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Report on a
Geological Examination of
Normine Resources Ltd.
Pacific Eastern Property
and Surrounding Area
Lillooet Mining Division
British Columbia

50°45' North Latitude
122°45' West Longitude

July 16, 1984

R.J. Fraser
Kerr Addison Mines Ltd.

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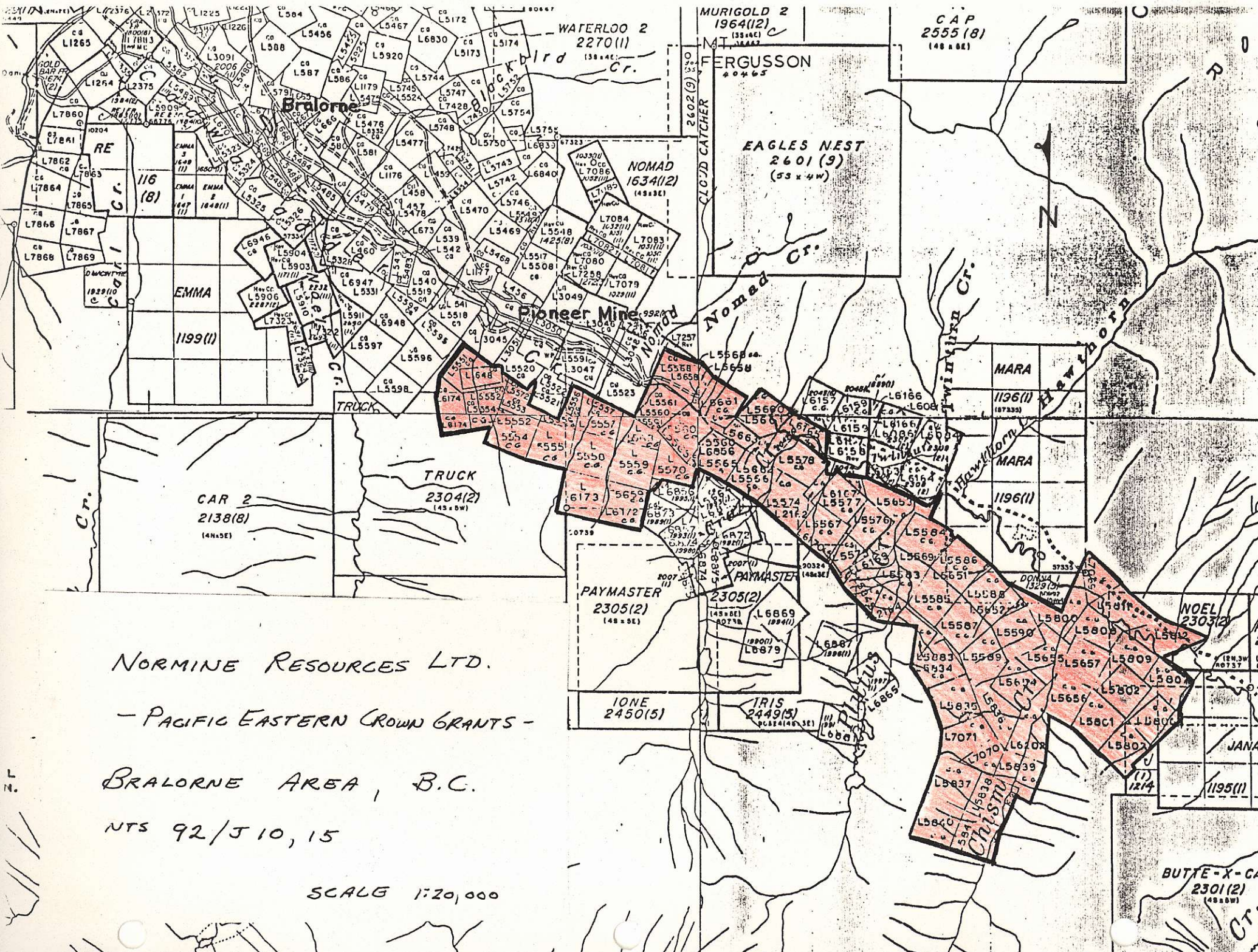
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INTRODUCTION

A group of 81 crown granted mineral claims and fractions held under option by Normine Resources Ltd., have been offered to Kerr Addison for consideration.

The claims are situated along Cadwallader Creek approximately 5½ kilometers southeast of the former Bralorne Mine, Bralorne, British Columbia. Bralorne is situated approximately 160 kilometers north of Vancouver, B.C.

The property as well as several other mineral occurrences in the area; the Paymaster, Red Hawk, Butte-IXL and the Hawthorne Creek Cu were examined and sampled by the author during the period July 4 to July 13, 1984.



NORMINE RESOURCES LTD.

- PACIFIC EASTERN CROWN GRANTS -

BRALORNE AREA, B.C.

NTS 92/J 10, 15

SCALE 1:20,000

BUTTE-X-CAL
2301(2)
(4880W)

SUMMARY AND CONCLUSIONS

The Pacific Eastern crown grants held by Normine Resources Ltd., and the immediate surrounding area represents an interesting geological bet for the discovery of gold mineralization similar to that previously mined at the Bralorne and Pioneer Mines.

The property lies along strike and encompasses the same favourable structural zone as the two former past producers, the ground lying between the Cadwallader Fault and the Fergusson overthrust.

The principal differences between the Bralorne-Pioneer area and the Normines property are as follows:

1. The absence or at least the lesser quantity of "Soda Granite", host to much of the ore in the camp, on the Normines property
2. The occurrence of mineralization within shears associated with dioritic to ultramafic rocks along and south of the Cadwallader shear.
3. The abundance of graphitic, argillaceous and sandy sediments which deform by more of a ductile rather than a brittle deformation. This results in fewer open fractures which presumably could become mineralised.

Numerous small mineral occurrences exist on and near the property however most appear to be of rather limited extent although do suggest that the gold mineralizing process was active in this part of the Bralorne district.

The application of modern exploration techniques to this property would be difficult primarily due to the steepness of the mountain slopes and the presence of much slide material. This will greatly limit the effectiveness and create interpretational problems for many techniques, notably ground and airborne EM and conventional "B" horizon soil sampling.

Despite the differences in the overall geological setting of the Normines property with respect to the main portion of the Bralorne camp and the difficulties to be encountered in applying modern exploration techniques, the property represents an interesting geological bet, in close, to British Columbia's largest gold mining area.

Further exploration on the property and/or the surrounding area should be based on a consideration of both the most recent sampling by company personnel and Kerr Addison's overall philosophy towards grassroots gold exploration.

PREVIOUS WORK

The Normines property consists of claims originally held by Pacific Eastern Gold Mines, the geology of which has been fairly well documented by previous workers including Cairns (1937), Stevenson (1953) and Barclay (1979) and Stevenson (1983).

Some underground exploration has been undertaken on the property however no attempt has been made by the writer to evaluate this work. Reference can be made to previous writers for details of this work.

The most recent evaluation of the ground and the Bralorne area by Kerr Addison is a report by Arscott (1984), an office based study on which part of this report draws.

GENERAL GEOLOGY

The property is underlain by an oceanic assemblage comprising a composite lithological environment with major volcanics, sedimentary and intrusive units similar to other major British Columbia mining camps notably Rossland, Portland Canal, Hedley and Zeballos.

The oldest rocks in the area consist of a series of mafic volcanics and intercalated sediments locally known as the Fergusson Group. The sediments are well banded and consist primarily of chert and argillites often with a large graphite component. Minor amounts of bank type crystalline limestones are also present.

The Fergusson Group is conformably overlain by the Noel Formation which consists chiefly of argillites and granular siltstones to sandstones. Graphitic horizons are also present within this unit.

The Noel Formation is in turn overlain by the Pioneer Formation, a series of mafic to intermediate volcanic flows, tuffs and volcanoclastics. Quartz and Quartz-Feldspar porphyry dykes are common within this unit and may be largely co-magmatic. This unit is one of the principal host rocks for gold at the Bralorne and Pioneer Mines.

The Pioneer Formation is overlain by the Hurley Formation, a sequence of graphitic argillites with interbedded sandy and tuffaceous horizons. This unit closely resembles the Noel Formation and can only be distinguished when it has an appreciable limey component.

All of the above units have been intruded by rocks known as "Bralorne" Intrusions. These consist of augite diorites, diorites, gabbroic rocks, "soda granites" and albitites. On the Normines property diorite appears to be the most common intrusive, while "soda granite", a rock composed chiefly of quartz and sodic plagioclase was not conclusively observed.

The lack of "soda granite" is of considerable importance as it is the second major host lithology for gold mineralization at the Bralorne and Pioneer Mines, though it has been reported to occur in the crosscut driven by Pacific Eastern Gold Mines under Cadwallader Creek.

The last rock type of significance in the area is a serpentized ultramafic. The ultramafics appear to be confined to fault zones and according to M. Rusmore (personal communication 1984) all ultramafics in the Bridge River Area are fault bound. No age relationships are known for the ultramafic rocks but the similarity of the lithological and tectonic setting of the Bridge River area to many gold camps in the Canadian Shield such as Timmins, Larder Lake and Val d'Or suggests that they may be related to the volcanic activity which produced the Pioneer Formation. Alpine-type ultramafic rocks, as well as extrusive ultramafics are common in the gold camps of the Canadian Shield.

The youngest known rocks in the area consist of the Bendor intrusives, chiefly late stage batholithic granodiorites.

PROPERTY EXAMINATION

The present work on the Normines property consisted of examination of known mineralized zones (where accessible), traverses cross-sectioning the property geology, tracing of the Cadwallader fault and systematic soil sampling on two traverse lines near the old underground workings.

All sampling locations and results are shown on the prints accompanying this report.

Three areas of known or suspected gold mineralization were examined and are described below, the Mix, the Dan Tucker and the Extension Creek Area.

MIX AREA

The Mix area was originally developed by two adits driven northward from near the north shore of Cadwallader Creek approximately 6 kilometers southeast of the Pioneer Mine.

No outcrop was observed in the vicinity of the adits but on the muck piles, argillaceous and limey sediments of the Fergusson group were observed. The sediments are often brecciated and contain fine disseminations and threads of pyrite and pyrrhotite. Locally narrow bands of magnetite and biotite are present and the rock tends to resemble a poorly developed skarn. Four rock samples were collected of which one, a silicified rock with abundant biotite and 3-4% pyrite and pyrrhotite occurring as small threads and disseminations, was submitted for assay.

Assay results are listed below:

Sample No.	ppb Au	ppm Ag	ppm As
F-NR-84-35	<5	0.3	4

The host rocks for this occurrence do not appear favourable and no further work appears to be justified at the present time.

DAN TUCKER AREA

The Dan Tucker showing is located in the southeast portion of Normines claim block approximately 7 kilometers southeast of the Pioneer mine on a steep mountain slope on the south side of Cadwallader Creek.

The showing has been developed by a series of test pits along an arcuate shear and a short adit to intersect the shear at depth. Little evidence of this work remains, with only a few pits noted and a small muck pile outside the adit, now caved. No outcrop is present in the immediate area of the workings and all rock formerly exposed above the adit is now covered by slide material. A prominent ridge of brown weathering serpentized peridotite extends eastward from the adit area and appears to be on the north edge of a major southeast trending shear.

From an examination of material on the waste dump, the chief rock type appears to be a moderately serpentized peridotite with local quartz veining and patches of a greenish coloured silicic alteration. Other rock types present in the dump include banded crystalline limestone and a fine grained chloritic basalt.

The greenish coloured alteration is characterized by numerous stringers and fine disseminations of pyrite. The patches are not extensive but rather appear to be a spotty feature.

Six rock samples were collected from the waste dump of which four were sent in for assay. Assay results are listed below:

Sample No.	ppb Au	ppm Ag	ppm As	ppm Cu
F-NR-84-25	<5	0.1	100	--
F-NR-84-27	<5	0.1	5	940
F-NR-84-29	<5	0.1	3	--
F-NR-84-30	<5	0.1	5	--

The Dan Tucker showing appears to lie along the trend of the Cadwallader Fault with the fault trace being represented by the arcuate shearing and the serpentized ultramafics. The showing has a very similar geological setting to that of the Red Hawk, described later in this report.

Ultramafics are present along the Cadwallader Fault at both the Bralorne and Pioneer Mines similar to that at the Dan Tucker, as well, there are flexures similar to that at the Dan Tucker present at the Bralorne. Unfortunately there is no evidence for open cross-over structures or splays off the Cadwallader at the Dan Tucker which are primary ore controls elsewhere in the district. This particular piece of the Normines property can only be considered, at best a remote geological bet.

EXTENSION CREEK AREA

Ground geological traverses were made in the Extension Creek Area of the Normines property in order to investigate rock exposed by early sluicing operations, a small adit and to attempt to obtain a geological cross section of the property.

No outcrop was found in the area except in a few spots in the trenches excavated by previous workers by diverting the course of Extension Creek. The principal rock type exposed is a graphitic argillite with interbeds of sandy material. The rocks probably belong to the Hurley Formation. Three rock samples, grabs from the trenches were submitted for assays. Results are listed below:

Sample No.	ppb Au	ppm Ag	ppm As
F-NR-84-1	<5	0.2	7
F-NR-84-4	<5	0.1	6
F-NR-84-6	<5	0.1	9

In order to evaluate the feasibility of soil sampling on the Normines property, two traverse lines were run approximately 200 meters apart on either side of Extension Creek. Samples of the "B" horizon were collected at station intervals of 30 meters.

The "B" horizon is moderately well developed occurring at a depth of approximately 6-8 inches and averages about 2-3 inches in thickness.

The results of the soil sampling with analyses for Au, Ag and As are shown on the prints accompanying this report.

BUTTE-IXL CLAIMS

The writer was approached informally by Mr. Randy Polischuk of Lillooet, British Columbia, Ph 256-7962 and asked to examine the Butte-IXL claims, if time permitted. Mr. Polischuk in conjunction with other family members holds title to crown granted claims covering the Butte-IXL showing, the Standard and other properties in the area. The exact extent of the holdings are unknown to the writer.

The Butte-IXL claims were examined on July 9, 1984.

The property is situated approximately 10 kilometers southeast from the Pioneer Mine on the south side of Cadwallader Creek immediately south of the confluence with Piebiter Creek.

Access to the claims is best afforded by a 4 W D road leading southeast from the Pioneer Mine along the north side of Cadwallader Creek to Piebiter Creek. An old trail leads south from a bridge crossing Piebiter Creek to the old workings. No outcrop was seen in the immediate area of the old adit however Cairn's (1937) map, of Cadwallader Creek, suggest the area to be underlain by most of the rocks typical of the Bralorne Area; Fergusson volcanics, Noel Formation argillaceous sediments, Pioneer greenstone and ultramafic intrusives. The Cadwallader Creek shear can be interpreted as crossing through the ground just north of the adit, associated with a band of ultramafic rocks.

From an examination of rock samples from the mine dump numerous quartz-carbonate veins occasionally brecciated can be seen to be present with abundant sulphides, 2-5%, as fine disseminations stringers and small blebs. The sulphides are chiefly pyrite although locally chalcopyrite and sphalerite are present.

The host rock for the quartz veins appears to be a silicified volcaniclastic tuff in contact with thin bedded siltstones and other turbidites. The siltstones are in part argillaceous with a moderate graphitic component.

In a few locales on the waste dump a well bedded quartz-sericite schist with up to 3% pyrite was observed but is not a common rock type.

Alteration of the rocks appears to be chiefly silicification and sericitization and locally biotitic especially in the argillaceous horizons.

Eleven grab samples of rock from the muck pile, seven of which were sent for assay, are listed below:

Sample No.	oz/ton Au	oz/ton Ag	ppm As	%Cu	%Zn
F-B1XL-84-1	0.018	0.14	4	0.25	0.07
F-B1XL-84-2	0.028	0.04	5	0.07	0.08
F-B1XL-84-3	0.018	0.05	11	<0.01	0.01
F-B1XL-84-4	0.006	0.70	110	1.92	1.46
F-B1XL-84-6	0.008	0.28	11	0.58	0.70
F-B1XL-84-9	<0.003	0.01	6	0.06	0.17
F-B1XL-84-11	0.006	0.02	5	0.01	0.01

The Butte-IXL property represents the most interesting and encouraging signs of mineralization that were observed outside of the Bralorne and Pioneer Mine. The presence of base-metal sulphides within the quartz veins and the occurrence of a pyritiferous quartz sericite schist suggest that a mineralizing process was active in the area. The lack of "soda granite" and the fact that the mineralization appears to lie on the south side of Cadwallader Creek Shear can not be considered negative factors. Should the assay results prove to be sufficiently interesting, negotiations for ground in this area should be considered.

PAYMASTER CLAIMS

The Paymaster claims are situated on the southeast side of Crazy Creek approximately 5 km southeast of the Pioneer Mine and immediately south of Normines, Pacific Eastern property.

The ground was examined on July 6 and July 10, 1984 in conjunction with other reconnaissance work on the Pacific Eastern property.

Previous reports on the Paymaster report the occurrence of disseminated pyrrhotite and quartz stringers and masses occurring within an albitite dyke, six feet in width, in contact with argillaceous sediments. Cairns (19137), indicates the occurrence to lie within Hurley sediments intercalated with Pioneer greenstone.

Several old trenches were located by the writer on a steep slide surface, facing north. Weakly developed gossans are present contributing to their recognition. The trenches occur in an extensively faulted area with quartz porphyry intrusions infilling open faults in thinly bedded graphitic argillites. Mafic volcanics, highly altered to chlorite and biotite were observed south of the main showing.

Numerous 2-10 m. wide quartz veins often with good quartz crystal development were observed crosscutting a quartz porphyry intrusive. The quartz veins all have a fairly consistent orientation of 045°-055°, dipping 45°-60° southeast. The veins are confined to the more brittle quartz porphyry and terminate at the contact with graphitic argillites. Other narrow quartz porphyry dykes are mineralized in a similar fashion.

Several narrow shear zones are present north of the main showing with silicified breccias being common, however the quartz vein bearing quartz porphyries appear to be absent.

Twenty grab and chip samples of rock were collected from three principal areas of shearing and quartz porphyry intrusion of which nine were submitted for assay. Results are listed below:

Sample No.	ppb Au	ppm Ag	ppb As
F-NR-84-16	<5	0.1	3
F-NR-84-19	<5	0.1	9
F-NR-84-20	<5	0.1	120
F-NR-84-55	<5	0.1	12
F-NR-84-56	<5	0.1	5
F-NR-84-57	5	0.1	7
F-NR-84-59	<5	0.1	6
F-NR-84-62	<5	0.1	33
F-NR-84-63	<5	0.1	48

This occurrence appears to be of limited potential due to the restricted extent of the quartz veins within the porphyries. Difficult access and the presence of an extremely unstable slope are degrading factors. Further work on this occurrence could only be justified if carried out in conjunction with work on the Pacific Eastern property.

REDHAWK CLAIMS

The Redhawk showing is situated south of Cadwallader Creek approximately 8 kilometers southeast of the Pioneer Mine and immediately southeast and on strike with the Pacific Eastern claims.

The property has been developed by a small adit, now caved in. A small waste dump is present with abundant white quartz visible.

The predominant rock type present is a fine to medium grained diorite with a poorly developed spaced cleavage present, infilled with 2 mm wide quartz veins. Minor amounts of thinly bedded weakly graphitic argillite with silty layers and lenses was also observed. A small quantity of mafic to ultramafic material moderately chloritized and serpentinized was also observed.

The predominant mineralization consists of a milky white quartz, poorly fractured with only traces of pyrite present. Locally there are silicified border zones adjacent to the quartz veins with 1-2% pyrite but in general they are not very common. Eight grab samples of rock were collected from the muck pile of which three were submitted for assays. The results are listed below:

Sample No.	ppb Au	ppm Ag	ppm As
F-NR-84-50	<5	0.2	5
F-NR-84-52	2000	4.0	29
F-NR-84-53	10	0.3	30

A large shear zone in fine to medium grained diorite was located south of the Red Hawk adit approximately 150 meters higher in elevation. The shear zone is arcuate in shape and was traced for a distance of approximately 325 meters. It is open at both ends along strike. It trends @ 134° dipping 75-80° southwest, immediately above the Red Hawk adit, gradually turning southward to 160°.

The diorite is locally intensely sheared with abundant chlorite and serpentine alteration. Occasionally relict feldspars can be seen. The shear has been cut by numerous quartz and calcite veins with up to 2-3% pyrrhotite in small masses and threads of chalcopyrite.

Ten old trenches were located along the shear zone of which five of them were sampled. Assay results are listed below:

Sample No.	ppb Au	ppm Ag	ppm As	ppm Cu
F-NR-84-37	<5	0.1	7	98
F-NR-84-39	<5	0.2	14	230
F-NR-84-41	<5	0.1	1	--
F-NR-84-42	30	0.2	50	--
F-NR-84-43	<5	0.1	6	--
F-NR-84-44	<5	0.1	27	--
F-NR-84-45	<5	0.1	9	--

Previous reports on the property suggest the presence of other shear zones also of great length. Should the assay results from the preliminary sampling be encouraging, additional work may be warranted in the area.

HAWTHORN CREEK COPPER

The Hawthorn Creek Copper occurrence is located on the south side of Cadwallader Creek immediately across from the confluence of Hawthorn and Cadwallader Creeks. It is situated approximately 9 kilometers southeast of the Pioneer Mine on the Mara Claim Block, No. 1196. The showing lies just outside the northern claim line of the Pacific Eastern block.

An old trench approximately 1.5m x 1.5m x 2.0m was found and re-excavated.

The showing consists of a narrow sulphide zone approximately 0.5 to 0.6 m in width of 5-10% pyrite with 2% chalcopyrite as threads, stringers and small blebs within heavily chloritized and biotitic mafic volcanics. Silicification is also widely present.

The sulphide zone is underlain by a 0.4 m wide chert bed, recrystallized to give a sugary texture.

The structural footwall is represented by a highly altered mafic volcanic with abundant, chlorite, biotite and serpentine. A fibrous, blade like texture is evident in some of the alteration minerals somewhat similar in appearance to anthophyllite rosettes. Locally the footwall is fragmented and has been intruded by narrow quartz veins and Bralorne intrusives, possibly "soda granite". The intrusives have been elongated and fragmented or boudinaged parallel to the S1 cleavage imparting a brecciated appearance to the rock.

Two periods of folding are present in the rocks, a first phase of tight isoclinal folding and a second more open style which folded the axial planes of the F1 isoclinal folds producing Monk's Cap structures. The S1 fabric trends @ 149° and dips near vertical. It is probably closely related to the Cadwallader shear.

The hanging wall rocks are also highly altered mafic volcanics but lack the numerous small intrusions and strong cleavage characteristic of the footwall.

Stratigraphic relations with other lithologies are not known but it is believed that the mafic volcanics are part of the Fergusson Group and are of limited extent, being surrounded by argillites and siltstones.

The showing itself does appear to be of limited extent but its close resemblance to alteration zones characteristic of volcanogenic sulphide deposits suggest the possibility of other, larger deposits of a similiar nature in the Cadwallader Creek Area.

Ten grab and chip samples of mineralized and footwall material were collected from the immediate area of the trench of which five were submitted for assay. Assay results are listed below:

Sample No.	oz/ton Au	oz/ton Ag	ppm As	% Cu	% Zn	% Co
F-NR-84-68	0.006	0.02	9	0.06	0.02	0.004
F-NR-84-70	<0.003	0.14	3	0.07	0.06	0.001
F-NR-84-72	0.022	0.24	4	0.33	0.33	0.003
F-NR-84-73	0.005	0.27	9	0.32	0.19	0.003
F-NR-84-75	0.020	0.04	4	0.05	0.05	0.002



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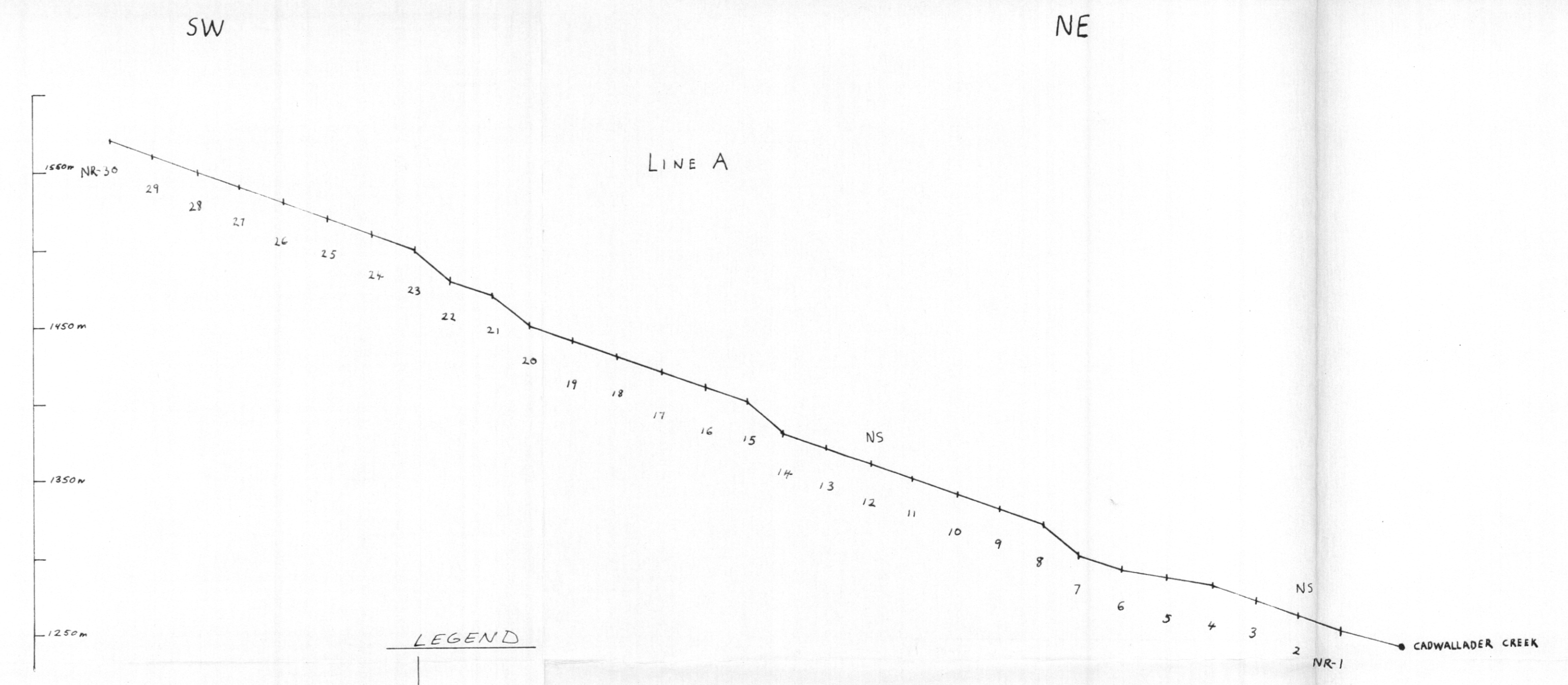
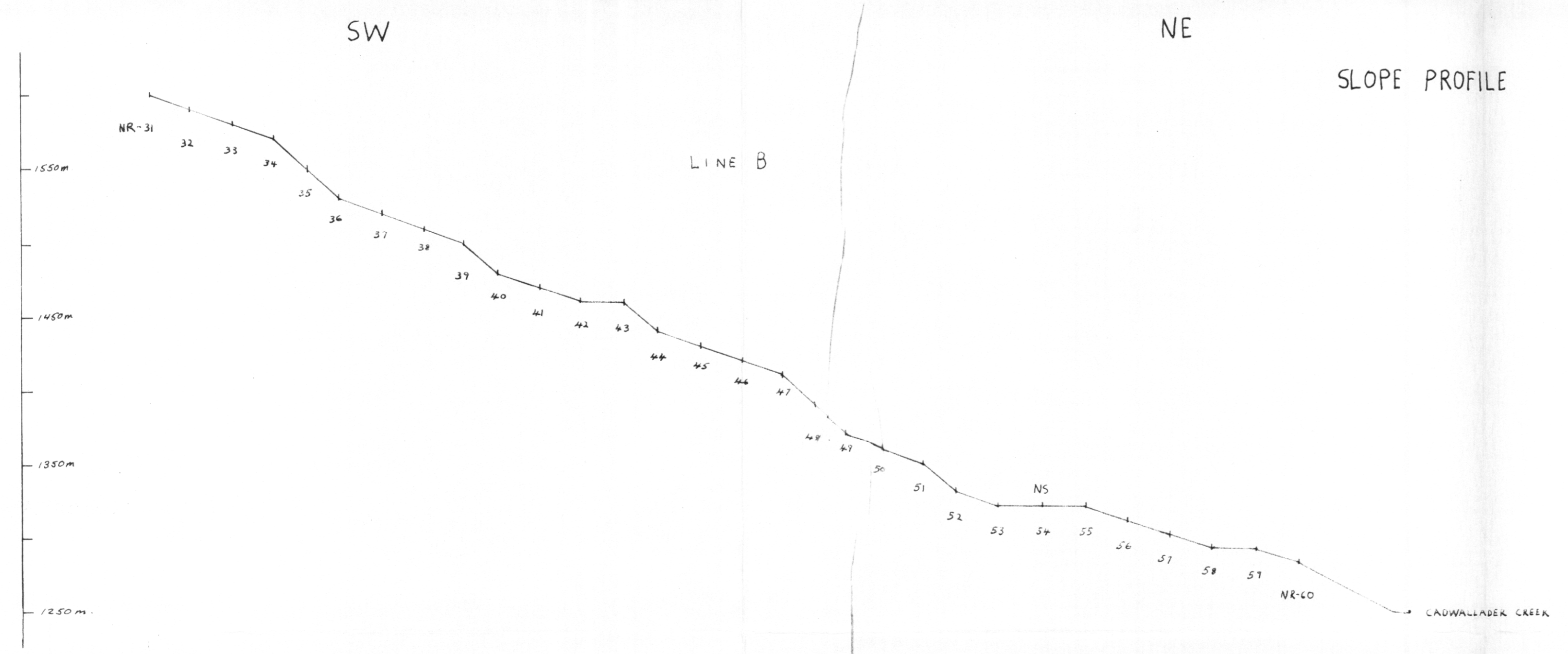
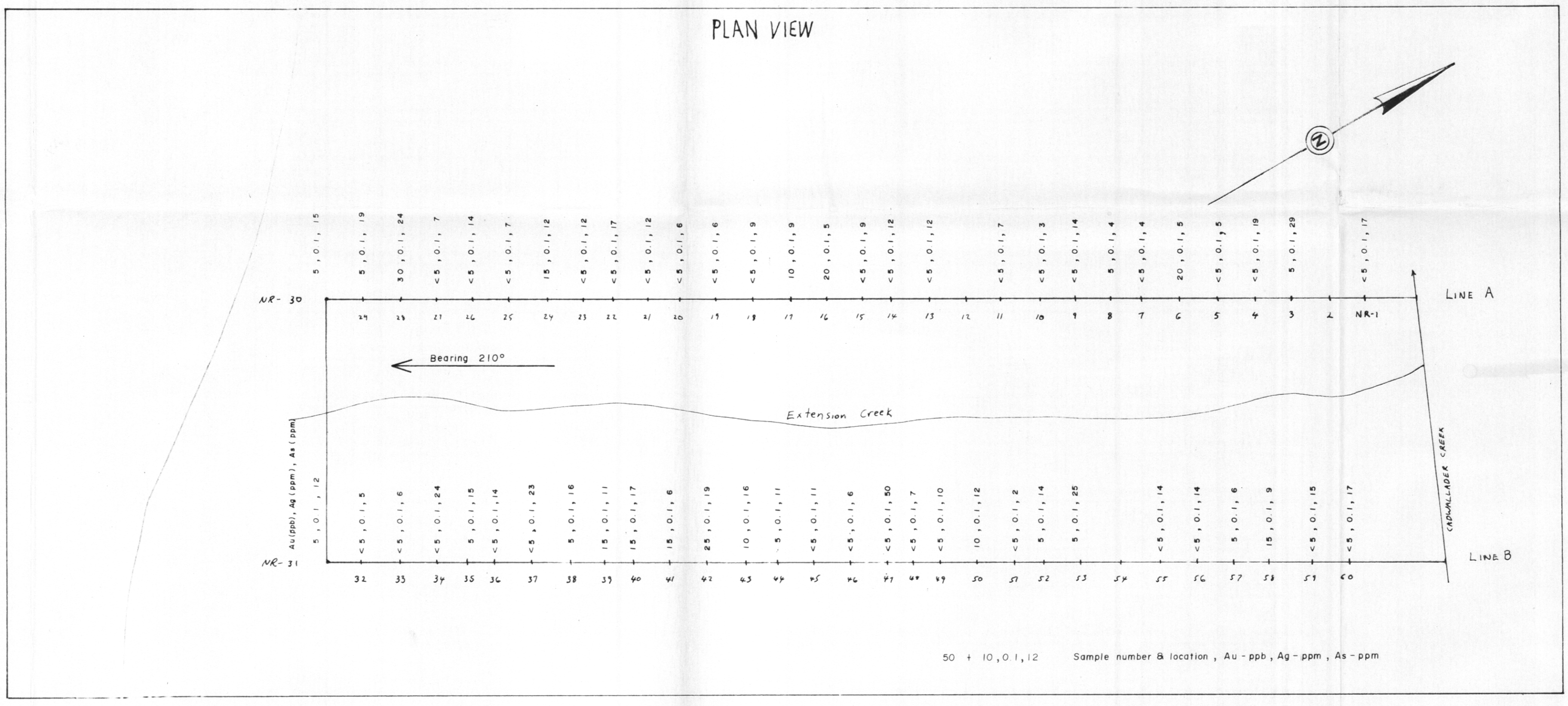
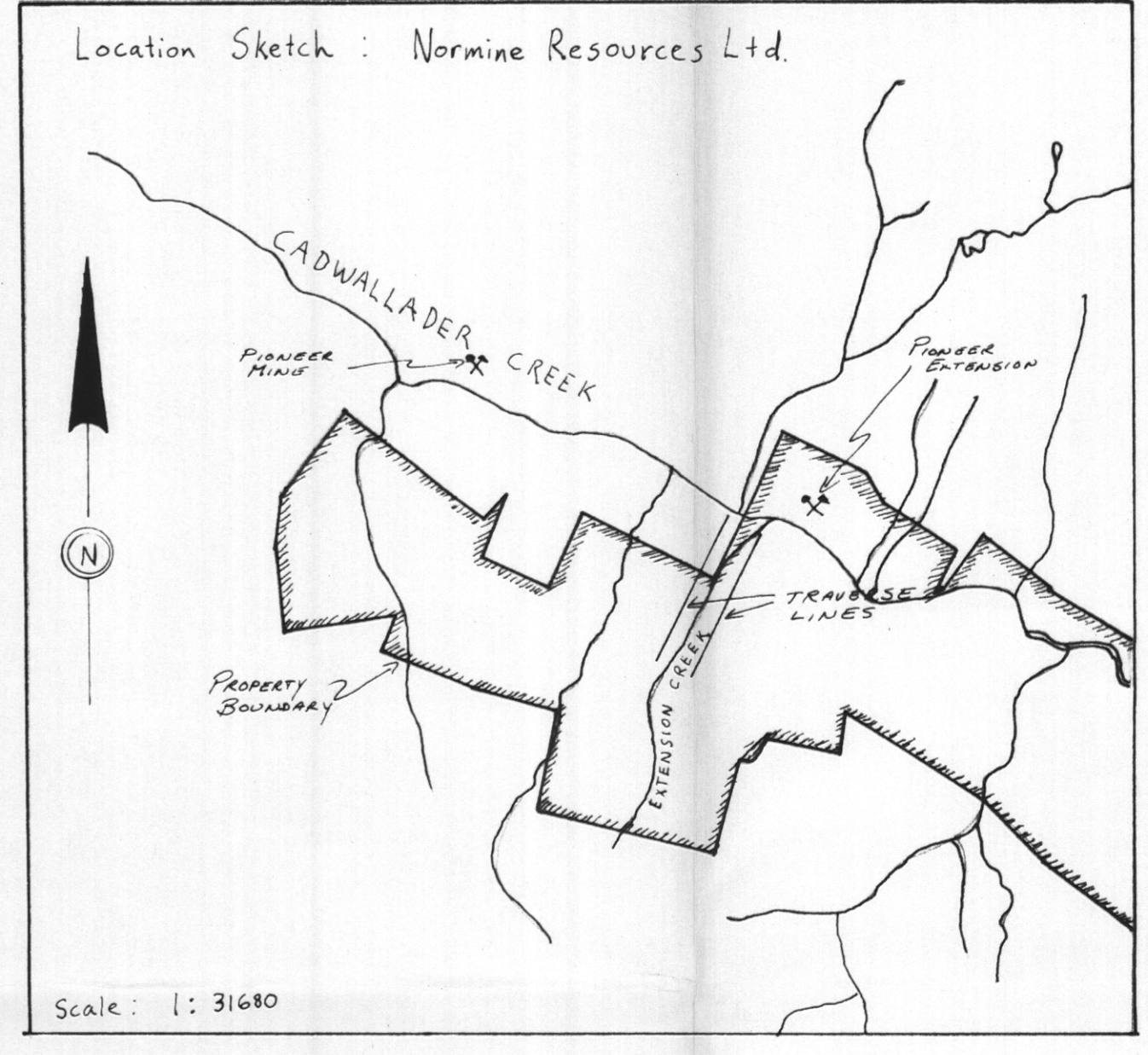
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Ltd.



GEOCHEMICAL SURVEY
NORMINES PROPERTY
EXTENSION CREEK AREA

BRALORNE B.C.

92/J 10W

SCALE 1:2,500

SAMPLED AND DRAWN BY: J. THOMLINSON
July 81

