MAP NO.:
106 D 14

106 D 11

ASSESSMENT REPORT X

PROSPECTUS

CONFIDENTIAL X

OPEN FILE

DOCUMENT NO: 093096

MINING DISTRICT: Mayo

TYPE OF WORK: Geological, Geophysical and Geochemical Surveys

REPORT FILED UNDER: Falconbridge Limited

DATE PERFORMED: July 10 - August 25, 1992

DATE FILED: April 29, 1993

LOCATION: **LAT.:** 64°43'N

LONG.: 135°13'W

AREA: Hart Lake

VALUE $: 17,600.00

CLAIM NAME & NO.: Nick 139 - 147 YB03207 - YB03215,
Nick 148 - 182 YB03216 - YB03250.

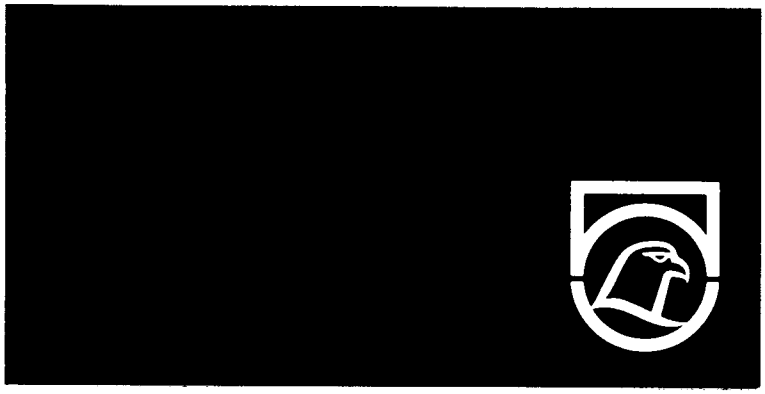
WORK DONE BY: Stuart M. Miller B.Sc., M.Sc.

WORK DONE FOR: Falconbridge Limited.

DATE TO GOOD STANDING:	

REMARKS: # 105 O - Hart Lake Area
The company carried out geological mapping, lithogeochemical sampling, re-examination and selective lithogeochemical sampling of drill core from earlier programs and "test" magnetometer and VLF geophysical surveys. The main purpose of the program was to try and identify areas where mineralization had thickened to economic widths. Its is believed that deposit is basin wide but no economic areas have been found to date. Measuring stratigraphic sections did not work but detailed geochemistry has identified 3 areas with potential for economic widths. Geophysics did not work as mineralization does not produce significant Em responses. Report suggests drilling the most favourable stratigraphy not yet tested by diamond drilling. A plan for 9 diamond drill holes with location information is included.

OFFICE OF THE REGIONAL MANAGER
MAR 30 1993
WHITEHORSE
YUKON TERRITORY



FALCONBRIDGE

093096

RECEIVED
MAR 29 1993
MINING RECORDER
MAYO, Y.T.
I.A. & N.D.

Falconbridge Limited

Report on

GEOLOGICAL MAPPING AND GEOCHEMICAL SAMPLING

at the

NICK PROPERTY, YUKON

Nick 1-126 YB02115-YB02240

Nick 127-138 YB02726-YB02737

Nick 139-182 YB03207-YB03250

NTS 106D/11 AND 106D/14

Latitude 64°43'N, Longitude 135°13'W

Stuart M. Miller, B.Sc., M.Sc.

093096

November, 1992

Field work performed between July 10 and August 25, 1992

This report has been examined by the Geological Evaluation Unit under Section 53 (4) Yukon Quartz Mining Act and is allowed as representation work in the amount of $ 17,600.00.

Robert Deklerk

for Regional Manager, Exploration and Geological Services for Commissioner of Yukon Territory.

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Summary and Recommendations

This report details the results of the exploration program carried out on the Nick property in the central Yukon Territory between July 10 and August 27 1992. The 1992 exploration program consisted of geological mapping of the property and surrounding areas onto a new orthophoto-controlled topographic base, measurement of stratigraphic sections to be used in a simple basin analysis, regional litho- (rock) geochemical sampling, re-examination and selective lithogeochemical sampling of the drill core from the 1988 and 1989 drill programs, and "test" magnetometer and VLF geophysical surveys.

Geological investigations conducted during the 1992 exploration program confirmed that the Nick mineralization appears to occur as a nearly continuous blanket of massive sulfide mineralization from 1 cm to 10 cm thick within two northwest-trending synclines on the Nick property. This represents a potential mineralized area estimated to be greater than 80 km^2.

The mineralization is stratiform, always occurring at the base of the Phosphatic Chert Member within 20 cm to 120 cm of the top of the distinctive concretionary Limestone Ball Member. The sulfide mineralization consists of vaesite (NiS_2), pyrite, minor sphalerite and organic matter (bitumen) that display many soft sediment deformation features. The massive sulfide mineralization contains up to 5.8% nickel and a distinctive suite of ore-associated elements (As, Ag, Mo, Se, V, Zn, Pt, Pd and Re). Metal grades of the mineralization are relatively consistent and economic potential of the property depends on discovery of thicknesses of mineralization on the order of 1 m to greater than 3 m.

The geological setting and geochemistry of the Nick mineralization are similar to "sedex" Pb-Zn deposits found elsewhere in Selwyn Basin. The Howards Pass Pb-Zn deposit is the closest analogy where approximately 500 Mt of reserves grading 7.5% Zn+Pb occur in "third-order basins". The most promising settings for discovering greater thicknesses of massive sulfides at Nick are similar third-order basins or depressions in the Devonian seafloor which can be located by thickness variations in the rocks overlying the mineralized horizon. Results of stratigraphic thickness variation studies conducted at the Nick property in 1992 are inconclusive. No significant thickness variations could be correlated with occurrences of mineralization or suspected geologic structures representing growth-faults.

Anomalous concentrations of ore-forming or ore-associated elements occur in footwall rocks around known vaesite showings. Three areas of anomalous rock geochemical response were identified in areas remote from known occurrences of mineralization. These areas warrant follow-up investigations and diamond drilling to test for economic thicknesses of mineralization.

Total field magnetometer and VLF test geophysical survey results over the Discovery Showing area are inconclusive and indicate these methods are not capable of tracing either vaesite mineralization or geological structures in the shales underlying the survey site.

Future exploration at the property should focus on diamond drilling to test an estimated 95% of favourable stratigraphy underlying the rest of the property not previously tested by diamond drilling. Three areas of anomalous rock geochemical response were identified and three drill holes are proposed to test these areas. Seven additional drill holes are proposed to test the mineralization in the Main and North synclines. Both rock geochemical and stratigraphic thickness variation studies should continue on new drill core to gather more information on the geochemistry and sedimentary environment of the host rocks. Future geological work should also include detailed mapping around proposed drill sites to properly spot drill holes within Upper Earn Group rocks to allow complete intersections of the basin-fill member to be used in stratigraphic and geochemical studies.

Two or 3 labourers and one geologist will be required for 3 weeks to prepare drill sites. A geologist and core-splitter/cook will be required for 2 months. Ten drill holes totalling 2670 metres are required to adequately test the areas recommended for detailed exploration. Direct drill costs (includes mud etc.) will be $100/m for a total drill cost of $267,000. Drill moves and mobilization to and from the Hart Lake air strip can be accomplished by Bell Jet Ranger helicopter at $700/hr. The drill and required fuel can be transported to Hart Lake strip by DC-3 fixed wing aircraft from Whitehorse and/or Mayo.

Respectfully submitted,

Stuart M. Miller, B.Sc., M.Sc.

Introduction

This report details the results of the exploration program carried out on the Nick property in the Yukon Territory between July 10 and August 27 1992. All work on the property in 1992 was conducted by Falconbridge contract and full-time staff. The 1992 exploration program consisted of geological mapping of the property and surrounding areas onto a new orthophoto-controlled topographic base, measurement of stratigraphic sections to be used in a simple basin analysis, regional litho- (rock) geochemical sampling of the Limestone Ball Member unit immediately below the "Nick horizon", re-examination and selective lithogeochemical sampling of the drill core from the 1988 and 1989 drill program, and "test" magnetometer and VLF geophysical surveys.

The 1992 exploration program was funded by Falconbridge Limited. The Nick claims are under option from the Nick Joint Venture (NDU Resources Ltd., Pac-Man resources and 2001 Resources Industries Ltd.). Falconbridge Limited can earn a 60% interest in the property by spending $1,500,000 by June 30, 1995 and making cash payments totalling $30,000 in three instalments, starting January 1, 1992.

Details of exploration work conducted by Archer, Cathro & Associates (1981) Limited during 1988, 1989 and 1991 can be found in reports by them dated December 1988, December 1989 and December 1991. A list of the personnel who worked on the property can be found in Appendix II. The authors' qualifications are listed in Appendix I.

Location and Access

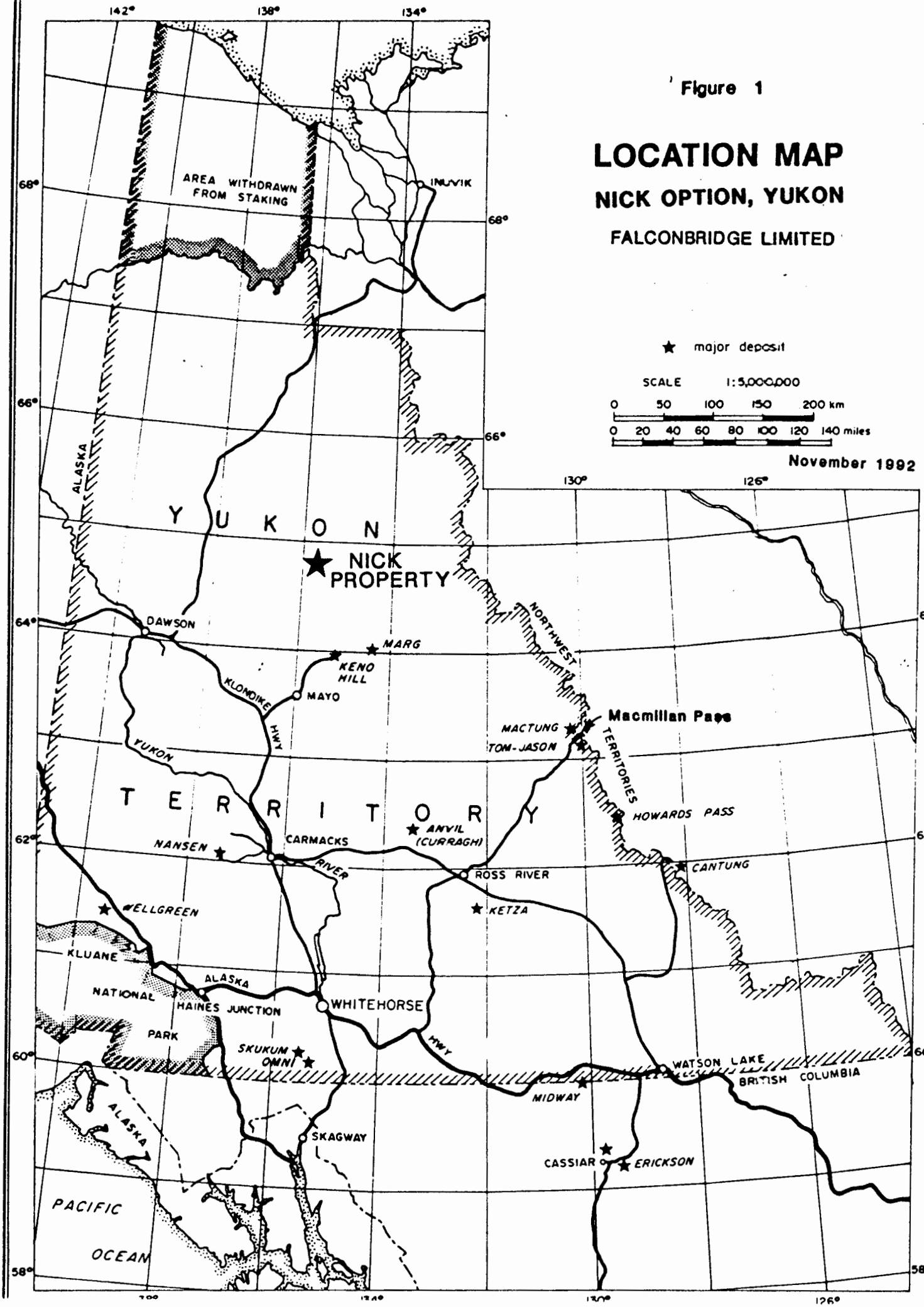
The Nick property is located at 64°43'N and 135°13'W, approximately 130 km north of Mayo, Yukon Territory (Figure 1) within NTS claim sheets 106D/11 and 106D/14. The property lies approximately 15 km northwest of Hart Lake where there is an all-weather air strip suitable for DC-3 and smaller aircraft. Access to the property is by helicopter from Hart Lake or the closest road at McQuesten Lake, 70 km to the south (Figure 2). Hart Lake can be reached from McQuesten Lake by way of the Wind River winter road and a bulldozer trail along Nash Creek. The closest airport and supply point is the town of Mayo 130 km to the south. The 1992 Nick exploration program was serviced by a Bell Jet Ranger II helicopter based in Mayo and operated by Trans North Air of Whitehorse.

Figure 1

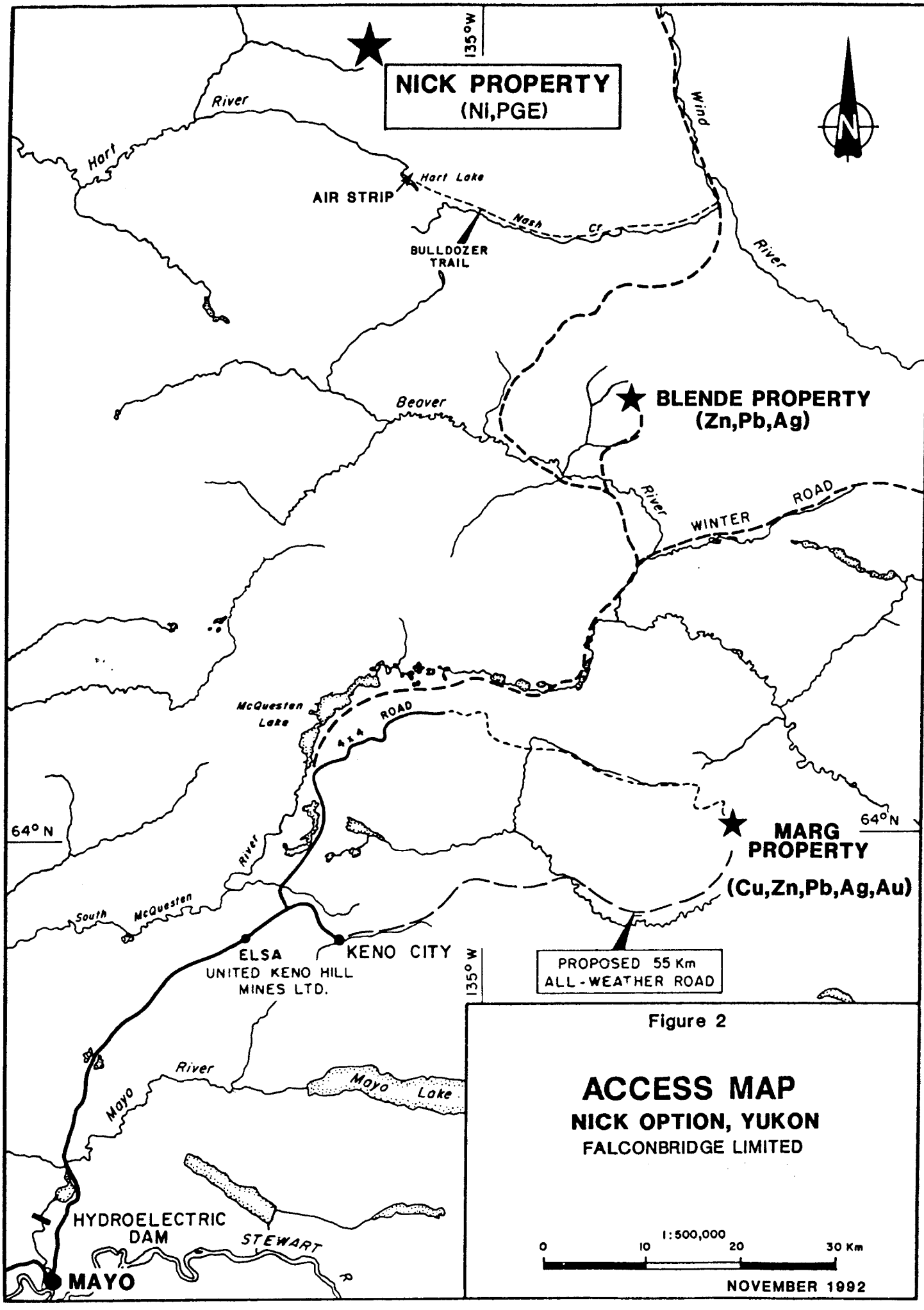
LOCATION MAP

NICK OPTION, YUKON

FALCONBRIDGE LIMITED



November 1992


NICK PROPERTY
(Ni,PGE)
135°W
River
Hart
Hart Lake
AIR STRIP
Nash Cr
BULLDOZER TRAIL
Wind
River
N
BLENDE PROPERTY
(Zn,Pb,Ag)
Beaver
River
WINTER ROAD
McQuesten Lake
4x4 ROAD
64° N
MARG PROPERTY
(Cu,Zn,Pb,Ag,Au)
South McQuesten River
ELSA
UNITED KENO HILL MINES LTD.
KENO CITY
PROPOSED 55 Km ALL-WEATHER ROAD
Mayo River
Mayo Lake
HYDROELECTRIC DAM
STEWART R
MAYO
Figure 2
ACCESS MAP
NICK OPTION, YUKON
FALCONBRIDGE LIMITED
1:500,000
0 10 20 30 Km
NOVEMBER 1992

The 1992 Nick exploration program was serviced by a Bell Jet Ranger II helicopter based in Mayo and operated by Trans North Air of Whitehorse.

History and Previous Work

Indications of base metal mineralization in the Nick area were discovered in 1977 when the Geological Survey of Canada (GSC) Open File 418 reported strongly anomalous values for Ni, Zn and Mo from reconnaissance stream sediment samples. These samples were taken from streams draining an area 18 km long by 5 km wide underlain by erosional remnants of Devonian black shale. The Nick mineralization was subsequently discovered by Cominco geologists in 1981 exploring the area for sedimentary exhalative (sedex) Pb-Zn-Ba deposits. A sample taken at that time from a 5 cm thick conformable sulfide layer, at what is now known as the Discovery Showing, assayed 5.8% Ni and 0.8% Zn.

The area was first staked by the Cooke Yukon Syndicate in March 1988 and optioned to Archer, Cathro in May of that year. The option was transferred in June 1988 to a joint venture between NDU Resources Ltd. (50%), Pac-Man Resources Inc. (25%) and 2001 Resource Industries (25%). In August and September 1988 the joint venture carried out a program of geological mapping, geochemical sampling and diamond drilling (362m in 4 holes) around the Discovery Showing.

Inco Limited optioned the Nick property from the joint venture in July 1989 and performed 892m of diamond drilling, geological mapping, prospecting and claim staking prior to terminating the agreement in 1990. This work was carried out by Archer, Cathro and Associates (1981) Limited.

The property was optioned by Falconbridge Limited from the joint venture in June of 1991. The 1991 exploration program was funded by Falconbridge Limited under the option agreement, and was carried out by Archer, Cathro and Associates (1981) Limited. This work consisted of geological mapping and hand trenching carried out between July 27 and August 18.

The massive sulfide horizon has been traced by soil geochemistry, hand trenching and prospecting around the circumference of the Main and North Synclines and evidence to date suggests that the sulfide horizon is a continuous sheet of Ni-bearing massive sulfide mineralization.

Property Status

The Nick property consists of 182 Nick claims (Figure 3) registered in the name of Archer, Cathro and Associates (1981) Limited with the Mayo Mining Recorder as shown in Table 1.

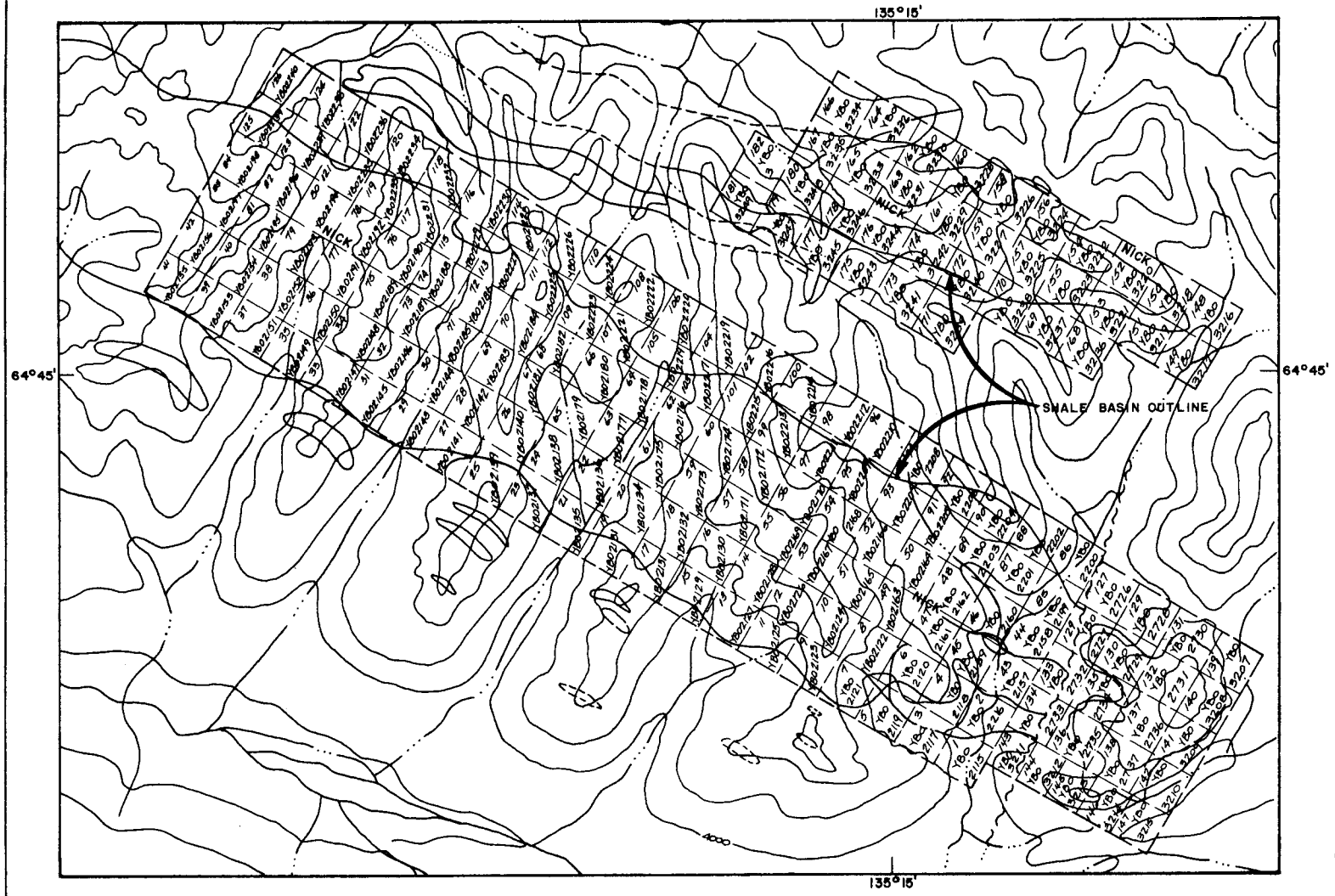
Inspection of the claims in 1991 by Archer, Cathro and Associates (1981) Limited staff and the author has shown them to be adequately staked although insufficient surveying has been done to confirm that no unstaked fractions are present. Claim posts were stood up, mounded and tagged during work conducted in 1988, 1989 and 1991.

Table 1: Nick Claim Status

Claim Name	Record Numbers	Expiry Date
Nick 1-126	YB02115 - YB02240	March 28, 1998
Nick 127-138	YB02726 - YB02737	March 28, 1998
Nick 139-147	YB03207 - YB03215	March 28, 1998
Nick 148-182	YB03216 - YB03250	March, 28 1996

Regional Geology

The Nick property is located within the Mackenzie Platform tectonic province (Figure 4) at the east end of a synclinal erosional outlier of a Palaeozoic black shale sequence. The rocks of the Ordovician-Silurian to Upper Devonian shale sequence underlying the property are very similar to the age-equivalent Road River Group and Earn Group strata found within the Selwyn Basin in the east-central Yukon. These shale outliers represent the erosional remnants of a folded Palaeozoic sub-basin overlying Cambrian and Ordovician carbonate rocks of the Mackenzie Platform. The Nick sub-basin is considered to be a local trough or embayment on the eastern margin of the Selwyn Basin that developed during the Ordivician by subsidence along a major west-trending, westerly deepening graben. The Selwyn Basin is an epicratonic marine basin that formed due to subsidence accompanying rifting of the continental margin of North America during the Early Palaeozoic.



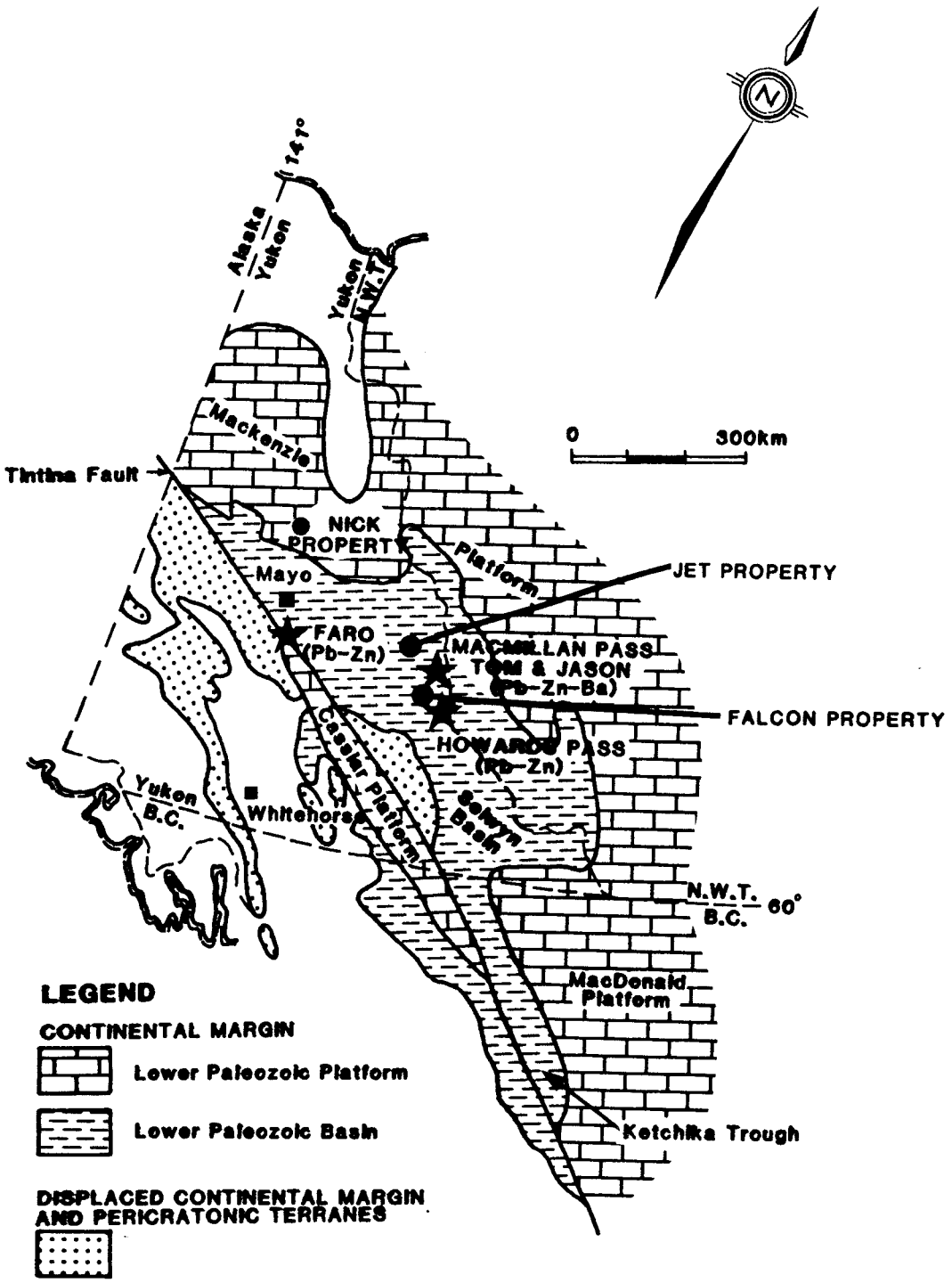
0 460 920 1380 1840 2300
METRES

FIGURE 3

FALCONBRIDGE LIMITED

CLAIM MAP
NICK OPTION, YUKON
(LOCATIONS APPROXIMATE)

SCALE 1 : 41,600	DRAWN VCH
DATE NOV 1992	DATA BY SM



after Hubert et al.(1992)

FIGURE 4

FALCONBRIDGE LIMITED

GEOLOGICAL SETTING NICK OPTION, YUKON

SCALE	DRAWN YAZ
DATE NOVEMBER 1992	DATA BY SM

The Nick sub-basin is separated from age-equivalent carbonate rocks of the Mackenzie Platform by regional-scale faults to the north, southeast and east (Green, 1972; Figure 5). These faults are thought to represent the reactivated margins of a graben that was the site of Ordovician to Devonian deep water sedimentation within the Mackenzie Platform (Hulbert *et al.*, 1992).

Laramide compressional tectonics, wide spread throughout the Yukon during the Cretaceous, deformed the Nick sub-basin producing open to isoclinal, northerly-verging folds with NNW-trending axes. The erosional remnants of the folded Nick sub-basin are presently exposed in two parallel synclines, the Main and North synclines. The Main Syncline is approximately 16km by 2km while the smaller North Syncline is approximately 8km by 1km. The Ordovician to Devonian sequence which hosts the strataform Nick mineralization is preserved in the interiors of these two parallel structures.

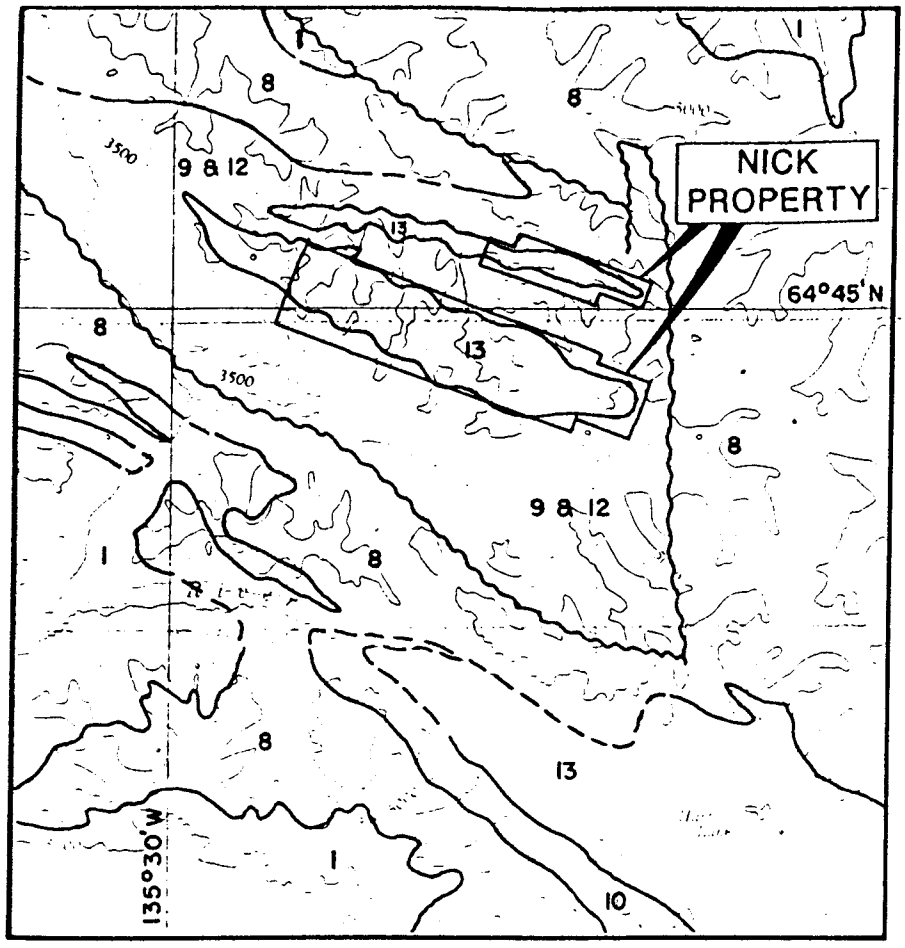
Regional metamorphism of the lower Palaeozoic Selwyn Basin sediments has been estimated as lower greenschist facies based on conodont CAI's (Norford and Orchard, 1982; Goodfellow and Jonasson, 1987) and on graptolite reflectance (Riedeger *et al.*, 1989).

No intrusive rocks are present within the area.

Property Geology

Introduction

The Nick property is underlain by calcareous, starved basin Road River equivalent shales conformably overlain by Lower Earn cherty to siliceous shales which are in turn overlain by fine-grained clastic rocks of the Upper Earn Group. The Road River Group consists of calcareous and carbonaceous, silty black shales. Lower Earn Group lithologies consist of interbedded calcareous black shale and cherty shale, a distinctive concretionary Limestone Ball Member, a thin clay shale unit, the Ni-bearing sulfide horizon, a highly resistant, phosphate enriched cherty shale unit, and silty, pyritic black shales. The Upper Earn Group consists of brown silty shales to fine grained siliciclastic rock. Quaternary glacial drift covers most valley bottoms and flats. Overburden thicknesses of 5m to 15m were reported from 1988 and 1989 diamond drilling. Hillsides and mountains are covered by only a thin layer of talus. However outcrop exposures of all but the most resistant units are generally poor.



LEGEND

DEVONIAN TO CARBONIFEROUS

13 — Black shale, chert and minor limestone

SILURIAN (?) TO MIDDLE DEVONIAN

12 — Dark grey-weathering, black, thin-bedded, platy limestone

DEVONIAN

10 — Light grey limestone and dolomite

ORDOVICIAN AND SILURIAN

9 — Road River Formation: Black chert and black argillite

8 — Grey-and buff-weathering dolomite and limestone

PROTEROZOIC

2 — Dolomite, slate, minor phyllite and quartzite

1 — Argillite, slate and phyllite

REGIONAL FAULT

From GSC Map 1282 A and Memoir 364 by L.H. Green, 1972

FIGURE 6

REGIONAL GEOLOGY

NICK OPTION, YUKON

FALCONBRIDGE LIMITED

SCALE 1:250,000

0 5 10 15 Km

0 5 10 Miles

NOVEMBER 1992

Stratigraphy

The Ni-Zn-PGE mineralization occurs as a thin stratiform sulfide layer at a distinct break in the local stratigraphy, at the contact between the Ordovician to Silurian "starved basin" calcareous silty black shales and the Lower to Middle Devonian cherty shales and fine-grained clastic rocks.

The Ordovician to Silurian calcareous rocks have been correlated with the Road River Group and older strata elsewhere in Selwyn Basin. Lower to Upper Devonian non-calcareous siliceous shale and fine grain clastic strata overlying the Ni-bearing sulfide horizon have been assigned to the Earn Group. These correlations are based on microfossil determinations by the GSC on conodonts taken from the Limestone Ball Member immediately below the Ni-bearing mineralized horizon (Hulbert *et al.*, 1992) and direct comparisons of property stratigraphy with descriptions of similar successions in Selwyn Basin from the Macmillan Pass and Howards Pass areas near the Northwest Territories-Yukon border. Stratigraphic relationships are illustrated in Figure 6. Thicknesses of some units are approximate and some units vary considerably across the map area in thickness (see section on "Basin Analysis" for details). Property geology is summarized at 1:5000 scale in Figures 7-13 contained in pockets at the back of this report.

Unnamed Cambrian-Ordovician Carbonate Rocks (3D fr)

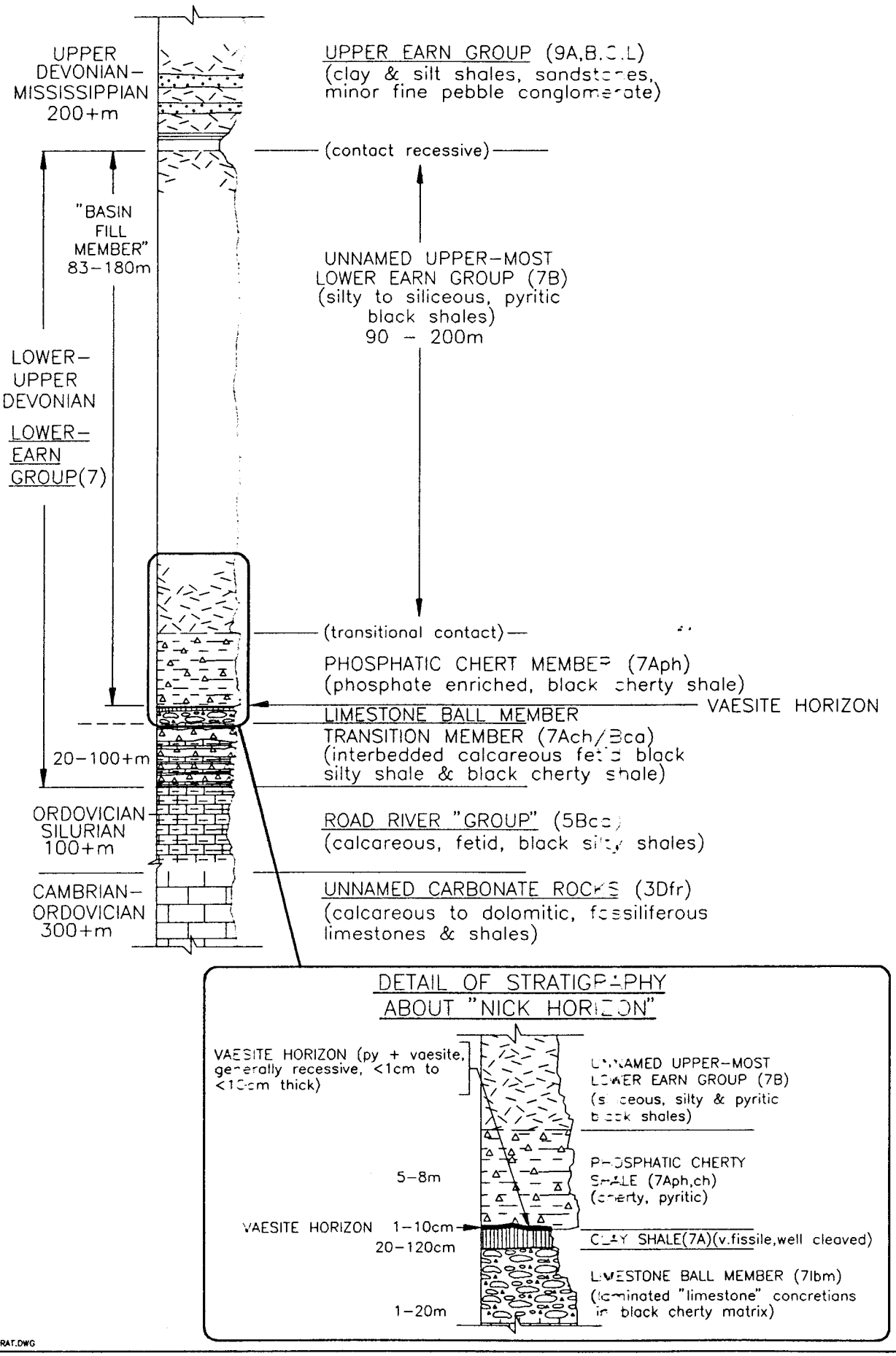
The oldest rocks in the property area are an unnamed sequence of medium to light grey weathering dolomitic to calcareous, limestones and shales. These rocks are considered to be shelf carbonates which flanked the Nick sub-basin, a westerly deepening graben-like structure. Thin to thick bedded limestones, often containing abundant fossil remains of crinoids, brachiopods and corals in the lowermost beds of this unit, support this interpretation. This sequence is a minimum of several hundred metres thick although the base is not seen in the map area.

Road River Group (5B ca ft)

The Ordovician to Silurian Road River Group is characterized by medium to dark grey weathering, fetid (methanous odour), black calcareous and graptolitic silty shales. Bedding thicknesses decrease from base to top and axial planar cleavage is normally well developed

Figure 6

NICK OPTION STRATIGRAPHY



K:\1202\NICSTRAT.DWG

although cleavage surfaces are typically uneven and conchoidal. The Road River sequence is greater than 100 metres thick and, unlike elsewhere in Selwyn Basin, grades conformably into the overlying Lower Earn Group rocks.

Lower Earn Group (7Ach/Bca, 7lbm, 7A ch, 7B py cd bn)

The Lower to Upper Devonian Lower Earn Group is composed of four informally named members and one unnamed member. Some of these units are shown individually on 1:5000 property geology maps (Figures 7-13).

Transition Member (7Ach/Bca)

At the base of the Lower Earn Group is the Transition Member. It is a variably resistant unit of medium grey to black weathering, interbedded black cherty shales and black, fetid, calcareous shales. The base of the unit was re-defined by the present author as the first occurrence of finely laminated to thinly interbedded cherty and calcareous, silty shales. The unit is typified by an upward increase in thickness of cherty shale beds accompanied by an upward decrease in fetid, silty beds. Limestone ball concretionary textures similar to those in the Limestone Ball Member are very common in this member. This transition between Road River and Lower Earn groups occurs over a stratigraphic interval of greater than 200 metres in some areas.

Limestone Ball Member (7lbm)

The Limestone Ball Member is a distinct and unique unit because of its unusual texture, extremely consistent stratigraphic position and uncertain origin. The member consists of a black to grey weathering, cherty to siliceous black shale containing 30% to 40% limestone "balls" ranging from 5cm to 1.5m in diameter. The limestone balls weather to light grey, contrasting very strongly with the black matrix making this member a distinct marker horizon, even in lose talus slopes. The laminated, micritic limestone balls have sharp contacts with the surrounding siliceous shales and laminations within the balls is sub-parallel to bedding in the enclosing "matrix". Bedding in the enclosing matrix is draped around the balls and a few balls are concentrically zoned from a laminated micritic limestone core to a sparry calcite rim. The balls probably formed as methane (gas) concretions during early diagenesis and compaction of these organic-rich sediments.

Preliminary conodont determinations by the GSC (M. Orchard, personal communication, 1990, as cited by Hulbert *et al.*, 1992) on conodonts from the balls suggest a Givetian (Middle Devonian) to Frasnian (Upper Devonian) age range.

The Limestone Ball Member is considered to be an integral part of the mineralizing event that gave rise to the Ni-bearing sulfide horizon. Its consistent stratigraphic position 20cm to 120cm below the mineralized horizon and wide spread distribution across the entire Nick sub-basin suggests a genetic link to the mineralizing event. It is also of note that similar concretionary structures have been described in the footwall of Nick-like deposits in China (Coveny *et al.*, 1992).

Clay Shale Member (7A)

The Clay Shale Member consists of black to brown weathering, generally soft to slightly siliceous, silty to clay shale. This member is generally less than 30cm thick and occurs in a consistent stratigraphic position between the Limestone Ball Member and the Nick horizon. This member typically displays intense cleavage development and cleavage is often refracted into a sigmoidal pattern due to the competency contrast between it and the generally cherty enclosing members.

This member represents a brief but significant change in the style of sedimentation from cherty to clay-rich. Its position directly below the vaesite-bearing horizon represents a pulse of clastic material input just prior to the mineralizing event. This change in sedimentation could have been produced by tectonic activity such as growth faulting in the source region although no coarse clastic units have been found within this stratigraphic interval. Thickness variations in this unit are not considered to be significant in terms of indicating a thickening wedge of clastic material towards a fault scarp due to the extremely ductile nature of this unit, especially in comparison to the enclosing cherty units.

Phosphatic Chert Member (7A ph ch)

This highly resistant unit consists of black, cherty thin bedded shale, often with a lime green to yellow surface precipitate that forms distinct cliffs on steep slopes and water falls in drainages. The base of the unit is almost always marked by the recessive Ni-bearing sulfide horizon. The top of the unit is indistinct in outcrops and was originally defined chemically on

the basis of decreased concentrations of P_2O_5. However, maximum thicknesses estimated from measured stratigraphic sections are generally less than 30m.

Unnamed Upper Member (7B py bn cd)

The uppermost member of the Lower Earn Group is a 100m to 200m thick sequence of thinly bedded, black to silver-grey to blue-grey weathering, silty and siliceous black, pyritic shale. Variations in silt content of alternating beds produce a rhythmically banded weathered surface in places. Pyrite occurs as massive thin interbeds up to 1.5cm thick, as fine to coarse disseminations and clots, and as concentrations of disseminated pyrite along basal bedding planes. The larger clots and cubes of pyrite are often partially replaced by, and enclosed in, fibrous chalcedony quartz. Two distinct, rusty red weathering, pyritic subunits occur near the top of this member. This member also displays regular, widely-spaced jointing and cleavage producing sharp blocky talus that is often covered by a black lichen growth not present on other lithologies in the area.

Upper Earn Group (9A, 9B, 9C, 9L)

The Upper Devonian to Mississippian Upper Earn Group is composed of a basal fine-grained, recessive, brown weathering silty to interbedded silty and clay shale that coarsens upward into coarse sandstone and in rare cases, fine chert pebble conglomerate. Outcrops of all but the coarsest units in this member tend to be very recessive due to intense axial planar cleavage developed in these rocks. The basal contact with the Lower Earn Group rocks is always covered by thick talus of Upper Earn Group shale. Conchoidally fractured siliceous concretions are common in talus of this member and thin (less than 15cm), orange weathering dolomitic shale beds occur about the middle of the member. The top of the Upper Earn Group is not exposed in the map area, however total exposed thickness ranges from 140m to 220m. Total thickness of the Upper Earn Group in the map area is unknown.

Structural Geology

The major structures in the Nick area are the Main and North Synclines and regional faults. Fold axes have orientations of 090° to 130°. Axial planar cleavage varies with proximity to fold hinges and rock type with cleavage being best developed in silty shales of the Upper Earn Group. Quartz ± carbonate veins are common in the hinge zones of folded Lower Earn Group rocks and rare tabular breccia zones are found at low angles to bedding in the steep limbs of folded Lower Earn Group strata. A later phase of folding overprints the main phase of deformation and produced gentle, undulating folds with axes approximately orthogonal to those of the Main and North synclines.

Cretaceous Laramide compression (widespread throughout the Yukon) produced the open to isoclinal, northerly-verging folds with NNW-trending axes, of the large synclines. Smaller parasitic open folds of the same orientation occur along the southern limbs of both synclines while open to overturned isoclinal folds of the same orientation occur along the northern limbs of both synclines. Kink folding and occasional N-directed thrust faulting of limited displacement were also produced by Laramide compression. Examples of this are found on the north limb of the Main Syncline where thrust-folding has juxtaposed Lower Earn Transition Member strata on top of Upper Earn strata (Figure 10) and in Olfert Creek just south of the Camp Showing (Figure 7) where minor thrusting has juxtaposed Limestone Ball Member and Phosphatic Chert Member sediments over unnamed member strata.

Regional scale faults with southern and northwestern orientations (the Back Creek Fault to the east and the Little Wind River Fault to the north respectively) were originally identified by Green (1972) and have been interpreted as re-activated basin-margin structures (Hulbert *et al.*, 1992). The Discovery Fault is an interpreted north-south oriented structure, sub-parallel to the Back Creek Fault, that has been interpreted as a growth fault to the west of the main basin-margin fault (Back Creek Fault). Maximum displacement on this fault measured from the base of the Upper Earn Group in a structural cross section is 100 metres with the west side thrown down. Prominent N-trending topographic linears sub-parallel to the Discovery Fault are formed by drainages cross-cutting the regional trends of folding and physiography. Geological data in these areas is confined to exposures along ridges separating these linears. The linears may have been formed by preferential erosion along a westerly propagating series of growth

faults, similar to the Discovery Fault, within the westerly deepening Nick sub-basin. Poor exposures in the valley bottoms do not provide enough information to accept or reject this hypothesis.

Mineralization

The Nick mineralization is a thin, Ni-Zn-PGE enriched stratiform massive sulfide layer at the base of the Phosphatic Chert Member, approximately 20cm to 120cm above the top of the Limestone Ball Member of the Lower to Upper Devonian Lower Earn Group. The massive sulfide horizon has been traced by soil geochemistry, trenching and prospecting around the circumference of the Main and North Synclines and evidence to date suggests that the sulfide horizon is a continuous sheet of vaesite-bearing, massive sulfide mineralization that formed on the entire floor of the Nick sub-basin during Middle Devonian time.

Surface exposures of the mineralization are confined to creek beds and cliff faces. The mineralized zone or "vaesite horizon" is readily oxidized and therefore very recessive in nature. The horizon is exposed at several locations on surface along the limbs of the Main and North Synclines. Only the east end of the Main Syncline has been tested by diamond drilling where true thickness of the vaesite-bearing horizon ranges from several mm to 10 cm. Locations of drill holes and surface showings of vaesite-bearing massive sulfides are indicated on Figures 7-13.

Fresh samples of the mineralization contain 40% to 65% sulfide with many sedimentary features including soft sediment deformation of rhythmically laminated metalliferous sediments. Sulfides occur in thin, 1 to 3mm discontinuous laminae less than 5cm long. The sulfide laminations are separated by a dark grey siliceous matrix with fine pyrite disseminations. Some of the laminations are matte- and sponge-like and may have formed by replacement of organic material. There is some evidence of pyritization of fossil remains in shale laminations. Other sulfide laminations show signs of sulfide loading in soft muds. Hulbert *et al.* (1992) report unusually high abundances of microfossil debris in some samples.

Mineralogy

The Nick sulfide horizon is mineralogically unique compared to shale-hosted Pb-Zn deposits elsewhere in Selwyn Basin and compared to similar deposits in China. The massive sulfide horizon consists of pyrite (46%), vaesite (10%), melnikovite-type pyrite (low-temperature amorphous form) (2%) and sphalerite and wurtzite (2%), in a gangue (39%) of phosphatic-carbonaceous chert, amorphous silica and intergrown bitumen (1%). Vaesite occurs as streaks or aligned segregations with abundant inclusions of pyrite, sphalerite and siliceous gangue and is commonly intergrown with fine-grained pyrite. Sphalerite occurs intergrown with pyrite and vaesite or as a discrete phase adjacent to other sulfides. Pyrite occurs as compact layers consisting of coalesced minute spherulites and framboids. Pyrite from the mineralized unit contains up to 1.29% Ni (Hulbert *et al.*, 1992).

The principle source of Ni in the mineralization is vaesite (NiS_2), a relatively rare member of the pyrite group with a specific gravity of 4.5 g/cc and stoichiometric nickel content of 47.2%. Elsewhere, vaesite occurs as a low-temperature alteration product of other sulfide minerals (Hulbert *et al.*, 1992). The vaesite-pyrite mineral pair suggests a minimum crystallization temperature of 138°C based on published thermodynamic studies (Hulbert *et al.*, 1992).

Geochemistry

The Nick mineralization is characterized by anomalous levels of a distinct suite of elements which includes Ag, As, Ba, Mo, Ni, Pd, Pt, Re, Se, U, V and Zn. Nickel and zinc grades of the vaesite-bearing massive sulfide horizon intersected in drill core or from unoxidized outcrop exposures range from 1.42% to 5.80% and 0.38% and 1.56% respectively. Variations in the grade of the mineralization are likely due to dilution effects from barren wall rock which is difficult to remove from samples of the massive sulfide horizon. Anomalous levels of other elements in the vaesite horizon include Pt (up to 1000 ppb), Pd (up to 390 ppb), Au (up to 98 ppb), Ag (up to 16 ppm), Mo (up to 3950 ppm), Cu (up to 2530 ppm), As (up to 3930 ppm), P (up to 8700 ppm) and U (up to 280 ppm). Average compositions of the Nick mineralization are summarized in Table 2 and full analyses are provided in Appendix III.

Detailed geochemical studies on the mineralized unit and the enclosing Lower Earn Group stratigraphy by Hulbert *et al.* (1992) shows that the contacts of the sulfide horizon are very abrupt and that there has been no dispersion of constituent metals into either footwall or hanging wall rocks.

Table 2: Average Composition of Nick Mineralization*

Source:	Ag	As	Ba	C^{org}	Cu	Mo
1992 Surface Samples (n=2)	6	1003	184	11.3	245	2223
Hulbert *et al.* (1992) (n=9)	-	3067	3389	1.9	322	2399
Drill Core (1988-1989) (n=13)	7	2517	57	-	681	1992
Source:	**Ni**	**Pb**	**Pd**	**Pt**	**V**	**Zn**
1992 Surface Samples (n=2)	4.54	79	-	-	211	0.19
Hulbert *et al.* (1992) (n=9)	5.45	82	214	410	7622	0.76
Drill Core (1988-1989) (n=13)	3.01	78	150	310	8238	0.82

NOTE: n=number of samples, C^{org}=organic carbon, * - Pt and Pd in ppb, Ni, Zn and C^{org} in %, all others in ppm

Thin pyrite beds are common in the hanging wall shales of the unnamed upper member of the Lower Earn Group. They range in thickness from 5mm to 1.5cm and generally have a massive granular texture very different from the vaesite-bearing sulfide mineralization. Analyses of these pyrite layers indicate they have a trace element signature very different from the vaesite horizon and are significantly depleted in most of the diagnostic suite of elements including Ni and Zn. However, analyses of two thin pyrite layers from holes N88-1 (sample A1034) and N88-14 (sample VB08802), 7.5m and 18m respectively above the vaesite horizon, show highly anomalous levels of Ni and Zn and moderately anomalous concentrations of Mo and other elements (Table 3). This may indicate that the mineralizing process was repeatable over time within the Nick sub-basin and that there is potential for discovery of more Ni-rich massive sulfide layers higher in the stratigraphy.

The suite of elements associated with the Nick mineralization is relatively unique compared to other shale-hosted Pb-Zn deposits elsewhere in Selwyn Basin and the world. Deposit models for this "sedex" class of shale-hosted Pb-Zn deposits indicate that the ore-

forming elements were carried in hot, moderately saline hydrothermal fluids expelled along active "growth-faults" in fault bounded basins. In the case of the Howards Pass deposit near the Yukon/Northwest Territories border, these hydrothermal fluids pooled in topographic depressions or "third-order basins" in the sea floor where base metal-rich sulfide muds formed. The stratigraphic setting and age of the Nick deposit is similar to the Howards pass Pb-Zn deposit and current models for the Nick deposit envisage a similar environment of formation. The anomalous metals in the Nick mineralization are organophile in nature and were probably carried as organic complexes in the hydrothermal fluid rather than as chloride complexes. A depositional model is discussed in more detail later in this report.

Sulphur isotope values for the barren pyrite in the hanging wall rocks at Nick are similar to those for the Pb-Zn-Ba-Ag deposits elsewhere in Selwyn Basin and are within the range of values expected for biogenically reduced Devonian seawater sulphate (Goodfellow and Jonasson, 1986). The sulphur isotope values for the Nick mineralization are the "lightest" (i.e. most negative) compositions recorded to date for the Selwyn Basin (Table 3). Sulphur isotope values for the Chinese Mo-Ni ores are also "light". Hulbert *et al.* (1992) propose that this unusual isotopic composition is the result of extreme biogenic reduction of pore water sulphate (derived mainly from hydrothermal brines) to H_2S in a restricted reservoir (ie. that underwent little mixing with the overlying sea water) and subsequent precipitation of sulfides enriched in ^{32}S.

Table 3: Comparison of Vaesite Horizon, Barren Pyrite and Anomalous Pyrite*

Element	As	Ba	Co	Cu	Mo	Ni	Pb	Pt	Pd	Zn	$\delta^{34}S$ (‰)
Vaesite Horizon[1]	3930	170	258	167	3920	5.00	130	480	171	1.04	-11 to -14
"Barren" Pyrite Layer[2]	10	350	3	33	34	36 ppm	498	20	<4	-	+11 to +19
Anomalous Pyrite Layer[3]	150	630	50	97	123	0.34	52	137	34	0.27	-

NOTE: * = Ni and Zn in %, $\delta^{34}S$ (‰) = sulphur isotopes in *per mil*, Pt and Pd in ppb, all others in ppm;
1. = N88-1 (sample A1035); 2. = 1988 G.S.C. analyses from 1991 Archer, Cathro report, Table 1;
3. = N88-1 (sample A1034), - = not reported

Bitumen Veins

Several outcrop and float occurrences of bitumen or pyrobitumen material have been discovered on the Nick property (Figures 7-13) within the Road River and Lower Earn group rocks. The largest of these, the Bitumen Showing, occurs in Road River Group calcareous shales and is exposed in Olfert Creek about 1km down stream of the Discovery Showing. It is a 3m wide tabular body exposed in a canyon wall for a vertical extent of 9m and a strike length of 21m. The structure is composed of deformed slabs of wall rock floating in sheared and crushed bitumen. The walls of the vein are vertical and are sub-perpendicular to bedding in the enclosing calcareous shales. Vertical slickensides and sigmoidally deformed fragments of wall rock indicate an east-side-down sense of vertical displacement.

Thinner bitumen veins also occur in two other locations but within Lower Earn Group strata. These veins are also sub-vertical to bedding in the enclosing rocks.

The bitumen from all occurrences has a very high optical reflectance indicating either a high temperature of formation or subsequent thermal upgrading during metamorphism. Since the rocks in the area are essentially unmetamorphosed, it is most likely that the bitumen was deposited from relatively high temperature, possibly petroliferous, fluids. Bitumen from elsewhere in the lower Paleozoic strata of Selwyn Basin has been described as representing over-mature hydrocarbon compounds and similarly, bitumen veins at the Nick property may represent the degradation products of trapped petroliferous fluids.

Material from the Bitumen Showing has anomalous abundances of Ni, Zn, As, Mo and V (Table 4) indicating a chemical signature similar to that of the mineralization and a possible genetic link. Other occurrences sampled by Archer, Cathro returned lower abundances of the diagnostic elements.

Table 4: Bitumen Analyses

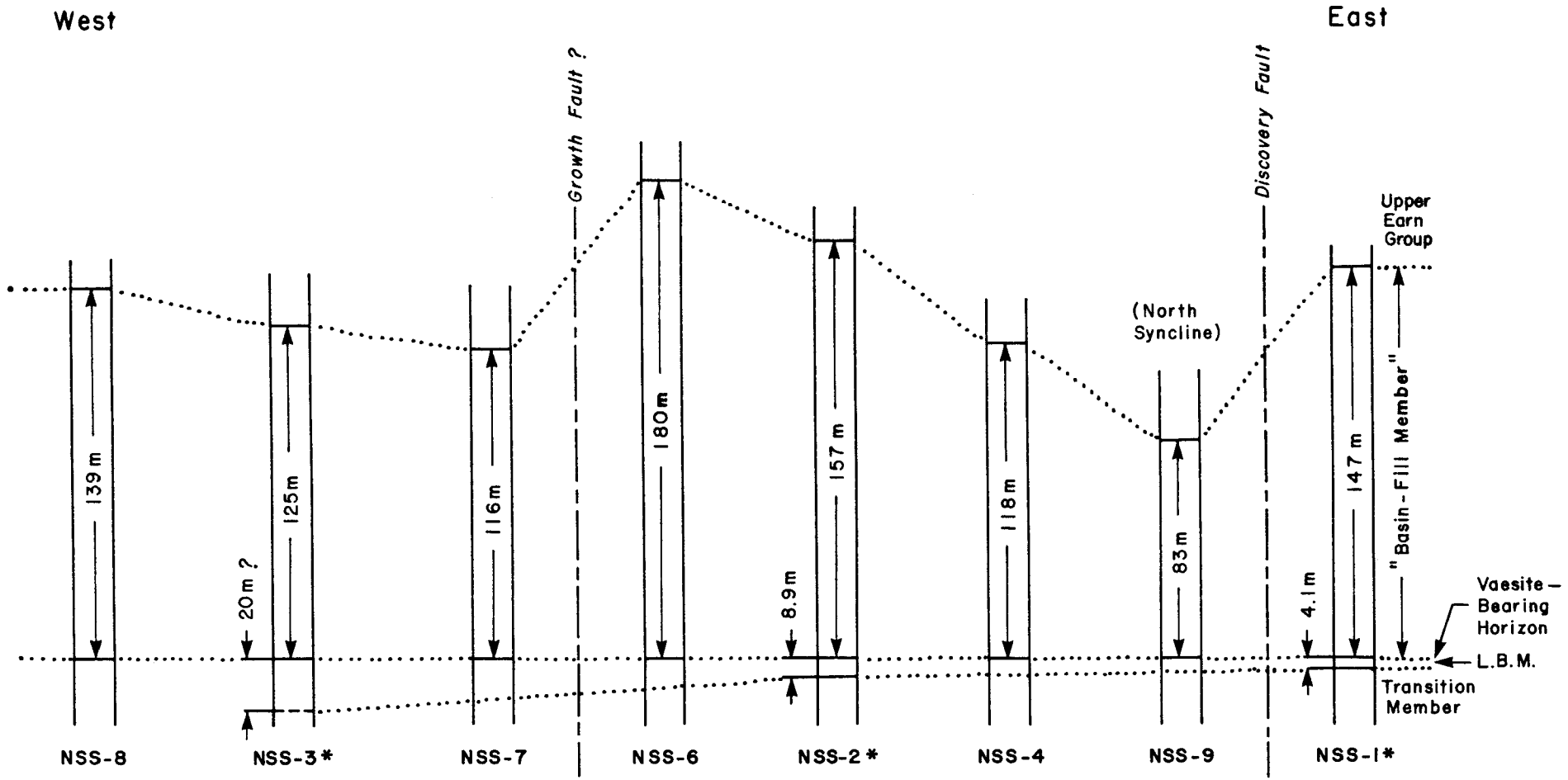
	Ag	As	Co	Mo	Ni	Pb	U	V	Zn
Consolidated (n=10)	0.8 -4.0	65 -150	10 - 51	100 - 353	470 - 1050	6 - 14	≤ 10	1980 - 4000	320 - 1940
Ashed (n=1)	62	2610	26	1465	>10 000	218	180	>10 000	1700

NOTE: all values in ppm (after Hulbert *et al.*, 1992)

Basin Analysis

The 1992 program included stratigraphic mapping and simplified basin analysis studies of the Nick sub-basin. These types of studies have been successful in Pb-Zn-Ba camps elsewhere in helping locate potentially economic massive sulfide mineralization that was covered or otherwise blind to surface. In sedex deposit models, discharge of metal-bearing hydrothermal fluids coincides with tectonic activity along growth-faults and therefore evidence in the sedimentary record of third-order basins would be found in the strata above the sulfide horizons. The objective of this study was to define areas of thickening of the stratigraphic interval from the base of the Phosphatic Chert Member (top of vaesite-bearing horizon) to the top of the Lower Earn Group - the "basin-fill member". Because this sequence directly overlies the Nick vaesite-bearing horizon, it would represent the in-fill of sediment into any third-order basins or sea floor depressions after the mineralizing event.

Potentially economic thicknesses of stratiform sulfide mineralization at Howards Pass is contained within depressions identified as third-order basins. Third-order basins may be either steep sided graben-like, (growth ?) fault bounded structures or smooth shallow depressions. A wedge of clastic sediments discharged off fault scarps would also be produced by growth faulting. Thickening of the basin-fill member would therefore indicate either: (i) smooth and shallow or fault-bounded third-order basins where deeper pools of mineralizing brines would precipitate greater thicknesses of Ni-rich sulfide mineralization or (ii) a wedge of sediment shed off submarine fault scarps and therefore the direction to the fault that may have been the vent for the mineralizing fluids. These third-order basins are the most prospective sites for potentially economic thicknesses of Ni-bearing, massive sulfide mineralization at Nick.



NOTE: * – Sections measured in the field, others estimated from 1:5000 geology.

FIGURE 14

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THICKNESS VARIATIONS IN BASIN-FILL MEMBER

SCALE NOT TO SCALE	DRAWN YZ/VCH
DATE NOV. 1992	DATA SM

Results

Areas suitable for measuring stratigraphic sections proved to be exceptionally rare. Accurate sections require both good outcrop exposure and structurally simple areas. Three areas meeting these criteria were located on the property and sections were measured at each location at approximately 4 to 7 km intervals along the north limb of the Main Syncline. These are sections NSS-1, NSS-2 and NSS-3 shown in Figure 14 and located on Figures 7-13. Other stratigraphic sections (NSS-4 through NSS-9) were estimated by way of structural cross sections drawn using lithological contacts on 1:5000 geology maps and are also located on Figures 7-13. These sections could not be measured in the field due to poor outcrop exposure and/or structural complexities such as folding and faulting. In sections that were measured directly in the field, the upper contact of the basin-fill member (Lower Earn Group/Upper Earn Group contact) had to be interpreted in talus slopes that always cover this stratigraphic contact. For these reasons the accuracy of the estimated sections in Figure 14 is considered to be relatively poor.

Thickness variations in Figure 14 suggest a thickening of the basin fill member towards the west in two "wedges". The first wedge begins at NSS-8 and thins to the east until NSS-6 where an abrupt thickening of the basin-fill member may indicate the presence of a growth fault between NSS-7 and NSS-6. There are no mapped faults in this area. However, two prominent drainages form N-trending topographic linears and cross-cut the regional structure and physiography in the 3 kms that separate these two sections and could represent preferential erosion along pre-existing growth faults.

A second wedge begins at NSS-6, thins toward the east until NSS-4 where the basin-fill member thickens again in NSS-1 and again may indicate the presence of a growth fault represented in this case by the Discovery Fault. NSS-9 was estimated from mapped contacts along the North Syncline and may not be directly comparable to those measured/estimated from the Main Syncline.

These interpretations of the thickness variations conflict with earlier interpretations by Hulbert *et al.* (1992) and Talbot and Carne (1991) which suggested that the Nick sub-basin was a westerly deepening graben-type structure. However, interpretations based on Figure 14 must be viewed with caution since 5 of the 8 sections are estimates only and because of the poor exposure of the upper contact of the basin-fill member affecting thickness measurements.

Exposures of the massive sulfide horizon are not abundant enough along the limbs of the Main and North Synclines to determine if there are any conclusive correlations between thickness variations in the basin-fill member and the massive sulfide horizon.

Results from the basin analysis work conducted in 1992 are inconclusive. Poor outcrop exposure and structural complexities make accurate measurements of closely spaced stratigraphic sections impractical. Future work of this kind would be more effective in conjunction with diamond drilling to test the mineralized horizon at several locations along the two major synclines. Holes should be collared in the Upper Earn Group strata, lower in the limbs of the synclines so that complete and structurally simple sections of the basin-fill member would be drilled. More accurate stratigraphic sections could be obtained in this way and the potential for economic thicknesses of Ni-rich massive sulfides in the remaining 95% of the property not previously tested by diamond drilling could be evaluated. Drill core from this work would also allow additional lithogeochemical studies.

Geochemistry

General

Extensive geochemical sampling of Nick property soils, stream silts and rocks was conducted in the past. Approximately 3100 rock, soil and stream silt samples were collected. Initial sampling was undertaken by the G.S.C. in 1977 as part of a regional stream silt survey. Cominco limited prospected and sampled the property in 1981 as part of a regional exploration program for Pb-Zn-Ba sedex deposits. The bulk of the sampling was conducted by Archer, Cathro and Associates in 1988, 1989 and 1991 in detailed property-scale programs. Most drainages on the property were silt sampled and both grid and regional contour soil sampling programs were conducted. Rock samples from drill core, outcrop and hand trenches were taken to test identified and possible vaesite mineralization. Results of these studies are contained in reports by Archer, Cathro and Associates. These surveys established that Ni and Zn are the best soil geochemical indicators of the mineralization in the vaesite-bearing horizon. No soil sampling was conducted during the 1992 program.

Detailed geochemical data on the mineralization and host rocks of the Nick deposit are contained in a recent paper by Hulbert *et al.* (1992).

1992 Program

The 1992 geochemical exploration program consisted of regional litho- (rock) geochemical sampling of the Limestone Ball Member (LBM) immediately below the "Nick horizon" and, re-examination and selective lithogeochemical sampling of the drill core from the 1988 and 1989 drill program. Locations of surface rock samples are shown on Figures 7-13. As part of the 1992 field season, 128 rock samples were collected and analyzed for a suite of 17 elements at International Plasma Laboratories Ltd. of Vancouver. Samples were crushed to -150 mesh and analyzed for elements Ag, As, Ba, Cd, Co, Cu, Fe, Mn, Mo, Ni, P, Pb, Se, V and Zn by multi-acid digestion ICP. Sulphur and organic carbon (C^{org}) were analyzed by traditional assay methods. Selenium and As were also analyzed by hydride generation which returned more acceptable results. Complete results with statistical data are tabulated in Appendix III.

The objective of this program was to establish if there were any regional lithogeochemical trends in the footwall LBM which may indicate or correlate with increased thicknesses of the basin-fill member or the vaesite horizon itself. Similar studies on fresh drill core from shale-hosted Pb-Zn-Ba deposits in Selwyn Basin have shown that trends in ore-forming and ore-associated elements within host rocks can be positively correlated with proximity to the ore bodies and potentially economic thicknesses of Pb-Zn mineralization (eg. Goodfellow *et al.*, 1983; Smee and Bailes, 1986). Because the environment of formation for the Nick deposit is similar to that of the Pb-Zn deposits, it was expected that anomalous or elevated concentrations of the ore-forming and ore associated elements in samples of the footwall rocks would indicate proximity to greater thicknesses of the vaesite-bearing mineralization.

Trends in various element ratios in footwall rocks were also investigated to determine if they could be used as indicators of increased thicknesses or proximity to mineralization. Expected trends in these ratios were empirically deduced from differences between ratios in vaesite-bearing mineralization and the enclosing shales as well as suggestions made by Hulbert *et al.* (1992) that Ni/Zn and Ni/Pb ratios in massive sulfide mineralization should increase away

from discharge vent areas due to the higher solubility of Ni in Cl-rich hydrothermal fluids than either Zn or Pb.

Results and Interpretation

The lithogeochemistry program met with relatively limited success for the following reasons. Firstly, outcrop exposures of the footwall LBM are relatively rare and are generally limited to ridges and cliffs. Consequently the areal density of LBM matrix samples collected was lower than expected. When the program was conceived, a high sample density along the margins of the two synclines was desired to define small-scale trends in metal concentration or metal ratios. Secondly, the exposures that were sampled also tended to be deeply weathered and fractured raising concerns about leaching of ore-forming and ore-associated elements from the rocks and therefore the reliability of geochemical analyses of these samples. Analyses of the LBM from drill core show that these samples have consistently higher concentrations of C^{org}, Cu, Fe, Mn, Mo, Ni, S, Se, V and Zn than samples of the same material from surface exposures (Appendix III) indicating that surface weathering has leached these elements from the rock. For this reason it is recommended that only fresh drill core material be used for any future lithogeochemical sampling programs. Despite these obstacles some meaningful conclusions can be drawn from the data.

Statistical data for all samples collected in 1992 as well as for vaesite mineralization from all drill holes can be found in Appendix III. Inter-element correlations for vaesite samples are strongest among the group Ni, C^{org}, S, Co, As, Mn, Pb and Fe. This indicates that these elements all reside in vaesite, pyrite or other sulfide species. Nickel and Mo are not strongly associated with C^{org} and Zn has strong correlations with As and Mn only. This is likely due the small amount of data (n=5) for C^{org} and S. Inter-element correlations for LBM matrix samples are strongest among the group Ni, C^{org}, S, Mo, V, Se, Mn and Fe.

The strong association of C^{org} with nearly all these elements indicates that they were originally bound in organic matter. Organic matter is well known as an effective collector of these and other elements in marine environments. The elements are absorbed from sea water (or hydrothermal brines discharged onto the sea floor) by dead organic matter and incorporated into the bottom sediment. Subsequent bacterial activity and thermal degradation of the organic

matter within the sediment may release some of the elements. Many of these elements may then be incorporated into pyrite during diagenesis. Correlations between elements in footwall clay shales are similar to the LBM matrix samples with best correlations between Ni, C^{org}, S, Ba, V, Se, Pb, Fe and Cd. Hanging wall shale samples show only moderate correlations between a few elements. Although C^{org} and S are present in amounts equal to those found in the footwall shales, organic matter apparently did not play an important role in the distribution of these elements in hanging wall shales.

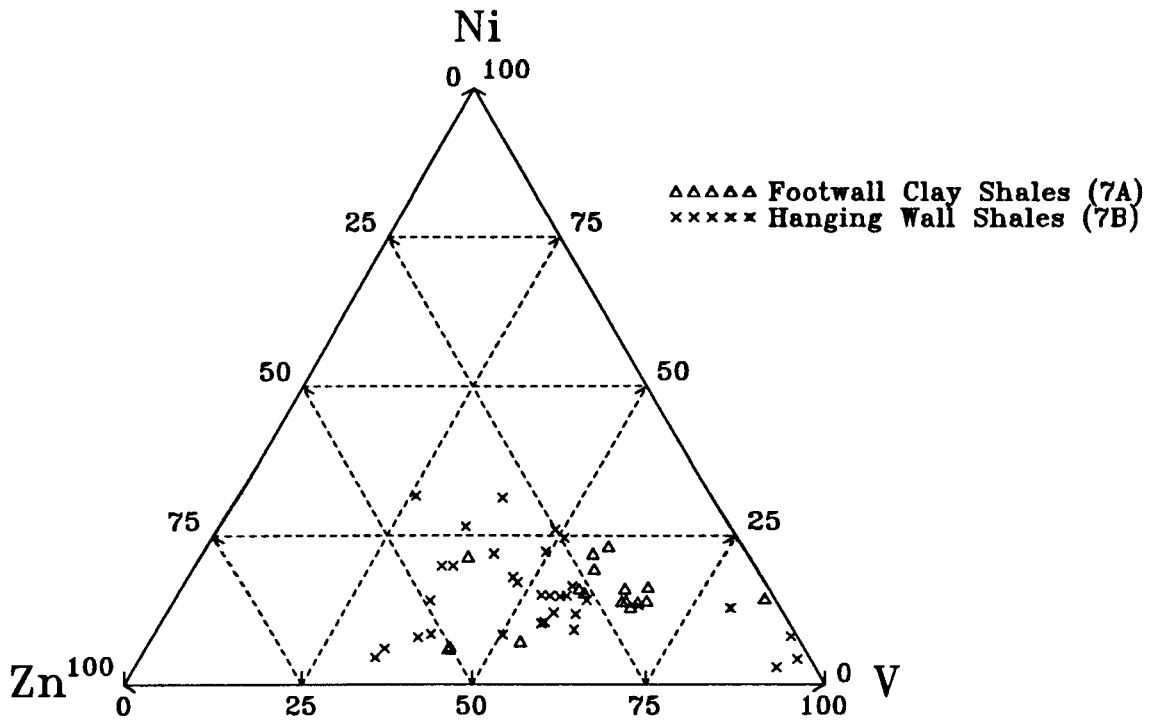
Table 5 lists geochemical analyses from a variety of shales from Selwyn Basin as well as typical average shale analyses from the literature. Abundances of As, C^{org}, Fe, Mo and S in Nick LBM matrix are higher than the average Selwyn Basin cherty shale as represented by section XY0279 but within the range of both the footwall shales at Howards Pass and other North American shales. Abundances of Ni, Se and V in Nick LBM matrix are generally higher than in average shales but still well below the values for metalliferous shales. These comparisons indicate that the overall metal content of Nick LBM matrix is not very unusual when compared to other shales in Selwyn Basin and North America. However, the Ni content of Nick LBM matrix is significantly higher than the average Selwyn Basin cherty shale and roughly equivalent to metal-enriched footwall shales within the "Zn-corridor" at Howards Pass. This indicates that the Nick sub-basin was an area of Ni-enriched hydrothermal activity during Devonian time.

Table 5: Comparison of Metal Content of Various Shales

	Selwyn Basin Shales			"Normal" Shales		Metalliferous"
Element	Section XY0279 Black Chert and Shale[1]	Average Nick LBM Matrix[2]	Howards Pass Footwall Shale[3]	U.S.G.S. Standard SDO-1[4]	Average Black Shale[5]	Mecca Quarry Shale, Pennsylvania[6]
Ag (ppm)	0.9	0.11	1.6	0.09	<1	7
As (ppm)	7	18.8	25	68.5	-	-
Ba (ppm)*	1.37	990	0.14	397	0.03	300
C^{org} (%)	1.43	2.78	8.14	9.68	3.2	39.7
Cd (ppm)	0.6	2.1	38	≈ 2	-	-
Co (ppm)	1	9	11	46.8	10	23
Cu (ppm)	25	35	70	60.2	70	-
Fe (%)*	0.43	1.4	3.90	9.34	2.58	-
Mn (ppm)*	0.01	104	0.03	-	0.02	-
Mo (ppm)	8	57	12	134	10	1400
Ni (ppm)	12	200	182	36.6	50	530
P (%)*	0.24	0.04	0.44	0.11	-	-
Pb (ppm)	16	3	107	27.9	20	-
S (%)	0.42	1.27	1.96	5.35	-	3.3
Se (ppm)	-	10.4	-	3	-	-
V (ppm)	-	946	-	160	150	2850
Zn (ppm)	32	321	1878	64.1	<300	3350

NOTE: 1. = average "lmDt" from Goodfellow *et al.*, (1983), 2. = for samples from drill core,
3. = average "OlSp1" from Goodfellow *et al.* (1983), 4. & 6. = from Shultz, R.B. (1991),
5. = from Vine and Torrtelot (1970),
* = 1., 3. and 5. calculated as Mn in % MnO, Fe in % FeO_2, P in % P_2O_5, Ba in % BaO
- = not calculated

Ternary plots of Ni, Zn and V (Figure 15) show that the vaesite-bearing mineralization at Nick has much higher Ni/Zn, Ni/V and Zn/V ratios than samples of LBM and other hanging wall and footwall rocks. Vaesite-bearing mineralization also has a very restricted range of Ni/V ratios and a much wider range of Ni/Zn ratios. Therefore high Ni/Ni+Zn and low V/V+Ni ratios, particularly in samples of Limestone Ball Member, may indicate proximity to greater



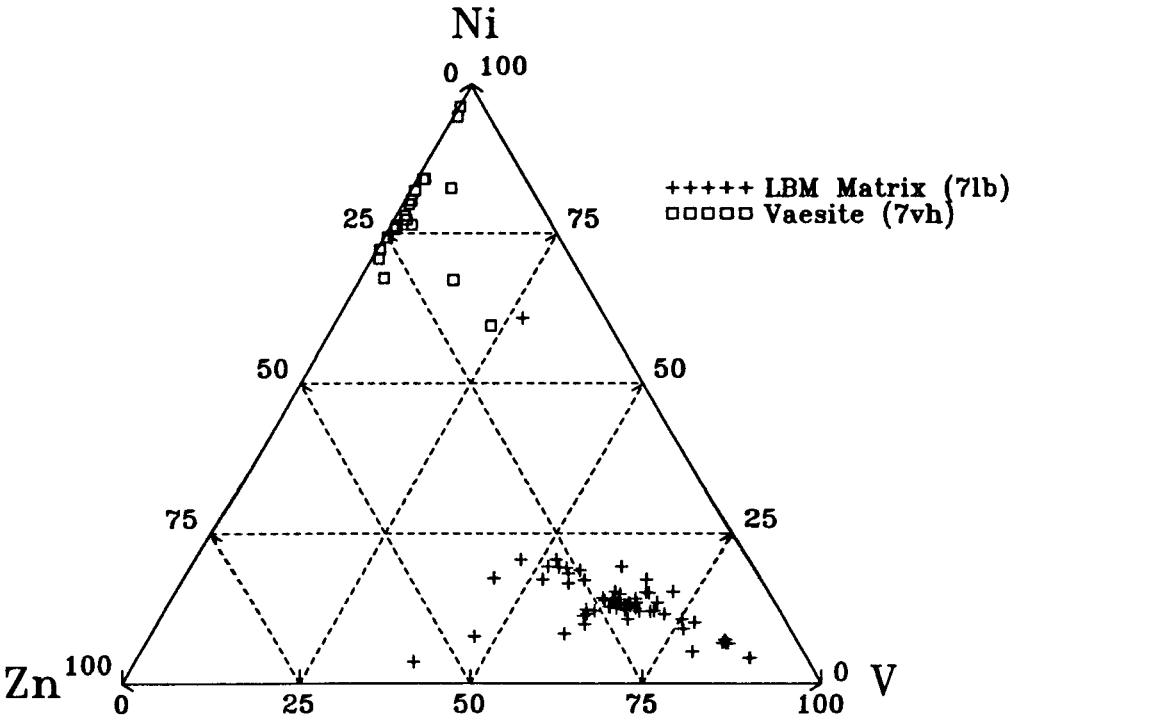


Figure 15

Nickel–Vanadium–Zinc Ternary Plots for Nick Rock Samples

NICK OPTION, YUKON
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NOVEMBER, 1992

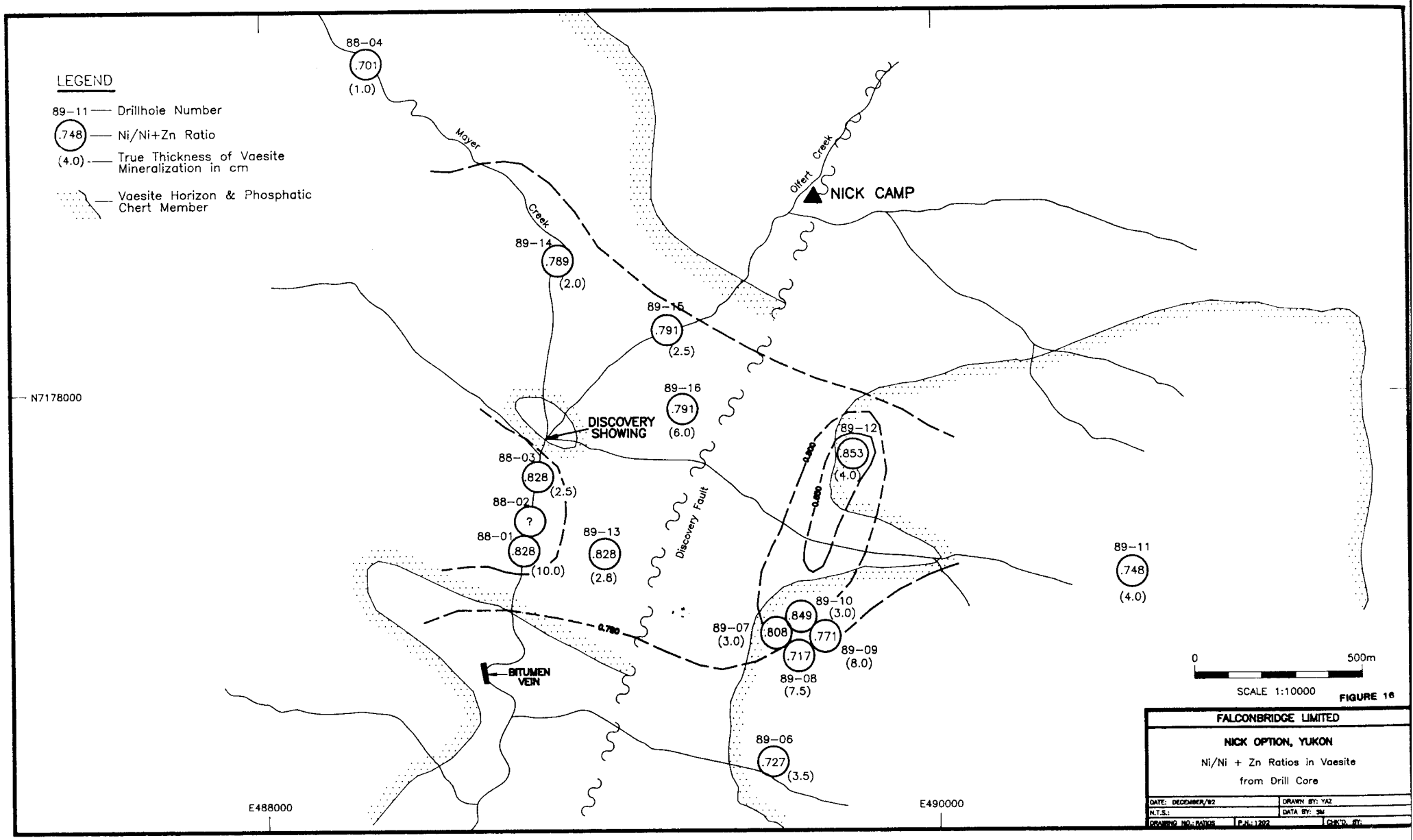
thicknesses of mineralization. These ratios and selected elements for the regional LBM matrix samples are plotted on Figures 7-13.

As indicated earlier, a decrease Ni/Ni+Zn ratios in the massive sulfide mineralization may indicate areas closer to discharge vents and possible economic accumulations of sulfides. However, there is no statistical correlation between existing data on true thickness of vaesite mineralization from drill holes in the Discovery Showing area and Ni/Ni+Zn ratios. Therefore this trend in Ni/Ni+Zn ratios in vaesite mineralization does not appear to be important. Instead, higher Ni/Ni+Zn ratios may be of use in locating areas closer to possible economic accumulations of sulfides.

Figure 16 shows a contoured plot of Ni/Ni+Zn ratios in vaesite mineralization from drill holes around the Discovery Showing area. There are two areas of elevated Ni/Ni+Zn ratios separated by the Discovery Fault. There is no data from areas west of Olfert Creek and consequently the area of elevated Ni/Ni+Zn ratios along Olfert Creek is open to the west. Therefore other areas of vaesite mineralization with high Ni/Ni+Zn ratios may be located in the area immediately west of Olfert Creek not yet tested by diamond drilling. As will be discussed later, the Discovery Fault may be the locus of syn-ore differential subsidence (ie. a growth-fault) and discharge of hydrothermal fluids. Consequently, favourable areas for locating greater thicknesses of mineralization may lie in the down-dropped block to the west of the Discovery Fault.

The property-wide LBM matrix sampling program revealed 3 potentially anomalous areas for future work. Before discussing these areas however, a examination of the results of samples collected around existing showings is warranted.

Several samples collected from out crops in the area surrounding the showings in Olfert Creek (VB06696, VB06693, VB06687, VB06686 & VB06682; Figures 7 and 9) are anomalous in several ore-forming (OFE) and ore-associated (OAE) elements (As, Ba, C^{org}, Ni ,V , Zn or V/V+Ni). Similarly, several samples collected from the east end of the North Syncline (VB06615, VB06614, VB06710, VB06618, VB06698 & VB06712; Figure 9) around existing vaesite showings are also anomalous in OFE and OAE (Ba, C^{org}, Mo, Ni, Se, V ,Zn, V/V+Ni, Ni/Ni+Zn or Fe). Another group of samples around another area of known vaesite mineralization at the west end of the Main Syncline (VB06707, VB06708 & VB06706; Figure


LEGEND
89–11 — Drillhole Number
(.748) — Ni/Ni+Zn Ratio
(4.0) — True Thickness of Vaesite Mineralization in cm
Vaesite Horizon & Phosphatic Chert Member
88–04
.701
(1.0)
Moyer Creek
Olfert Creek
NICK CAMP
89–14
.789
(2.0)
89–15
.791
(2.5)
89–16
.791
(6.0)
N7178000
DISCOVERY SHOWING
89–12
.853
(4.0)
88–03
.828
(2.5)
88–02
?
88–01
.828
(10.0)
89–13
.828
(2.8)
Discovery Fault
0.800
0.850
89–11
.748
(4.0)
89–10
(3.0)
.849
89–07
(3.0)
.808
.771
89–09
(8.0)
.717
89–08
(7.5)
0.780
BITUMEN VEIN
89–06
.727
(3.5)
E488000
E490000
0
500m
SCALE 1:10000
FIGURE 16
FALCONBRIDGE LIMITED
NICK OPTION, YUKON
Ni/Ni + Zn Ratios in Vaesite
from Drill Core
DATE: DECEMBER/92
DRAWN BY: YAZ
N.T.S.:
DATA BY: SM
DRAWING NO.: RATIOS
P.N.: 1202
CHK'D. BY:

13) are also anomalous in OFE and OAE (As, Ni, Se, Zn or V/V+Ni). This demonstrates that halos of anomalous levels of OFE and OAE occur within the LBM matrix around existing areas of mineralization. Therefore similar anomalous areas remote from known mineralization may indicate mineralization blind to surface and possibly economic thicknesses of massive sulfide mineralization.

Three such areas were located. The first of these anomalies (Anomaly "A") is located in in the headwaters of Mawer Creek (Figure 10). The anomaly is defined by a single sample (VB06691) anomalous in Ba, Mo, Ni, V, Zn and Fe. Another sample (VB06690) taken at higher elevation on a ridge approximately 1 km to the west of VB06691 is not anomalous in any of the OFE or OAE but is approximately 50 m north of a bitumen showing in NTR-91-29 on the same ridge. The second anomaly (Anomaly "B") is located on the south limb of the Main Syncline on a ridge to the west of Caribou Creek (Figure 11). The anomaly is defined by 3 samples (VB06612, VB06611 & VB06610) which are anomalous in As, Ba, C^{org}, Mo, Se, V, Zn or Fe. The third anomaly (Anomaly "C") is also located on the south limb of the Main Syncline on a ridge to the east of Caribou Creek (Figure 11). The anomaly is defined by 2 samples (VB06604 & VB06603) that are anomalous in V/V+Ni or Fe.

These anomalies are based on a rock geochemical exploration approach developed from other studies on Selwyn Basin polymetallic sedex deposits (eg. Goodfellow *et al.*, 1983; Smee and Bailes, 1986). The defined anomalies should be considered as targets for follow-up exploration by trenching or diamond drilling.

Geophysics

The 1992 program included a test total field magnetometer and VLF EM surveys carried out by Falconbridge personnel. The survey required establishing a flagged grid of approximately 52 line-kms over the Discovery Showing area (Figure 17). These surveys were intended to test the EM response of the Nick horizon and possibly uncover growth-fault like structures that are otherwise blind to surface. A survey of the magnetic susceptibility of the various rock units at the property was also conducted using a hand-held unit (Table 6).

The magnetometer survey was conducted using a roving and base station pair. Falconbridge geophysicist Tony Watts analyzed the collected mag data. He indicated that high

diurnal noise levels coupled with a negligible contrast in magnetic susceptibility of lithologies renders the survey unusable. Magnetic susceptibilities of various rock types on the Nick property are summarized in Table 6.

Table 6: Magnetic Susceptibility of Rock Units at the Nick Property

Rock Unit	Average Susceptibility
Upper Earn Group Shale (9b)	0.01
Lower Earn Group Siliceous Shale (7A)	0.03
Phosphatic Chert Member	0.03
Vaesite Mineralization	0.06
Limestone Ball Member (matrix)	0.03
Limestone Ball Member (balls)	0.03

The VLF survey was conducted using a Geonics EM-16 instrument. The survey covered a smaller area centred over the Discovery Showing and the Bitumen Showing adjacent to Olfert Creek. The vaesite horizon and suspected structures in the area (the Discovery Fault) did not produce EM responses correlatable with them. Contoured Fraser filtered VLF data is plotted in Figures 18 & 19. Overburden thicknesses encountered in diamond drilling in this area are up to 15 m and EM responses may have been affected by this.

Results of these surveys are inconclusive. The test surveys did however demonstrate that the vaesite horizon apparently does not produce significant EM responses indicating surveys of this type are not effective exploration tools for deposits of this type.

Plan for Future Work

Additional exploration should consist of diamond drilling to test some of the 95% of favourable stratigraphy underlying the Nick property not yet tested by diamond drilling. Results of the 1992 lithogeochemical program indicate 3 anomalous areas along the Main Syncline which

should be tested. Hand trenching in the past (cf. 1991 Archer, Cathro report) has not been effective in uncovering massive sulfides near surface. However, the nearly ubiquitous occurrence of vaesite showings in cliffs and waterfalls washed by creeks indicates that the massive sulfide horizon is a persistent basin-wide blanket of mineralization. Trenching with excavation equipment would be far more effective in uncovering fresh mineralization beneath the thick mantle of deeply weathered and fractured rock present in most slopes and ridges. If cost effective, trenching with excavation equipment should precede diamond drilling on anomalous areas.

Additional geological work should consist of detailed mapping around prospective drill sites to properly spot drill holes.

Table 7: Proposed Diamond Drilling for Nick Property

UTM Co-ordinates	Azimuth	Angle	Length (m)
E484950/N7179500	213°	-90°	300
E485380/N7180220	026°	-50°	280
E486930/N7179775	035°	-50°	170
E488300/N7182090	037°	-50°	260
E482980/N7180140	212°	-90°	300
E481670/N7180800	190°	-90°	300
E480100/N7181950	200°	-90°	300
E479390/N7183100	360°	-60°	210
E482000/N7181840	020°	-50°	280
E483620/N7181500	030°	-50°	270
		10 HOLES FOR TOTAL OF:	2670 metres
		TOTAL COST* @ $100/m:	$267,000

Note: * - cost does not include helicopter time for moves or site preparation

In addition to surface testing of these geochemically anomalous areas, holes should be drilled at several locations along the flanks of the Main and North Synclines to test for economic

thicknesses of massive sulfide mineralization. These holes should be collared in Upper Earn Group rocks to allow additional information on thickness variations in the basin-fill member as well as additional rock geochemical studies. A minimum of 10 holes is recommended with locations, lengths, azimuths and costs listed in Table 7. Locations of the proposed drill holes are shown in Figure 20. Drill site preparation can be accomplished by field crews using picks and shovels.

Further rock geochemical studies should also be conducted on drill core to gather more information on the geochemistry of the host rocks and anomalous levels of ore-associated and ore-forming elements. Stratigraphic thickness variation studies should also be conducted on drill core to further test for third-order basins.

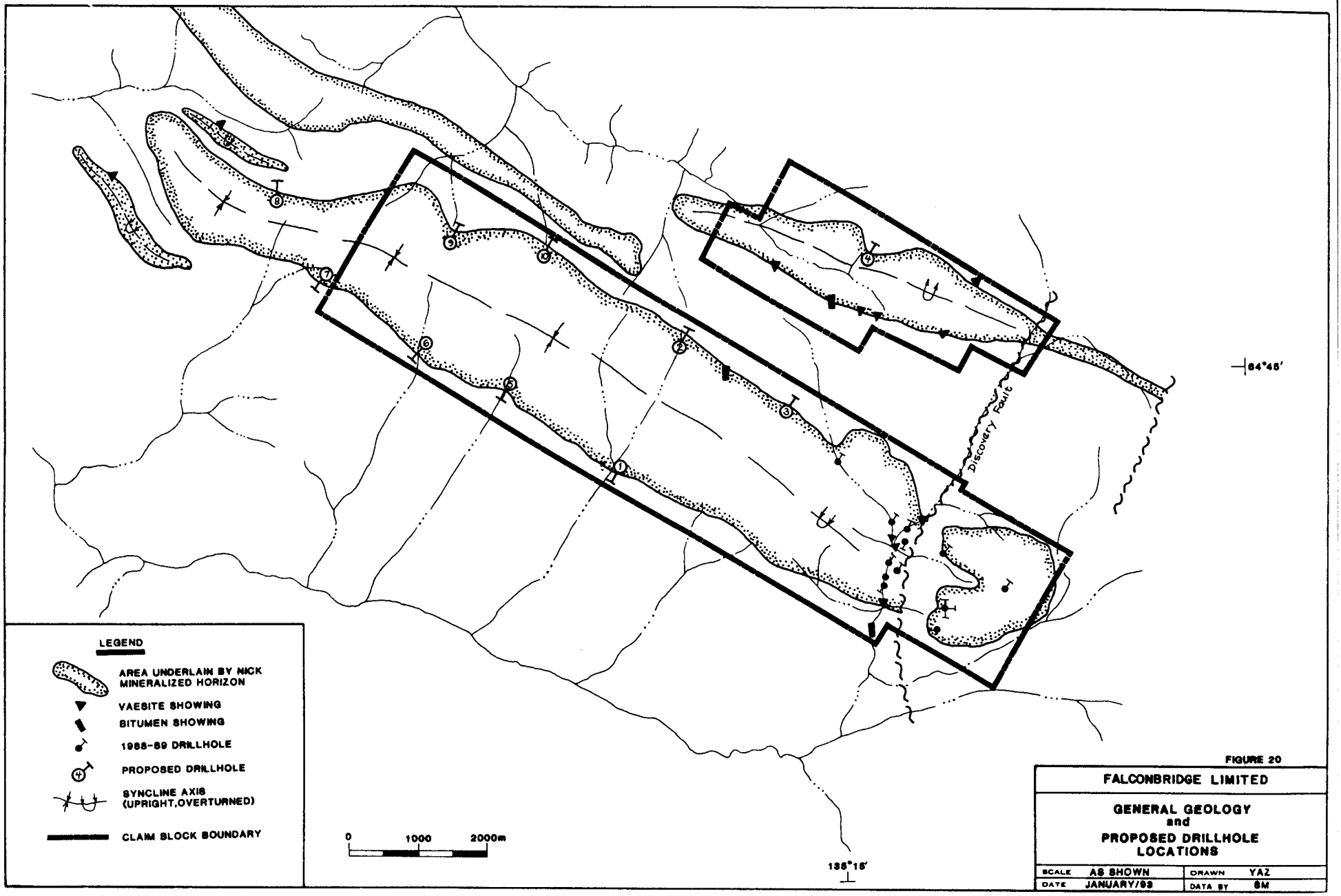


FIGURE 20

FALCONBRIDGE LIMITED

GENERAL GEOLOGY
and
PROPOSED DRILLHOLE
LOCATIONS

SCALE	AS SHOWN	DRAWN	YAZ
DATE	JANUARY/93	DATA BY	SM

Discussion and Depositional Model for the Nick Mineralization

With the exception of Pb, Zn and Ag the suite of ore-forming and ore-associated elements at Nick is unique to this deposit and very different from other strataform shale-hosted Pb-Zn-Ba deposits elsewhere in Selwyn Basin or North America. Sedimentary Ni deposits are a relatively newly discovered deposit type and little material has been published on these deposits. The only other known examples of sedimentary Ni deposits are found in Cambrian black shales of southern China where they are mined for their high Mo-Ni contents (Coveny Jr. *et al.*, 1992). A brief comparison with relevant shale-hosted deposits is warranted at this time. Figure 21 shows the age relationships and main features of the deposits in Selwyn Basin.

Chinese Sedimentary Nickel Deposits

The Lower Cambrian Chinese deposits occur in a 1600km-long east-northeast-trending belt that extends from Yunnan Province in the southwest to Zhejiang Province in the southeast. Field relations described by Coveny Jr. *et al.* (1992) are remarkably similar to those at the Nick property including the presence of laminated carbonate concretions in a black shale underlying the ore horizon (c.f. Limestone Ball Member). Assays listed by Coveny Jr. *et al.* (1992) indicate the ores have a very similar element composition and are anomalous in As (up to 15 900ppm), Mo (in excess of 5.8%), Ni (up to 2.6%), Se (up to 2700ppm), Pd (up to 274ppb), Pt (up to 202ppb), Au (up to 290ppb) and Zn (up to 0.21%). In Hunan province, ores with Mo contents of up to 18% were mined as Mo-Ni sources during the 1970's. Exceptionally high V concentrations (approx. 2% V_2O_5) in some areas of Hunan Province have warranted production of V from these ores in the past. Fluid inclusions in cherts associated with the Chinese ores indicate temperatures of formation of 158°C to 178°C.

Selwyn Basin Pb-Zn-Ag (-Ba) Deposits

The age, morphology and stratigraphic setting of the Nick deposit is similar to the Howards Pass Pb-Zn sedex deposits on the Yukon-Northwest Territories border. At Howards Pass approximately 500 million tonnes of mineralization grading 5.4% Zn and 2.1% Pb has been outlined by drilling.

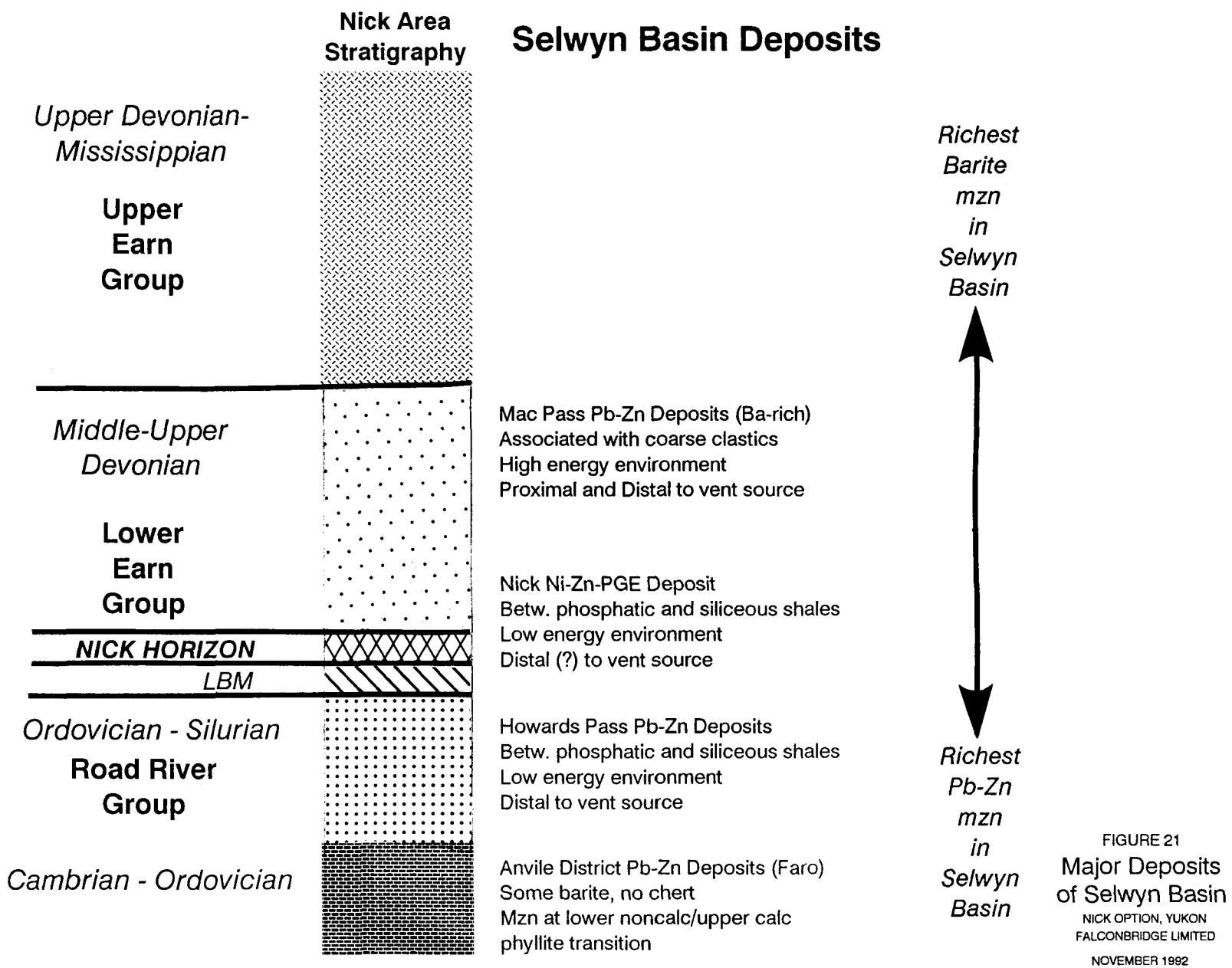


FIGURE 21
Major Deposits of Selwyn Basin
NICK OPTION, YUKON
FALCONBRIDGE LIMITED
NOVEMBER 1992

The stratigraphic position of these deposits is marked by a persistent, basin-wide Zn-rich horizon overlain by phosphatic chert within a 40km-long shale basin. Like the Nick deposit, this Zn-rich horizon occurs at an abrupt transition from calcareous to siliceous, pyritic shales. The mineralization occurs within the "Active Member", a Lower Ordovician sequence that is roughly correlatable with Road River Group strata at Nick and elsewhere in Selwyn Basin. The Active Member occurs in a stratigraphic setting nearly identical in description but not age to that of the Nick deposit, just below a Lower to Upper Silurian black carbonaceous phosphatic chert and above a cherty mudstone with black fetid limestone concretions.

Potentially economic strataform mineralization at Howards Pass is contained in three deposits confined within structures interpreted as third-order basins or sea floor depressions. These third order basins at Howards Pass are apparently of the smooth, shallow depression type described earlier under the Basin Analysis section. No vent areas have been discovered for the Howards Pass deposits. Pronounced metal zoning is present within the regional metal-rich horizon and the Pb-Zn deposits (Goodfellow *et al.*, 1983). Zoning within the sulfide bodies is dominated by decreasing Pb/Pb+Zn ratios away from the centre of the deposit both laterally and vertically. Metal zoning within the host rocks to the deposit is dominated by an enrichment of ore-forming (Pb and Zn) and ore-associated elements (As, Cd, Co, Cu, Hg, Mo, Ni and Sb) within the footwall carbonaceous mudstones relative to rocks of similar age and composition located remote from the mineralization (Goodfellow *et al.*, 1983).

The mineralization is thought to have formed in Early Silurian time from relatively low temperature (< 220°C) metalliferous fluids discharged along extensional basin-margin faults. These dense fluids subsequently migrated down-slope where they pooled in third-order basins or sea floor depressions and combined with sulfidic bottom waters to precipitate the sulfide mineralization (Goodfellow and Jonasson, 1986). A Devonian hydrothermal event is also indicated in the Howards Pass area where elevated levels of Ag, As, Hg, Mo, Ni, Sb and Zn are found in highly carbonaceous and calcareous rocks. The spatial association of the Devonian metalliferous mudstones with the underlying Howards Pass deposits suggests that the structures that served as conduits for discharge of ore-forming fluids during Lower Silurian time were reactivated in Devonian time (Goodfellow *et al.*, 1983). A hydrothermal event in the Nick sub-

basin may have occurred simultaneously in Devonian time as the result of large-scale extensional tectonic activity within Selwyn Basin.

The Tom and Jason Pb-Zn-Ba deposits of the Macmillan Pass area at the Yukon-Northwest Territories border, are higher temperature, vent-proximal and distal deposits hosted in coarse clastic sediments. Mineralization occurs associated with high-energy, coarse clastic (turbidite) deposits filling a fault-bounded, graben-like submarine canyon. Deposition of these coarse clastics was apparently triggered by a major Upper Devonian tectonic event which may have also initiated the upward migration of mineralizing hydrothermal solutions through the sedimentary pile (Smee and Bailes, 1986). The mineralization occurs in both finely laminated distal deposits and mineralogically zoned vent proximal deposits complete with cross-cutting footwall alteration zones penetrating the stratigraphy up to 100 m below the massive sulfides. The vent structures have been interpreted as basin-margin faults. Vent-proximal deposits are thought to be unlikely at Nick.

The sedimentary environment at Howards Pass appears to be dominated by low-energy sedimentation in contrast with the high-energy environment of the Tom and Jason deposits. This indicates that although high energy, coarse clastic deposits have not been found at Nick, third-order basins similar to those at Howards Pass which host potentially economic thicknesses of sulfide mineralization may still be found. The Active Member at Howards Pass is up to 50 metres thick, decreasing gradually in thickness toward the margins of the (third-order) basin over a distance of 3 km to 4 km. Nick-type mineralization a fraction of this thickness (1 m to 3 m) would represent a potentially mineable deposit.

Genetic Model for Nick Mineralization

The dominant metals in sedex base metal deposits elsewhere in Selwyn Basin are Pb, Zn, Ba and Ag. Ore deposit models for this class of deposits indicate that these metals were probably carried as chloride ion complexes in relatively hot and saline hydrothermal brines expelled along active growth faults in fault bounded basins (eg. Morganti, 1981). However, many of the anomalous metals in the Nick mineralization are organophile elements and are commonly concentrated by organic compounds in modern marine and bog environments as well as in basinal brines and petroleum. Complexing of organophile metals such as Ni, Mo and V

with organic matter is believed to be the main mode of transport of these metals in marine environments and diagenetic formational fluids associated with metalliferous black shales of the U.S. Midwest (Coveny Jr. *et al.*, 1987). Although the age and stratigraphic setting of the Nick deposit are similar to that of the Howards Pass Pb-Zn-Ba-Ag deposits, the metals were probably carried as organic complexes in formational (diagenetic) fluids. The similarity of the suite of elements associated with the mineralized horizon and those commonly associated with oil shales and black shales suggests that the source of the metals was the underlying organic-rich Silurian and Devonian strata.

The extensive and apparently continuous nature of the Nick mineralization, particularly within the Discovery Showing area, implies a mineralizing process that was effective over a large area. The abrupt cutoff of the anomalous sulphur isotopes at the base and top of the mineralized horizon suggest rapid deposition of sulfides and very little mixing of mineralizing fluids with the overlying seawater. Hulbert *et al.* (1992) propose that the mineralized unit formed from metalliferous hydrothermal brines enriched in sulphate, phosphate and organic compounds being introduced into stagnant water-saturated, ooze-like, carbonaceous bottom sediments. This model requires extensive lateral migration of these fluids through the bottom ooze. It also requires enhanced biogenic reduction of sulphate within a restricted reservoir (the ooze layer). This would promote precipitation of sulfides with sulphur isotope values much more negative than those for sulfides precipitated from a more open sulphate reservoir such as at the sediment-water interface below a anoxic/oxic stratified water column. It is not clear whether such lateral migration of a fluid through a water saturated bottom ooze could produce such a laterally extensive mineralized horizon of such consistent grade. It is more likely that the dense, metal-bearing fluids at Nick, like at Howards Pass, were discharged at the sediment-water interface and then migrated along the sea floor to third-order basins where metal-rich sulfide muds were precipitated.

The mineralizing fluids were at least organic-rich and probably petroliferous (hydrocarbon-bearing). The close association of organic material and bitumen with the mineralization, together with the abundant evidence in the literature for the transport and concentration of many of the elements present in the mineralized horizon by such fluids suggests hydrocarbons may have been effective in the scavenging and transport of the ore-forming

elements from the source rocks and subsequent deposition at or near the sea floor. The bitumen veins at the Nick property may occupy what once were hydrothermal vents that discharged dense metalliferous (laterally migrating ?) and organic compound-rich hydrothermal fluids onto the sea floor.

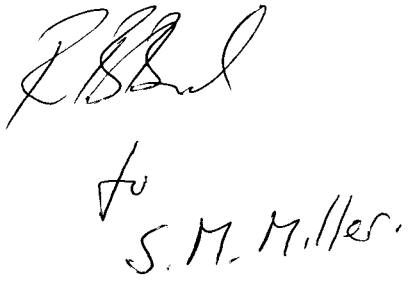
The sedimentary environment in the Nick sub-basin, like that at Howards Pass, was dominated by very low-energy shale sedimentation. No coarse clastic deposits were noted anywhere within the Lower Earn Group strata during mapping of the property. Turbidite-like, rhythmic sand-shale deposits occur only within the Upper Earn Group strata, at least 100 metres above the vaesite horizon (Figure 6). This indicates that syn-sedimentary growth faulting was not a significant factor in controlling sedimentation in the Nick sub-basin during deposition of the Nick mineralized horizon. Instead, the mineralizing fluids may have been expelled along conduits or faults that were not producing significant vertical displacements during Lower Earn Group sedimentation. Alternatively, the mineralizing fluids may have been expelled along active growth faults a great distance from the preserved Nick sub-basin. (The source vents may have been in an area of the sub-basin that has since been removed by erosion or tectonic activity.) The fluids then migrated down slope to collect in smooth shallow depressions within the part of the Nick sub-basin we see at surface today. This is in fact the same situation envisaged for the genesis of the Howards Pass deposits.

The economic potential of the Nick deposit and others like it depends on finding mineralized horizons on the order of one to several metres thick. "Vent proximal" settings with thick sulfide accumulations and footwall alteration halos like the higher temperature Macmillan Pass Pb-Zn-Ba deposits are considered to be unlikely.

However, using the ideas considered above for sedimentary nickel deposits in general, the most favourable settings for potentially economic thicknesses of the vaesite-bearing horizon are smooth, shallow third-order basins or sea floor depressions where mineralizing fluids could have pooled forming locally thicker accumulations of Ni-bearing sulfide mineralization similar to the model for the Howards Pass deposits.

Exploration methods for locating potentially economic thicknesses of massive sulfides at Nick should concentrate on locating these smooth, shallow third-order basins. Third-order basins are normally indicated by thicker wedges or lenses of "basin-fill" sediments deposited in

these depressions. The smooth, shallow shape and very fine grained nature of the basin-fill sediment (ie. shales) of the envisaged third-order basins make traditional methods of locating them (ie. measured stratigraphic sections) unsuitable. Alternate methods which may prove to be more successful and which should be considered are stratigraphic drilling over a greater proportion of the sub-basin not yet tested and continued lithogeochemical studies on subsurface samples.



STATEMENT OF COSTS
NICK OPTION (PN 001-207)

Geology		
	Salaries	$ 50,962.06
	Travel & Expenses	5,239.36
	Contract Payments	22,206.55
	Field Expenses	37,616.86
	Assays	10,566.70
	Total Geology	$ 126,591.53
Geophysics		
	Salaries	$ 7,013.94
	Travel & Expenses	158.25
	Contract Payments	7,874.71
	Field Expenses	2,949.85
	Total Geophysics	$ 17,996.75
Sub-total		144,588.28
Administration 10%		14,458.83
TOTAL EXPENDITURES		$ 159,047.11

CERTIFIED CORRECT



R. B. BAND

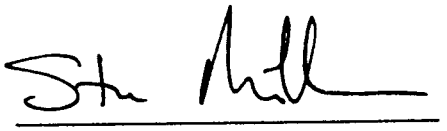
excel\nickstct

APPENDIX I

STATEMENT OF QUALIFICATIONS

I, Stuart M. Miller, geologist with a residential address in Hanmer, Ontario, hereby certify that:

1. I graduated from McMaster University in 1987 with a B.Sc. and in 1992 with an M.Sc. in geology.
2. I am a member of the Geological Association of Canada
3. From 1987 to present I have been actively engaged as a geologist in mineral exploration and/or ore deposit research in the Yukon Territory and Ontario.
4. I have personally participated in or supervised the field work reported herein and have interpreted all data resulting from this work.



Stuart M. Miller, B.Sc., M.Sc.

APPENDIX II

LIST OF PERSONNEL

Name	Position	Period
Stuart Miller	Senior Geologist	July 10-August 13, August 17-25
Jason Weber	Field Assistant	July 10-August 25
Colin Russel	Geologist	August 9-25
Krystian von Fersen	Field Assistant	August 9-25
Scott Parker	Field Assistant	August 9-25
Ryan Kelly	Field Assistant	August 9-25

APPENDIX III

GEOCHEMICAL CERTIFICATES, DATA AND STATISTICS

INTERNATIONAL PLASMA LABORATORY LTD

2036 Columbia Street
Vancouver, B.C.
Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7898

R E P O R T S U M M A R Y Report:[9200587 R]

A N A L Y T I C A L R E P O R T

Origin Inception Date:[Aug 05, 1992]

Client:[	232	Falconbridge Ltd.	]
Contact:[		Peter Manojlovic	]
Project:[	0	601 207 Nick	]
Amount/Type:[	19	Rock	]
[			]

Analytical Requisition

Geochemical:[	ICP(MuAc)15	]	
Assay:[	C S Se As VGA	]	ICP:[15]
Comments:[	None		]

Delivery Information Reporting Date:[Aug 12, 1992]

Principal Destination (Hardcopy,Fascimile,Invoice)

Company:[	Falconbridge Ltd.]
Address:[	202 - 856 Homer St.]
City/Province:[	Vancouver, BC]
Country/Postal:[	V6B 2W2]
Attention:[	Peter Manojlovic]
Fascimile:[	]

Secondary Destination (Hardcopy)

Company:[	]
Address:[	]
City/Province:[	]
Country/Postal:[	]
Attention:[	]
Fascimile:[	]

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Canada V5Y 3E1
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R E P O R T S U M M A R Y Report:[9200655 R]

A N A L Y T I C A L R E P O R T

Origin Inception Date:[Aug 19, 1992]

Client:[	232	Falconbridge Ltd.]
Contact:[		Peter Manojlovic]
Project:[	0	601 207 Nick]
Amount/Type:[	18	Rock]
[		]

Analytical Requisition

Geochemical:[	ICP(MuAc)15]	
Assay:[	C S Se As VGA]	ICP:[15]
Comments:[	None	]

Delivery Information Reporting Date:[Aug 24, 1992]

Principal Destination (Hardcopy,Fascimile,Invoice)

Company:[	Falconbridge Ltd.]
Address:[	202 - 856 Homer St.]
City/Province:[	Vancouver, BC]
Country/Postal:[	V6B 2W2]
Attention:[	Peter Manojlovic]
Fascimile:[	]

Secondary Destination (Hardcopy)

Company:[	]
Address:[	]
City/Province:[	]
Country/Postal:[	]
Attention:[	]
Fascimile:[	]

1 data pages in this report. Approved by: _____

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Fax (604) 879-7898

R E P O R T S U M M A R Y Report:[9200709 R]

A N A L Y T I C A L R E P O R T

Origin Inception Date:[Aug 31, 1992]

Client:[	232	Falconbridge Ltd.]
Contact:[		Peter Manojlovic]
Project:[	0	207 Nick]
Amount/Type:[	12	Rock]
[		]

Analytical Requisition

Geochemical:[	ICP(MuAc)15]	
Assay:[	C S Se As VGA]	ICP:[15]
Comments:[	None	]

Delivery Information Reporting Date:[Sep 05, 1992]

Principal Destination (Hardcopy,Fascimile,Invoice)

Company:[	Falconbridge Ltd.]
Address:[	202 - 856 Homer St.]
City/Province:[	Vancouver, BC]
Country/Postal:[	V6B 2W2]
Attention:[	Peter Manojlovic]
Fascimile:[	]

Secondary Destination (Hardcopy)

Company:[	]
Address:[	]
City/Province:[	]
Country/Postal:[	]
Attention:[	]
Fascimile:[	]

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Canada V5Y 3E1
Phone (604) 879-7878
Fax (604) 879-7898

R E P O R T S U M M A R Y Report:[9200710 R]

A N A L Y T I C A L R E P O R T

Origin Inception Date:[Aug 31, 1992]

Client:[	232	Falconbridge Ltd.	]
Contact:[		Peter Manojlovic	]
Project:[	0	207 Nick	]
Amount/Type:[	60	Rock	]
[			]

Analytical Requisition

Geochemical:[	ICP(MuAc)15	]	
Assay:[	C S Se As VGA	]	ICP:[15]
Comments:[	None		]

Delivery Information Reporting Date:[Sep 05, 1992]

Principal Destination (Hardcopy,Fascimile,Invoice)

Company:[	Falconbridge Ltd.]
Address:[	202 - 856 Homer St.]
City/Province:[	Vancouver, BC]
Country/Postal:[	V6B 2W2]
Attention:[	Peter Manojlovic]
Fascimile:[	]

Secondary Destination (Hardcopy)

Company:[	]
Address:[	]
City/Province:[	]
Country/Postal:[	]
Attention:[	]
Fascimile:[	]

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B.C. Certified Assayers

iPL CODE: 921112-15:13:10

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R E P O R T S U M M A R Y Report:[9200731 R]

A N A L Y T I C A L R E P O R T

Origin Inception Date:[Sep 04, 1992]

Client:[	232	Falconbridge Ltd.]
Contact:[		Peter Manojlovic]
Project:[	0	207 Nick]
Amount/Type:[	19	Rock]
[		]

Analytical Requisition

Geochemical:[ICP(MuAc)15]
Assay:[C S Se As VGA] ICP:[15]
Comments:[None]

Delivery Information Reporting Date:[Sep 11, 1992]

Principal Destination (Hardcopy,Fascimile,Invoice)

Company:[Falconbridge Ltd.]
Address:[202 - 856 Homer St.]
City/Province:[Vancouver, BC]
Country/Postal:[V6B 2W2]
Attention:[Peter Manojlovic]
Fascimile:[ ]

Secondary Destination (Hardcopy)

Company:[ ]
Address:[ ]
City/Province:[ ]
Country/Postal:[ ]
Attention:[ ]
Fascimile:[ ]

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iPL Report: 9200587 T Falconbridge Ltd. In: Aug 05, 1992 Page 1 of 1 Section 1 of 1
Project: 601 207 Nick Out: Aug 12, 1992 19 Rock Certified BC Assayer David Chiu

Sample Name		Ag ppm	Cu ppm	Pb ppm	Zn ppm	S %	As ppm	As ppm	Mo ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	V ppm	Mn ppm	Fe %	P %	Se ppm	C Org %	Se ppm
VB 06601	R	12.3	141	37	2501	15.32	295	Max	519	14.4	52	0.9%	101	385	123	11.97	0.25	485	3.42	637.6
VB 06682	R	0.2	21	4	62	0.10	<	6.9	17	0.4	2	66	518	210	37	0.41	0.01	<	0.54	2.4
VB 06683	R	0.1	12	2	80	0.08	6	8.2	14	0.6	2	47	583	212	25	0.47	0.01	<	0.61	2.2
VB 06684	R	0.2	16	8	46	0.04	8	6.1	18	0.1	2	16	482	239	14	0.33	<	<	0.66	1.5
VB 06685	R	0.2	17	4	74	0.06	6	6.6	16	0.6	2	49	494	243	24	0.48	0.01	<	0.68	1.2
VB 06686	R	0.9	48	4	83	0.16	<	13.7	14	0.7	2	47	2166	256	128	0.19	0.02	<	0.63	5.2
VB 06687	R	0.2	12	4	82	0.10	5	6.8	16	0.6	3	57	584	191	32	0.52	<	<	0.69	2.5
VB 06688	R	4.1	774	14	901	1.66	1958	Max	2348	10.5	21	0.3%	653	657	158	8.91	0.22	2785	2.31	Max
VB 06689	R	0.5	19	4	87	0.48	12	12.5	48	0.2	3	59	1248	743	31	0.64	0.02	11	2.55	7.0
VB 06690	R	0.1	23	4	48	0.10	6	9.5	20	0.4	3	39	586	297	32	0.53	0.01	<	0.70	2.9
VB 06691	R	0.3	23	2	166	0.20	16	14.9	38	1.9	6	139	2248	725	52	0.86	0.01	<	0.82	5.6
VB 06692	R	0.1	12	3	60	0.28	6	4.3	29	0.4	3	46	624	322	29	0.57	0.01	<	0.80	3.2
VB 06693	R	0.3	18	5	217	0.46	<	6.5	24	6.9	5	132	892	441	76	0.52	0.02	<	1.12	4.5
VB 06694	R	0.5	467	<	352	0.82	35	48.0	38	4.0	38	263	1065	215	130	3.42	0.36	<	1.83	3.4
VB 06695	R	0.3	42	2	1400	0.34	<	4.9	15	16.2	3	66	1261	80	35	0.55	0.04	<	0.68	2.3
VB 06696	R	0.3	18	6	85	0.20	14	17.2	31	0.7	3	63	1214	718	28	0.64	0.01	<	3.32	4.4
VB 06698	R	0.2	17	6	143	0.72	8	10.3	61	0.7	6	157	2194	604	24	0.82	0.04	6	3.56	5.2
VB 06699	R	10.9	229	77	1890	24.82	433	Max	2282	17.9	173	5.4%	59	147	61	19.95	0.03	255	8.48	556.0
VB 06700	R	1.7	385	<	485	1.12	95	86.1	86	<	17	160	960	597	13	24.10	0.27	34	2.66	28.0
Min Limit		0.1	1	2	1	0.01	5	0.1	1	0.1	1	1	2	2	1	0.01	0.01	5	0.01	0.1
Max Reported*		99.9	20000	20000	20000	100.00	9999	1000.0	9999	99.9	999	999	9999	999	9999	99.99	5.00	10000	100.00	1000.0
Method		ICP	ICP	ICP	ICP	Assay	ICP	VGA	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	Assay	VGA

--=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate

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iPL Report: 9200655 T Falconbridge Ltd. In: Aug 19, 1992 Page 1 of 1 Section 1 of 1
Project: 601 207 Nick Out: Aug 24, 1992 18 Rock Certified BC Assayer David Chiu

Sample Name		Ag ppm	Cu ppm	Pb ppm	Zn ppm	S %	As ppm	As ppm	Mo ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	V ppm	Mn ppm	Fe %	P %	Se ppm	C Org %	Se ppm
VB 06602	R	<	14	6	55	0.10	9	12.2	15	0.3	3	49	590	219	28	0.45	0.01	<	0.93	5.6
VB 06603	R	<	19	4	110	0.06	9	9.6	26	0.4	4	84	746	252	17	0.62	<	<	0.82	3.3
VB 06604	R	<	7	3	55	0.14	<	4.8	12	0.5	2	40	321	113	26	0.40	0.01	<	0.60	2.2
VB 06605	R	<	27	2	76	0.08	<	9.7	16	1.7	2	50	417	247	34	0.34	<	<	0.61	3.3
VB 06606	R	<	37	2	85	0.27	6	13.5	16	1.0	3	61	889	252	37	0.50	0.01	<	0.47	4.3
VB 06607	R	<	9	3	50	0.18	<	6.6	13	0.3	2	38	358	96	30	0.37	0.01	<	0.52	2.9
VB 06608	R	<	10	3	74	0.20	<	7.5	13	0.8	3	47	835	253	29	0.49	0.01	<	0.73	4.3
VB 06609	R	<	10	3	54	0.06	<	5.1	9	0.7	2	33	304	168	27	0.33	<	<	0.42	3.3
VB 06610	R	0.4	30	<	198	0.06	11	13.1	16	3.0	2	51	377	366	22	0.45	<	<	0.75	5.3
VB 06611	R	0.2	12	6	61	0.12	18	18.2	31	0.6	3	32	1704	662	19	0.45	<	5	2.39	9.0
VB 06612	R	<	76	5	126	0.08	20	27.9	32	0.8	3	91	985	568	23	0.65	0.01	<	1.72	5.9
VB 06702	R	<	9	<	3	1.92	52	10.9	15	0.1	1	211	403	0.3%	8	0.30	<	<	65.98	2.1
VB 06703	R	<	14	<	62	0.06	6	7.6	10	0.4	1	29	382	148	24	0.36	<	<	0.57	2.6
VB 06704	R	<	11	2	72	0.16	<	8.8	15	0.7	2	48	662	281	37	0.48	0.01	<	0.46	3.4
VB 06705	R	<	39	3	75	0.17	9	13.8	20	1.0	2	47	545	391	31	0.53	0.01	<	0.82	4.2
VB 06706	R	0.1	55	<	219	0.12	16	21.1	28	4.3	3	123	754	368	36	0.55	0.01	<	0.74	6.4
VB 06707	R	<	9	<	83	0.16	<	8.2	14	0.5	2	53	947	121	29	0.43	0.01	<	0.79	5.7
VB 06708	R	<	9	<	61	0.08	8	8.4	16	0.5	2	42	557	126	25	0.52	0.01	<	0.70	6.5
Min Limit		0.1	1	2	1	0.01	5	0.1	1	0.1	1	1	2	2	1	0.01	0.01	5	0.01	0.1
Max Reported*		99.9	20000	20000	20000	100.00	9999	1000.0	9999	99.9	999	999	9999	999	9999	99.99	5.00	10000	100.00	1000.0
Method		ICP	ICP	ICP	ICP	Assay	ICP	VGA	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	Assay	VGA

--=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate

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iPL Report: 9200709 T Falconbridge Ltd. In: Aug 31, 1992 Page 1 of 1 Section 1 of 1
Project: 207 Nick Out: Sep 05, 1992 12 Rock Certified BC Assayer David Chiu

Sample Name		Ag ppm	Cu ppm	Pb ppm	Zn ppm	S %	As ppm	As ppm	Mo ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	V ppm	Mn ppm	Fe %	P %	Se ppm	C Org %	Se ppm
VB 06711	R	<	12	<	132	0.18	5	5.7	23	1.6	3	65	749	408	29	0.57	3.40	<	0.94	3.5
VB 06712	R	<	11	<	76	0.14	<	5.4	12	0.4	2	51	594	135	48	0.38	0.01	<	0.74	3.4
VB 06713	R	0.8	44	37	371	0.16	220	218.0	70	1.9	12	0.1%	2020	499	83	1.52	0.06	49	1.63	46.2
VB 06714	R	<	64	18	1901	1.92	62	74.0	178	4.8	20	0.2%	334	0.1%	31	2.88	0.47	108	3.19	96.1
VB 08804	R	<	33	4	189	1.50	8	13.2	39	1.0	7	90	399	324	64	1.61	0.04	6	2.64	5.6
VB 08805	R	<	83	<	450	0.96	8	20.6	26	3.5	11	90	1715	546	156	1.49	0.01	8	1.60	6.4
VB 08806	R	<	23	<	238	0.97	<	13.8	46	1.7	6	178	1712	839	51	0.98	0.07	7	2.92	8.2
VB 08807	R	<	27	<	235	0.81	<	12.1	50	1.6	5	153	1311	684	47	0.89	0.04	7	1.83	6.8
VB 08808	R	<	28	<	164	0.77	<	11.6	43	0.4	5	145	2016	408	39	0.71	0.02	5	2.92	4.8
VB 08809	R	<	33	4	147	1.61	11	18.9	59	0.9	9	116	371	257	43	1.65	0.02	6	3.03	7.4
VB 08810	R	<	25	<	196	1.14	6	12.9	34	1.2	8	91	1458	316	109	1.36	0.01	<	2.53	4.5
VB 08811	R	<	62	8	137	2.67	16	47.8	63	2.5	13	142	290	267	85	2.57	1.95	17	4.71	18.3
Min Limit		0.1	1	2	1	0.01	5	0.1	1	0.1	1	1	2	2	1	0.01	0.01	5	0.01	0.1
Max Reported*		99.9	20000	20000	20000	100.00	9999	1000.0	9999	99.9	999	999	9999	999	9999	99.99	5.00	10000	100.00	1000.0
Method		ICP	ICP	ICP	ICP	Assay	ICP	VGA	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	Assay	VGA

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iPL Report: 9200710 T Falconbridge Ltd. In: Aug 31, 1992 Page 1 of 2 Section 1 of 1
Project: 207 Nick Out: Sep 05, 1992 60 Rock Certified BC Assayer David Chiu

Sample Name		Ag ppm	Cu ppm	Pb ppm	Zn ppm	S %	As ppm	As ppm	Mo ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	V ppm	Mn ppm	Fe %	P %	Se ppm	C Org %	Se ppm
VB 06614	R	<	34	6	86	0.14	13	9.6	24	3.0	5	56	1892	690	28	0.66	0.01	<	2.12	2.7
VB 06615	R	<	25	<	1098	0.30	<	8.2	24	12.3	2	69	670	776	32	0.45	0.02	7	1.34	8.4
VB 06616	R	<	18	<	75	0.20	<	6.5	13	0.7	2	45	439	197	30	0.52	<	<	0.70	1.9
VB 06617	R	<	17	<	110	0.08	<	3.9	17	1.3	2	38	542	238	25	0.37	0.01	<	0.47	1.6
VB 06618	R	0.1	39	<	150	0.12	<	7.9	5	2.7	2	26	1215	154	24	0.38	0.01	<	0.52	2.8
VB 06709	R	1.3	261	81	1818	24.36	512	0.2%	1701	18.9	202	3.7%	308	274	68	16.19	0.07	450	14.19	54.2
VB 06710	R	0.1	25	<	43	0.28	5	11.6	19	0.4	3	219	562	97	26	0.55	<	<	0.62	4.9
VB 08751	R	<	42	2	151	1.80	13	20.5	53	1.0	9	153	430	315	38	1.78	0.08	7	2.73	6.4
VB 08752	R	<	48	5	1246	1.44	13	17.1	47	20.8	8	156	693	0.1%	91	1.36	0.21	16	3.81	19.4
VB 08753	R	<	29	3	443	1.76	15	24.0	51	2.0	17	239	421	429	58	1.63	0.05	13	3.03	12.2
VB 08754	R	<	119	5	383	2.31	22	45.5	119	2.4	12	382	362	0.2%	160	2.36	0.04	26	5.27	26.7
VB 08755	R	<	42	9	44	3.33	22	38.9	159	<	13	462	299	0.3%	58	2.78	0.03	36	6.17	38.7
VB 08756	R	<	32	5	310	1.61	16	21.9	77	1.9	10	281	664	0.1%	103	1.73	0.07	19	3.56	16.0
VB 08757	R	<	51	<	887	1.74	9	19.8	48	2.1	46	412	690	0.1%	950	4.81	0.06	9	2.46	7.9
VB 08758	R	0.4	41	<	135	2.38	11	17.8	23	0.4	14	95	410	128	126	2.40	0.02	<	2.48	3.6
VB 08759	R	<	36	2	195	1.38	9	13.6	39	1.0	9	96	605	268	160	1.62	0.02	7	1.99	3.9
VB 08760	R	<	37	5	161	2.12	12	20.3	52	1.0	9	113	444	311	49	1.96	0.02	5	2.73	6.3
VB 08761	R	<	28	2	190	1.75	9	13.8	40	1.2	8	80	449	424	86	1.74	0.07	7	1.88	6.0
VB 08762	R	<	64	2	1062	1.28	13	17.7	39	18.6	8	125	573	916	110	1.37	0.10	10	3.05	14.7
VB 08763	R	<	34	4	301	1.44	12	17.6	57	4.1	7	137	605	676	104	1.56	0.02	11	3.32	10.7
VB 08764	R	<	77	<	269	1.93	19	34.0	100	3.5	10	317	421	0.1%	177	2.20	0.04	19	5.24	21.6
VB 08765	R	<	75	<	505	1.48	7	16.2	35	3.6	11	92	714	684	181	1.75	0.01	8	1.33	8.1
VB 08766	R	<	33	3	510	1.36	10	34.2	55	9.7	10	313	928	600	74	1.47	0.01	17	1.79	16.2
VB 08767	R	<	38	2	882	1.83	6	19.6	50	15.1	7	143	354	678	63	1.65	0.45	13	4.31	12.8
VB 08768	R	<	81	4	708	2.03	13	34.0	101	3.5	14	420	385	0.2%	90	1.94	0.07	24	5.59	22.6
VB 08769	R	<	32	<	310	1.06	<	12.6	44	1.7	9	168	1459	844	101	1.16	0.04	6	2.70	6.0
VB 08770	R	<	11	3	4	0.50	20	12.3	42	<	6	9	3802	199	16	1.05	0.01	6	3.19	6.6
VB 08771	R	0.2	93	7	123	1.00	9	21.7	36	0.9	6	66	2121	276	83	1.06	0.01	<	1.84	4.5
VB 08772	R	<	15	<	172	0.64	<	9.8	34	1.4	5	107	1358	487	42	0.79	0.06	7	1.43	5.3
VB 08773	R	<	37	<	347	1.32	7	15.4	62	2.5	6	222	581	0.1%	43	1.15	0.03	8	3.02	8.3
VB 08774	R	<	26	<	328	0.88	9	12.0	43	4.6	6	109	1694	661	34	0.88	0.03	13	2.27	11.9
VB 08775	R	<	25	<	154	0.67	<	10.8	29	1.7	4	97	1519	490	79	0.58	0.02	6	1.19	6.7
VB 08776	R	<	25	<	36	1.04	13	15.9	42	0.5	5	69	1659	429	36	1.05	0.02	8	1.96	10.4
VB 08777	R	<	85	<	598	2.00	11	24.6	45	15.7	6	224	301	0.1%	37	1.10	1.03	22	3.55	23.7
VB 08778	R	<	61	6	441	1.60	16	24.2	60	10.2	7	132	425	862	56	1.54	0.41	19	3.27	17.0
VB 08779	R	<	22	<	217	0.72	<	10.7	38	1.3	4	120	1327	623	48	0.69	0.02	9	1.47	7.2
VB 08780	R	<	22	<	5	0.90	12	9.7	38	<	6	47	2176	531	33	0.99	0.01	6	1.60	7.7
VB 08781	R	<	68	2	47	0.64	23	21.0	37	2.1	5	24	3641	781	25	0.83	0.04	17	2.00	17.7
VB 08782	R	<	24	2	233	0.82	<	11.3	46	1.7	5	142	1464	686	42	0.86	0.04	8	1.44	8.4
Min Limit		0.1	1	2	1	0.01	5	0.1	1	0.1	1	1	2	2	1	0.01	0.01	5	0.01	0.1
Max Reported*		99.9	20000	20000	20000	100.00	9999	1000.0	9999	99.9	999	999	9999	999	9999	99.99	5.00	10000	100.00	1000.0
Method		ICP	ICP	ICP	ICP	Assay	ICP	VGA	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	Assay	VGA

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iPL Report: 9200710 T Falconbridge Ltd. In: Aug 31, 1992 Page 2 of 2 Section 1 of 1
Project: 207 Nick Out: Sep 05, 1992 60 Rock Certified BC Assayer David Chiu

Sample Name		Ag ppm	Cu ppm	Pb ppm	Zn ppm	S %	As ppm	As ppm	Mo ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	V ppm	Mn ppm	Fe %	P %	Se ppm	C Org %	Se ppm
VB 08783	R	<	27	<	431	1.03	<	12.2	53	2.5	6	173	1843	940	41	0.98	0.04	7	2.24	7.6
VB 08784	R	0.2	55	3	136	1.45	29	29.6	29	<	13	39	404	102	37	3.23	0.02	5	4.88	5.2
VB 08785	R	0.1	55	<	189	3.59	22	28.4	29	<	15	88	340	164	52	3.49	0.03	<	3.62	4.7
VB 08786	R	<	32	<	296	1.34	<	12.6	30	1.8	9	87	500	466	219	1.57	0.02	7	1.74	7.9
VB 08787	R	<	69	5	1392	2.84	7	32.0	50	28.8	9	204	364	986	52	2.43	0.61	31	5.50	37.5
VB 08788	R	<	32	<	279	0.92	7	10.7	49	2.1	6	160	1837	859	47	0.90	0.03	6	2.40	7.1
VB 08789	R	<	43	<	238	0.84	<	11.1	42	1.4	5	131	1597	843	54	0.75	0.02	6	2.45	6.4
VB 08790	R	<	32	<	319	1.45	11	13.1	47	4.3	7	129	1049	644	57	1.48	0.02	14	2.56	11.9
VB 08791	R	<	88	<	717	0.79	8	16.5	19	13.4	6	72	1963	410	101	0.99	0.05	8	1.12	10.5
VB 08792	R	<	127	<	1386	1.05	11	19.6	28	25.8	7	101	1279	752	117	1.17	0.05	13	2.31	15.1
VB 08793	R	<	40	4	153	1.47	9	12.8	44	1.1	9	93	515	315	39	1.48	0.01	<	2.71	6.1
VB 08794	R	<	35	2	423	1.46	11	14.7	42	3.7	9	129	686	680	95	1.59	0.04	10	2.26	10.8
VB 08795	R	<	17	<	193	0.56	<	7.8	32	1.3	5	120	952	586	60	0.81	0.04	<	1.72	5.2
VB 08796	R	<	49	2	86	1.37	7	16.5	26	0.2	13	79	381	152	67	2.60	0.02	5	3.75	4.3
VB 08797	R	0.1	32	2	83	2.07	9	12.3	33	0.2	10	87	328	107	48	2.06	0.02	<	3.64	5.1
VB 08798	R	<	31	<	235	0.99	<	10.5	39	1.5	7	161	1888	814	59	1.06	0.02	8	3.31	6.8
VB 08799	R	<	40	4	220	1.64	8	11.2	46	1.4	8	109	493	407	55	1.62	0.03	7	3.13	6.9
VB 08800	R	<	36	2	188	1.51	12	10.7	44	0.8	8	97	423	365	135	1.96	0.03	6	2.19	6.8
VB 08801	R	0.1	53	<	216	1.19	12	11.3	37	0.9	11	111	859	289	183	1.87	0.03	5	1.67	4.9
VB 08802	R	<	126	35	1437	8.44	40	368.0	288	32.6	109	1.0%	220	722	70	6.53	4.06	195	7.70	192.0
VB 08803	R	<	27	<	121	0.52	<	7.8	28	0.9	3	86	739	373	46	0.57	0.02	<	1.38	4.8
Min Limit		0.1	1	2	1	0.01	5	0.1	1	0.1	1	1	2	2	1	0.01	0.01	5	0.01	0.1
Max Reported*		99.9	20000	20000	20000	100.00	9999	1000.0	9999	99.9	999	999	9999	999	9999	99.99	5.00	10000	100.00	1000.0
Method		ICP	ICP	ICP	ICP	Assay	ICP	VGA	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	Assay	VGA

--=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate

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Sample Name		Ag ppm	Cu ppm	Pb ppm	Zn ppm	S %	As ppm	As ppm	Mo ppm	Cd ppm	Co ppm	Ni ppm	Ba ppm	V ppm	Mn ppm	Fe %	P %	Se ppm	C Org %	Se ppm
VB 06715	R	<	85	7	500	2.03	43	62.6	95	2.7	10	354	382	0.2%	56	1.80	0.06	27	4.90	23.2
VB 06716	R	0.2	65	10	687	2.71	35	58.4	123	3.6	12	435	373	0.2%	56	2.28	0.05	33	5.83	30.2
VB 06717	R	0.1	43	7	576	1.92	16	34.1	97	3.1	9	312	448	0.2%	69	1.85	0.05	19	2.64	19.6
VB 06718	R	<	52	8	652	2.58	34	75.5	140	2.9	11	531	358	0.2%	56	2.27	0.08	42	5.57	38.8
VB 06719	R	0.2	90	9	635	2.53	27	61.9	125	3.7	11	411	394	0.2%	61	2.18	0.05	36	5.30	31.5
VB 06720	R	0.1	74	10	531	2.58	29	70.4	125	3.3	11	420	357	0.2%	53	2.26	0.05	35	5.69	32.2
VB 06721	R	<	91	8	537	2.23	29	49.4	101	5.0	10	387	351	0.2%	49	1.97	0.05	33	5.36	28.6
VB 06722	R	0.3	45	8	649	2.60	17	33.5	132	5.2	13	451	399	0.2%	91	2.55	0.08	27	4.98	25.2
VB 06723	R	<	61	2	600	2.77	18	28.8	69	4.0	21	364	358	0.1%	328	2.48	0.10	12	3.73	13.0
VB 06724	R	<	27	<	229	0.89	<	13.9	38	1.1	7	150	956	692	88	0.93	0.02	8	1.84	6.7
VB 06725	R	<	70	8	581	2.54	26	101.9	273	3.2	12	593	304	0.2%	68	2.25	0.06	39	5.55	37.0
VB 06726	R	<	20	<	234	0.94	5	14.4	44	1.2	5	163	1311	951	50	0.89	0.03	10	3.43	9.2
VB 06727	R	<	110	7	635	2.35	25	51.0	118	2.8	12	427	363	0.2%	75	2.23	0.06	32	5.90	28.8
VB 06728	R	<	62	9	676	2.83	29	88.2	205	4.4	12	837	342	0.2%	53	2.40	0.05	46	7.12	37.0
VB 06729	R	<	78	8	496	1.82	18	34.3	85	3.1	9	306	723	0.2%	64	1.67	0.06	22	5.55	16.5
VB 06730	R	0.3	46	<	295	0.66	<	9.6	29	1.2	10	132	1933	236	240	1.08	0.03	8	0.57	5.4
VB 06731	R	2.1	116	32	4057	8.26	108	0.1%	1640	35.4	40	1.0%	119	484	91	5.67	0.05	284	5.66	340.0
VB 06732	R	0.3	41	7	660	2.63	18	57.9	155	4.7	12	564	322	0.2%	86	2.43	0.03	30	4.49	28.5
VB 06733	R	<	20	2	301	1.04	8	15.2	51	1.8	7	186	1150	896	70	1.07	0.05	12	3.12	9.7
Min Limit		0.1	1	2	1	0.01	5	0.1	1	0.1	1	1	2	2	1	0.01	0.01	5	0.01	0.1
Max Reported*		99.9	20000	20000	20000	100.00	9999	1000.0	9999	99.9	999	999	9999	999	9999	99.99	5.00	10000	100.00	1000.0
Method		ICP	ICP	ICP	ICP	Assay	ICP	VGA	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	ICP	Assay	VGA

--=No Test ins=Insufficient Sample S=Soil R=Rock C=Core L=Silt P=Pulp U=Undefined m=Estimate/1000 %=Estimate % Max=No Estimate

NICK LITHOGEOCHEMISTRY RESULTS: All Samples Sorted by Sample Number and Rock Type

Sample No.	Ag (ppm)	As (ppm)	Ba (ppm)	C Org (%)	Cd (ppm)	Co (ppm)	Cu (ppm)	Fe (%)	Mn (ppm)	Mo (ppm)	Ni (ppm)	P (ppm)	Pb (ppm)	S (%)	Se (ppm)	V (ppm)	Zn (ppm)	V/V+Ni	Ni/Ni+Zn	Rock Unit	DDH	From (m)	To (m)
VB 06714	0.1	74.0	334	3.19	4.8	20	64	2.88	31	178	1597	0.47	18	1.92	96.1	1181	1901	0.425	0.457	5Bca			
VB 06695	0.3	4.9	1261	0.68	16.2	3	42	0.55	35	15	66	0.04	2	0.34	2.3	80	1400	0.548	0.045	5vnca			
VB 06716	0.2	58.4	373	5.83	3.6	12	65	2.28	56	123	435	0.05	10	2.71	30.2	2204	687	0.835	0.388	7A	N89-7	20.57	20.84
VB 06718	0.1	75.5	358	5.58	2.9	11	52	2.27	56	140	531	0.08	8	2.58	38.8	2096	652	0.798	0.449	7A	N89-8	29.15	29.95
VB 06719	0.2	61.9	394	5.30	3.7	11	90	2.18	61	125	411	0.05	9	2.53	31.5	1901	635	0.822	0.393	7A	N89-9	24.27	25.15
VB 06720	0.1	70.4	357	5.69	3.3	11	74	2.26	53	125	420	0.05	10	2.58	32.2	2030	531	0.829	0.442	7A	N89-10	21.20	21.80
VB 06721	0.1	49.4	351	5.36	5.0	10	91	1.97	49	101	387	0.05	8	2.23	28.6	1863	537	0.828	0.419	7A	N89-12	41.00	41.40
VB 06723	0.1	28.8	358	3.73	4.0	21	61	2.48	328	69	364	0.10	2	2.77	13.0	1294	600	0.780	0.378	7A	N89-13	53.26	54.26
VB 06725	0.1	101.9	304	5.55	3.2	12	70	2.25	68	273	593	0.06	8	2.54	37.0	1517	581	0.719	0.505	7A	N89-14	140.49	141.25
VB 06727	0.1	51.0	363	5.90	2.8	12	110	2.23	75	118	427	0.06	7	2.35	28.8	1983	635	0.823	0.402	7A	N89-15	51.13	51.80
VB 06728	0.1	88.2	342	7.12	4.4	12	62	2.40	53	205	837	0.05	9	2.83	37.0	2082	676	0.713	0.553	7A	N89-16	123.00	123.77
VB 06732	0.3	57.9	322	4.49	4.7	12	41	2.43	86	155	564	0.03	7	2.63	28.5	1680	660	0.749	0.461	7A	N88-4	140.90	141.40
VB 08755	0.1	38.9	299	6.17	0.1	13	42	2.78	58	159	462	0.03	9	3.33	38.7	2667	44	0.852	0.913	7A	N88-1	60.00	60.08
VB 08762	0.1	17.7	573	3.05	18.6	8	64	1.37	110	39	125	0.10	2	1.28	14.7	916	1062	0.880	0.105	7A	N88-2	65.00	66.00
VB 08768	0.1	34.0	385	5.59	3.5	14	81	1.94	90	101	420	0.07	4	2.03	22.6	1586	708	0.791	0.372	7A	N88-3	43.27	44.27
VB 08765	0.1	16.2	714	1.32	3.6	11	75	1.75	181	35	92	0.01	1	1.48	8.1	684	505	0.881	0.154	7Ach	N88-3	32.19	33.04
VB 08752	0.1	17.1	693	3.81	20.8	8	48	1.36	91	47	156	0.21	5	1.44	19.4	1085	1246	0.874	0.111	7Aph	N88-1	44.50	45.50
VB 08753	0.1	24.0	421	3.03	2.0	17	29	1.63	58	51	239	0.05	3	1.76	12.2	429	443	0.642	0.350	7Aph	N88-1	53.50	54.50
VB 08754	0.1	45.5	362	5.27	2.4	12	119	2.36	160	119	382	0.04	5	2.31	26.7	1562	383	0.803	0.499	7Aph	N88-1	59.23	60.00
VB 06694	0.5	48.0	1065	1.83	4.0	38	467	3.42	130	38	263	0.36	1	0.82	3.4	215	352	0.450	0.428	7B			
VB 06730	0.3	9.6	1933	0.57	1.2	10	46	1.08	240	29	132	0.03	1	0.66	5.4	236	295	0.641	0.309	7B	N88-4	137.05	137.51
VB 08751	0.1	20.5	430	2.73	1.0	9	42	1.78	38	53	153	0.08	2	1.80	6.4	315	151	0.673	0.503	7B	N88-1	8.00	9.00
VB 08758	0.4	17.8	410	2.48	0.4	14	41	2.40	126	23	95	0.02	1	2.38	3.6	128	135	0.574	0.413	7B	N88-2	17.00	18.00
VB 08759	0.1	13.6	605	1.99	1.0	9	36	1.62	160	39	96	0.02	2	1.38	3.9	268	195	0.736	0.330	7B	N88-2	41.15	41.90
VB 08766	0.1	34.2	928	1.79	9.7	10	33	1.47	74	55	313	0.01	3	1.36	16.2	600	510	0.657	0.380	7B	N88-3	38.00	39.00
VB 08767	0.1	19.6	354	4.31	15.1	7	38	1.65	63	50	143	0.45	2	1.83	12.8	678	882	0.826	0.140	7B	N88-3	39.40	40.00
VB 08770	0.1	12.3	3802	3.19	0.1	6	11	1.05	16	42	9	0.01	3	0.50	6.6	199	4	0.957	0.692	7B	N89-6	28.00	29.00
VB 08771	0.2	21.7	2121	1.84	0.9	6	93	1.06	83	36	66	0.01	7	1.00	4.5	276	123	0.807	0.349	7B	N89-6	72.35	73.35
VB 08776	0.1	15.9	1659	1.96	0.5	5	25	1.05	36	42	69	0.02	1	1.04	10.4	429	36	0.861	0.657	7B	N89-8	20.50	21.50
VB 08777	0.1	24.6	301	3.55	15.7	6	85	1.10	37	45	224	1.03	1	2.00	23.7	1035	598	0.822	0.273	7B	N89-8	21.50	22.50
VB 08778	0.1	24.2	425	3.27	10.2	7	61	1.54	56	60	132	0.41	6	1.60	17.0	862	441	0.867	0.230	7B	N89-9	18.00	19.00
VB 08780	0.1	9.7	2176	1.60	0.1	6	22	0.99	33	38	47	0.01	1	0.90	7.7	531	5	0.919	0.904	7B	N89-10	11.00	12.00
VB 08781	0.1	21.0	3641	2.00	2.1	5	68	0.83	25	37	24	0.04	2	0.64	17.7	781	47	0.970	0.338	7B	N89-10	16.21	16.46
VB 08784	0.2	29.6	404	4.88	0.1	13	55	3.23	37	29	39	0.02	3	1.45	5.2	102	136	0.723	0.223	7B	N89-11	10.70	11.70
VB 08785	0.1	28.4	340	3.62	0.1	15	55	3.49	52	29	88	0.03	1	3.59	4.7	164	189	0.651	0.318	7B	N89-11	16.40	16.70

NICK LITHOGEOCHEMISTRY RESULTS: All Samples Sorted by Sample Number and Rock Type

Sample No.	Ag (ppm)	As (ppm)	Ba (ppm)	C Org (%)	Cd (ppm)	Co (ppm)	Cu (ppm)	Fe (%)	Mn (ppm)	Mo (ppm)	Ni (ppm)	P (ppm)	Pb (ppm)	S (%)	Se (ppm)	V (ppm)	Zn (ppm)	V/V+Ni	Ni/Ni+Zn	Rock Unit	DDH	From (m)	To (m)
VB 08786	0.1	12.6	500	1.74	1.8	9	32	1.57	219	30	87	0.02	1	1.34	7.9	466	296	0.843	0.227	7B	N89-11	51.50	51.90
VB 08787	0.1	32.0	364	5.50	28.8	9	69	2.43	52	50	204	0.61	5	2.84	37.5	986	1392	0.829	0.128	7B	N89-11	58.00	59.00
VB 08790	0.1	13.1	1049	2.56	4.3	7	32	1.48	57	47	129	0.02	1	1.45	11.9	644	319	0.833	0.288	7B	N89-12	32.00	33.00
VB 08791	0.1	16.5	1963	1.12	13.4	6	88	0.99	101	19	72	0.05	1	0.79	10.5	410	717	0.851	0.091	7B	N89-12	35.67	36.40
VB 08792	0.1	19.6	1279	2.31	25.8	7	127	1.17	117	28	101	0.05	1	1.05	15.1	752	1386	0.882	0.068	7B	N89-12	37.00	38.00
VB 08793	0.1	12.8	515	2.71	1.1	9	40	1.48	39	44	93	0.01	4	1.47	6.1	315	153	0.772	0.378	7B	N89-13	35.00	36.00
VB 08794	0.1	14.7	686	2.26	3.7	9	35	1.59	95	42	129	0.04	2	1.46	10.8	680	423	0.841	0.234	7B	N89-13	50.00	51.00
VB 08797	0.1	12.3	328	3.64	0.2	10	32	2.06	48	33	87	0.02	2	2.07	5.1	107	83	0.552	0.512	7B	N89-14	30.00	31.00
VB 08798	0.1	10.5	1888	3.31	1.5	7	31	1.06	59	39	161	0.02	1	0.99	6.8	814	235	0.835	0.407	7B	N89-14	62.00	63.00
VB 08799	0.1	11.2	493	3.13	1.4	8	40	1.62	55	46	109	0.03	4	1.64	6.9	407	220	0.789	0.331	7B	N89-14	96.50	97.50
VB 08800	0.1	10.7	423	2.19	0.8	8	36	1.96	135	44	97	0.03	2	1.51	6.8	365	188	0.790	0.340	7B	N89-14	115.10	115.80
VB 08801	0.1	11.3	859	1.67	0.9	11	53	1.87	183	37	111	0.03	1	1.19	4.9	289	216	0.723	0.339	7B	N89-14	116.70	117.70
VB 08804	0.1	13.2	399	2.64	1.0	7	33	1.61	64	39	90	0.04	4	1.50	5.6	324	189	0.783	0.323	7B	N89-15	29.00	30.00
VB 08805	0.1	20.6	1715	1.60	3.5	11	83	1.49	156	26	90	0.01	1	0.96	6.4	546	450	0.858	0.167	7B	N89-15	41.76	42.35
VB 08809	0.1	18.9	371	3.03	0.9	9	33	1.65	43	59	116	0.02	4	1.61	7.4	257	147	0.689	0.441	7B	N89-16	45.00	46.00
VB 08810	0.1	12.9	1458	2.53	1.2	8	25	1.36	109	34	91	0.01	1	1.14	4.5	316	196	0.776	0.317	7B	N89-16	85.50	86.50
VB 08811	0.1	47.8	290	4.71	2.5	13	62	2.57	85	63	142	1.95	8	2.67	18.3	267	137	0.653	0.509	7B	N89-16	111.00	112.00
VB 08789	0.1	11.1	1597	2.46	1.4	5	43	0.75	54	42	131	0.02	1	0.84	6.4	843	238	0.866	0.355	7Bca/Ach	N89-11	70.00	71.00
VB 08796	0.1	16.5	381	3.75	0.2	13	49	2.60	67	26	79	0.02	2	1.37	4.3	152	86	0.658	0.479	7Bca/Ach	N89-13	67.00	68.00
VB 08808	0.1	11.6	2016	2.92	0.4	5	28	0.71	39	43	145	0.02	1	0.77	4.8	408	164	0.738	0.469	7Bca/Ach	N89-15	79.10	80.10
VB 08774	0.1	12.0	1694	2.27	4.6	6	26	0.88	34	43	109	0.03	1	0.88	11.9	661	328	0.858	0.249	7Bch	N89-7	18.00	19.00
VB 06602	0.1	12.2	590	0.93	0.3	3	14	0.45	28	15	49	0.01	6	0.10	5.6	219	55	0.817	0.471	7lb			
VB 06603	0.1	9.6	746	0.82	0.4	4	19	0.62	17	26	84	0.00	4	0.06	3.3	252	110	0.750	0.433	7lb			
VB 06604	0.1	4.8	321	0.60	0.5	2	7	0.40	26	12	40	0.01	3	0.14	2.2	113	55	0.739	0.421	7lb			
VB 06605	0.1	9.7	417	0.61	1.7	2	27	0.34	34	16	50	0.00	2	0.08	3.3	247	76	0.832	0.397	7lb			
VB 06606	0.1	13.5	889	0.47	1.0	3	37	0.50	37	16	61	0.01	2	0.27	4.3	252	85	0.805	0.418	7lb			
VB 06607	0.1	6.6	358	0.52	0.3	2	9	0.37	30	13	38	0.01	3	0.18	2.9	96	50	0.716	0.432	7lb			
VB 06608	0.1	7.5	835	0.73	0.8	3	10	0.49	29	13	47	0.01	3	0.20	4.3	253	74	0.843	0.388	7lb			
VB 06609	0.1	5.1	304	0.42	0.7	2	10	0.33	27	9	33	0.00	3	0.06	3.3	168	54	0.836	0.379	7lb			
VB 06610	0.4	13.1	377	0.75	3.0	2	30	0.45	22	16	51	0.00	1	0.06	5.3	366	198	0.878	0.205	7lb			
VB 06611	0.2	18.2	1704	2.39	0.6	3	12	0.45	19	31	32	0.00	6	0.12	9.0	662	61	0.954	0.344	7lb			
VB 06612	0.1	27.9	985	1.72	0.8	3	76	0.65	23	32	91	0.01	5	0.08	5.9	568	126	0.862	0.419	7lb			
VB 06614	0.1	9.6	1892	2.12	3.0	5	34	0.66	28	24	56	0.01	6	0.14	2.7	690	86	0.925	0.394	7lb			
VB 06615	0.1	8.2	670	1.34	12.3	2	25	0.45	32	24	69	0.02	1	0.30	8.4	776	1098	0.918	0.059	7lb			
VB 06616	0.1	6.5	439	0.70	0.7	2	18	0.52	30	13	45	0.00	1	0.20	1.9	197	75	0.814	0.375	7lb			

NICK LITHOGEOCHEMISTRY RESULTS: All Samples Sorted by Sample Number and Rock Type

Sample No.	Ag (ppm)	As (ppm)	Ba (ppm)	C Org (%)	Cd (ppm)	Co (ppm)	Cu (ppm)	Fe (%)	Mn (ppm)	Mo (ppm)	Ni (ppm)	P (ppm)	Pb (ppm)	S (%)	Se (ppm)	V (ppm)	Zn (ppm)	V/V+Ni	Ni/Ni+Zn	Rock Unit	DDH	From (m)	To (m)
VB 06617	0.1	3.9	542	0.47	1.3	2	17	0.37	25	17	38	0.01	1	0.08	1.6	238	110	0.862	0.257	7lb			
VB 06618	0.1	7.9	1215	0.52	2.7	2	39	0.38	24	5	26	0.01	1	0.12	2.8	154	150	0.856	0.148	7lb			
VB 06682	0.2	6.9	518	0.54	0.4	2	21	0.41	37	17	66	0.01	4	0.10	2.4	210	62	0.761	0.516	7lb			
VB 06683	0.1	8.2	583	0.61	0.6	2	12	0.47	25	14	47	0.01	2	0.08	2.2	212	80	0.819	0.370	7lb			
VB 06684	0.2	6.1	482	0.66	0.1	2	16	0.33	14	18	16	0.00	8	0.04	1.5	239	46	0.937	0.258	7lb			
VB 06685	0.2	6.6	494	0.68	0.6	2	17	0.48	24	16	49	0.01	4	0.06	1.2	243	74	0.832	0.398	7lb			
VB 06686	0.9	13.7	2166	0.63	0.7	2	48	0.19	128	14	47	0.02	4	0.16	5.2	256	83	0.845	0.362	7lb			
VB 06687	0.2	6.8	584	0.69	0.6	3	12	0.52	32	16	57	0.00	4	0.10	2.5	191	82	0.770	0.410	7lb			
VB 06689	0.5	12.5	1248	2.54	0.2	3	19	0.64	31	48	59	0.02	4	0.48	7.0	743	87	0.926	0.404	7lb			
VB 06690	0.1	9.5	586	0.70	0.4	3	23	0.53	32	20	39	0.01	4	0.10	2.9	297	48	0.884	0.448	7lb			
VB 06691	0.3	14.9	2248	0.82	1.9	6	23	0.86	52	38	139	0.01	2	0.20	5.6	725	166	0.839	0.456	7lb			
VB 06692	0.1	4.3	624	0.80	0.4	3	12	0.57	29	29	46	0.01	3	0.28	3.2	322	60	0.875	0.434	7lb			
VB 06693	0.3	6.5	892	1.12	6.9	5	18	0.52	76	24	132	0.02	5	0.46	4.5	441	217	0.770	0.378	7lb			
VB 06696	0.3	17.2	1214	3.32	0.7	3	18	0.64	28	31	63	0.01	6	0.20	4.4	718	85	0.919	0.426	7lb			
VB 06698	0.2	10.3	2194	3.56	0.7	6	17	0.82	24	61	157	0.04	6	0.72	5.2	604	143	0.794	0.523	7lb			
VB 06703	0.1	7.6	382	0.57	0.4	1	14	0.36	24	10	29	0.00	1	0.06	2.6	148	62	0.836	0.319	7lb			
VB 06704	0.1	8.8	662	0.46	0.7	2	11	0.48	37	15	48	0.01	2	0.16	3.4	281	72	0.854	0.400	7lb			
VB 06705	0.1	13.8	545	0.82	1.0	2	39	0.53	31	20	47	0.01	3	0.17	4.2	391	75	0.893	0.385	7lb			
VB 06706	0.1	21.1	754	0.74	4.3	3	55	0.55	36	28	123	0.01	1	0.12	6.4	368	219	0.749	0.360	7lb			
VB 06707	0.1	8.2	947	0.79	0.5	2	9	0.43	29	14	53	0.01	1	0.16	5.7	121	83	0.695	0.390	7lb			
VB 06708	0.1	8.4	557	0.70	0.5	2	9	0.52	25	16	42	0.01	1	0.08	6.5	126	61	0.750	0.408	7lb			
VB 06710	0.1	11.6	562	0.62	0.4	3	25	0.55	26	19	219	0.00	1	0.28	4.9	97	43	0.307	0.836	7lb			
VB 06711	0.1	5.7	749	0.94	1.6	3	12	0.57	29	23	65	3.40	1	0.18	3.5	408	132	0.863	0.330	7lb			
VB 06712	0.1	5.4	594	0.74	0.4	2	11	0.38	48	12	51	0.01	1	0.14	3.4	135	76	0.726	0.402	7lb			
VB 06715	0.1	62.6	382	4.90	2.7	10	85	1.80	56	95	354	0.06	7	2.03	23.2	1766	500	0.833	0.415	7lb	N89-6	88.92	89.83
VB 06717	0.1	34.1	448	2.64	3.1	9	43	1.85	69	97	312	0.05	7	1.92	19.6	1556	576	0.833	0.351	7lb	N89-7	20.84	21.62
VB 06722	0.3	33.5	399	4.98	5.2	13	45	2.55	91	132	451	0.08	8	2.60	25.2	2264	649	0.834	0.410	7lb	N89-12	43.50	44.00
VB 06724	0.1	13.9	956	1.84	1.1	7	27	0.93	88	38	150	0.02	1	0.89	6.7	692	229	0.822	0.396	7lb	N89-13	55.10	56.10
VB 06726	0.1	14.4	1311	3.43	1.2	5	20	0.89	50	44	163	0.03	1	0.94	9.2	951	234	0.854	0.411	7lb	N89-14	142.00	142.50
VB 06729	0.1	34.3	723	5.55	3.1	9	78	1.67	64	85	306	0.06	8	1.82	16.5	1747	496	0.851	0.382	7lb	N89-16	123.77	124.77
VB 06733	0.1	15.2	1150	3.12	1.8	7	20	1.07	70	51	186	0.05	2	1.04	9.7	896	301	0.828	0.382	7lb	N88-4	143.98	144.48
VB 08756	0.1	21.9	664	3.56	1.9	10	32	1.73	103	77	281	0.07	5	1.61	16.0	1275	310	0.819	0.475	7lb	N88-1	61.40	62.40
VB 08757	0.1	19.8	690	2.46	2.1	46	51	4.81	950	48	412	0.06	1	1.74	7.9	1051	887	0.718	0.317	7lb	N88-1	73.80	74.80
VB 08760	0.1	20.3	444	2.73	1.0	9	37	1.96	49	52	113	0.02	5	2.12	6.3	311	161	0.733	0.412	7lb	N88-2	44.50	45.50
VB 08761	0.1	13.8	449	1.88	1.2	8	28	1.74	86	40	80	0.07	2	1.75	6.0	424	190	0.841	0.296	7lb	N88-2	53.85	54.85

NICK LITHOGEOCHEMISTRY RESULTS: All Samples Sorted by Sample Number and Rock Type

Sample No.	Ag (ppm)	As (ppm)	Ba (ppm)	C Org (%)	Cd (ppm)	Co (ppm)	Cu (ppm)	Fe (%)	Mn (ppm)	Mo (ppm)	Ni (ppm)	P (ppm)	Pb (ppm)	S (%)	Se (ppm)	V (ppm)	Zn (ppm)	V/V+Ni	Ni/Ni+Zn	Rock Unit	DDH	From (m)	To (m)
VB 08763	0.1	17.6	605	3.32	4.1	7	34	1.56	104	57	137	0.02	4	1.44	10.7	676	301	0.831	0.313	7lb	N88-2	72.00	73.00
VB 08764	0.1	34.0	421	5.24	3.5	10	77	2.20	177	100	317	0.04	1	1.93	21.6	1482	269	0.824	0.541	7lb	N88-2	76.00	76.60
VB 08769	0.1	12.6	1459	2.70	1.7	9	32	1.16	101	44	168	0.04	1	1.06	6.0	844	310	0.834	0.351	7lb	N88-3	52.00	53.00
VB 08772	0.1	9.8	1358	1.43	1.4	5	15	0.79	42	34	107	0.06	1	0.64	5.3	487	172	0.820	0.384	7lb	N89-6	91.00	92.00
VB 08773	0.1	15.4	581	3.02	2.5	6	37	1.15	43	62	222	0.03	1	1.32	8.3	1140	347	0.837	0.390	7lb	N89-6	99.50	100.50
VB 08775	0.1	10.8	1519	1.19	1.7	4	25	0.58	79	29	97	0.02	1	0.67	6.7	490	154	0.835	0.386	7lb	N89-8	31.30	32.32
VB 08779	0.1	10.7	1327	1.47	1.3	4	22	0.69	48	38	120	0.02	1	0.72	7.2	623	217	0.838	0.356	7lb	N89-9	27.00	28.00
VB 08782	0.1	11.3	1464	1.44	1.7	5	24	0.86	42	46	142	0.04	2	0.82	8.4	686	233	0.829	0.379	7lb	N89-10	23.00	24.00
VB 08783	0.1	12.2	1843	2.24	2.5	6	27	0.98	41	53	173	0.04	1	1.03	7.6	940	431	0.845	0.286	7lb	N89-10	27.00	28.00
VB 08788	0.1	10.7	1837	2.40	2.1	6	32	0.90	47	49	160	0.03	1	0.92	7.1	859	279	0.843	0.364	7lb	N89-11	68.50	69.25
VB 08795	0.1	7.8	952	1.72	1.3	5	17	0.81	60	32	120	0.04	1	0.56	5.2	586	193	0.830	0.383	7lb	N89-13	57.90	58.45
VB 08803	0.1	7.8	739	1.38	0.9	3	27	0.57	46	28	86	0.02	1	0.52	4.8	373	121	0.813	0.415	7lb	N89-14	145.25	145.65
VB 08806	0.1	13.8	1712	2.92	1.7	6	23	0.98	51	46	178	0.07	1	0.97	8.2	839	238	0.825	0.428	7lb	N89-15	53.64	53.94
VB 08807	0.1	12.1	1311	1.83	1.6	5	27	0.89	47	50	153	0.04	1	0.81	6.8	684	235	0.817	0.394	7lb	N89-15	56.50	57.50
VB 06700	1.7	86.1	960	2.66	0.1	17	385	24.10	13	86	160	0.27	1	1.12	28.0	597	485	0.789	0.248	7py			
1801A	6.8	1985	0	-	15.0	131	167	-	154	1570	29000	0.07	76	-	0.0	370	6590	0.013	0.815	7vh	N88-1	59.13	59.23
A1035	12.2	3930	170	-	61.0	258	363	-	300	3920	50000	0.12	130	-	0.0	422	10400	0.008	0.828	7vh	N88-3	43.50	43.53
T21748	7.2	2890	30	-	0.0	178	511	-	220	1550	34400	0.32	76	-	75.0	377	6100	0.011	0.849	7vh	N89-10	21.16	21.20
T21769	12.0	3310	210	-	95.0	191	1400	-	210	2570	41600	0.07	174	-	5.6	304	15600	0.007	0.727	7vh	N89-6	88.89	88.95
T22041	3.0	1280	70	-	6.0	76	139	7.52	100	1715	14200	0.11	48	-	68.0	349	3800	0.024	0.789	7vh	N89-14	140.45	140.51
T22047	5.2	2560	30	-	8.0	130	260	12.95	105	2350	24200	0.14	58	-	70.0	416	6400	0.017	0.791	7vh	N89-15	51.07	51.14
T26498	4.4	1975	50	-	15.5	96	250	10.40	115	2270	19400	0.05	54	-	63.0	439	5500	0.022	0.779	7vh	N89-16	122.79	128.00
T8371	4.0	1400	30	-	54.5	105	141	11.70	165	1535	18300	0.02	50	-	75.0	231	5600	0.012	0.766	7vh	N89-13	53.21	53.26
T8392	6.2	2270	30	-	9.5	108	1740	13.75	280	1950	27800	0.05	54	-	64.0	363	6600	0.013	0.808	7vh	N89-7	20.52	20.57
T8402	8.0	2880	20	-	14.0	124	276	-	145	2600	26600	0.04	102	-	58.0	402	4600	0.015	0.853	7vh	N89-12	40.94	41.00
T8432	10.8	3530	30	-	24.0	185	2530	-	320	2590	36900	0.09	64	-	74.0	263	12400	0.007	0.748	7vh	N89-11	67.24	67.30
T8441	8.8	2760	20	-	14.0	173	519	-	225	2650	36000	0.20	78	-	82.0	435	10700	0.012	0.771	7vh	N89-9	24.16	24.27
T8450	5.4	1950	50	-	26.0	149	555	10.60	195	1625	32400	0.87	56	-	90.0	507	12800	0.015	0.717	7vh	N89-8	28.97	29.15
VB 06601	12.3	295	101	3.42	14.4	52	141	11.97	123	519	9401	0.25	37	15.32	637.6	385	2501	0.039	0.790	7vh			
VB 06699	10.9	433	59	8.48	17.9	173	229	19.95	61	2282	53676	0.03	77	24.82	556.0	147	1890	0.003	0.966	7vh			
VB 06709	1.3	1572	308	14.19	18.9	202	261	16.19	68	1701	37043	0.07	81	24.36	54.2	274	1818	0.007	0.953	7vh			
VB 06713	0.8	218	2020	1.63	1.9	12	44	1.52	83	70	1287	0.06	37	0.16	46.2	499	371	0.279	0.776	7vh			
VB 06731	2.1	1119	119	5.66	35.4	40	116	5.67	91	1640	9506	0.05	32	8.26	340.0	484	4057	0.048	0.701	7vh	N88-4	140.82	140.90
VB 08802	0.1	368	220	7.70	32.6	109	126	6.53	70	288	10256	4.06	35	8.44	192.0	722	1437	0.066	0.877	7vh	N89-14	132.83	132.88
VB 06688	4.1	1958	653	2.31	10.5	21	774	8.91	158	2348	3208	0.22	14	1.66	2785.0	657	901	0.170	0.781	7vh oxd			
VB 06702	0.1	11	403	65.98	0.1	1	9	0.30	8	15	211	0.00	1	1.92	2.1	2681	3	0.927	0.986	Bitum			

NICK LITHOGEOCHEMICAL STATISTICS: LBM Matrix Samples

CORRELATION COEFFICIENT TABLE

(n=63)

NOTE: Significant inter-element correlations shaded in grey and arbitrarily defined as less than or equal to -0.700 or greater than or equal to +0.700

	Ni	Zn	Cu	C Org	S	Co	Ag	Mo	Ba	V	Se	As	P	Mn	Pb	Fe	Cd
Ni	-	0.694	0.623	0.777	0.864	0.712	-0.094	0.882	-0.007	0.877	0.843	0.738	-0.031	0.505	0.203	0.828	0.340
Zn		-	0.456	0.521	0.623	0.624	-0.110	0.592	-0.021	0.697	0.612	0.477	-0.014	0.505	0.044	0.665	0.754
Cu			-	0.592	0.566	0.397	0.031	0.600	-0.028	0.628	0.645	0.828	-0.090	0.285	0.254	0.524	0.322
C Org				-	0.828	0.448	-0.048	0.896	0.136	0.889	0.826	0.746	-0.040	0.207	0.379	0.641	0.287
S					-	0.614	-0.144	0.900	-0.061	0.821	0.824	0.702	-0.043	0.372	0.231	0.824	0.303
Co						-	-0.103	0.473	-0.001	0.501	0.401	0.391	-0.017	0.937	0.045	0.934	0.161
Ag							-	-0.032	0.301	-0.012	-0.022	0.445	-0.062	-0.012	0.285	-0.143	-0.008
Mo								-	0.049	0.941	0.920	0.781	-0.023	0.207	0.370	0.697	0.329
Ba									-	0.105	-0.062	-0.089	-0.030	-0.026	-0.075	-0.107	-0.018
V										-	0.908	0.786	-0.009	0.260	0.353	0.670	0.434
Se											-	0.862	-0.044	0.183	0.342	0.624	0.406
As												-	-0.077	0.188	0.448	0.587	0.247
P													-	-0.018	-0.104	-0.017	0.007
Mn														-	-0.108	0.795	0.096
Pb															-	0.143	0.013
Fe																-	0.224
Cd																	-

MEANS, STANDARD DEVIATIONS, MAXIMUM AND MINUMUM VALUES

LBM Matrix Surface Samples

	Ni	Zn	Cu	C Org	S	Co	Ag	Mo	Ba	V	Se	As	P	Mn	Pb	Fe	Cd
Mean	63	92	22	1.00	0.17	3	0.2	21	839	330	4.1	10.0	0.1	33	3	0.49	1.4
Std Dev	41	46	15	0.77	0.14	1	0.2	11	535	207	1.9	5.0	0.6	19	2	0.13	2.2
Max	219	1098	76	3.56	0.72	6	0.9	61	2248	776	9.0	27.9	3.4	128	8	0.86	12.3
Min	16	43	9	0.42	0.04	1	0.1	5	304	96	1.2	3.9	0.0	14	1	0.13	0.1

NICK LITHOGEOCHEMICAL STATISTICS: LBM Matrix Samples (continued)
MEANS, STANDARD DEVIATIONS, MAXIMUM AND MINUMUM VALUES
LBM Matrix DDH Samples

	Ni	Zn	Cu	C Org	S	Co	Ag	Mo	Ba	V	Se	As	P	Mn	Pb	Fe	Cd
Mean	200	321	35	2.78	1.27	9	0.1	57	990	946	10.4	18.8	0.0	104	3	1.40	2.1
Std Dev	99	175	16	1.19	0.56	8	0.0	25	473	462	5.5	8.4	0.0	179	2	0.89	1.0
Max	451	887	85	5.55	2.60	46	0.3	132	1843	2264	25.2	62.6	0.1	950	8	4.81	5.2
Min	80	121	15	1.19	0.52	3	0.1	28	382	311	4.8	7.8	0.0	41	1	0.57	0.9

NICK LITHOGEOCHEMICAL STATISTICS: Hanging Wall Shale Samples (7B)

CORRELATION COEFFICIENT TABLE

(n=33)

NOTE: Significant inter-element correlations shaded in grey and arbitrarily defined as less than or equal to -0.700 or greater than or equal to +0.700

	Ni	Zn	Cu	C Org	S	Co	Ag	Mo	Ba	V	Se	As	P	Mn	Pb	Fe	Cd
Ni	-	0.411	0.414	0.105	0.229	0.422	0.191	0.431	-0.413	0.359	0.396	0.530	0.356	0.085	0.033	0.223	0.415
Zn		-	0.200	0.225	0.161	-0.040	-0.129	-0.001	-0.198	0.607	0.656	0.230	0.202	0.103	-0.028	-0.012	0.964
Cu			-	-0.132	-0.153	0.847	0.653	-0.115	0.008	-0.048	-0.034	0.599	0.165	0.172	-0.085	0.416	0.174
C Org				-	0.661	-0.009	-0.190	0.423	-0.422	0.153	0.461	0.388	0.515	-0.547	0.451	0.472	0.296
S					-	0.111	-0.058	0.250	-0.701	-0.023	0.311	0.346	0.436	-0.209	0.266	0.625	0.176
Co						-	0.756	-0.095	-0.222	-0.362	-0.235	0.618	0.145	0.252	-0.102	0.735	-0.113
Ag							-	-0.354	-0.012	-0.432	-0.338	0.334	-0.049	0.341	-0.136	0.473	-0.182
Mo								-	-0.292	0.289	0.427	0.312	0.491	-0.416	0.591	-0.002	0.109
Ba									-	0.060	-0.086	-0.223	-0.285	-0.084	-0.174	-0.556	-0.143
V										-	0.763	0.035	0.233	-0.202	-0.022	-0.410	0.684
Se											-	0.386	0.553	0.553	0.301	-0.085	0.784
As												-	0.640	-0.135	0.391	0.607	0.285
P													-	-0.107	0.486	0.238	0.308
Mn														-	-0.298	0.027	-0.066
Pb															-	0.107	0.057
Fe																-	-0.075
Cd																	-

MEANS AND STANDARD DEVIATIONS

DDH Samples

	Ni	Zn	Cu	C Org	S	Co	Ag	Mo	Ba	V	Se	As	P	Mn	Pb	Fe	Cd
Mean	115	329	61	2.67	1.47	10	0.1	40	1066	447	9.7	19.4	0.2	86	2	1.69	4.7
Std Dev	64	338	77	1.10	0.67	6	0.1	11	924	259	7.1	9.9	0.4	57	2	0.69	7.3
Max	313	1392	467	5.50	3.59	38	0.5	63	3802	1035	37.5	48.0	2.0	240	8	3.49	28.8
Min	9	4	11	0.57	0.50	5	0.1	19	290	102	3.4	9.6	0.0	16	1	0.83	0.1

NICK LITHOGEOCHEMICAL STATISTICS: Footwall Clay Shales (7A)

CORRELATION COEFFICIENT TABLE

(n=13)

NOTE: Significant inter-element correlations shaded in grey and arbitrarily defined as less than or equal to -0.700 or greater than or equal to +0.700

	Ni	Zn	Cu	C Org	S	Co	Ag	Mo	Ba	V	Se	As	P	Mn	Pb	Fe	Cd
Ni	-	-0.292	-0.230	0.739	0.614	0.097	0.082	0.806	-0.702	0.466	0.689	0.779	-0.494	-0.294	0.539	0.601	-0.571
Zn		-	0.211	-0.499	-0.814	-0.273	0.094	-0.367	0.760	-0.749	-0.546	-0.134	0.600	0.123	-0.492	-0.796	0.764
Cu			-	0.139	-0.379	-0.153	-0.227	-0.192	0.160	-0.105	-0.148	-0.022	0.101	-0.134	0.017	-0.381	-0.052
C Org				-	0.575	-0.121	-0.119	0.615	-0.625	0.807	0.809	0.615	-0.617	-0.606	0.771	0.507	-0.692
S					-	0.439	0.163	0.518	-0.845	0.755	0.597	0.396	-0.574	-0.002	0.584	0.980	-0.832
Co						-	-0.113	-0.078	-0.374	-0.090	-0.351	-0.210	0.261	0.828	-0.376	0.516	-0.412
Ag							-	0.038	-0.106	0.086	0.046	0.091	-0.495	-0.150	0.294	0.176	-0.074
Mo								-	-0.678	0.364	0.771	0.870	-0.513	-0.412	0.578	0.495	-0.499
Ba									-	-0.627	-0.632	-0.550	0.629	0.117	-0.564	-0.862	0.916
V										-	0.784	0.336	-0.717	-0.531	0.818	0.686	-0.734
Se											-	0.769	-0.670	-0.727	0.870	0.524	-0.603
As												-	-0.387	-0.470	0.687	0.343	-0.432
P													-	0.627	-0.782	0.542	0.557
Mn														-	-0.727	0.083	0.127
Pb															-	0.482	-0.582
Fe																-	-0.836
Cd																	-

MEANS AND STANDARD DEVIATIONS

	Ni	Zn	Cu	C Org	S	Co	Ag	Mo	Ba	V	Se	As	P	Mn	Pb	Fe	Cd
Mean	460	616	69	5.34	2.49	12	0.1	133	368	1832	29.4	56.5	0.1	88	7	2.22	4.6
Std Dev	161	216	20	1.05	0.48	3	0.1	59	68	442	8.3	23.8	0.0	74	3	0.33	4.4
Max	837	1062	110	7.12	3.33	21	0.3	273	573	2667	38.8	101.9	0.1	328	10	2.78	18.6
Min	125	44	41	3.05	1.28	8	0.1	39	299	916	13.0	17.7	0.0	49	2	1.37	0.1

NICK LITHOGEOCHEMICAL STATISTICS: Vaesite-Bearing Mineralization

CORRELATION COEFFICIENT TABLE

(n=18 for all elements except for: C Org and S n=5, Fe n=11, Ba n=17)

NOTE: Significant inter-element correlations shaded in grey and arbitrarily defined as less than or equal to -0.700 or greater than or equal to +0.700

	Ni	Zn	Cu	C Org	S	Co	Ag	Mo	Ba	V	Se	As	P	Mn	Pb	Fe	Cd
Ni	-	0.455	0.333	0.608	0.899	0.898	0.575	0.693	0.074	-0.501	-0.193	0.532	-0.327	0.424	0.700	0.868	0.236
Zn		-	0.610	-0.476	-0.443	0.495	0.493	0.550	-0.143	-0.059	-0.498	0.756	-0.232	0.751	0.575	-0.117	0.503
Cu			-	0.816	0.954	0.168	0.387	0.303	-0.153	-0.262	-0.264	0.535	-0.159	0.730	0.249	0.233	0.168
C Org				-	0.607	0.893	-0.483	0.441	0.746	-0.319	-0.757	0.692	-0.054	-0.742	0.794	0.468	-0.130
S					-	0.817	0.400	0.637	0.076	-0.895	0.052	0.241	-0.545	-0.378	0.952	0.978	-0.788
Co						-	0.433	0.645	0.268	-0.274	-0.412	0.649	-0.110	0.488	0.716	0.722	0.316
Ag							-	0.498	-0.214	-0.422	0.209	0.439	-0.416	0.544	0.570	0.558	0.261
Mo								-	-0.152	-0.333	-0.430	0.786	-0.538	0.527	0.656	0.447	0.283
Ba									-	0.162	-0.016	-0.159	0.349	-0.288	0.302	-0.034	0.463
V										-	-0.098	-0.117	0.740	-0.117	-0.292	-0.750	-0.062
Se											-	-0.707	0.071	-0.441	-0.392	0.223	-0.171
As												-	-0.371	0.781	0.658	0.057	0.257
P													-	-0.251	-0.280	-0.418	0.046
Mn														-	0.377	0.014	0.229
Pb															-	0.855	0.621
Fe																-	-0.259
Cd																	-

MEANS, STANDARD DEVIATIONS, MAXIMUM AND MINUMUM VALUES

	Ni	Zn	Cu	C Org	S	Co	Ag	Mo	Ba	V	Se	As	P	Mn	Pb	Fe	Cd
Mean	28371	6600	540	7.89	18.19	138	6.7	1963	91	383	156.5	2028.1	0.4	164	71	11.57	27.9
Std Dev	13262	4156	666	4.03	7.93	56	3.9	825	86	124	188.3	1089.1	0.9	81	35	4.21	23.8
Max	53676	15600	2530	14.19	24.82	258	12.3	3920	308	722	637.6	3930.0	4.1	320	174	19.95	54.5
Min	9401	1437	116	5.66	8.26	40	0.1	288	20	147	54.2	295.0	0.0	61	32	0.00	8.0

APPENDIX IV

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135°14'00"

135°10'00"

N7176000

E490000

E492000

DRY CREEK

WOLF CREEK

BEAR CREEK

WHITE CREEK

BLACK CREEK

MAWER CREEK

DESERT CREEK

DESERT FALLS

NICK CAMP

GEORGE SHOWING

DISCOVERY SHOWING

N55-1

VB 06694 (7Bb)

Ass=	7	Nis=	49
Bas=	494	Sa=	0.06
C Orgs=	0.58	Sea=	1
Mos=	16	Vs=	281
Zns=	74		
V/V+Ns=	0.933		
Ni/Ni+Zn=	0.365		
Fes=	0.63		

VB 06689 (7Bb)

Ass=	33	Nis=	59
Bas=	1248	Sa=	0.48
C Orgs=	2.54	Sea=	7
Mos=	48	Vs=	747
Zns=	67		
V/V+Ns=	0.906		
Ni/Ni+Zn=	0.404		
Fes=	4.64		

VB 06687 (7Bb)

Ass=	4	Nis=	57
Bas=	584	Sa=	0.10
C Orgs=	0.69	Sea=	3
Mos=	16	Vs=	191
Zns=	87		
V/V+Ns=	0.770		
Ni/Ni+Zn=	0.410		
Fes=	0.52		

VB 06686 (7Bb)

Ass=	14	Nis=	47
Bas=	1146	Sa=	0.63
C Orgs=	0.63	Sea=	5
Mos=	14	Vs=	258
Zns=	83		
V/V+Ns=	0.845		
Ni/Ni+Zn=	0.362		
Fes=	0.70		

VB 06695 (7Bb)

Ass=	7	Nis=	66
Bas=	518	Sa=	0.10
C Orgs=	0.54	Sea=	4
Mos=	19	Vs=	219
Zns=	62		
V/V+Ns=	0.761		
Ni/Ni+Zn=	0.516		
Fes=	0.64		

VB 06696 (7Bb)

Ass=	17	Nis=	63
Bas=	1214	Sa=	0.20
C Orgs=	3.32	Sea=	4
Mos=	31	Vs=	718
Zns=	83		
V/V+Ns=	0.919		
Ni/Ni+Zn=	0.426		
Fes=	8.04		

VB 06693 (7Bb)

Ass=	7	Nis=	432
Bas=	892	Sa=	0.05
C Orgs=	1.12	Sea=	1
Mos=	24	Vs=	441
Zns=	217		
V/V+Ns=	0.770		
Ni/Ni+Zn=	0.328		
Fes=	0.52		

VB 06692 (7Bb)

Ass=	4	Nis=	46
Bas=	624	Sa=	0.28
C Orgs=	0.80	Sea=	3
Mos=	29	Vs=	322
Zns=	75		
V/V+Ns=	0.870		
Ni/Ni+Zn=	0.434		
Fes=	0.72		

VB 06691 (7Bb)

Ass=	5	Nis=	47
Bas=	544	Sa=	0.08
C Orgs=	0.61	Sea=	2
Mos=	14	Vs=	312
Zns=	85		
V/V+Ns=	0.819		
Ni/Ni+Zn=	0.330		
Fes=	0.47		

STRATIGRAPHY

Upper Devonian to Mississippian
Upper Earn Group (A, B, C, L)

- 9 Undivided
- 9A Brown to buff weathering fissile, silt shale
- 9B Light brown to buff weathering fissile, silt shale
- 9C Light brown to buff weathering sandstone
- 9L Brown weathering (chert pebble) conglomerate — Conchoidally fractured siliceous concretions common. Thin (less than 15cm), orange weathering dolomitic algal beds occur about the middle of the member. Top not exposed in map area.

Middle to Upper Devonian
Lower Earn Group (Ach/Bca, Ibm, Ach, Bpy, cd, bn)

- ? Undivided
- 7B Unnamed Upper Member (py, bn, cd)
  — Black to silver-grey to blue-grey weathering, finely bedded, silty and siliceous, black pyritic shale. Phyllonitic zones bleaching on weathered surfaces. Two rusty red weathering, pyritic subunits occur near the top of this member.
- 7Bph Phosphatic Chert Member (ph, ch)
  — Black, highly resistant, cherty, thin bedded shale, often with a bone green to yellow surface precipitate. Top of unit is indistinct in outcrop and tentatively defined chemically on the basis of depressed concs. of P2O5. Base of member marked by the recessive, fissile, massive sulphide member.
- 7A Clay Shale Member
  — Black to brown weathering, soft to slightly siliceous, sooty to waxy shale
- 7Bm Limestone Bald Member
  — Black to grey weathering, cherty to siliceous shale shale containing thin beds (0.5-10cm) limestone buhls weather to light grey. Stacking on the enclosing matrix arrows around buhls.
- 7Bm Transition Member (Ib)
  — Highly resistant unit of medium grey to black weathering, interbedded black cherty shales and black felsic siliciclastic shales. Typified by upward increase in thickness of cherty shale beds accompanied by an upward increase in felsic, silty beds. Base of this unit was re-defined by the author as the first occurrence of finely laminated to thinly interbedded cherty and carbonaceous silty shales.

Ordovician to Silurian
Road River Group (Bca, ft)

- 5 Undivided
- 5B Medium to dark grey weathering, felsic, black calcareous and graptolitic silty shales. Bedding thickness decreases from base to top.

Cambrian to Ordovician
Unnamed Cambrian–Ordovician Carbonate Rocks (Dh)

- ? Undivided
- 3Bl Medium to light grey weathering calcareous to dolomitic, fossiliferous limestones and shales. Base not exposed in map area.

ROCK DESCRIPTIONS

- bs Barytic
- bl Limestone Bald Tan-Lines
- bn Banded
- br Burrowed
- bi Bituminous
- ca Calcareous
- cb Carbonaceous
- ch Chert (replacing pyrite)
- cl Clastic
- dz Dolomite
- brc Brecciated
- fr Fossiliferous (incl. graptolites)
- fp Felsic (metamorph.)
- ho Hydrothermal
- ph Phosphatic
- py Pyritic (diss. to banded)
- sh Siliceous (replacing pyrite)
- sm Siliceous Mudstone

BEDDING QUALIFIERS

- tl Thin Laminated (0.1mm to 1cm)
- vt Very Thinly Bedded (1cm to 3cm)
- m Thinly Bedded (3cm to 10cm)
- t Thickly Bedded (>10cm)

SYMBOLS

- Geological Contact (observed, inferred, assumed)
- Normal Fault (down-thrown block, observed, inferred, assumed)
- Thrust Fault (upper block, observed, inferred, assumed)
- Bedding Attitude (upright & overturned)
- Cleavage Attitude
- Fold Axis
- Anticline (upright, overturned)
- Syncline (upright, overturned)
- Mapped Outcrop
- V Volcanic Showing
- B Bitumen Showing
- Grid Tie Line (1988 or 1991)
- Old Tie Line (1980-1983)
- Rock Sample Location

WHOLE ROCK SAMPLES

VB — Sample #
As (ppm) Ni (ppm)
Ba (ppm) S (%) V/V+Ni (-)
Cu/Org (%) Se (ppm) Ni/Ni+Zn (-)
Mo (ppm) V (ppm) Fe (%)

DWG 155 Figure 7

FALCONBRIDGE LIMITED

NICK OPTION

Yukon Territory

COMPILATION MAP

Scale: 1:5000

093096

Drawn: DECEMBER '91	Project: Nick	Drawing No. Issue: 1A	

135°14'00"

135°0'00"

OLFERT CREEK

E490000

E492000

STRATIGRAPHY

Upper Devonian to Mississippian
Upper Earn Group (A, B, C, L)

- 9 Undivided
- 9B Brown to buff weathering fissile silt shale
- 9BF Light brown to buff weathering fissile silt shale
- 9C Light brown to buff weathering sandstone
- 9S Brown weathering (cream-pebble) conglomerate ±Conchoidally fractured siliceous concretions common. Tan (less than 1.5cm), orange weathering dolomitic shale beds occur about the middle of the member. Top not exposed in map area.

Middle to Upper Devonian
Lower Earn Group (Ach/Bca, Ibm, Ach, Bpy, cd, bn)

- 7 Undivided
- 7Bb *Unnamed Upper Member (py bn cd)* — Black to silver-grey to blue-grey weathering, thinly bedded, silty and siliceous, black pyritic shale. Rhythmic colour banding on weathered surfaces. Two rusty red weathering, pyritic subunits occur near the top of this member.
- 7PBC *Phosphatic Chert Member (ph ch)* — Black, highly resistant, cherty thin bedded shale, often with a lime green to yellow surface. Irregular top of unit is undulatory in outcrop and conformably defined chemically on the basis of decreased carbon or P2O5. Base of weather marked by the recessive, fissile, massive dolomite horizon.
- 7A *Clay Shale Member* — Black to brown weathering, soft to slightly siliceous, waxy to chip shale.
- 7MBC *Limestone Bulk Member* — Massive, grey weathering, clearly to siliceous black unnamed member with ≤ 40% limestone beds weather to light grey, thinning into the enclosing shales draped around bulk.
- 7BCC *Transition Member (tb)* — Variably resistant unit of medium grey to black weathering, interbedded fissile shales and dark brown, fetid, calcareous shales. Profound by-upward increase in thickness of cherty shale beds accompanied by an upward decrease in fetid, silty beds. Base of this unit was re-defined by the author as the last occurrence of finely laminated to finely interbedded cherty and calcareous, silty shales.

Ordovician to Silurian
Road River Group (Dca, ft)

- 5 Undivided
- 5B Medium to dark grey weathering, fetid, black, carbonaceous and graptolitic silty shales. Bedding thickness decreases from base to top.

Cambrian to Ordovician
Unnamed Cambrian–Ordovician Carbonate Rocks (Dlr)

- 3 Undivided
- 3C Medium to light grey weathering calcareous to dolomitic, fossiliferous limestones and shales (base not exposed in map area)

ROCK DESCRIPTIONS

- bg Biogrit
- bl Limestone Rock Textures
- bm Boundst
- bw Burrowed
- bx Brecciated
- cg Conglomerate
- cb Carbonaceous
- cd Disseminated fossil algae (replacing pyrite)
- ch Cherty
- ds Dolomitic
- fl Fossiliferous (mod. graptolites)
- fo Fetid (methanous)
- gr Graptolitic
- ph Phosphatic
- py Pyritic (blebs to bands)
- vb Vesicle Horizon

BEDDING QUALIFIERS

- la Laminated (0.1cm to 1cm)
- vt Very Thinly Bedded (1cm to 3cm)
- th Thinly Bedded (3cm to 30cm)
- tk Thickly Bedded (>30cm)

SYMBOLS

- Fault (exposed, concealed, interpreted, assumed)
- Normal Fault (down-thrown block(s) observed, inferred, assumed)
- Thrust Fault (upper block observed, inferred, assumed)
- Bedding Attitude (upright, overturned)
- Lineation Attitude
- Fold Axis
- Anticline (upright, overturned)
- Syncline (upright, overturned)
- Mapped Outcrop
- Volcanite Showing
- Bitumen Showing
- Road Traverse (1984 or 1991)
- Drill Hole (1980 - 1990)
- Rock Sample Location

WHOLE ROCK SAMPLES

VR — = Sample #
As (ppm) to (ppm) Zn (ppm)
Bo (ppm) ≥ (%) V/V+Ni (–)
LOI@ (%) Se (ppm) Ni/Ni+Zn (–)
Mo (ppm) = (ppm) Fe(%)

Figure 8 DWG 156

FALCONBRIDGE LIMITED

NICK OPTION
Yukon Territory
COMPILATION MAP

SCALE 1:5000

093096

DRAWN BY: TDB 12/11/14 | PROJECT NO: | DRAWING NO. SHEET 2A
DATE: SEPTEMBER 24

135°18'00"

NS6-4

N7178000

E486000

E488000

STRATIGRAPHY

Upper Devonian to Mississippian
Upper Earn Group (A, B, C, L)

- 9 Undivided
- 9A Brown to buff weathering fissile, silt shale
- 9B Light brown to buff weathering fissile, silt shale
- 9C Light brown to buff weathering sandstone
- 9L Brown weathering (rarely pastel) conglomerate – Crudely bedded, fractured and locally recrystallized, common thin (less than 15cm), orange weathering dolomitic shale beds occur about the middle of the member. Top not exposed in map area.

Middle to Upper Devonian
Lower Earn Group (Ach/Bca, Ibm, Ach, Bpy, cd, bn)

- ? Undivided
- 7B Brownish Upper Member (Bpy, bn, cd) – Black to brown-grey to blue-grey weathering, finely bedded, silty and sometimes pyritic shale. Rhythmic colour banding on weathered surfaces. Two rusty red weathering pyritic subunits occur near the top of the member.
- 7BPh Phosphatic Chert Member (Ph, Ch) – Black, highly resistant, cherty thin bedded shale, often with a lower green to yellow surface precipitate and a thin brown to orange clay derived weathering horizon. Less than 1m thick and occurs at 1/3 to 1/2 the distance from the base of the member. Base of member marked by the recessive to slightly recessive subjacent horizon.
- 7A Clay Shale Member – Black to brown weathering, soft to slightly resistant, thin bedded, locally silty shale.
- 6M Limestone Unit Member – Black to grey weathering, cherty to siliceous black shale containing 10% to 40% limestone both weather to light grey. Boudins in the enclosing matrix shapes around balls.
- 6Tm Transition Member (Th) – Variably dominant unit of medium grey to black weathering, interbedded black cherty shales and black, fetid, calcareous shales. Typified by rounded recessives in thickness of cherty shale beds accompanied by an upward increase in fetid, silty beds. Base of this unit was re-defined by the author as the first occurrence of finely laminated to thinly interbedded cherty and calcareous rich shales.

Ordovician to Silurian
Road River Group (Bca, fl)

- 5 Undivided
- 5B Medium to dark grey weathering, fetid, black calcareous and graptolitic silty shales. Bedding thickness decreases from base to top.

Cambrian to Ordovician
Unnamed Cambrian–Ordovician Carbonate Rocks (Dlr)

- D Undivided
- D3 Medium to light grey weathering carbonate to dolomite, fossiliferous limestones and shales. Base not exposed in map area.

ROCK DESCRIPTIONS

bd	Bioturbation	do	Dolomitic
bf	Limestone float textures	ecla	Brecciated
bn	Banded	fr	Fossiliferous (shell fragments)
br	Burrowed	fg	Fetid (hydrocarbons)
by	Bituminous	mn	Nodular
ca	Calcareous	ph	Phosphatic
cb	Carbonaceous	py	Pyritic (less to banded)
cd	Calcareous mixed water	vn	Weathering Veinlets
ch	Cherty		

BEDDING QUALIFIERS

lb	Laminated	(<1cm to 1cm)
vt	Very Thinly Bedded	(1cm to 3cm)
tb	Thinly Bedded	(3cm to 10cm)
tk	Thickly Bedded	(>10cm)

SYMBOLS

- Geological Contact (observed, inferred, assumed)
- Normal Fault (down-thrown block; observed, inferred, assumed)
- Bedding Attitude (upright, overturned)
- Cleavage Attitude
- Fold Axis
- Anticline (upright, overturned)
- Syncline (upright, overturned)
- Mapped Outcrop
- V Visible Showing
- B Bedrock Showing
- Hand Trench (1988 or 1991)
- Drill Hole (1988–1989)
- Rock Sample Location

WHOLE ROCK SAMPLES

XX	= Sample #		
Ag (ppm)	Mo (ppm)	Zn* (ppm)	
Au (ppm)	S (%)	V/V+Ni (-)	
Cr2O3 (%)	Sb (ppm)	Ni/Ni+Zn (-)	
Mn (ppm)	V (ppm)	Fe(%)	

XX000684 (7Bb)					
Ag=	6	Ni=	15	Zn=	64
Au=	.482	Sb=	0.04	V/V+Ni=	0.917
Cr2O3=	0.06	Sb=	2	Ni/Ni+Zn=	0.258
Mn=	18	V=	289	Fe=	0.35

Figure 9 DWG 159

FALCONBRIDGE LIMITED

NICK OPTION
Yukon Territory
COMPILATION MAP

SCALE 1:5000 093096

N.T.S. 106 G/11,14	PROJECT 1990	DRAWING NO. (Page) 3a
DATE DECEMBER/90		

LITTLE WIND RIVER

FLAT CREEK

SMALLSHING CREEK

VB 06615 (Tlb)
Asc 8 Nic 69 Zin 1008
Bas 638 Sn 0.20 V/V+Nic 0.918
C Org= 1.34 Scn 5 Ni/Ni+Zn= 0.059
Mic= 24 Vc= 776 Fe= 0.45

VB 06605 (Tlb)
Asc 10 Nic 30 Zin 76
Bas 442 Sn 0.08 V/V+Nic 0.832
C Org= 0.61 Scn 5 Ni/Ni+Zn= 0.197
Mic= 16 Vc= 247 Fe= 0.34

VB 06616 (Tlb)
Asc 7 Nic 45 Zin 75
Bas 1030 Sn 0.20 V/V+Nic 0.814
C Org= 0.81 Scn 5 Ni/Ni+Zn= 0.275
Mic= 13 Vc= 397 Fe= 0.43

VB 06617 (Tlb)
Asc 8 Nic 26 Zin 150
Bas 1215 Sn 0.12 V/V+Nic 0.856
C Org= 0.52 Scn 5 Ni/Ni+Zn= 0.148
Mic= 5 Vc= 154 Fe= 0.38

VB 06614 (Tlb)
Asc 10 Nic 56 Zin 91
Bas 1892 Sn 0.14 V/V+Nic 0.905
C Org= 2.12 Scn 5 Ni/Ni+Zn= 0.394
Mic= 24 Vc= 600 Fe= 0.66

VB 06710 (Tlb)
Asc 12 Nic 210 Zin 48
Bas 562 Sn 0.25 V/V+Nic 0.830
C Org= 0.62 Scn 5 Ni/Ni+Zn= 0.836
Mic= 19 Vc= 97 Fe= 0.55

VB 06703 (Tlb)
Asc 8 Nic 5 Zin 57
Bas 382 Sn 0.08 V/V+Nic 0.836
C Org= 0.57 Scn 5 Ni/Ni+Zn= 0.319
Mic= 10 Vc= 148 Fe= 0.36

VB 06660 (Tlb)
Asc 10 Nic 39 Zin 48
Bas 586 Sn 0.10 V/V+Nic 0.884
C Org= 0.70 Scn 5 Ni/Ni+Zn= 0.448
Mic= 20 Vc= 297 Fe= 0.51

VB 06691 (Tlb)
Asc 15 Nic 139 Zin 166
Bas 2248 Sn 0.20 V/V+Nic 0.859
C Org= 0.82 Scn 5 Ni/Ni+Zn= 0.456
Mic= 38 Vc= 728 Fe= 0.66

NSS-2

NSS-4

NSS-6

NFR-4-18

STRATIGRAPHY

Upper Devonian to Mississippian
Upper Earn Group (A, B, C,)

9 Undivided

9A Brown to buff weathering shale, silt shale

9B Light brown to buff weathering fissile, silt shale

9C Light brown to buff weathering sandstone

9L Brown weathering (chert pebble) conglomerate. Conchoidally fractured siliceous cobbles are common. Thin (sizes less 15cm) orange weathering dolomitic shale beds occur about the middle of the member. Top not exposed in map area.

Middle to Upper Devonian
Lower Earn Group (Ach/Bca, Bm, Ach, Bpy, ed, Bn)

7 Undivided

7B Clevmond Upper Member (py su, cd)
Shale to siltstone, grey to brown weathering, finely laminated with rare limestone nodules, minor pyritic shale, thinning, coarser banding as weathered surfaces. Two rusty red weathering pyritic zones occur near the top of this member.

7BP Phosphatic Chert Member (ph ch)
Black, highly resistant, cherty and bedded shale, often with a lime green to yellow surface precipitate. Top of unit is marked by an outcrop and sometimes subcrop of chert nodules and beds. Base of unit is a sharp, locally disconformable contact with the underlying massive sulphide horizon.

7A Clay Shale Member
Black to brown weathering, soft to slightly siliceous, silty to clay shale.

7BM Limestone Ball Member
Black to grey weathering, chalky to siliceous black shale containing 20% to 40% limestone balls weather to light grey. Bedding in the enclosing shale crosses around balls.

7B Limestone Member (lb)
Variably recessive and resistant grey to dark grey weathering, variably recrystallized and carbonaceous limestone, commonly cherty shales and beds. Rare, carbonaceous, medium grey to dark grey weathering shale beds. Limestone beds commonly appear as tabular to lenticular beds which may pinch and swell. Base of the member is taken as the first occurrence of finely laminated to thinly interbedded cherty limestones, with shales.

Ordovician to Silurian
Road River Group (Rcs, rt)

9 Undivided

9A Medium to dark grey weathering, rarely black, fissile, carbonaceous and graptolitic silty shales. Bedding thickness decreases from base to top.

Cambrian to Ordovician
Unnamed Cambrian–Ordovician Carbonate Rocks (Oh)

3 Undivided

3G Medium to light grey weathering calcareous to dolomitic, locally fossiliferous and shales. Base not explored in map area.

ROCK DESCRIPTIONS

ss Sandstone
sl Limestone, Silt Textured
sh Shale
cg Conglomerate
ch Chert
bx Breccia
ls Limestone
do Dolomite
bx Breccias
fg Fragmental (mm grained/coarse)
ig Felsic Intrusive(s)
mi Mafic Intrusive(s)
ph Phosphatic
br Barite (Mass, to stringer)
vt Volcanic Horizon

BEDDING QUALIFIERS

Th Laminated (0-1cm to 1cm)
Vt Very Thinly Bedded (1cm to 3cm)
Th Thinly Bedded (3cm to 10cm)
B Thickly Bedded (>30cm)

SYMBOLS

Geological Contact (observed, inferred, assumed)
Normal Fault (Upper block, observed, inferred, assumed)
Thrust Fault (Upper block, observed, inferred, assumed)
Bedding Attitude (upright, overturned)
Cleavage Attitude
Fold Axis
Anticline (upright, overturned)
Syncline (upright, overturned)
Mapped Outcrop
Vanadium Showing
Bitumen Showing
Island Premise (1989 to 1991)
Drill Hole (1985–1989)
Rock Sample Location

WHOLE ROCK SAMPLES

Ni (ppm) Ni (ppm) Zn (ppm)
Ba (ppm) Sr (%) V/V+Ni (-)
Org (%) Sn (ppm) Ni/Ni+Zn (-)
Mo (ppm) V (ppm) Fe (%)

Figure 10 DWG 158

FALCONBRIDGE LIMITED

NICK OPTION
Yukon Territory
COMPILATION MAP

SCALE 1:5000 093096

DATE: DECEMBER/82 DRAWING NO. SHEET 4A

FALCONBRIDGE LIMITED

NICK OPTION

Yukon Territory

COMPILATION MAP

SCALE 1:5000

093096

Figure 11

Dwg 159

CANYON CREEK

CARIBOO CREEK

SHEET 6A NICK

135°22'00"

N7184000

E480000

E482000

E484000

STRATIGRAPHY

Upper Devonian to Mississippian
Upper Earn Group (A, B, C, L)

- Undivided
- Brown to buff weathering friable silt shale.
- Light brown to buff weathering fissile, silt shale.
- Light brown to buff weathering sandstone.
- Brown weathering (chert pebble) conglomerate. Concordantly fractured siliceous (sandstone) cuttings. Thin (less than 10cm), orange weathering, dirty/silty shale beds occur (about the middle of the member, top not exposed in map area).

Middle to Upper Devonian
Lower Earn Group (Ach/Bca, Bm, Ach, Bpy, cd, bn)

- Undivided.
- *Dimmitated Upper Member (py, bn, rd)* — Black to fine-grey to blue-grey weathering, thinly bedded, silty, and siliceous, black pyritic shale. Rhythmic colour banding on weathered surfaces. Ten rusty red weathering, pelitic subunits occur near the top of the member.
- *Phosphatic Chert Member (ph, ch)* — Black, thinly laminated, cherty (thin sectioned shale-chert) unit. Forms prominent surface precipitate (on pit walls) & smooth, siliceous and unjointed talus on slopes. Base of member marked by the recessive weathering, bedded, sulphide-bearing shale.
- *Clay Shale Member* — Black, fissile, recessive-weathering, locally to slightly siliceous, silty to clay shale.
- *Limestone Bull Member* — Black to grey weathering, clayey to siliceous, black shale containing 30% to 40% limestone beds weather to light grey. Bedding is the excellently visible, dipping, around bank.
- *Prevostian Member (rk)* — Variously recessive unit of medium grey to black weathering, intermediate beds clayey shales and black, fissile, calcareous shales. Typified by upward increase in thickness of clayey shale beds accompanied by an upward decrease in fetid, silty beds. Base of this unit was re-defined by the author on the first occurrence of finely laminated to finely interbedded chert and calcareous, silty shales.

Ordovician to Silurian
Road River Group (Obca, rr)

- Undivided.
- Medium to dark grey weathering, fetid, black calcareous and graptolitic silty shales. Bedding thickness decrease from base to top.

Cambrian to Ordovician
Unnamed Cambrian-Ordovician Carbonate Rocks (Cm)

- Undivided.
- Medium to light grey weathering calcareous to dolomitic, fossiliferous limestones and silstein. Base not exposed in map area.

ROCK DESCRIPTIONS

ba	Barytic	do	Dolomitic
bl	Limestone Ball Textures	fm	Brecciated
bn	Banded	fs	Fossiliferous (incl. graptolites)
br	Burrowed	n	Fetid (methanous)
bu	Bituminous	no	Nodular
cc	Concretions	ph	Phosphatic
cb	Carbonaceous	py	Pyritic (blue to banded)
cd	Cloisteroid, filled rings (replacing pyrite)	vn	Veined, massive sulphides
ch	Cherty		

BEDDING QUALIFIERS

vt	Very Thinly Laminated	(10mm to 1cm)	
vt	Very Thinly Bedded	(1cm to 3cm)	
tb	Thinly Bedded	(3cm to 30cm)	
tb	Thickly Bedded	(+30cm)	

SYMBOLS

- Geological Contact (observed, inferred, assumed)
- Normal Fault (observed, inferred, assumed)
- Thrust Fault, observed, inferred, assumed)
- Overturned Anticline (observed, inferred)
- Overturned Syncline (observed, inferred)
- Bedding Attitude
- Cleavage Attitude
- Fold Axis
- Anticline (observed, inferred)
- Syncline (observed, inferred)
- Horizontal Outcrop
- Vertical Showing
- Trench Showing
- Drill Hole Trench (1968 or 1969)
- Drill Hole (1968-1969)
- Rock Exposure Locality

WHOLE ROCK SAMPLES

Pb ... = Sample #
As (ppb) Ni (ppm) Zn (ppm)
Ba (ppm) Fe (%) V/V+Ni (-)
Cmax (%) Sr (ppm) Ni/Ni+Zn (-)
Mo (ppm) Cu (ppm) Fe/Ni

Figure 12

DWG 160

FALCONBRIDGE LIMITED

NICK OPTION
Yukon Territory
COMPILATION MAP

SCALE 1:5000

093096

DRAWN BY OUTLINE | PROJECT NO. | DRAWING NO. SHEET 6A

DATE DECEMBER/82

SHEET 7A

SHEET 7 NW2

136°30'00"

135°26'00"

N7184000

N7182000

E475000

E472000

+1078.6

+1046.8

+1083.1

+1214.8

+1206.9

+1635.1

1300

1250

1200

1150

1100

1050

1000

950

900

1100

1150

1200

1250

1300

1350

1400

1450

1500

1550

1600

1650

1700

1750

1800

1850

1900

1950

2000

2050

2100

2150

2200

2250

2300

2350

2400

2450

2500

2550

2600

2650

2700

2750

2800

2850

2900

2950

3000

3050

135°18'00"

135°14'00"

135°10'00"

N7182000

N7180000

N7178000

E486000

E488000

E490000

E492000

64°46'00"

64°44'00"

LITTLE WIND RIVER

FLAT CREEK

WHITE CREEK

DESCHAMPS CREEK

OAK CREEK

BACK CREEK

Limestone Ball Member/Phosphate chert Member Contact (Vaesite Horizon)

Fault (symbol on down-thrown block)

Thrust Fault (sawtooth on upper block)

Figure 17

DWG 162

FALCONBRIDGE LIMITED

NICK OPTION

Yukon Territory

1992 Geophysical Survey Grid

Location Map

SCALE 1:10000

093096

DATE: DECEMBER/92

Figure 18 DWG 163

FALCONBRIDGE LIMITED

NICK OPTION

Yukon Territory

Contoured Fraser VLF Data

(WEST HALF)

SCALE 1:5000

093096

CLIENT: FB SYSTEM | PROJECT: 1200 | DRAWING NO. SHEET

DATE: DECEMBER/92

Figure 19 DWG 164

FALCONBRIDGE LIMITED

NICK OPTION

Yukon Territory

Contoured Fraser VLF Data

(EAST HALF)

SCALE 1:5000

093096

N.T.S. 106 D/11,14 | PROJECT 1203 | DRAWING NO. SHEET

DATE DECEMBER/92