatite and pyroxenite bodies (Wilkinson et al., 1976) in the Main zone. Recent magnetometer surveys over the Extension zone have, however, returned erratic and inconclusive total field magnetic data.

An airborne electromagnetic, magnetic and radiometric survey was flown over Lorraine in 1991 as part of a program commissioned by B.P. Resources Canada Ltd. to cover the Boot/Steele claims, which surround the Lorraine property claims. The results of this survey (Humphreys, 1991) indicated that (1) apparent resistivities show no correlation with mineralization at the deposit; instead, resistivity highs correspond with topographic ridges, and lows with valley bottoms near the deposit; (2) the entire Lorraine Mountain area has an anomalously high magnetic signature within which the Main zone and part of the Extension zone are denoted by moderate to high total field values (59 500 to 60 500 nT); and (3) calculated weight-per cent magnetite values exceeding 5% define an

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3D AIR PHOTO

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LORRAINE

Sept. 2/05

- 'Show + Tell' - Glen Garratt (East field office)

#1 Priority (Teck Cominco - IP)
"Too Good To Be True" area on SW side of property (extends SE towards Mackenzie

#2 Mckenzie - esp. new (Jay Page) disc - (~~ep~~ bn in Takla volcs) - N. part of prop.

#3 Rhonda Zone (East side, where old rd. comes thru pass', where Cominco drilled previously) → NE magnetite-structure

#4 Eklund Zone (Glen's favourite) - dissem bn in intr. - could be "another Main zone"

[* Key to gate is behind sign on tree - feel around)

LORRAINE

Aug. 20/04

- 'Show + Tell' with Glen Garratt

- Late start, to expl'n; mobilization 'mix-ups'; poor mobilization & initiation by drilling company (Britton Bros. - drill late - 2wks coming from Kemess)

- Currently drilling on "All Alone" (NW end of system) - good pot. results

* Big News is road connection, from Osilinka Logging rd. (to north). Drive to camp in ~ 30 min. (5.5 hrs. to PG)!

* New (GL) interpretation that basically only 2 rock types: i) Dark = ultramafic (faulted in; rather than stratigraphic with NW strikes)
ii) Light = "felsics" — could even be sill(s).
⟹ all rx. have been extensively faulted, esp. by NE-trending post-mineral
→ need to trace/project
⟹ Area: 5 km x 2 km (multi-tonnes potential)

* Like pot. of Weber zone

* " " NE side of cirque (Bishop zone) - never tested

Satellite (camp) phone: 403-987-3571

LORRAINE

Sept. 26/01

- chat with Bill Morton + Dan Mustard
- just finished drilling DDH #59 - on 'lower' level of Bishop zone (almost drove Labe into trees) = expect "excellent" results (down to bottom of hole @ ~ 600-700 feet! [CONFIDENTIAL]
- 0 holes, #57, 58 + 59 in 3rd phase, drilling on #60 + → - depends on financing.
- Giles Peat field 'now' thinking one huge system - offset by post-min. faulting!

1½ hrs in from P.S. Sept. 18/95

Lorraine — Bill Morton Lou Duarte
talk with Vic Preto Don Mustard Eric Finlayson (Kennecott)

#34 - Bishop Upper Main Zone; potential

34 holes in '95 ~~2000 ft~~ 8000 ft.

Upper Main Zone; med-gr. syenite (crowded por.)
- blotchy alt'n (i.e. not classic)
- dissem bn-cpy (+ trae.)
- rk. still "warm" (i.e. not brittle; not hydro. fracturing)
- 200 m gap in drilling between Upper & Lower Main zone.
- fabric (gneissosity) 110°; steep dip
- ab. magnetite

176 m ddh in min. → Cu:Au "all over the place". ⇒ Au assoc. with mag. ± in bn/cpy

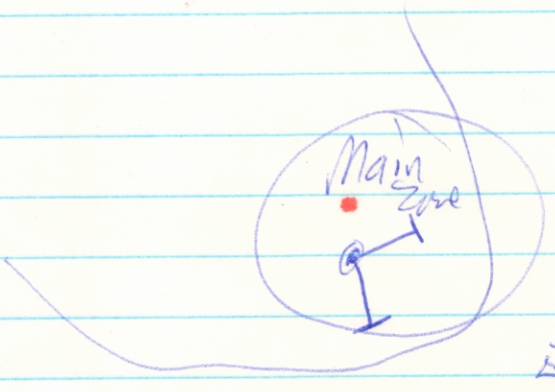
No mo/y. No PX. (low sulfur system)

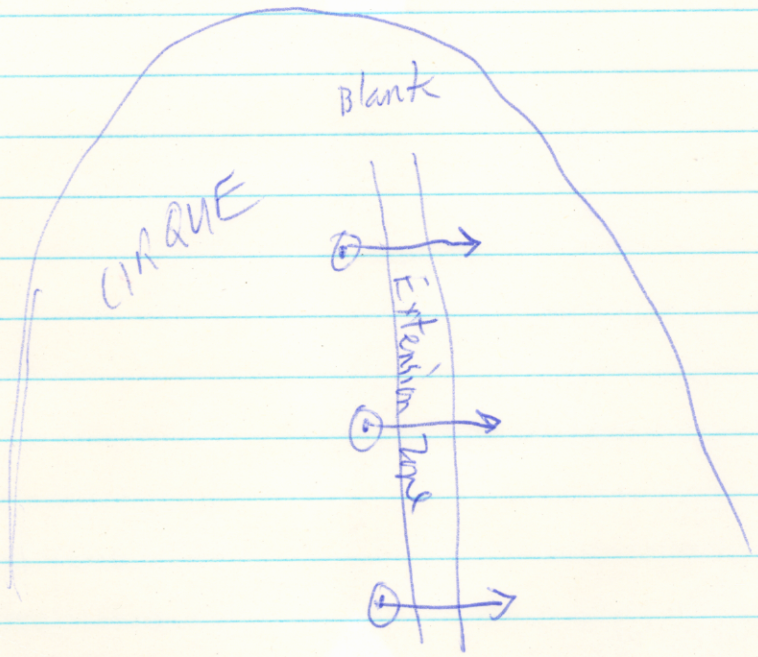
Bn-bx. towards Bishop zone.

TOS → Lorraine

Oct. 4/74

- talk with Don Mustard (Cons. to Lysander)
- 7 to 9 ddh on Extension (Bishop) zone and Main zone (2)
- est. 150' wide zone @ > 1% Cu
  - a 'highlight'





ex-BP ground
now - Haslinger + Hewitt