

## FALCONBRIDGE

**H**istorically, Falconbridge Ltd. has followed a constant policy of exploration and acquisition since the end of World War II.

During 1985, Falconbridge spent about \$16 million on exploration and development, of which \$14 million was spent in Canada. The Canadian expenditures broke down into \$4 million in the Sudbury area, almost \$2 million on the Callahan underground exploration, \$3.3 million from the Quebec City office, and about \$2 million each from the Winnipeg and Vancouver offices.

In Quebec the emphasis was mainly on four general areas. The main thrust was on surface and underground exploration of the Callahan and adjoining properties in the Val d'Or area. By year-end, the Callahan shaft had been sunk to a depth of 276 m and the cross-cut had been driven north-northeastward 72% of the way to the No. 4 zone under Lac de Montigny.

This shaft had been positioned to allow underground access to three other significant, but smaller gold discoveries in the vicinity. Only about half of the Callahan and adjoining property has been explored from surface, and this work will continue to the northwest in 1986. These programs are financed on a 51% Falconbridge Ltd., 49% Corporation Falconbridge Copper joint venture basis.

Surface exploration in the Lac Shortt area continued with the discovery of several low grade zones, but nothing of economic size has been encountered. Proximity to the Lac Shortt mill and the presence of many untested targets dictates continued effort in this area.

In the Ligneris Twp. area, Falconbridge has optioned two claim groups which adjoin the Vior property. Surface overburden removal, sampling, geophysical surveys and diamond drilling were completed during 1985. Assay results are awaited.

A new program of exploration has been launched from the Quebec office to explore parts of northeastern Ontario. Reconnaissance assessment of the Kirkland Lake, Timmins and Matachewan areas led to the

acquisition of properties. Surveys, surface sampling and drilling will follow in 1986.

The Winnipeg office devoted most of its attention to the Sturgeon Lake, Oba, Hemlo, Dryden and Cameron Lake areas of western Ontario. In the Sturgeon Lake area, the Armstrong prospect was stripped of overburden and sampled. Irregular, high grade quartz veins were exposed, the best of which assayed 70 g gold per tonne in three trenches over an average width of 1.8 m and along a strike length of about 20 m. Drilling failed to trace this zone to depth but surface exploration on the property will continue in 1986.

Several claim groups have been optioned during 1985, which are located about 26 km west of the Hemlo discoveries, along the inter-

phide deposits in the Flin Flon-Snow Lake belt. A long term review of known gold occurrences in north-western Ontario continues at the Winnipeg office.

At the Delta office, just outside Vancouver, emphasis was placed on three projects. The Beau Pre property at Valentine Mountain was systematically bulk sampled along a narrow quartz vein which is known to carry small pockets of very high gold grades. Results are awaited. Other gold-bearing veins and a gold placer prospect on this property will receive attention in 1986.

The Charlemagne option at Phillips Arm, just across from Campbell River, was acquired in 1985 and surface sampling and surveys, and airborne survey coverage were completed. This is an old and well known



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preted extension of the favorable stratigraphic horizon. Work will begin in 1986. In the Oba area, a volcanic-sedimentary horizon similar to that at Hemlo has been traced, trenched and drilled shallowly along a strike length of two miles. This horizon is gold bearing along its entire length, locally the grade rises to sub-economic levels over minable dimensions, but ore grades have not been discovered over significant strike lengths. Limited deeper drilling is planned for 1986.

Exploration continued on a reduced basis in search of gold and precious metals-bearing massive sul-

phide deposits in the Flin Flon-Snow Lake belt. A long term review of known gold occurrences in north-western Ontario continues at the Winnipeg office. At the Delta office, just outside Vancouver, emphasis was placed on three projects. The Beau Pre property at Valentine Mountain was systematically bulk sampled along a narrow quartz vein which is known to carry small pockets of very high gold grades. Results are awaited. Other gold-bearing veins and a gold placer prospect on this property will receive attention in 1986. The Charlemagne option at Phillips Arm, just across from Campbell River, was acquired in 1985 and surface sampling and surveys, and airborne survey coverage were completed. This is an old and well known mining camp which operated at the beginning of the century. The gold bearing zone strikes northwest for a distance of 3½ miles and contains five old gold mining properties. The mineralization is extensive but irregular in grade. The old Alexandria mine produced 1,800 tons grading 0.38 oz. gold per ton and the old Doratha-Morton 10,000 tons at 0.44 oz. gold per ton. Other old adits returned high but localized grades. The entire camp is being re-assessed to study cross-structures which appear to relate to concentration of gold.

The old magnetite iron deposits of

British Columbia are turning up surprises at Zeballos, where gold has been found along narrow shear zones in the skarn rocks. Results are irregular and continuity over minable dimensions has not been established. Re-assessment of results to date indicate the need for more drilling in 1986.

Falconbridge's greatly reduced foreign exploration program has led to two interesting developments in 1985. Three new diamondiferous kimberlite pipes have been discovered in the vicinity of GO-25 in Botswana; and positive metallurgical results have led to diamond drilling of a cobalt deposit near Fredericton, Mo.

During 1986 it is planned that exploration will continue at about the same scale as in 1985. A total budget of about \$15 million is expected to be spent, with about \$5 million in the Sudbury area, \$3 million from the Quebec office, \$2 million from the Winnipeg office and \$2 million from the Delta office.

Emphasis will continue to be on precious metals and massive sulphide base metal deposits which contain silver and gold. Continued low metal prices require higher grades and tonnages to compete with low cost Third World producers. It is impossible to forecast or to control the grades and tonnages to be found, but lower costs can be assured by exploration near established infrastructure. This policy is reflected in the distribution of Falconbridge's exploration funds.

## NORANDA

**T**he exploration budget at Noranda Exploration for 1986 is expected to be little changed from the \$36 million spent by the company in 1985. Despite the fact that the company's exploration contribution has actually decreased during the past few years, the current level of expenditures have been maintained by increasing contributions from junior exploration partners, principally via flow-through share financings.

"The juniors have come to Noranda because of our portfolio of properties," John Harvey, president of Noranda Exploration notes. "They can't use flow-through funds for prop-

erty acquisitions."

Noranda is one of the few Canadian mining companies which still maintains a network of regional exploration offices across the country. "We have 14 district offices each having a district geologist," Harvey says. Each geologist is responsible for supporting prospectors and being informed about activities in their respective areas.

Harvey notes that each office has a general budget for property acquisitions and has capabilities to make quick staking decisions. The district offices come under the supervision of 6 regional centres. For example, Thunder Bay is responsible for the district offices in Hemlo, Red Lake and in the Lakehead area of Ontario. "Essentially we're a decentralized head office," Harvey says. "Our office



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(the Toronto head office) is really a monitoring centre."

In 1985, Noranda was involved with 253 exploration projects in various stages of development, most of which are located in Ontario and Quebec. Approximately 66% of the company's budget is spent in these two provinces. In the Maritimes, Noranda's affiliate Brunswick Mining and Smelting is responsible for funding exploration programs operated by Noranda Exploration. In BC, Brenda Mines carries out programs in the province as well as in the Yukon. Brenda is also controlled by Noranda's parent company.

Important projects of the 1985 season which will see follow-up exploration include the Norita base metals discovery in Quebec which was made by surface diamond drilling at a depth of 4,000 ft. At the company's Mattagami properties in northwestern Quebec, high grade zinc values have been intersected in a new deposit at a depth of 1,500 ft.

Another important property is the Mountjoy project which controls a large block of ground west of the Hollinger mine grounds near Timmins, Ont. Drilling underneath the old workings at the DeSantis mine has produced encouraging results which will be further explored this year. Near Noranda, Que, where the company was born, exploration is continuing on the old Horne property, mined as a copper orebody.

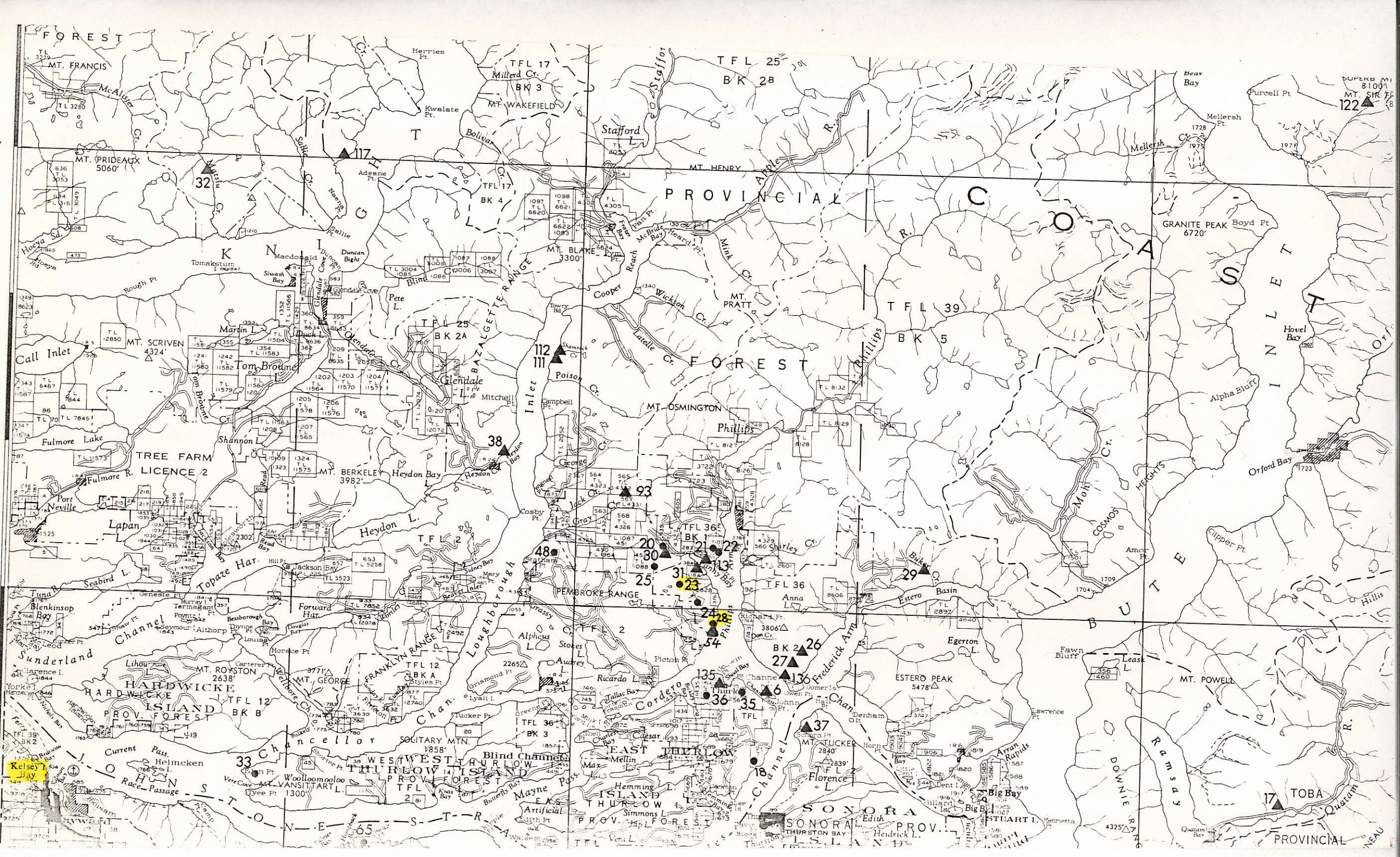
At Hemlo, where Noranda Exploration's parent company poured its first bar of gold in 1985 from operations at its Golden Giant mine, approximately \$1 million will be spent on exploration this year. "We're looking at every property in the Hemlo camp. We're probably the most active company in this respect," Harvey says.

The company stresses that at least 50% of each year's exploration budget be devoted to diamond drilling. "If you're not drilling you're not going to find mines," is how Harvey summarizes his company's exploration philosophy. Noranda maintains a geo-

Talked to Barry Faurneau Nov 6/95

Phillips Dam site property Partner: John Caswell

- Actually logged by two co's Dutcher + <sup>hardly</sup> <sup>mining</sup>
- Good logging road never
- Many new road cuts to sample
- Several on maps Alexandria, Davatha Mountain, S. Mo
- No success
- Strat. from Cu Zn intersected in drilling
- Pioneer mine did good vs. valuation in 1930's.
- Jenna Flannery worked on it for Nevada.
- Pile of budge sphered in 1980.
- Loc pulled out after opening <sup>1/3</sup> 1 M
- drilled down deep(?)
- geochron anomaly just barely tested.
- mag (?) anomaly not tested.
- sedimentary rock - limestone - pendent labeled by fronts, veins at contact.
- check 92K Date Plot: interior of Quaternary?



Orders for maps should specify the map sheet number and letter.  
Orders should be addressed, with prepayment, to the

Department of Mines and Petroleum Resources,  
Victoria, B. C. V8X 1S4

Mineral Inventory cards containing specific information on each of the following mineral occurrences are available for viewing on open file according to the map number. Contact the Resource Data Section, Geological Division, Victoria.

NO.	NAME	PRODUCT (S)
92K-		
1	TWIN ISLANDS	Limestone
2	REDONDA ISLAND	Limestone, MARBLE
3	PRYCE CHANNEL	Limestone
4	BOLD POINT	Limestone
5	OPEN BAY	Limestone
6	YUCTAW (CHANNE ISLAND)	Au
7	BLUEBIRD (TRUE; TANNER)	Cu
8	OK	Cu, Mo
9	WANDERER (WHYHO; COPPER ROAD)	Cu, Au
10	GEILER	Au, Cu
11	INCA	Cu
12	COPPER CLIFF	Cu, Au, Ag
13	SANTANA	Cu, Ag, Au
14	TRILBY	Au, Ag, Cu
15	LUCKY JIM (GREAT GRANITE)	Au, Ag, Cu
16	CHALCO (CORONATION)	Cu, Ag
17	CAP	Cu
18	HOPE	Au, Ag, Cu
19	DAWN	Ag, Au, Cu
20	SHOO FLY	Fe
21	AMETHYST	Au, Ag, Cu
22	MONTE CRISTO	Cu, Au, Ag
23	DORATHA MORTON	Au, Ag
24	ENID - JULIE	Ag, Au
25	COMMONWEALTH	Au, Ag
26	BLUE BELLS	Au, Si
27	SUNBEAM	Au
28	ALEXANDRIA	Au, Ag, Cu
29	LAGOON (COLOSSUS)	Cu, Ag, Au, Mo
30	TIDEWATER	Fe
31	GALENA	Au, Ag, Pb
32	CAMBRIA COPPER (PRINCESS; CATHERINE)	Cu, Ag, Au, marble
33	CONSTITUTION	Au, Ag, Pb, Zn
34	SOLYMAN - FREYA	Cu, Au, Ag
35	DOUGLAS PINE	Cu, Ag, Au
36	WHITE PINE	Au
37	SONORA (NODALE)	Au, Ag, Cu
38	MARTLE & HAYDEN BAY	Au
39	REDONDA (ELSIE)	Fe
40	BLACK WARRIOR	Fe
41	SPIDER	Au, Ag, Cu
42	COPPER QUEEN (COPPER KING)	Cu
43	IRON MIKE	Fe
44	OTTAWA - CENTRAL	Mo
45	COPPER BOWL	Ag, Au, Cu
46	MAYFLOWER (OL)	Fe, Cu, Au, Ag
47	HUMMING BIRD	Cu, Ag, Au
48	LOUGHBOROUGH (GOLDEN GATE)	Au, Ag, Cu, C-y
49	CORTES	Mo
50	SUNSET	Cu
51	---	Cu
52	RADIUM	Cu, V, U
53	COPPER KING	Fe, Cu, Zn
54	ALL UP	Au, Ag
55	WHITE	Zn, Pb, Cu, Cd, Ag
56	LARK	Cu
57	O K	Cu, Mo
58	DOE	Cu
59	WHITE SWAN	Cu, Au
60	COPPER ROAD	Cu, Ag
61	SLAVIN, WHITE HOPE	Au, Ag, Cu
62	SKOOKUMCHUCK	Cu
63	HARD CASH	?
64	CAMP	?
65	BEAR	Cu
66	ALLEN	Cu
67	STAR	Cu
68	CHAL 4	Cu
69	LM, HAP (R, WAPO)	Cu, Mo
70	W R	Cu
71	INGERSOLL (COPPER BELL; BEAVER)	Ag, Cu
72	COPPER MOUNTAIN (COPPER HILLS; HERCULES)	Cu, Au, Ag
73	SENATOR	Cu, Au, Ag
74	INGERSOLL NO. 2 (BEAVER)	Cu
75	ARROW (MCLEAN)	Mo
76	RED MOUNTAIN (LINDA 3)	Zn, Ag, Pb, Cu, Au
77	VERGO (LINDA 2, 3)	Ag, Cu, Zn, Pb, Au
78	LEM, ELLEN, DIT	Cu, Mo
79	TIMOTHY	Hg
80	B	Cu
81	K, X	Cu
82	LINDA 14	Cu, Zn, Ag
83	LINDA 5	Pb, Cu, Zn, Au, Ag
84	MT. DIADEM	Ag, Pb, Zn
85	CONTACT	

