## GEOLOGICAL BRANCH ASSESSMENT REPORT

# 13,276

10/85

REPORT ON THE D1, D3, D4, D6, D8, D9 MINERAL CLAIMS

Located in the McBride River Area
Liard Mining Division
NTS 104-I-3E
British Columbia

at
58°10' N Latitude
129°07' W Longitude

for ORSINA RESOURCES LTD.

by

D.A. Yeager, Geologist
C.K. Ikona, P.Eng.

January, 1985

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#### 1.0 INTRODUCTION

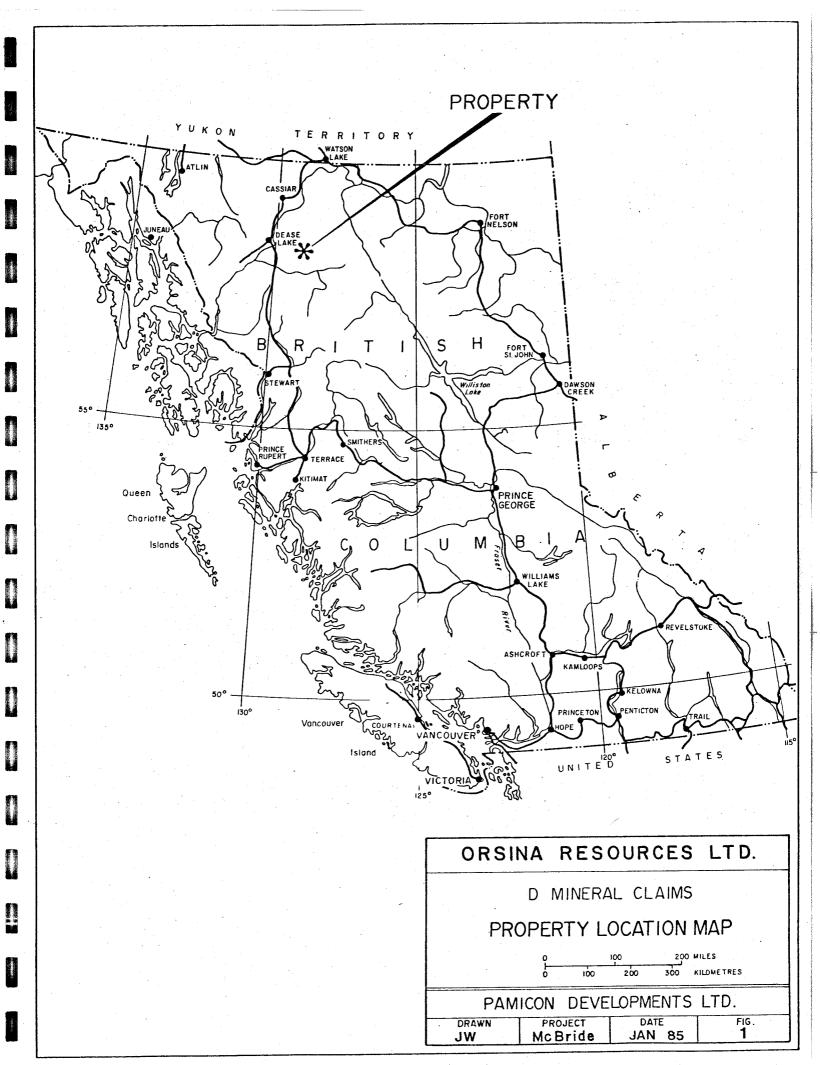
The D1-D13 mineral claims (236 units) were staked during the 1981 field season to cover a visible gold and silver showing as well as a large surrounding area having geological and geochemical characteristics indicative of similar precious metal occurrences. The key discoveries were made during a regional exploration program carried out by Pamicon Developments Ltd. of Vancouver for CHOA Joint Venture which operated under the management of Alex Burton, P.Eng. The joint venture consisted of the following companies:

Anglo Canadian Mining Corporation Chatwood Resources Ltd. Consolidated Montclerg Mines Ltd. Five M Resources Ltd. Granada Exploration Corp. Nuspar Resources Ltd.

The 1981 program on the D1 claim consisted of assay sampling and minor trenching of the discovery showing and an initial survey of the surrounding geochemistry (October 1982 Assessment Report).

The 1982 program was carried out by Pamicon Developments Ltd. under the field supervision of Alex Burton, P.Eng. during the month of September. The program consisted of a) hand trenching on the discovery showing to expose the mineralized fissure along strike; b) reconnaissance geologic mapping of the northern part of the claim group; c) study of the stream sediment geochemistry of the northern part of the claim group (January 1983 Assessment Report).

For the purposes of the 1982 and 1983 programs, a fly camp was established on the D1 claim and work was carried out on foot from there.



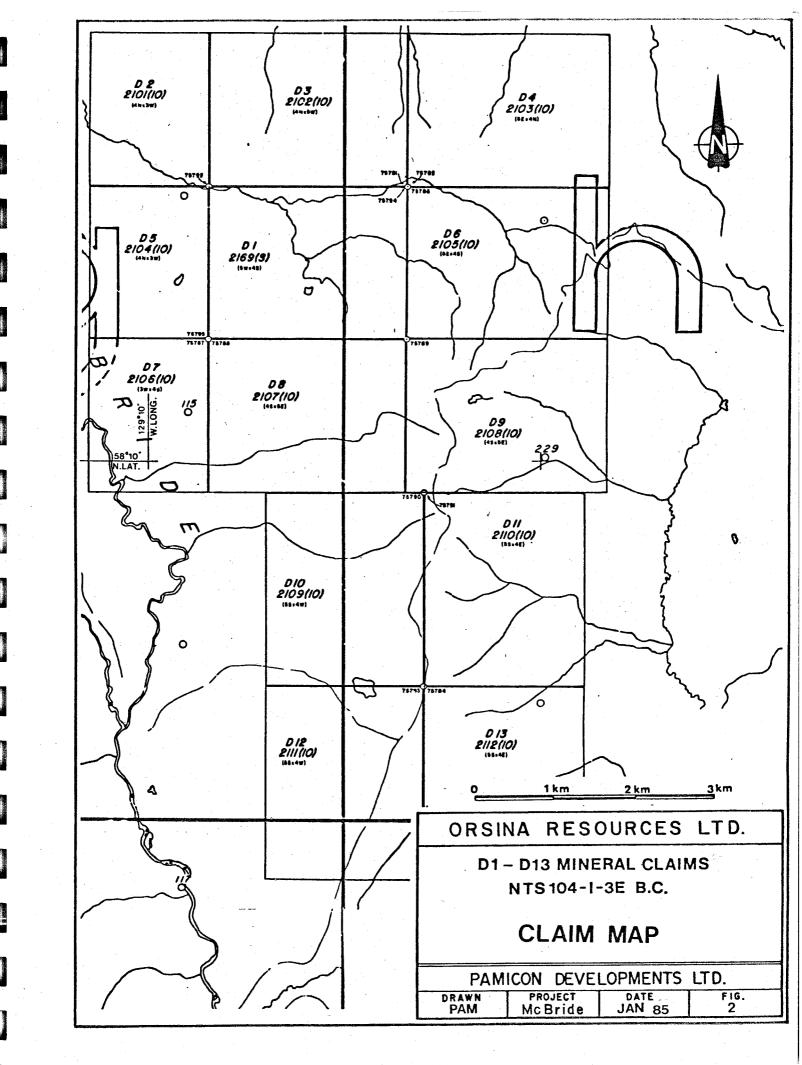
The 1983 program was carried out by Pamicon Developments Ltd. under the field supervision of David Yeager during the month of September. The work consisted of a) hand trenching on showings discovered in 1982; b) detailed grid prospecting and rock chip sampling around the discovery showing; c) grid soil sampling to determine the applicability of the technique to the property.

The 1984 program consisted of the preparation of an orthophoto mosaic with superimposed topographic contours. This was felt necessary as prospecting and geologic mapping on the property have been hampered in the past by the lack of adequate base maps. All available information from past work was plotted on the new base maps and this compilation and other interpretive material are presented in this report at the new unified scale of 1:5,000.

#### 2.0 LIST OF CLAIMS

Certain of the original claims (D2, D5, D7, D10, D11, D12, D13) have been allowed to lapse as the geologic interpretation based on the orthophoto study indicates that the geologic structures hosting the known mineralization on the property do not occur on the claims dropped.

Examination of mineral titles registered with the British Columbia Department of Mines and Petroleum Resources indicates the claims are held by Pamicon Developments Ltd. Separate documents examined indicate that Pamicon is holding the claims in trust for CHOA Resources Ltd. and that Orsina Resources has optioned the property from CHOA. The following table summarizes the pertinent claim data.



Claim Name	Record No.	Record Date	No. of Units	Tag Number
<b>D1</b>	2169	August 10/81	20	75794
D3	2102	October 9/81	20	75781
D4	2103	October 9/81	20	75782
D6	2105	October 9/81	20	75786
D8	2107	October 9/81	20	75788
D9	2108	October 9/81	20	75789

Claim posts examined in the field indicate that the claim was staked in accordance with the requirements of the B.C. Mineral Act.

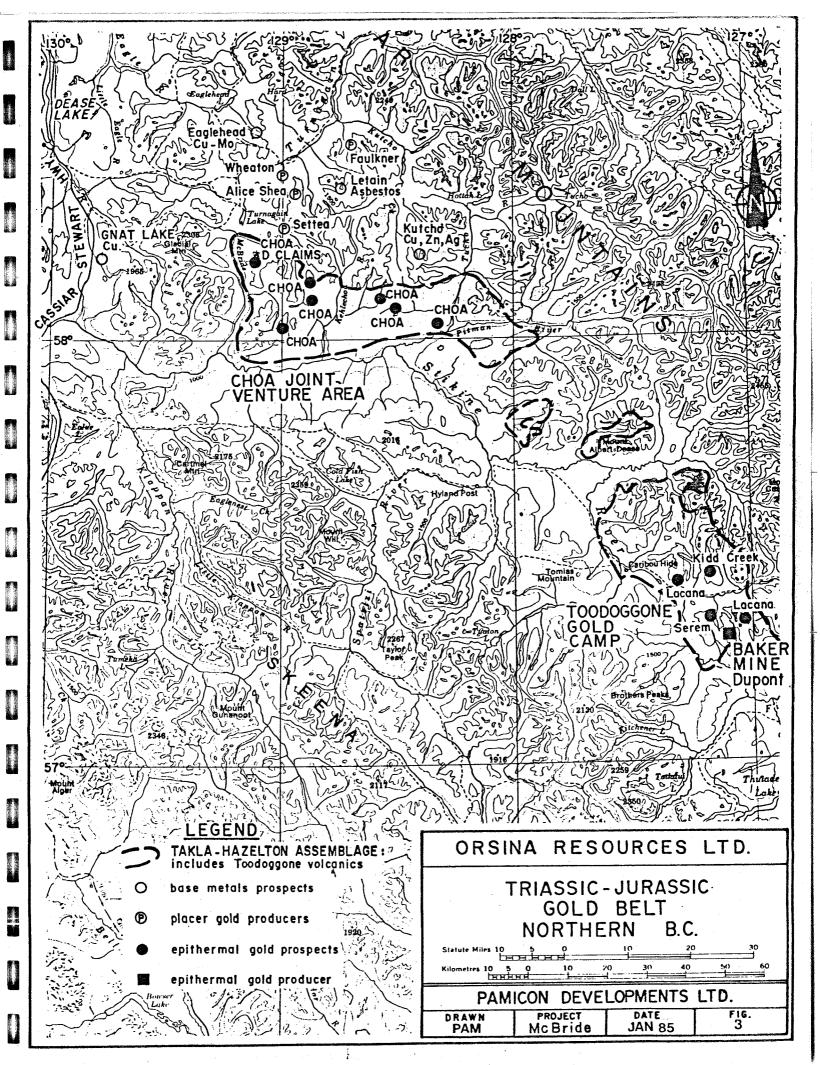
#### 3.0 LOCATION, ACCESS AND GEOGRAPHY

The claims lie on NTS sheet 104-I-3E at approximately 58°10° No latitude, 129°07° W longitude.

The property is 60 kilometres southeast of the community of Dease Lake, B.C. and approximately 40 kilometres east of the Cassiar-Stewart Highway.

Access to the property is by fixed wing to Turnagain Lake located 7 kilometres to the north, thence by foot or helicopter to the claims. There is also an all season cat road (Dease Lake - Kutcho air strip) passing within 20 kilometres to the north with a spur road to the Settea Creek placer operations located 6 kilometres to the northeast.

The claims are underlain by a small mountain range 3,500 feet A.S.L. in elevation at the base to 6,253 feet A.S.L. at the highest point. The northern half of the range is comprised of an upland plateau ranging from 5,000 feet to 5,500 feet A.S.L. Relief in the mountainous southern part of the property is moderate to precipitous whereas the northern plateau portion is

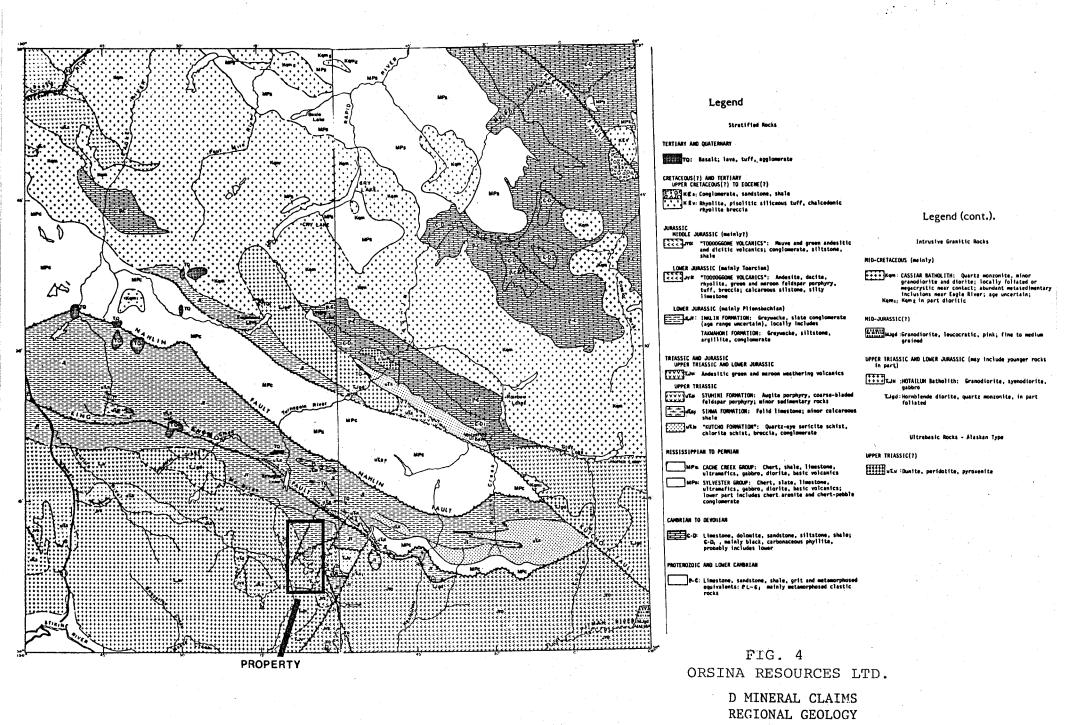


quite gentle. The higher elevations of the property are above tree line and vegetation consists primarily of dwarf balsam, dwarf alder, grasses, lichen and mosses; the lower forest cover consists primarily of spruce, balsam and poplar. Water is plentiful in the streams draining the range and on the northern plateau, the highest dependable water supply being generally at the 5,500 foot level. The claims are in the Stikine River drainage basin (Pacific).

#### 4.0 HISTORY OF REGIONAL ECONOMIC GEOLOGY

The first mining activity of note in the area took place on tributaries of the Turnagain River where placer gold was discovered in the 1930's on Wheaton (Boulder) Creek and its tributary Alice Shea Creek, as well as on Faulkner Creek (Figure 3). These creeks have been economically worked intermittently from discovery to present. Other creeks in the Wolverine and Letaine lakes area have been worked for placer jade. More recently placer gold mining has been conducted on Settea Creek.

In the early 1950's investigations began on the asbestos occurrences in the Letaine Lake area; the ground now being held by Cassiar Asbestos Corporation. During the 1960's porphyry Cu-Mo occurrences were discovered east of Eaglehead Lake and are currently being developed jointly by Esso Resources and Nuspar Resources. In 1972 the Kutcho Creek volcanogenic massive sulphide Cu-Zn-Ag deposit was discovered by Esso Resources and Sumac Mines Ltd. Exploration at Kutcho Creek has continued and Sumac initiated underground work during the 1982 field season. The construction of the Kutcho Creek Airstrip in 1975 made it possible to fly jade out of deposits located to the west of the strip being quarried by Jadex Mines Ltd.



after Gabrielse, 1978

#### 5.0 REGIONAL GEOLOGY

The geology of the Cry Lake sheet was revised by the G.S.C. in 1978 and is now available as Paper 78-1A. A portion of this map is presented in Figure 4 of this report.

The area of interest lies within a discontinuous succession of strata bounded by the northwesterly trending King Salmon Thrust Fault to the north and northeast; and by the Triassic-Jurassic granodiorites of the Hotailuh batholith to the west and southwest. The King Salmon assemblage, forming the upper plate of the King Salmon Thrust, ranges from the Mississippian/Permian Cache Creek Group to the lower Jurassic Inklin Formation.

In the area of interest, between the above two geologic boundaries, is contained a succession of volcanic and sedimentary island-arc environment rocks ranging in age from upper Triassic Sinwa Formation to middle Jurassic Hazelton group (in part "Toodoggone Volcanics"). The trend of these beds is generally northwesterly (parallel to King Salmon Thrust) but dips vary from southwesterly to northeasterly depending on local deformation. Deformation is thought to be related to the King Salmon Thrust.

#### 6.0 PROPERTY GEOLOGY

#### 6.1 Introduction

Reconnaissance geologic mapping was carried out in 1982 over the northern portion of the claims. As outcrop is very sparse on the claims (less than 5%) mapping consisted mainly of a time consuming search for outcrop. Dips and strikes were often impossible to obtain due to the weathered nature of outcrops.

#### 6.2 Lithology and Stratigraphy

The western portion of the property is underlain by massive andesite flows and pyroclastics that appear to correlate with upper Triassic to lower Jurassic Telkwa formation volcanics. These are overlain to the east by waterlain tuffs and shales of the lower Jurassic Takwahoni facies. To the south lie waterlain tuffs and fine grained sediments with some limestone members that correlate with lower Jurassic Toodoggone Volcanics."

Bedding attitudes generally dip moderately to the north and east.

#### 6.3 Mineralization

#### 6.3.1 Discovery Showing (D1 Claim)

The discovery showing was found during the 1981 field season and consists of a mineralized fissure containing gold and silver in a quartz-calcite gangue. Galena, sphalerite, arsenopyrite and chalcopyrite are also present. The 1981 trenching program exposed 4.0 metres of mineralization along strike. Thirteen channel samples were taken across the mineralized fissure: the best two samples containing 32.40 oz/T Ag and 4.705 oz/T Au across 10 cm and 17.20 oz/T Ag and 3.380 oz/T Au across 25 cm.

The mineralized fissure is somewhat anastamosing in nature but generally dips near vertically and strikes 040°.

#### 6.3.2 "B" Showing (D8 Claim)

The mineralized fissure on the D8 claim was found during the 1982 program when mineralized float specimens were found to contain .325 oz/T gold and 3.81 oz/T silver. Eight hand trenches were excavated along the strike of the showing in 1983. The trenching exposed the mineralized

fissure for a strike length of ninety-five metres. The fissure is filled with white quartz vein material ranging in width from 0.1 metres to 0.3 metres and containing visible sulphides consisting of pyrite, chalcopyrite, galena and sphalerite. Five assay samples from vein material contained gold values ranging from .088 oz/T to .250 oz/T. Overburden depths ranged from 1.0 metres to 2.0 metres.

#### 6.3.3 "C" Showing (D4 Claim)

The mineralized fissure on the D4 claim was found during the 1982 program when a vein exposed in a stream bed was found to contain .024 oz/T gold and .19 oz/T silver. A twenty-seven metre long hand trench was excavated adjacent to the stream in 1983. Overburden depths ranged from 0.5 metres to 2.0 metres.

Three mineralized fissure veins were exposed by the trenching which consist of 1 cm to 5 cm grey quartz veins in shear zones up to 0.5 metres wide. The quartz veins contain galena and sphalerite and gold values ranging from .024 to .026 oz/T. A six metre chip sample of tuffs and black shale host rock contained .016 oz/T gold.

#### 7.0 ORTHOPHOTO STUDY

#### 7.1 Orthophoto Compilation

Triathlon Mapping Corporation of Burnaby, B.C. was contracted to produce the contoured orthophoto map. British Columbia Government 6 inch focal length photography exposed from 20,000 feet (6100 metres) above sea level on July 30 and July 31, 1971 was used on this project. Control was derived from the 1:250,000 map sheet for the area as there

is no 1:50,000 existing. An aerotriangulation program was carried out on the B.C. Government photo to obtain the best mean fit to the 1:250,000 map.

An orthophoto with 10 metre elevation contours of the entire area was provided at a scale of 1:5,000. The following products were supplied by Triathlon: a) one KRC print of each sheet with contours superimposed; b) one matte film positive of each sheet with contours superimposed; c) one acetate film positive of each sheet showing contours only.

A screen print was made of the matte film positive of each sheet (semi-tone screen, 85% intensity, fine spacing) in order that the data compilation could be drafted on and inexpensive blackline dry prints made showing the data compilation in contrasting solid form.

#### 7.2 Data Compilation

All the previous information on the property was compiled and transferred to working sheets at the unified 1:5,000 scale. The following data were plotted on the compilation:

- a) claim boundaries and LCP locations
- b) picket grid lines
- c) location of all showings and trenches
- d) geologic contacts
- e) portions of streams containing anomalous levels of gold and/or silver in sediments
- f) air photo linears

- g) locations of rock chip samples containing anomalous levels of gold and/or silver
- h) latitude and longitude markers

All the above data were derived from information contained in previous assessment reports on the property with the exception of the air photo linears. The large scale orthophoto mosaic made recognition and plotting of the linears much easier and a large number of linears were identified. Of these, three specific groups were identified: therly group ranging in azimuth from 350° to 008° averaging 001°, a northeasterly group ranging in azimuth from 025° to 042° and averaging 033°, and a southeasterly group ranging in azimuth from 125° to 165° and averaging The discovery showing and the "B" showing fissure systems both lie in shear zones parallel to the northeasterly group of linears. This northeasterly group of linears is the most abundant of the linears and in the southwest quandrant of the D1 claims; discovery showing area, the greatest concentration of these northeast linears occurs.

The majority of the air photo linears are presumed to be reflections of underlying passive fracture systems rather than large displacement faults as there was little or no displacement noted at the intersections of air photo linears. Plotting of the geologic contacts was made much easier by the use of the large scale orthophotos and much more accurate interpretations of where the contacts lay in overburden covered areas were made possible. A number of the interpreted contact locations were changed significantly by the use of the orthophoto. All of the mineralized showings discovered to date occur in host rocks assigned to map unit 3 consisting of interbedded waterlain tuffs and black shales with a basal section of poorly sorted sediments. Although a number of anomalous rock chip samples

were taken in areas underlain by map unit 2, unit 3 appears to be the best target unit for ongoing exploration.

As with any airborne remote sensing technique which, in reality, an air photo linear study is, ground confirmation and follow-up is an important stage that must be carried out. This follow-up can be carried out as part of the ongoing exploration on the property and should consist of prospecting and geologic mapping along the linears using the orthophoto for control.

#### 8.0 RECOMMENDATIONS

- 1. The program of grid controlled detailed prospecting and rock chip sampling should be carried on and expanded to include the entire area between the Discovery "B" Vein area and the "C" Vein area.
- 2. Geologic mapping should proceed along with the prospecting and sampling.
- 3. Any mineralized showings discovered in 1. and 2. should be exposed by trenching; and drilling and blasting should be carried out prior to their assay sampling.
- 4. The discovery showing should be drilled and blasted and re-sampled and trenching carried on to the southwest.
- 5. The mineralized float occurrences discovered by the 1983 program should be trenched then drilled and blasted on a staged priority basis.

CHARLES K. IKONA Respectfully submitted,

David A. Yeager, Geologist

Charles K. Tkona, P.Eng.

Pamicon Developments Ltd.

#### LIST OF REFERENCES

- Gabrielse, H. et al. 1977. Open File 610, Geology of Cry Lake (104-I) Map Area.
- Gabrielse, H. 1978. Operation Dease. Current Research, Part A, Geol. Surv. Can., Paper 78-1A, pp. 1-4.
- Tipper, H.W. and Richards, T.A. 1976. Jurassic stratigraphy and history of north-central British Columbia; Geol. Surv. Can., Bull. 270.
- Tipper, H.W. 1978. Jurassic biostratigraphy, Cry Lake map-area, British Columbia; Current Research, Part A, Geol. Surv. Can., Paper 78-1A, pp. 25-27.
- Yeager, D.A. and Ikona, C.K. 1982. Report on the D1 Mineral Claim.
- Yeager, D.A. and Ikona, C.K. 1983. Report on the D1-D13 Mineral Claims.
- Yeager, D.A. and Ikona, C.K. 1984. Report on the D1-D13 Mineral Claims.

### STATEMENT OF COSTS "D" GROUP

Airphoto Interpretation		
D1, D3, D4, D6, D8, D9		
August 1, 1984 - October	5,	1984

August 1, 1984 - October 5, 198	<b>4</b>	
WAGES		
D. Yeager (Geologist) 215, 543 Granville Street Vancouver, B.C. V6C 1X8 7 days @ \$250/day		\$ 1,750.00
Steve Toderick (Geologist) 215, 543 Granville Street Vancouver, B.C. V6C 1X8 10 days @ \$200/day		2,000.00
C.K. Ikona (P.Eng.) 215, 543 Granville Street Vancouver, B.C. V6C 1X8 1 day @ \$300/day		300.00
D. Fulcher (Prospector) 215, 543 Granville Street Vancouver, B.C. V6C 1X8 2 days @ \$150/day		300.00
DRAFTING		
18.5 hours @ \$20/hour		370.00

#### REPRODUCTIONS

Contoured Orthophoto

(Triathlon Mapping Corp.)

Map Reproductions (Superior Reproductions)	75.00			
Report, Typing, Photocopies, etc.	500.00	8,075.00		
SUB TOTAL		\$12,795.00		
MANAGEMENT FEE (15%)		1,919.25		

\$ 7,500.00

Pamicon Developments Ltd.

\$14,714.25

#### CERTIFICATE OF QUALIFICATIONS

- I, DAVID A. YEAGER, of Bowen Bay Road, Bowen Island, in the Province of British Columbia, DO HEREBY CERTIFY THAT:
- 1. I am a Geologist in the employ of Pamicon Developments Ltd. with offices at 215, 543 Granville Street, Vancouver, British Columbia.
- 2. I am a graduate of the University of British Columbia with a Bachelor of Science Degree in Geology.
- 3. My primary employment since 1969 has been in the field of mineral exploration, mainly as a Field and Project Geologist.
- 4. My experience has encompassed a wide range of geologic environments and has allowed considerable familiarization with prospecting, geophysical, geochemical and exploration drilling techniques.
- 5. This report is based on data generated by work supervised by me on the D mineral claims during the years 1981 1984.

DATED	at	Vancouver,	British	Columbia,	this	16	da	у о	f
		Jonesony		, 19	85.				

David A. Yeager, Geologist

#### ENGINEER'S CERTIFICATE

I, CHARLES K. IKONA, of 5 Cowley Court, Port Moody, in the Province of British Columbia, DO HEREBY CERTIFY THAT:

- 1. I am a Consulting Mining Engineer with offices at 215, 543 Granville Street, Vancouver, British Columbia.
- 2. I am a graduate of the University of British Columbia with a degree in Mining Engineering.
- I am a member in good standing of the Association of Profes-3. sional Engineers of the Province of British Columbia.
- 4. I examined the property reported on herein on July 14, 1981. The field work was conducted by David A. Yeager, a Geologist whom I have known and worked with for a number of years and in whom I have every confidence.

						th.		
DATED	at	Vancouver,	British	Columbia,	this	16	day	of

Jan

Charles K. Ikona, P.Eng.

Pamicon Developments Ltd. ..



Index Scale 1:125,000

Waterlain tuffs, block shales, poorly sorted sediments.

Massive flows.

Interbedded pyroclastics and flows.

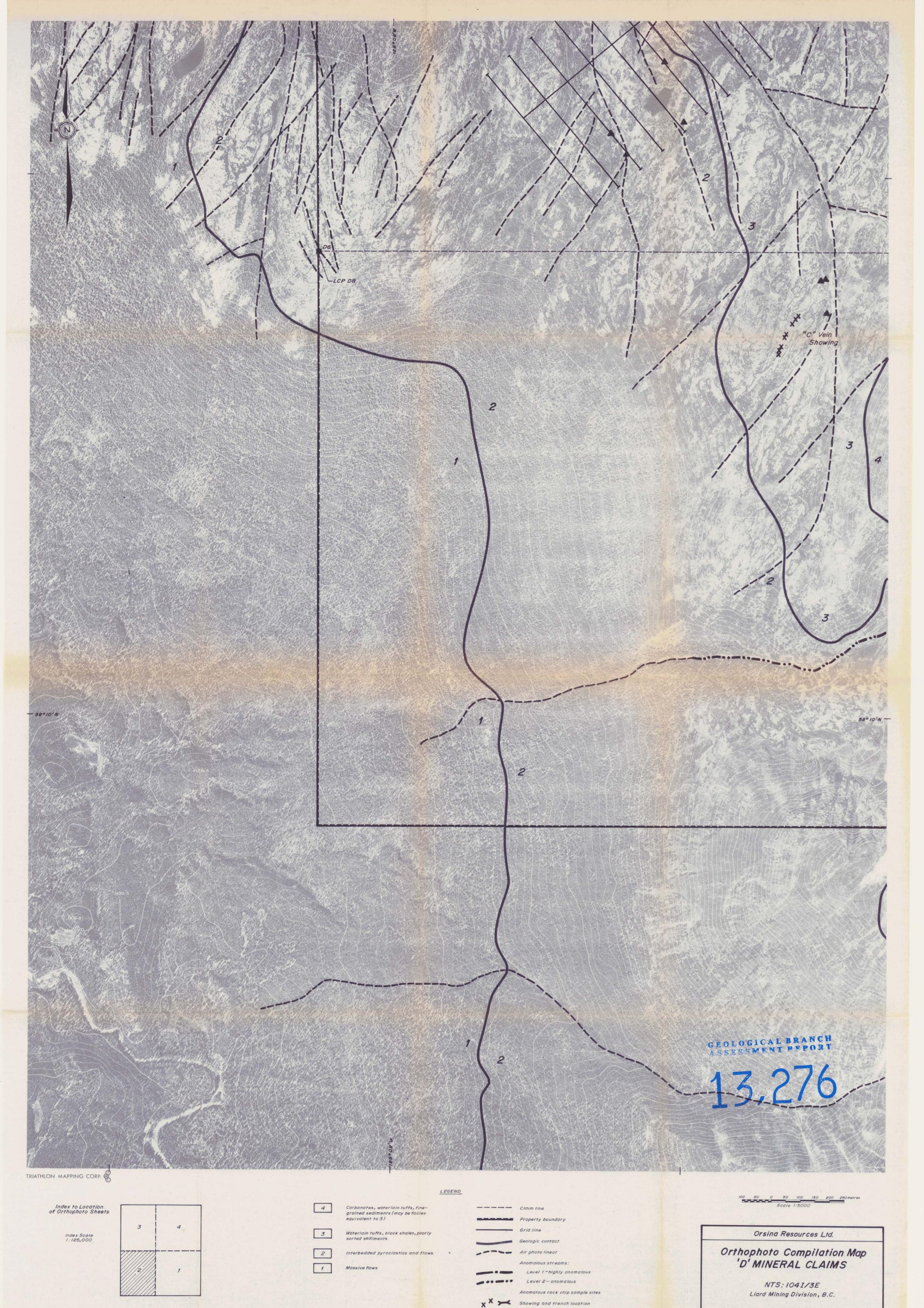
Geologic contact ---- Air photo linear Anomalous streams: Level 1 - highly anomalous Level 2- anomalous Anomalous rock chip sample Showing and trench locations

Orsina Resources Ltd.

Orthophoto Compilation Map
'D' MINERAL CLAIMS

NTS: 1041/3E Liard Mining Division, B.C.

Pamicon Developments Ltd.



Project Date Jan., 1985 Figure 5B



