

LOG NO: 02-01	RD.
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ASSESSMENT REPORT

KWANIKA/VALLEAU PROPERTY

STREAM and SOIL GEOCHEMICAL SURVEY,
 LINECUTTING and BASEMAP PREPARATION
 undertaken on
 KC CLAIMS 1-30

Part 1 of 2

Omineca Mining Division
NTS 93N/6E, 7W, 11E
Latitude 55° 30', Longitude 125° 00'

SUB-RECORDER
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JAN 28 1991
 M.R. # _____ \$ _____
 VANCOUVER, B.C.

Claim Owner and Operator
 Westmin Resources Limited

Funding by
 Byron Resources Inc.

Report by
 Ron W. Lane - Project Geologist
 Westmin Resources Limited

January, 1991

20,897

PART 1
OF 2

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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I. SUMMARY

Kwanika/Valleau property is a 6 by 20 km northwest trending claim block located 200 km north of Prince George, BC, and 70 km northwest of the Mt. Milligan porphyry Au-Cu deposit (385 Mt of 0.016 oz/t Au, 0.22% Cu). The initial property was staked in February, 1989, and was expanded several times in response to favourable exploration results. It was acquired for its potential to host Mt. Milligan style alkaline porphyry Au-Cu deposits. Byron Resources Inc. entered into an option agreement with Westmin Resources Limited on July 14, 1989, to acquire a 45% interest in the property. Westmin is operator of the project.

Kwanika/Valleau is situated within the central portion of the Quesnel Trough, a 30 to 60 km wide by 1300+ km long depositional basin, which extends northwestward from the southern BC border (49th parallel) to the Stikine River in northern BC. The Trough contains an assemblage of alkalic and calc-alkalic volcanic and sedimentary rocks of Upper Triassic to Jurassic age (Rossland, Nicola, Takla and Stuhini Groups), which are intruded by comagmatic plutons.

Kwanika/Valleau is mainly covered by thin to thick glacial till. The underlying geology is mapped and/or interpreted to consist of 60% alkaline (to calc-alkaline) Takla Group volcanic and sedimentary rocks and 40% comagmatic intrusive rocks of the Hogen Batholith. The Hogen rocks intrude along a narrow (2-5 km), well developed, northwest trending structural zone crosscutting Takla Group rocks. Moderate to strong propylitic and/or potassic alteration is common on the property. Potassic and/or pyrite rich phyllic alteration is weak to strong in some places.

A detailed airborne Mag-VLF-HEM survey was undertaken over the property by Aerodat Ltd. in 1989 and 1990. The magnetics survey defined numerous strong, complex anomalies on the property, some of which appear to reflect late-stage high-level intrusive activity and good potential for associated porphyry Au-Cu mineralization.

Several large resistivity low anomalies were also defined, some of which flank the magnetic highs and likely reflect disseminated pyrite alteration haloes.

Detailed stream sediment sampling was undertaken in the southern half of the property in 1990 to pinpoint the source areas of anomalous Au \pm Cu stream sediment values defined in 1989. The sampling confirmed and more clearly defined a very encouraging 4.0 km by 9.0 km northwest trending zone containing an abundance of anomalous to very anomalous Au \pm Cu stream sediment values, which are coincident with very attractive airborne geophysical (magnetics, resistivity) anomalies.

Very fine grained placer gold was discovered in the southern half of the property in 1990. The gold was found along Chickadee Creek, which flows through the western third of the zone of anomalous Au \pm Cu stream sediment values. Most of the placer gold grains are quite angular in shape, suggesting a very short transport distance and a local bedrock source, although a moderate amount of glacial transport of the gold likely did occur.

Grid soil geochemical sampling was undertaken over a 2.5 by 4.5 km area in the southern half of the property, in follow-up to anomalous gold stream sediment values, airborne geophysical anomalies (magnetics, resistivity) and favourable geology/alteration. The sampling defined three areas of anomalous gold values which warrant trenching and several other areas which warrant follow-up soil sampling.

It is concluded that the Kwanika/Valleau property has very good potential for the discovery of porphyry Au-Cu deposits because of:

- (1) favourable geology;
- (2) the occurrence of placer gold;
- (3) strong structural control contemporaneous with intrusion;
- (4) favourable alteration;
- (5) attractive airborne magnetics and resistivity anomalies;

- (6) anomalous to strongly anomalous Au ± Cu stream sediment values in a large (4 by 9 km) area;
- (7) attractive areas of anomalous Au soil geochemical values, which warrant immediate follow-up trenching.

Recommended exploration for 1991:

- (1) Detailed stream sediment sampling of the northern half of the property;
- (2) Substantial grid soil geochemical sampling of areas of anomalous Au ± Cu stream sediment geochemistry;
- (3) IP geophysical surveying over areas of anomalous Au ± Cu soil geochemistry;
- (4) Extensive backhoe trenching of soil geochemical and IP anomalies, followed by diamond drilling.

II. INTRODUCTION

A. Exploration Target

Primary exploration target is large tonnage low grade alkaline porphyry Au-Cu deposits similar to the Mt. Milligan deposit (385 mT. of 0.016 oz/t Au, 0.22% Cu).

Secondary exploration target is moderate tonnage high grade Au-Cu-Zn sulphide deposits replacing fracture zones adjacent to or cross-cutting Au-Cu porphyry mineralization.

B. Location and Access

Kwanika/Valleau property is located in the Kwanika Creek and Valleau Creek drainages, approximately 220 km northwest of Prince George, B.C., and 70 km northwest of the Mt. Milligan porphyry Au-Cu deposit. Refer to figures 1 to 3.

Access is via float plane northwest from Fort St. James to Chuchi Lake (90 km) and then northwest by helicopter to the property (40 km). Alternatively, road access is available to within 6 km of the northwest corner of the property via the Leo Creek Forestry road from Fort St. James (180 kms). It is proposed to construct an access road through the property to facilitate backhoe trenching, which would join up with the Leo Creek Forestry road.

C. Topography

Topography varies from gently rolling to moderately mountainous. Elevation ranges from 1158m (3800') to 1817m (5962'). Tree cover (hemlock, balsam, fir, spruce, pine, alder) varies from dense and mature to sparse.

D. Claims

Kwanika/Valleau property is a 6 by 20 km northwest trending area comprised of 31 contiguous four-post claim blocks (KC-1 to KC-31) totalling 461 units, which are wholly-owned by Westmin Resources Limited. Refer to figures 3 and 4.

Claim Name	Record Number	Units	Current Expiry Date	New Expiry Date (re: Jan 1991, Assmt. Report)
KC-1	10243	20	24 FEB 1992	24 FEB 1993
KC-2	10242	20	24 FEB 1992	24 FEB 1993
KC-3	40241	20	24 FEB 1992	24 FEB 1993
KC-4	10240	20	24 FEB 1992	24 FEB 1993
KC-5	10238	20	24 FEB 1992	24 FEB 1993
KC-6	10239	20	23 FEB 1992	23 FEB 1993
KC-7	10360	8	12 MAY 1992	12 MAY 1993
KC-8	10815	8	19 JUL 1992	19 JUL 1993
KC-9	10361	8	11 MAY 1992	11 MAY 1993
KC-10	10362	10	11 MAY 1992	11 MAY 1993
KC-11	10363	12	11 MAY 1992	11 MAY 1993
KC-12	10364	12	12 MAY 1992	12 MAY 1993
KC-13	10365	12	11 MAY 1992	11 MAY 1993
KC-14	10366	6	12 MAY 1992	12 MAY 1993
KC-15	10816	16	19 JUL 1992	19 JUL 1993
KC-16	10817	8	19 JUL 1992	19 JUL 1993
KC-17	10818	18	19 JUL 1992	19 JUL 1993
KC-18	10750	20	30 OCT 1990	30 OCT 1993
KC-19	10751	20	30 OCT 1990	30 OCT 1993
KC-20	10752	12	30 OCT 1990	30 OCT 1993
KC-21	11380	18	14 JAN 1991	14 JAN 1993
KC-22	11381	18	16 JAN 1991	16 JAN 1993
KC-23	11382	18	16 JAN 1991	16 JAN 1993
KC-24	11383	18	15 JAN 1991	15 JAN 1993
KC-25	11384	7	14 JAN 1991	14 JAN 1993
KC-26	12318	8	24 JUL 1993	24 JUL 1993
KC-27	12319	20	25 JUL 1993	25 JUL 1993
KC-28	12320	20	25 JUL 1993	25 JUL 1993
KC-29	12321	16	26 JUL 1993	25 JUL 1993
KC-30	12322	20	27 JUL 1993	27 JUL 1993
KC-31	12698	<u>8</u>	15 OCT 1991	15 OCT 1991
		<u>461</u>		

E. Option Agreement

Byron Resources Inc., a Vancouver, BC registered company listed on the Vancouver Stock Exchange, acquired an option from Westmin Mines Limited, on July 14, 1989,

to earn a 45% interest in the Tchentlo Lake and Kwanika Creek (now Kwanika/Valleau) properties. Byron is to make the following cumulative expenditures on the properties:

<u>Date</u>	<u>Amount</u>	<u>Cumulative Amount</u>
Dec 31, 1989	\$ 150,000	\$ 150,000
Dec 31, 1990	\$ 250,000	\$ 400,000
Dec 31, 1991	\$ 250,000	\$ 650,000
Dec 31, 1992	\$ 250,000	\$ 900,000
Dec 31, 1993	\$ 300,000	\$1,200,000

In addition, on the closing date of the agreement, Byron issued Westmin 200,000 common shares without par value.

F. Exploration History

A minor amount of exploration was undertaken in the vicinity of Kwanika/Valleau prior to Westmin's staking of the property. It is summarized as follows:

1961, 1967, 1969	Regional scale airborne magnetics survey (lines spaced 0.5 miles apart) undertaken by Geological Survey of Canada, Department of Energy, Mines and Resources.
1971, 1972	Soil geochemical sampling of a 1700m by 3660m area of SAN and NIK claims (Cu, Mo, Zn), by Noranda Exploration Company Ltd. A 3,500+m long northwest trending Cu soil geochemical anomaly was defined. The SAN and NIK claims (now lapsed) were located within what is now the northwest quarter of the Kwanika/Valleau property.
1978	Regional geological mapping (1:125,000 scale), by British Columbia Ministry of Mines and Petroleum Resources (Garnet,

J.A.) - Geology and Mineral Occurrences of the Southern Hogem Batholith, Bulletin 70.

1983 Regional Stream Sediment and Water Geochemical Survey, Joint Canada/British Columbia program.

1984 Stream sediment and rock geochemical sampling (wide spaced, for Cu-Au) and geological mapping on Kwan 1 claims by B.P. Selco - assessment report by N. Humphries. A few anomalous Cu \pm Au stream sediment values were defined. The Kwan 1 claim (now lapsed) plots within the northwest quarter of the Kwanika/Valleau property.

1989 Detailed airborne geophysics (Mag-VLF-HEM), stream, soil and rock geochemical sampling, and limited prospecting/geological mapping was undertaken on the Kwanika/Valleau property by Westmin Resources. The magnetics survey defined numerous strong, complex anomalies on the property, some of which appear to reflect late-stage high-level intrusive activity and good potential for associated porphyry Au-Cu mineralization. Several large resistivity low anomalies were also defined, some of which flank the magnetic highs and likely reflect disseminated pyrite alteration haloes.

Stream sediment sampling was undertaken over most of the property and samples were analyzed for Au, Ag, Cu, Pb, Zn, As, Sb and Mo. The sampling returned anomalous to strongly anomalous Au \pm Cu values over a substantial portion of the southern half of the property, and in a few locations in

the northern half of the property. The strength of the Au ± Cu stream anomalies is considered to be particularly significant considering the areas relatively poor outcrop exposure.

III. REGIONAL GEOLOGY

Kwanika/Valleau is situated within the central portion of the Quesnel Trough, a 30 to 60 km wide by 1300+ km long depositional basin, which extends northwestward from the southern BC border (49th parallel) to the Stikine River in northern BC. The boundaries of the Trough are regional faults in some areas. Refer to Figure 3. The Trough contains an assemblage of alkalic and calc-alkalic volcanic and sedimentary rocks of Upper Triassic to Jurassic age (Rossland, Nicola, Takla and Stuhini Groups), which are intruded by comagmatic plutons. The potential for porphyry Au-Cu deposits in this environment is considered quite good, especially in areas of well developed structural control.

IV. PROPERTY GEOLOGY

A. Rock Types and Structure

Kwanika/Valleau property is mainly covered by thin to thick glacial till. Outcrop exposure averages less than 5%, and is usually less than 1%. The property geology is largely interpreted from isolated scattered outcrops, float and airborne geophysical response. It is mapped and/or interpreted to consist of 60% alkaline (to calc-alkaline) Takla Group volcanic and sedimentary rocks and 40% comagmatic intrusive rocks of the Hogen Batholith.

The Takla Group volcanic rocks primarily consist of porphyritic (plagioclase, augite, hornblende) andesite to basalt flows and tuffs; and minor to moderate rhyolite, dacite

and latite flows and tuffs. The Takla Group sedimentary rocks are less abundant, and consist of volcanoclastics, siltstones, dolomite and minor limestone. The Hogem intrusive rocks appear comprised of a number of closely spaced, elongate shaped plutons consisting of diorite, gabbro, pyroxenite, hornblendite, monzonite, granodiorite, granite, syenite and felsite (in decreasing order of abundance). They intrude a narrow (2-5 km), well developed, northwest trending structural zone crosscutting Takla Group rocks. In places this structural zone is cut and/or offset by faulting contemporaneous with intrusion. Strong structural control contemporaneous with intrusion is essential for the development of significant alkaline porphyry Au-Cu deposits.

Locally within the structural zone intrusions of considerably different composition sometimes occur juxtaposed, or intrude one another. For example, at 2000N-400W pyroxenite is intruded and brecciated by quartz-syenite; and at 1000N-1400W pyroxenite is intruded by felsite.

B. Alteration

Moderate to strong propylitic alteration (epidote, carbonate and chlorite) is common in most rock types, especially within diorite, gabbro and pyroxenite. The alteration is usually pervasive, but occasionally patchy. In a few places it is fracture controlled, and overprints earlier pervasive propylitic alteration.

Weak to strong potassic alteration (K-Spar, biotite) is present in some areas. It is most commonly pervasive, replacing groundmass and some phenocrysts. Locally it forms knots of subhedral K-Spar and books of biotite. In a few instances, 1mm-5cm thick veins of K-Spar \pm carbonate \pm quartz were observed cutting monzonite, diorite and pyroxenite. Thin to thick veins of white bull quartz cut volcanic and intrusive rocks in places within the Robin Creek drainage.

Magnetite (magmatic) is common in trace to moderate amounts in most rock types, especially in pyroxenites and diorites. Coarse grained magnetite in euhedral crystals (up to 0.5 cm dia.) occurs associated with some very coarse grained propylitic alteration zones cutting hornblendites. Hydrothermal magnetite is also present, although it is far less common. It has been observed coating thin fractures in monzonite/diorite along Chickadee Creek, grid west of 1000W. It also occurs coating fine fractures (and breccia) in felsite at 1000N - 1400E, and in a small monzonite pluton at 1150N - 1600E.

C. Mineralization

Very fine grained placer gold was discovered in the southern half of the Kwanika/Valleau property in 1990. The gold was found along Chickadee Creek, which flows through the western third of the 4.0 km by 9.0 km northwest trending zone of anomalous Au ± Cu stream sediment values. Most of the placer gold grains are quite angular in shape, suggesting a very short transport distance and a local bedrock source, although a moderate amount of glacial transport of the gold likely did occur. Refer to figures 5 and 6. Microprobe analysis of the gold grains (Au, Ag, Cu, Hg) indicates that the gold is of high fineness (averages 870 fine), and is characterized by a very tight compositional range, suggesting that the gold was likely derived from a single and/or nearby source.

Altered Takla Group volcanic and sedimentary rocks typically contain trace to 2% (locally to 5%) pyrite, which is usually disseminated but sometimes fracture filling. Occasionally it is associated with trace to 1% disseminated chalcopyrite. The most pyritic rocks observed to date are andesites outcropping in the Robin Creek drainage; and silty dolomites as float along the Osprey Creek drainage. To date, Hogem intrusive rocks generally have been found to contain less sulphides than the Takla Group rocks, i.e. trace to 1% pyrite and trace chalcopyrite.

V. GEOCHEMISTRY

A. Stream Sediment Geochemistry

Detailed stream sediment sampling was undertaken in the southern half of the property to pinpoint the source of anomalous Au ± Cu stream sediment values defined in 1989. Considerable effort was expended to collect high quality silt samples, consisting wherever possible, of fine silt containing a minor amount of grit, and representative of several depositional cycles.

Samples were analyzed by Chemex Labs of Vancouver, BC for Au (fire assay with A.A. finish), and for an additional 10 elements (As, Ag, Co, Cu, Fe, Mn, Mo, Ni, Pb, Zn) by the ICP-AES method. Refer to Appendix A. Results for gold were plotted on figure 8a, and for copper on figure 8b. Values for the remaining elements are available in Appendix B.

Each sample was analyzed twice for gold for a total analyzed weight of 60 grams (two 30 gram samples), whenever sufficient sample weight was available. In a few cases, a particular sample was analyzed for gold 3 or even 4 times as a check on results by Chemex Labs and/or Westmin. The duplicate analyses were undertaken to deal with the nugget effect of gold. Results indicate that nugget effect is a significant problem, and that a total sample weight of 60 grams is the absolute minimum that should be analyzed. Three analysis, for a total sample weight of 90 grams, would be preferable. The quality of data and the ability to confidently outline areas of anomalous gold on a map is vastly improved using a weighted average value from two 30 gram analyses, as opposed to using a single value from a 30 gram sample. An additional advantage of running two or more analyses is that the variability of results for an anomalous sample gives an indication of the amount and grain size of gold particles in the sample, and hence an estimation of the reliability of the anomalous value. When the gold grains are very small and abundant the results are often more uniform and representative.

An orientation survey was also undertaken to compare the 1989 stream geochemical sample results with those of 1990. Of concern was the feasibility of combining results from two different periods of sampling into one data set, ie. the sampling undertaken in the fall of 1989 and the spring/summer of 1990. In addition, the orientation survey was intended to confirm that the 1989 results were valid and thus able to be reproduced in 1990. Most of the approximately 20 orientation samples were taken along Robin Creek, Chickadee Creek and portions of Raven Creek, in the same locations as in 1989. Gold results for both 1989 and 1990 were found to be highly variable, presumably due to the nugget effect of gold. This was not surprising considering that it was possible to pan very fine grained placer gold from Chickadee Creek. However, when sufficient sample weight was analyzed, gold results from the two periods of sampling were found to be more or less comparable; and in general, areas indicated to be anomalous or not anomalous in gold in 1989 were found to yield similar results in 1990. It was very encouraging to note that the 1989 Cu stream sediment values were often remarkably similar, sometimes even identical, to those of 1990.

Results

Gold and copper results from the 1990 detailed stream sediment sampling confirmed and more clearly defined a very encouraging 4 by 9 km northwest trending zone containing an abundance of anomalous to very anomalous Au \pm Cu values, which are coincident with very attractive airborne geophysical anomalies (magnetics, resistivity). In places the Au and Cu anomalies appear related, however, in many instances they occur separately. Anomalous gold values tend to occur in far greater abundance than anomalous copper values. The anomalous threshold for copper may also have been set a bit low for the area, as the distribution of some of the more weakly anomalous Cu values gives the impression that they are reflecting rock type rather than sulphide mineralization. The anomalous Au \pm Cu stream sediment (and soil) geochemical sample results suggest the existence of a gold rich porphyry system containing subordinate copper values.

B. Soil and Rock Geochemistry

Grid and traverse soil geochemical samples were collected of the B soil horizon with tree planting shovels, 15-45 cms below surface. Most grid samples were spaced at 50m intervals along lines 200m apart. In some anomalous areas additional lines were added, spaced 100m apart. Samples were analyzed by Chemex Labs of Vancouver, BC for Au (30 gram sample, fire assay with A.A. finish), and an additional 9 elements (Ag, Co, Cu, Fe, Mn, Mo, Ni, Pb, Zn) by the ICP-AES method. Refer to Appendix A. Results for gold were plotted on figures 9a and 10a, and for Cu on figures 9b and 10b. Values for the remaining elements are available in Appendix B.

Grid soil geochemical sampling was undertaken over a 2.5 by 4.5 km area in the southern half of the property, in follow-up to anomalous gold stream sediment values, airborne geophysical anomalies (magnetics, resistivity) and favourable geology/alteration. The sampling defined three areas of anomalous gold values which warrant trenching (designated as Soil Anomalies A to C on figure 5), and several other areas which warrant follow-up soil sampling. In addition, a soil geochemical traverse line (samples every 100m) was run in the extreme southeastern corner of the property to determine the source of very anomalous gold stream sediment values defined in 1990 along Valteau Creek. The sampling defined a zone of anomalous values designated as Soil Anomaly D, on figure 5. All of the Au \pm Cu soil geochemical anomalies are coincident with areas of intermediate strength complex magnetic anomalies, which are interpreted to reflect attractive, late stage, high level plutons intrusive into Takla Group volcanic and sedimentary rocks.

Soil Anomaly A (Au \pm Cu)

- Centred 1200m grid west of the 00 E/W Chickadee Creek baseline at 1200W - 1500N.
- 300m wide by 800m long.

- Anomalous Au values range from 25 ppb to 270 ppb Au.
- Outcrop is limited to two small occurrences of favourable monzonite and diorite.
- Underlying geology is interpreted to consist of small monzonite to diorite plutons intruding subordinate amounts of Takla Group rocks.

Soil Anomaly B (Au ± Cu)

- Centred 1500m grid east of the 00 E/W Chickadee Creek baseline at 1500E - 1000N.
- 500m wide by 600m long.
- Anomalous Au values range from 25 ppb to 4440 ppb Au.
- Outcrops are relatively scarce, but do include a small monzonite intrusion containing fine fractures and breccia healed by hydrothermal magnetite. Gold soil geochemical values flanking the monzonite range up to 600 ppb Au, however, two rock geochemical values from the monzonite were not anomalous in gold.
- Felsite outcrops in two small locations. Gold soil geochemical values over the felsite range up to 4440 ppb Au. Five rock geochemical samples collected from the two felsite exposures ranged in value from <5 ppb to 1100 ppb Au (0.03 oz/ton).
- Underlying geology is interpreted to consist of small pyroxenite, diorite, monzonite and felsite plutons intrusive into subordinate amounts of Takla Group basalt.

Soil Anomaly C (Au ± Cu)

- Centred 2800m grid east of the 00 E/W Chickadee Creek baseline at 2800E - 2000N.
- 200m wide by 700m long (open to the east).
- Anomalous Au values range from 25 ppb to 200 ppb Au.
- One small outcrop was observed. It consisted of felsite, contained trace pyrite, was iron stained on fracture surfaces, and returned 455 ppb Au (0.013 oz/ton).

- Underlying geology is interpreted to consist predominantly of Takla Group volcanic and sedimentary rocks, which are bordered and/or intruded by small felsite, monzonite and diorite plutons.

Soil Anomaly D (Au ± Cu)

- Centred 7000m southeast of the 00 E/W Chickadee Creek baseline.
- 500m wide zone (traverse line).
- Anomalous values range up to 145 ppb Au, and overlie a favourable northwest trending zone of magnetics which trend toward Soil Anomaly C, situated 4 km away.
- Underlying geology is interpreted to consist of Takla Group volcanic and sedimentary rocks, which are bordered and/or intruded by monzonite and diorite plutons.

Soil geochemical sampling was also undertaken in the northwest corner of the property in 1989 and 1990. Refer to figures 5, 9a and 9b. The work was in follow-up to a 4000m long northwesterly trending copper anomaly defined by Noranda in 1971-72. Westmin's sampling of a small portion of the centre of the Noranda anomaly confirmed the anomalous Cu values and demonstrated an association with gold. The Westmin anomaly is described as follows:

Soil Anomaly E (Cu ± Au)

- Centred 6000m grid west of the 00 E/W Chickadee Creek baseline.
- 200m wide by 350m long.
- Abundant anomalous Cu Values which range from 150 ppm to 2690 ppm Cu, associated with moderate amounts of anomalous Au values ranging from 25 ppb to 655 ppb Au.

VI. CONCLUSIONS

The Kwanika/Valleau property is considered to have very good potential for the discovery of porphyry Au-Cu deposits because:

1. the area is underlain by Takla Group volcanic and sedimentary rocks, which are intruded by favourable, comagmatic plutons of the Hogem Batholith.
2. the property geology reflects a strong structural control contemporaneous with intrusion, which is essential for the development of significant alkaline porphyry Au-Cu deposits.
3. moderate to strong propylitic alteration appears common on the property. Potassic and/or pyrite rich phyllic alteration is weak to strong in some places.
4. an airborne Mag-VLF-HEM geophysical survey of the property defined numerous very attractive complex magnetic anomalies, some of which appear associated with high-level, late-stage intrusive activity, and are coincident with anomalous stream, soil and rock geochemical values. Several large resistivity lows were also defined which may, in part, reflect disseminated pyrite alteration haloes.
5. a large (4.0 by 9.0 km) area of the southern half of the property is anomalous to strongly anomalous in Au \pm Cu stream sediment geochemistry. Panning in one of the anomalous drainages in 1990 discovered fine grained placer gold, which looks derived from a nearby bedrock source. Soil geochemical sampling over a portion of the anomalous area defined three attractive areas of anomalous Au soil geochemical values, which warrant immediate follow-up by trenching. Other areas warranting additional soil sampling were also defined.

VII. RECOMMENDATIONS

1. Detailed stream geochemical sampling should be undertaken over most of the northern half of the property.
2. Substantial amounts of grid soil geochemical sampling should be undertaken to test the remaining large areas of the property which are anomalous in Au ± Cu stream sediment geochemistry.
3. Gradient I.P. geophysical surveying should be undertaken over areas of anomalous Au ± Cu soil geochemistry.
4. Extensive backhoe trenching of Au ± Cu soil geochemical anomalies and I.P. anomalies should be undertaken, followed by diamond drill testing of areas of greatest potential.

VIII. EXPENDITURES

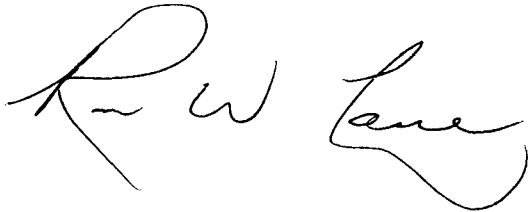
(Partial Expenditures)	
Linecutting Contractors	\$ 19,000
Charter Flying - helicopter	\$ 25,000
Assays/Geochemical Analysis	\$ 30,500
Salaries and Wages - Temporary	\$ 12,500
Base Map	\$ 9,000
Drafting	<u>\$ 4,000</u>
	<u>\$100,000</u>

IX. STATEMENT OF QUALIFICATIONS

I, Ron W. Lane, of 7673 Sutton Place, North Delta, B.C., graduated in 1971 from the University of Alberta, Edmonton, Alberta, with a Bachelor of Science - majoring in Geology.

Since graduation, I have worked on a continuous basis as an exploration geologist, first for Cominco Resources and Cominco International (12 years), and then for Westmin Resources (8 years). Work was undertaken in British Columbia, Alberta, Yukon Territory, Northwest Territories, Idaho, Southern Africa, and Italy.

I personally planned and supervised the work undertaken on the Kwanika/Valleau property, which is described in this report.

A handwritten signature in black ink, reading "Ron W. Lane". The signature is written in a cursive style with a large, stylized "R" and "W" followed by the name "Lane".



Ron W. Lane
Project Geologist
WESTMIN RESOURCES LIMITED

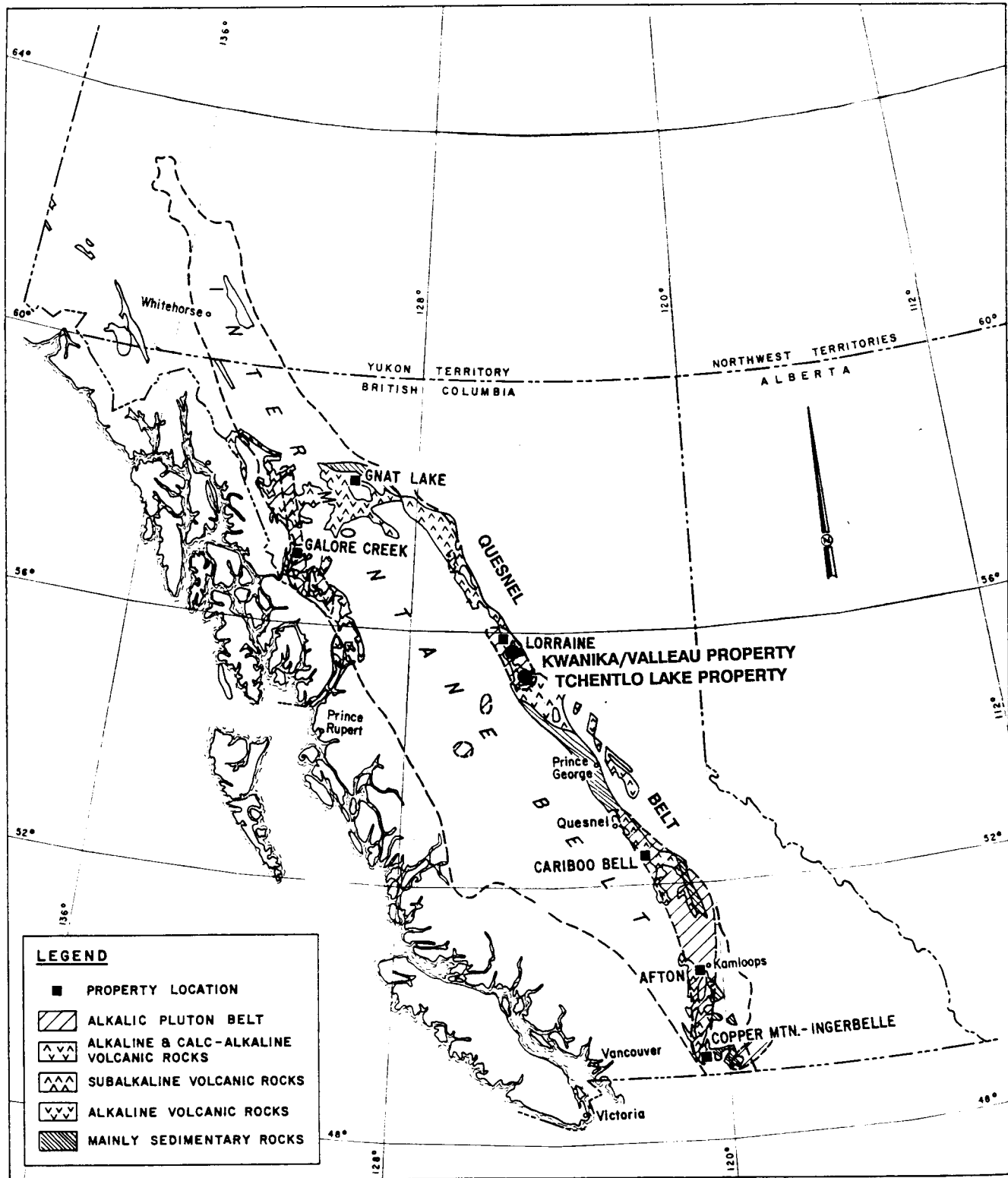
RWL/jmb

X. ATTACHMENTS



BRITISH COLUMBIA
Scale 1:7,500,000

 Westmin Resources Limited MINING DIVISION	
Work By R.W. Lane	KWANIKA/VALLEAU PROPERTY LOCATION MAP
Date Drafted January, 1991	
Drafted By	
Date Revised	
Revised By	
N.T.S. Number	
 SCALE 1:7,500,000	
Figure 1	



**UPPER TRIASSIC AND LOWER JURASSIC VOLCANIC ROCKS,
SIGNIFICANT COPPER DEPOSITS, AND ASSOCIATED
ALKALIC PLUTONS IN THE CANADIAN CORDILLERA**

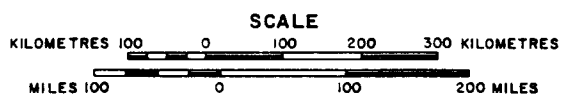
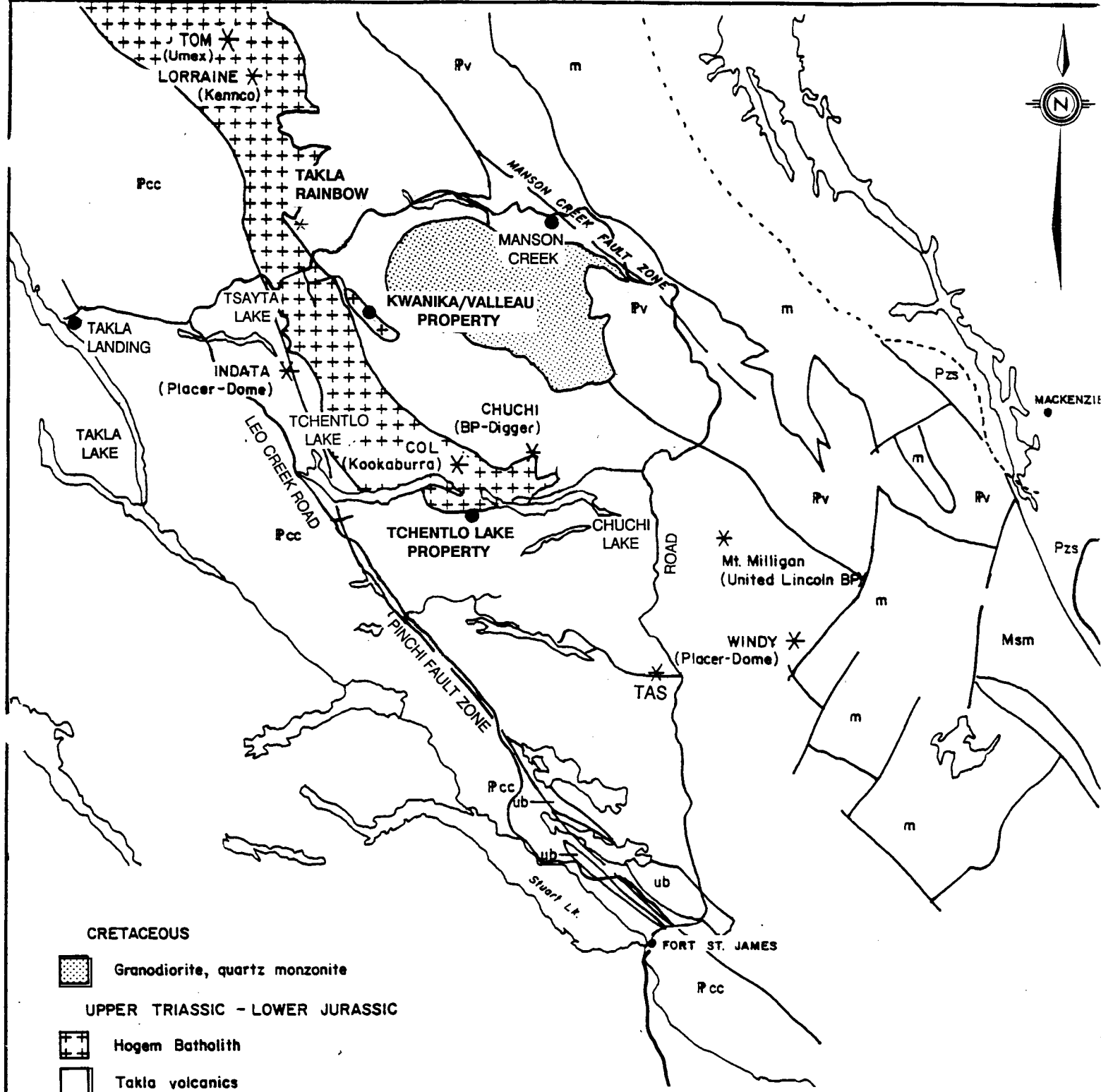



FIGURE 2



CRETACEOUS

 Granodiorite, quartz monzonite


UPPER TRIASSIC - LOWER JURASSIC


 Hogem Batholith


 Takla volcanics

PALAEOZOIC

 Permian - Nina Creek volcanics

 Permian - Cache Creek Group

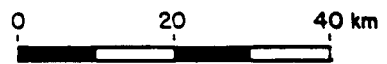
 Mississippian - Slide Mountain Assembl.

 Cambrian to Devonian sediments

 Wolverine Metamorphic Complex

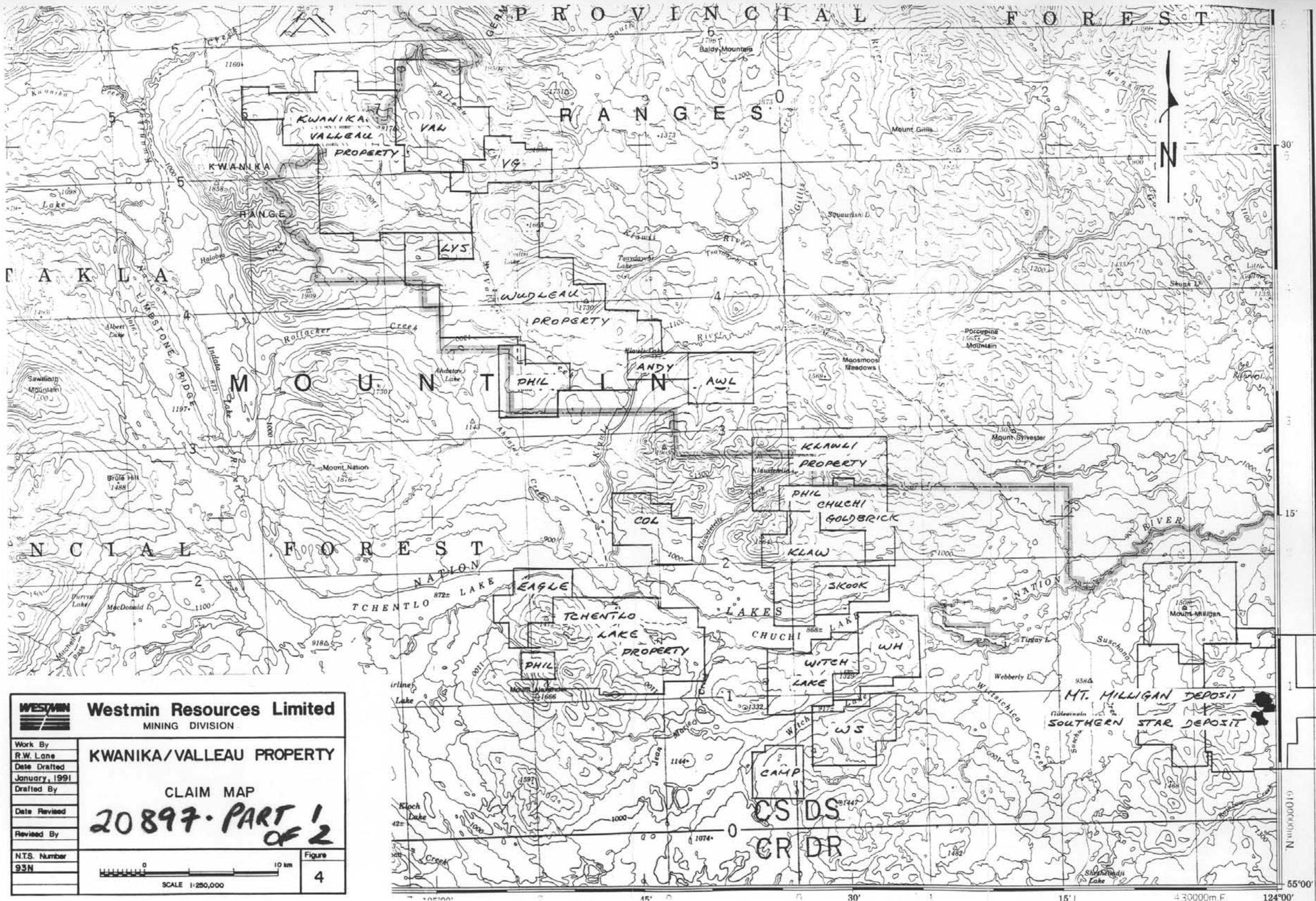
 ultrabasic rocks

 significant prospect



scale: 1:1,000,000

WESTMIN		Westmin Resources Limited	
		MINING DIVISION	
Work By	R.W. Lane	KWANIKA/VALLEAU PROPERTY	
Date Drafted	January, 1991		
Drafted By			
Date Revised		REGIONAL GEOLOGICAL SETTING	
Revised By			
N.T.S. Number			
		Figure	3

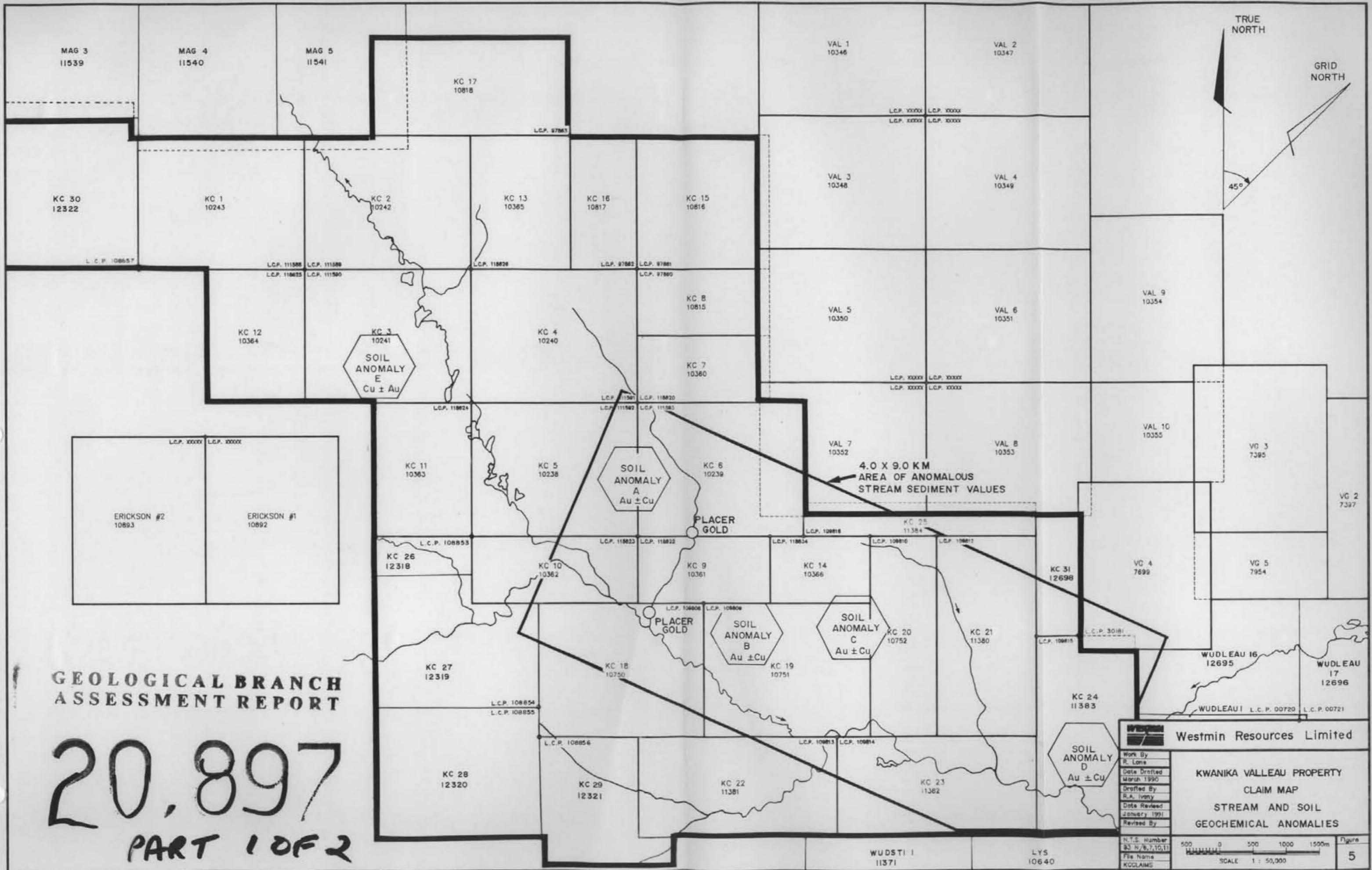


Westmin Resources Limited MINING DIVISION	
Work By R.W. Lane Date Drafted January, 1991 Drafted By Date Revised Revised By N.T.S. Number 93N	KWANIKA/VALLEAU PROPERTY CLAIM MAP 20897 - PART 1 OF 2 Figure 4
SCALE 1:250,000	

6100000m N

55°00'

4 30000m E. 124°00'



**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

20,897
PART 1 OF 2

Westmin Resources Limited													
KWANIKA VALLEAU PROPERTY CLAIM MAP STREAM AND SOIL GEOCHEMICAL ANOMALIES													
Work By R. Lons	<table border="1"> <tr> <td>N.T.S. Number</td> <td>500 0 500 1000 1500m</td> <td>Figure</td> </tr> <tr> <td>Date Drafted</td> <td>March 1990</td> <td rowspan="4" style="text-align: center; vertical-align: middle;">5</td> </tr> <tr> <td>Drafted By</td> <td>R.A. Ivany</td> </tr> <tr> <td>Date Revised</td> <td>January 1991</td> </tr> <tr> <td>Revised By</td> <td></td> </tr> </table>	N.T.S. Number	500 0 500 1000 1500m	Figure	Date Drafted	March 1990	5	Drafted By	R.A. Ivany	Date Revised	January 1991	Revised By	
N.T.S. Number		500 0 500 1000 1500m	Figure										
Date Drafted		March 1990	5										
Drafted By		R.A. Ivany											
Date Revised	January 1991												
Revised By													
File Name	KCCLAIMS												
<table border="1"> <tr> <td>WUDSTI 1 11371</td> <td>LYS 10640</td> </tr> </table>		WUDSTI 1 11371	LYS 10640										
WUDSTI 1 11371	LYS 10640												

20,897

Part 1 of 2

GEOLOGICAL BRANCH
ASSESSMENT REPORT

1989 Sample Numbers
- BFK 1 to BFK 73
- L1 to L3
- 453376 to 453916
- 458705 to 458730

1990 Sample Numbers
- 487501 +

SILT SAMPLING - 1990

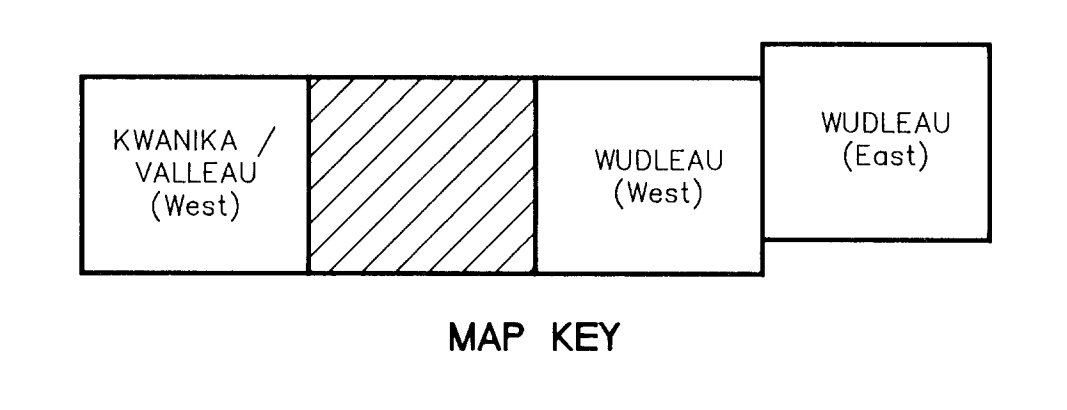
- - ppm
- 1 - 79
- 80 - 99
- ⊕ 100 - 199 (Anomalous)
- 200 - 399
- 400 - 799
- 800 + (Very Anomalous)

487500 487955 - Sample Number
146 146 - Cu in ppm

SYMBOLS

- Spot Height + 78.6
- Horizontal Control Δ
- Creek ———
- Indefinite Creek ———
- Lake ○
- Swamp ○
- Property Boundary ———
- Claim Boundary ———
- L.C.P. (Legal Corner Post) — location exact ⊕
- L.C.P. (Legal Corner Post) — location approximate ⊕

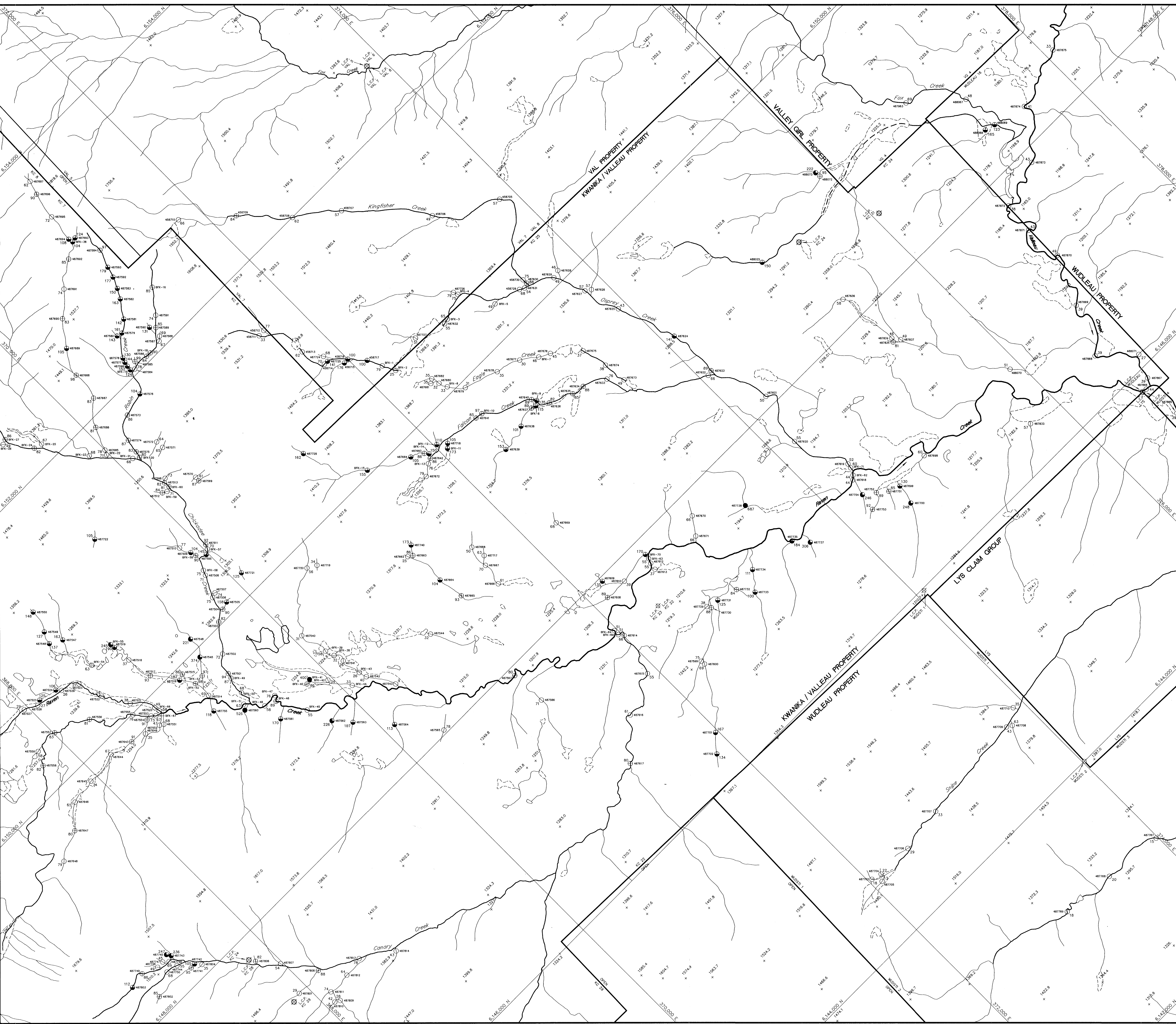
UNIVERSAL TRANSVERSE MERCATOR ZONE 10 NAD 1983
GRID NORTH IS 1°40' WEST OF TRUE NORTH
THE 1990 MAGNETIC BEARING IS 24°57.6' EAST OF GRID NORTH
ANNUAL CHANGE DECREASING 12'
MAP COMPILED BY HUGH HAMILTON LTD. USING 1987 1:70,000 AERIAL PHOTOS
PHOTO CONTROL DERIVED FROM B.C. GOVERNMENT TRIM PROJECT

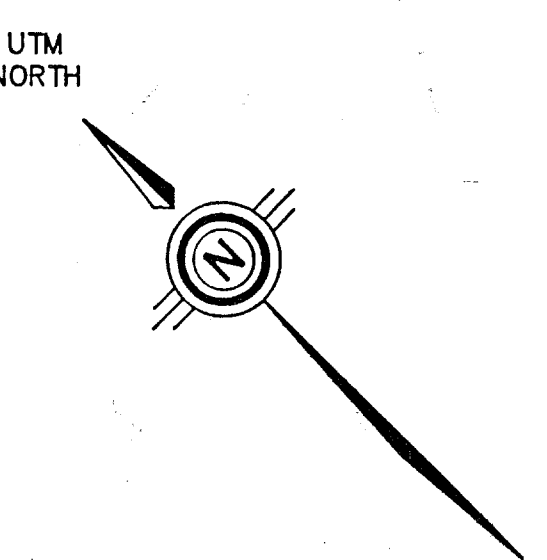
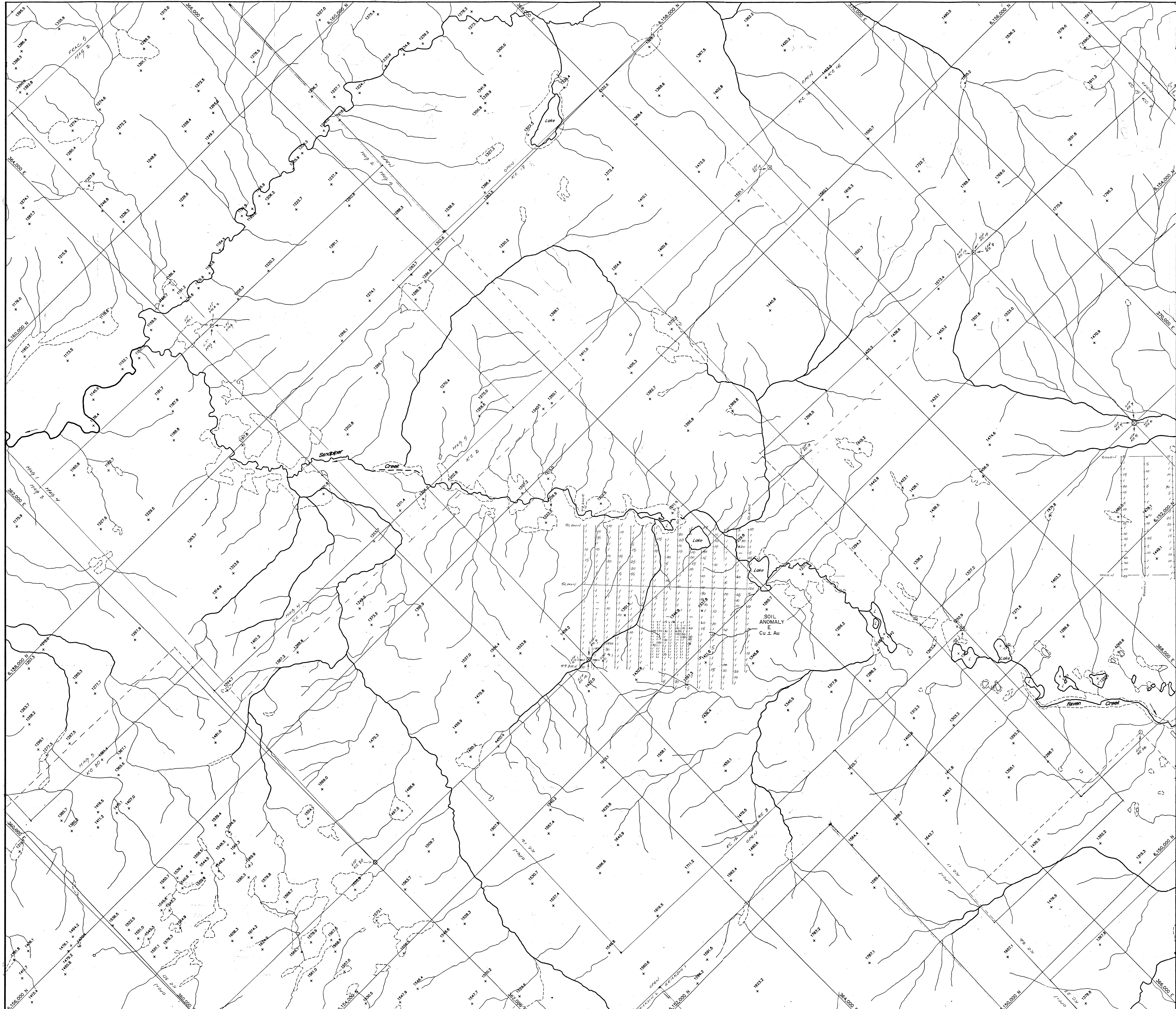


Westmin Resources Limited

Work By: T.W. Lane
Date Drafted: Sept. 1990
Drafted By: T.A. Iwery
Date Revised:
Revised By:

N.T.S. Number: 200
File Name: KVE_SILT
Scale: 1:10,000



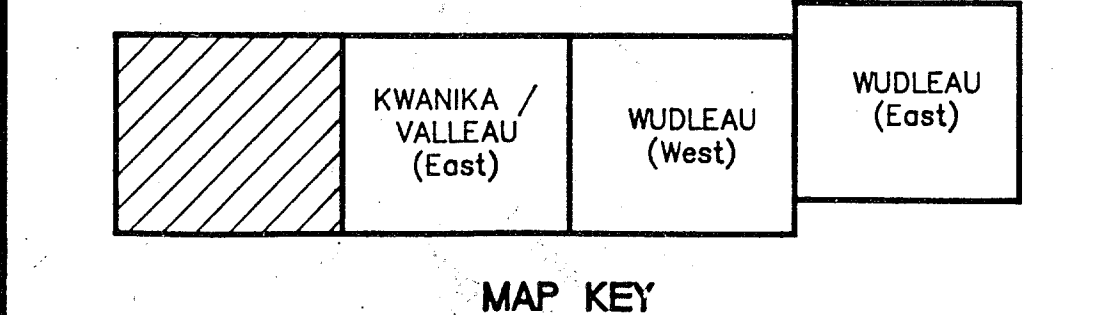


GEOLOGICAL BRANCH
 ASSESSMENT REPORT
20,897
PART 1 OF 2
 SOIL SAMPLING - 1990

- Au - ppb
- 1 - 9
 - ▣ 10 - 19
 - ▤ 20 - 49 (Anomalous)
 - ▥ 50 - 99
 - ▦ 100 - 199
 - ▧ 200 + (Very Anomalous)
- 6
 □ 21
 □ 1
 □ 4
 □ 14
 □ 1
 □ 35
 □ 2
- SOIL SAMPLE LOCATIONS - Au in ppb

- SYMBOLS**
- Spot Height + 78.6
 - Horizontal Control Δ
 - Creek ———
 - Indefinite Creek - - - - -
 - Lake ○
 - Swamp ⊖
 - Property Boundary ———
 - Claim Boundary ———
 - L.C.P. (Legal Corner Post) — location exact ⊕
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UNIVERSAL TRANSVERSE MERCATOR ZONE 10 NAD 1983
 GRID NORTH IS 1°40' WEST OF TRUE NORTH
 THE 1990 MAGNETIC BEARING IS 25°1.8' EAST OF GRID NORTH
 ANNUAL CHANGE DECREASING 12"
 MAP COMPILED BY HUGH HAMILTON LTD. USING 1987 1:70,000
 AERIAL PHOTOS
 PHOTO CONTROL DERIVED FROM B.C. GOVERNMENT TRIM PROJECT

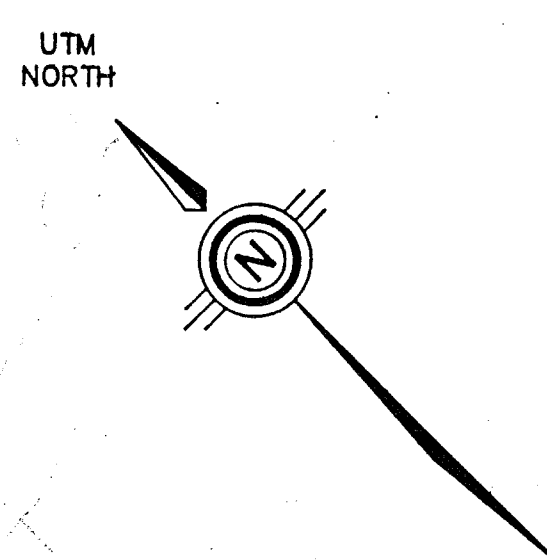
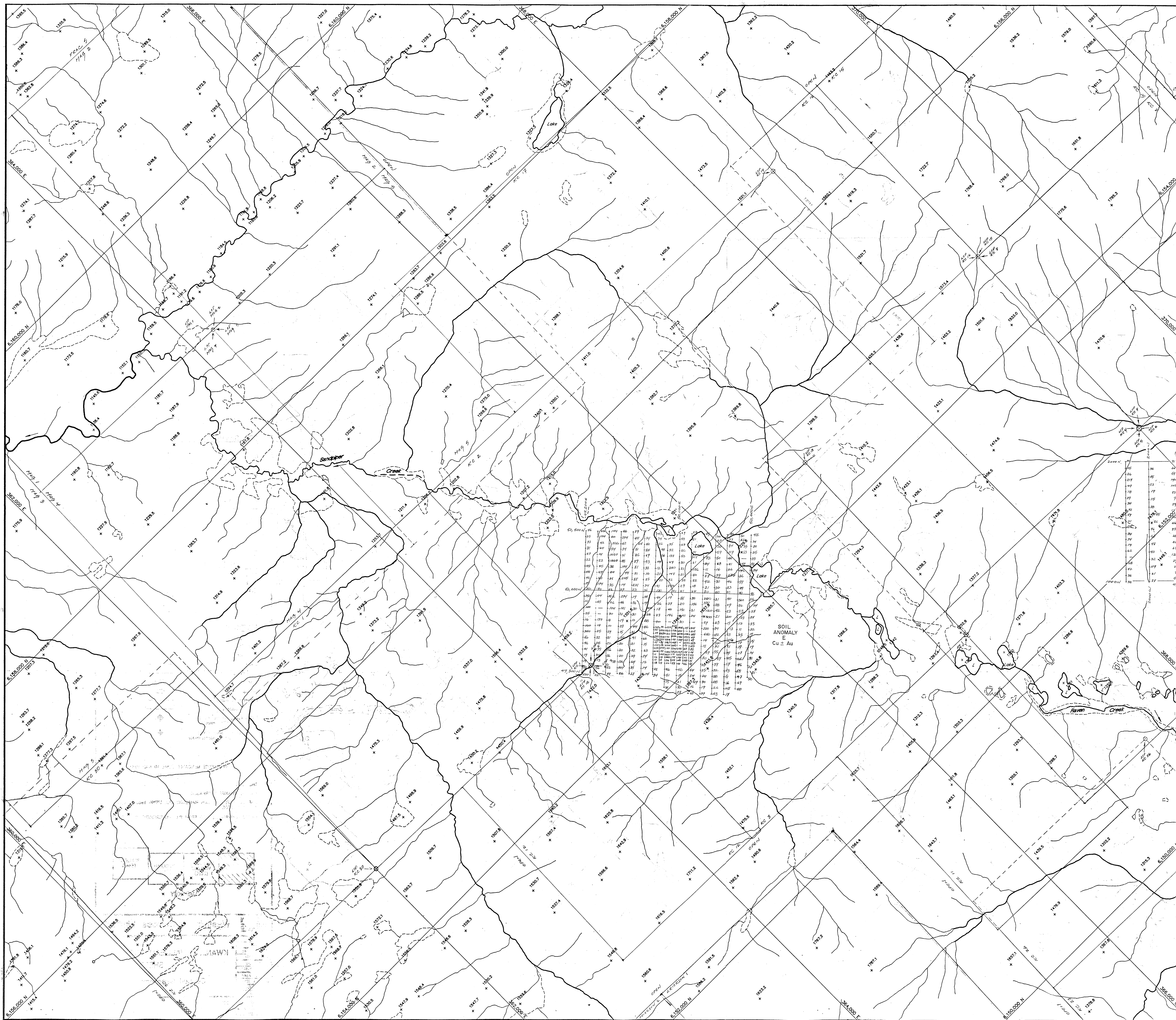


Westmin Resources Limited

KWANIKA / VALLEAU PROPERTY
WEST SHEET
Au Soil Geochemistry

Work By	R.W. Lane
Date Drafted	Sept. 1990
Drafted By	F. Heptonstall
Date Revised	January 1991
Revised By	R.W. Lane
N.T.S. Number	632/07 & 11
File Name	SHEET_B

200 0 200 400 600m Figure
 SCALE 1 : 10,000
 9a



ECOLOGICAL BRANCH
ASSESSMENT REPORT

20,897

PART 1 OF 2

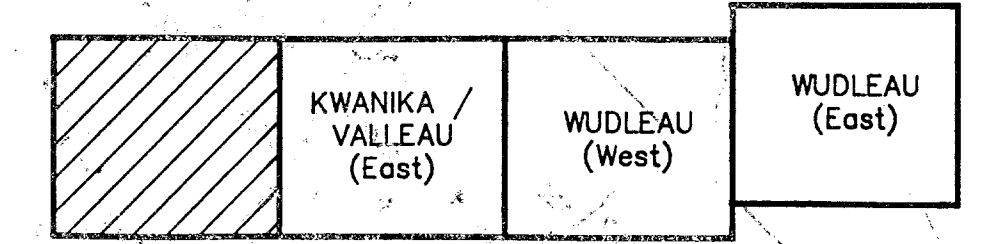
SOIL SAMPLING - 1990

- Cu - ppm
- 1 - 79
 - ▤ 80 - 99
 - ▥ 100 - 199 (Anomalous)
 - ▧ 200 - 399
 - ▨ 400 - 799
 - 800 + (Very Anomalous)
- SOIL SAMPLE LOCATIONS - Cu in ppm
- 55
 - 41
 - 131
 - 87
 - 285
 - 78
 - 92
 - 23

- SYMBOLS**
- Spot Height + 78.6
 - Horizontal Control Δ
 - Creek ———
 - Indefinite Creek - - - - -
 - Lake ○
 - Swamp ▭
 - Property Boundary ———
 - Claim Boundary - - - - -
 - L.C.P. (Legal Corner Post) location exact ⊕
 - L.C.P. (Legal Corner Post) location approximate ⊕

UNIVERSAL TRANSVERSE MERCATOR ZONE 10 MAD 1983
 GRID NORTH IS 1°40' WEST OF TRUE NORTH
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 ANNUAL CHANGE DECREASING 12'

MAP COMPILED BY HUGH HAMILTON LTD. USING 1987 1:70,000 AERIAL PHOTOS
 PHOTO CONTROL DERIVED FROM B.C. GOVERNMENT TRIM PROJECT



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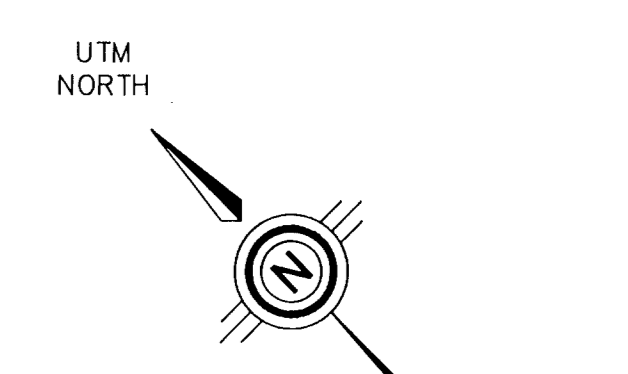
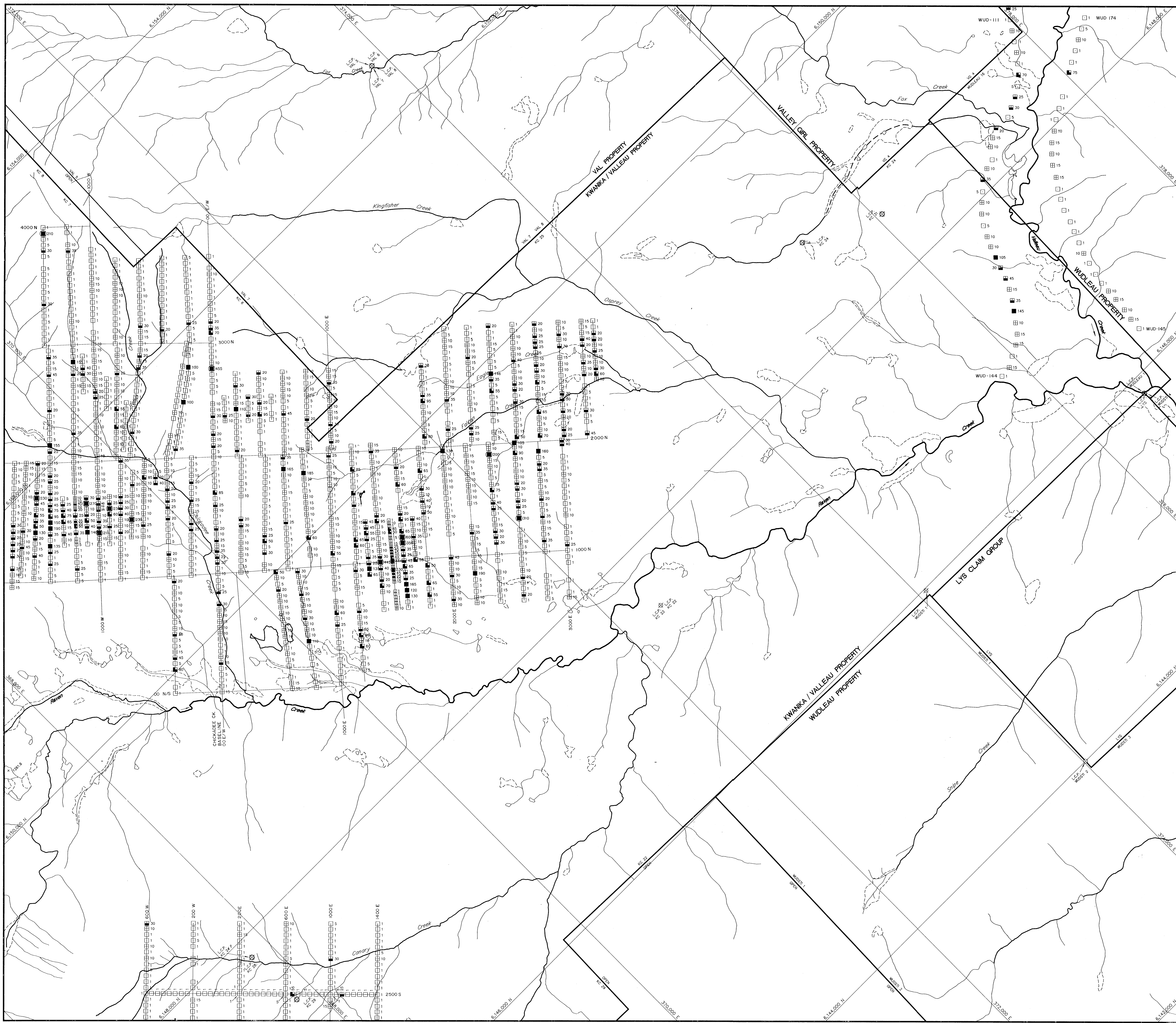
Work By: R.W. Lane
 Date Written: Sept. 1990
 Drafted By: F. Heptonstall
 Date Revised: January 1991
 Revised By: R.W. Lane

KWANIKA / VALLEAU PROPERTY
 WEST SHEET
 Cu Soil Geochemistry

N.T.S. Number: 3307/7 & 11
 File Name: SHEET_B

200 0 200 400 600m Figure
 SCALE 1:10,000

9b



**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

**20,897
PART 1 OF 2**

SOIL SAMPLING - 1990

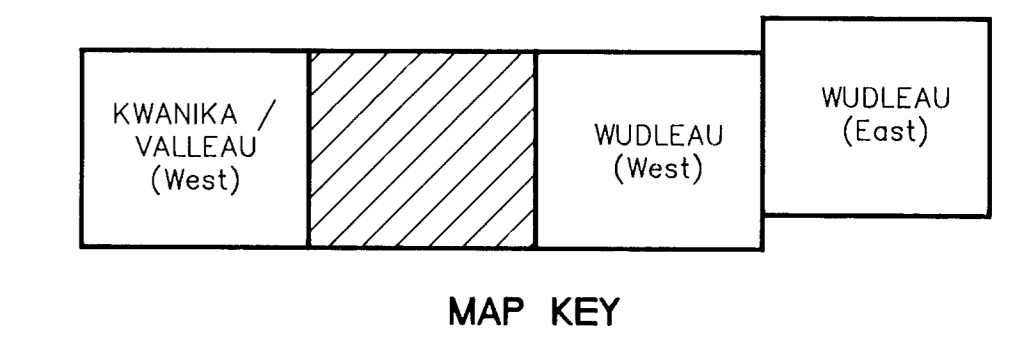
- Au - ppb
- 1 - 9
 - ▤ 10 - 19
 - ▥ 20 - 49 (Anomalous)
 - 50 - 99
 - 100 - 199
 - 200 + (Very Anomalous)

- SOIL SAMPLE LOCATIONS - Au in ppb
- 6
 - 21
 - 1
 - 4
 - 14
 - 1
 - 1
 - 35
 - 2

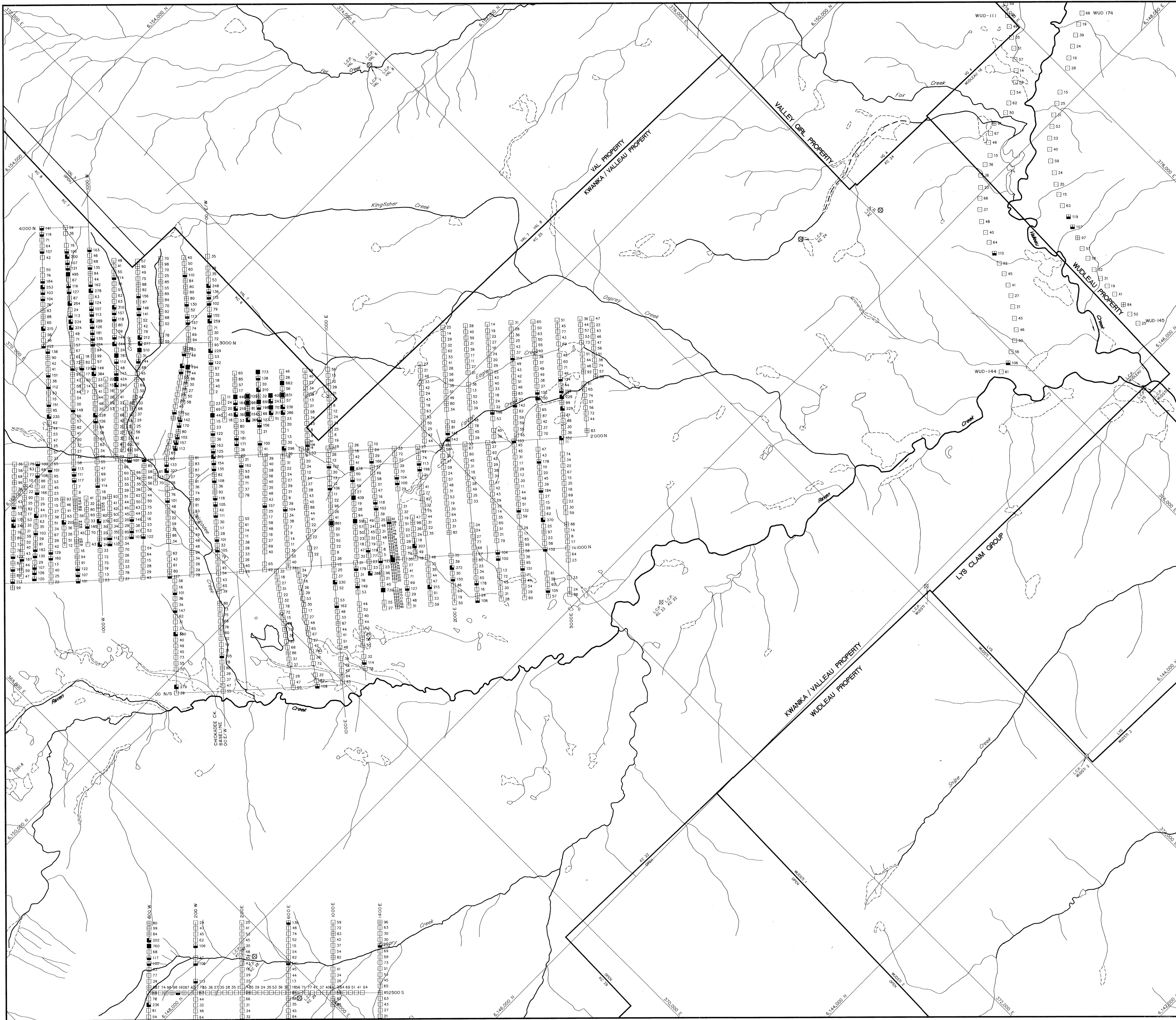
SYMBOLS

- Spot Height + 78.6
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- Lake ○
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UNIVERSAL TRANSVERSE MERCATOR ZONE 10 NAD 1983
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 MAP COMPILED BY HUGH HAMILTON LTD. USING 1987 1:70,000 AERIAL PHOTOS
 PHOTO CONTROL DERIVED FROM B.C. GOVERNMENT TRIM PROJECT



Westmin Resources Limited	
Work By R.W. Lane	KWANKA / VALLEAU PROPERTY EAST SHEET Au SOIL GEOCHEMISTRY
Date Drafted Sept. 1990	
Drafted By R.A. Ivany	
Date Revised	
Revised By	
N.T.S. Number 3391.67 & 11	Figure 10a
File Name KVE_S01	SCALE 1 : 10,000



GEOLOGICAL BRANCH
ASSESSMENT REPORT

20,897

PART 1 OF 2

SOIL SAMPLING - 1990

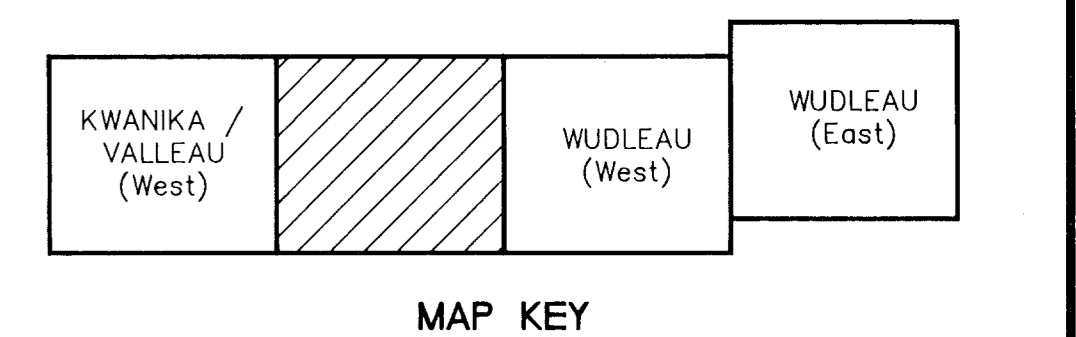
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 - ▤ 80 - 99
 - ▥ 100 - 199 (Anomalous)
 - ▧ 200 - 399
 - ▨ 400 - 799
 - 800 + (Very Anomalous)

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- 55
 - 41
 - 131
 - 67
 - 265
 - 78
 - 92
 - 23

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MAP COMPILED BY HUGH HAMILTON LTD. USING 1987 1:70,000 AERIAL PHOTOS
PHOTO CONTROL DERIVED FROM B.C. GOVERNMENT TRIM PROJECT



Westmin Resources Limited

Work By	B.W. Lewis
Date Drafted	Sept. 1990
Drafted By	B.A. Ivory
Date Revised	
Revised By	

N.T.S. Number	200	0	200	400	600m	Figure
File Name	KWNANKA / VALLEAU PROPERTY EAST SHEET CU SOIL GEOCHEMISTRY					10b
Scale	SCALE 1 : 10,000					