Rec. July 3/84

EXPLORATION PROPOSAL for CUSH PROPERTY

British Columbia, Map 93H
(lat. 53° 32', long. 120° 10')

J.R. Woodcock, P. Eng. March 8, 1984

FILE: 93H/108
Cush Project

31/ July 84
93H 8, 9
Vancouver.

To R.A.D.
From A.D.C.
Re Cush. property
Submitted by J.R. Woodcock to R.A.D.

I reviewed Woodcock's report and agree with his conclusion that the stream silts are very anomalous in Pb Zn Cu, The underlying rocks are Hadrynian Lower Miette slate's and shale's, which are often anomalous in Pb Zn and occasionly Cu. ~~The~~ The Cirque, etc deposits to the N.W. are Devonian, and Howards Pass-Grum are Silurian black shales. The Grum does contain Copper along with Pb and Zn.

So if the market for Cu or Pb (Zn is improving) were reasonable we could express interest in this helicopter access property, but without any suggestion of precious metals (and Au/Ag unlikely in this environment) I suggest we decline Mr Woodcock's offer of the Cush property at this time.

A-D Clendenan.

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for
CUSH PROPERTY

British Columbia, Map 93H
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by
J. R. Woodcock

March 8, 1984

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CUSH PROPERTY, BRITISH COLUMBIA

1. SUMMARY

A stream, highly anomalous in zinc and copper and precipitating white aluminum sulfate, occurs on Hadrynian strata north of McBride, British Columbia. Some limonite cements rock debris up slope from the top of this anomalous stream. This limonite has anomalous lead, copper and zinc.

The strata consist of black slates and some quartzite beds. Potential for a shale-hosted base metal massive sulfite deposit exists. Because of the anomalous copper, the writer has suggested using Rammelsburg for a model.

The recommended program includes geological mapping and geochemistry, possibly followed by a suitable type of geophysics. Any resulting target will need drilling. A budget for this two-phase program includes $45,000 for the geotechnical work and $134,000 for the initial drill program.

2. INTRODUCTION

An outstanding stream zinc-copper geochemical anomaly was found during a reconnaissance program in the mid seventies. Further work is necessary to determine if an economic massive sulphide deposit is present.

Most of the geochemical data for this report was taken from a report of J. R. Woodcock Consultants Ltd. dated 1974. The geology is from the published work of R. B. Campbell of the Geological Survey of Canada.

Claims originally covering the target lapsed in 1977. The target was again staked in 1983 for J. R. Woodcock by Mr. R. H. Janes, P. Eng. and Mr. Dennis Gorc. Mr. R. H. Janes at this time also took some silt samples in the anomalous creek and submitted them to Vangeochem Lab. Ltd. for check analyses.

3. LOCATION AND ACCESS

The property is at the head of East Twin Creek. The Fraser River, the Canadian National Railway and Highway 16 are in the Rocky Mountain Trench 12 miles (20 km) southwest of the property.

The property lies above timberline in an area of moderate snowfall.

Some logging roads extend a short distance up the creek's slopes east of the Fraser River; the closest is 6 miles (10 km) southwest of the property. The only access at present is by helicopter; a helicopter is stationed at Valemount, 80 miles (130 km) southeast of McBride or at Prince George, 110 miles (180 km) northwest of McBride.

4. CLAIMS AND OWNERSHIP

Three claims including a total of 55 units were staked by Richard H. Janes as agent for John R. Woodcock on December 17, 1983. These claims were recorded on December 19, 1983. The property is in the Quesnel Mining Division. The claims are shown on Figure 2.

The claim data is as follows:

Name	Units	Record No.
Cush 1	15	5650
Cush 2	20	5651
Cush 3	20	5652

5. HISTORY

In the mid seventies J. R. Woodcock Consultants Ltd. conducted a geochemical reconnaissance program in several areas in the western parts of the Rocky Mountains. One of the stream silts highly anomalous in zinc and copper came from a stream north of McBride. During follow-up work on this anomaly, J. R. Woodcock collected additional silt samples, noted abundant white sulfate precipitate along the creek bed, and discovered limonite-cemented rock debris near the head of the drainage.

In 1975, Mr. D. Ramage, geologist for J. R. Woodcock Consultants Ltd., accompanied a geophysicist to the property. This small crew completed four cross lines of Shootback EM work, made a very preliminary sketch of the geology and collected some rock chips from the limonite deposits.

6. GENERAL GEOLOGY

A large area of sedimentary rocks lying east of the trench have been assigned by R. B. Campbell to the Miette Group of Proterozoic-Hadrynian (Windermere) age. The Miette Group of the McBride area has been divided by Campbell into three map units called the lower, middle and upper Miette. The lower and upper Miette are largely argillaceous sequences whereas the middle Miette is composed of bands of coarse-grained and conglomeratic sandstones separated by phyllite. The lower Miette, which underlies the Cush property is composed largely of black shale, argillite and micritic limestone.

Structurally the property is an area of folding and faulting. The northeasterly trending Cushing Fault lies about 0.8 miles (1.3 km) northeast of the property. Campbell reports considerable folding adjacent to this fault.

7. GEOLOGY OF PROPERTY

The property and the head of Twin Creek to the southwest are underlain mainly by black shales, some of which are graphitic and some of which contain abundant disseminated cubes of pyrite. These strata fit Campbell's description of the lower Miette. However, on the property are also some quartzite beds; these could belong to the lower part of middle Miette.

Strata on and south of the property strike northwesterly parallel to the regional structures and parallel to Cushing Fault. The bedding south of the property dips southwest. However, insufficient mapping has been done on the property to outline possible folds.

8. GEOCHEMISTRY

The initial anomalous sample that led to the follow-up work yielded 620 ppm zinc, 53 ppm lead, 350 ppm copper and 32 ppm uranium.

The tributary of Twin Creek that contains the anomaly is marked by a white precipitate which coats the creek bed and is visible from a distance of several miles. The white creek bed can also be seen on 1:20,000 scale aerial photographs. A sample of this precipitate was analyzed and returned 34% aluminum, 3.9% sulphur (equivalent to 11.7% SO_4). The precipitate is probably aluminum sulphate.

Sample sites along the stream are shown in Figure 3 and the analytical results are shown in Table I. At some of the sites several different samples were taken including a sulphate-rich sample, a sample with silt and sulphate and a silt-rich sample.

This anomalous stream starts in a little basin which is bounded on its southeast side by a bank of rock and soil debris. The water which issues from the base of this bank is precipitating iron oxide on the boulders and the stream bed at the edge of this small basin (sample site 6). A second small stream from the northeast enters the same little basin (sample site 7). The water from these two streams mix, resulting in a sharp change of pH and the formation of a white precipitate in the creek bed.

Perusal of the sample results and the sample location map leads to the following conclusions on this geochemistry:

(a) The silts containing very little of the sulphate are almost as anomalous in zinc and copper as the material consisting largely of sulphate.

(b) The precipitate starts to form in the small basin at an elevation of 6600 feet (2000 m). Water draining into this basin from the foot of the debris bank on the south is very acidic with a pH of 3.6. It leaves a rusty coating on the boulders. Water draining the same basin from the east has a pH of 7.7 and deposits no rust or precipitate. Where these two streams intermix, on the flat bottom of the small basin, a small amount of white precipitate forms. The amount of precipitate increases very rapidly downstream on the flat floor of this little basin and within 400 feet a very thick precipitate coats all boulders and the creek bed (site 5).

The water from the base of the debris is very acidic; however, the pH increases sharply where it leaves the small basin and thence increases slightly in a downstream direction.

(c) There is also an increase in zinc and copper values downstream through sites 5, 4 and 3 and then the subsequent decay pattern or decrease further downstream through sites 2 and 1. In the upper parts of the drainage, as the acidity decreases, the zinc and copper become less soluble and precipitate out on the creek bed. Subsequently, (after pH reaches 7.3) the normal downstream decay pattern takes over.

TABLE I

CUSHING CREEK FOLLOW-UP

Sample Site	Water (pH)	High Sulphate (Cu, Pb, Zn)	Silt + Sulphate (Cu, Pb, Zn)	Low Sulphate (Cu, Pb, Zn)
#1	7.45	385, 60, 750	340, 65, 640	300, 50, 600
#2	7.15		370, 72, 610	355, 60, 550
#3	7.30		430, 65, 620	360, 60, 600
#4	7.10		345, 65, 350	275, 55, 410
#5	7.00	110, 50, 50	235, 60, 220	
#6	3.60			85, 35, 75
#7	7.70			120, 55, 400
#8	8.00			47, 52, 115
#9				50, 40, 157
#10	5.50			100, 40, 107

About 365 metres southeast of the rusty acidic seepage, some water is seeping out of the ground, presumably where the underlying bedrock approaches the surface. This is cementing large blocks of rock and talus to form a resistant small cliff-like feature. Mr. Ramage collected some rock chip samples from this limonite (R41 and R42). In addition he collected two more rock chip samples (R50 and R51) an additional 250 metres to the southwest. The analytical results of these rock samples are as follows:

Sample No.	Cu ppm	Pb ppm	Zn ppm	Ag ppm
R40	190	45	62	
R41	160	240	334	0.2
R42	75	144	128	0.2
~~R53~~		~~4900~~		1.9

The area of limonite is likely near the source for the sulphur and the anomalous metals found in the creek. Probably the soluble zinc and copper are leaching out of the system, but the less soluble lead is staying with the resulting limonite.

On the property, outcrops of graphitic slate do occur. However, much of the area is alpine with frost heaving resulting in areas of felsenmeer (frost-churned rock chips and soil). Mapping must be mainly on the basis of this loose rock and on the sparse outcrops. This indicates that the target is underlain mainly by graphitic and pyritic slate with minor quartzite. Outcrops of graphitic and pyritic slate also occur in another tributary of Twin Creek, 1000 metres south of the target. A grab sample of this material yielded 100 ppm zinc, 37 ppm lead, 22 ppm copper and 2 ppm uranium. Such values are not anomalous indicating that similar pyritic black slates are probably not the source of the stream anomaly.

Another small stream, three kilometers to the southeast, is moderately anomalous in zinc, copper and lead.

9. GEOPHYSICS

Four short cross lines were checked with a simple Crane Shootback EM instrument and the results were filed for assessment work with the Department of Mines and Petroleum Resources (Report No. 5640).

The coil separation was 75 metres which gives limited depth penetration. Moreover the widespread graphite complicated the interpretation. The work indicated an anomalous zone about 500 metres wide.

10. CONCLUSIONS AND RECOMMENDATIONS

1. The source of this highly anomalous stream water which is depositing the metals and sulphate in the creek bed is probably the area of limonite a short distance to the southwest of the head of the stream. Many black slates are anomalous in zinc and so this is not an unusual phenomenon; however, very few such slates are also anomalous in copper and even fewer are also anomalous in lead. These anomalous values and the abundant sulphur to form the sulphate may come from a sulphide body that carries base metals. To provide these anomalous conditions the source must be oxidizing and therefore must be readily accessible to oxygen of the air. This reasoning, plus the fact that limonite is forming near the surface, indicate that the sulphide body probably lies under the overburden. However, it could also occur near a highly fractured and porous fault zone.

   The property should be geologically mapped in an attempt to use structure and stratigraphy and rock alteration to unravel the picture. Some rock and soil geochemistry should also be done at this time.

2. The geology and the geochemistry indicate potential for a shale-hosted massive base-metal deposit. Most shale-hosted massive sulphide deposits of North America include lead and zinc but lack copper. Examples include Sullivan Mine of British Columbia, the Tom, Jason and Howards Pass in the Yukon Territory, and the huge Red Dog deposit in Alaska. However, the Rommelsburg deposit of Germany, which has been in production for many centuries, contains copper-rich zones of massive sulphides as well as the zinc-lead-silver zones and has produced zinc, copper, lead and silver for several centuries. It occurs in strata of very similar lithology. Thus, Rommelsburg would be a good model for initial exploration at the Cush property.

3. The geophysical results of the Shootback EM survey are confusing in the fact that the anomaly is very wide. Some of this anomaly reflects the graphitic zones in the country rock. The short electrode spacing (75 meters) would result in shallow penetration (in the order of 20 meters).

   A more sophisticated geophysical technique is needed for greater depth penetration and for better definition. A gravity survey or an EM survey using a pulse type instrument will give better results than the Shootback EM technique.

4. Drilling on the resulting target can be done initially with a light weight core drill. The initial budget should include monies for 2000 feet of drilling. The results of this program will determine the subsequent drill program.

5. The budget estimate for this program is as follows:

PHASE I

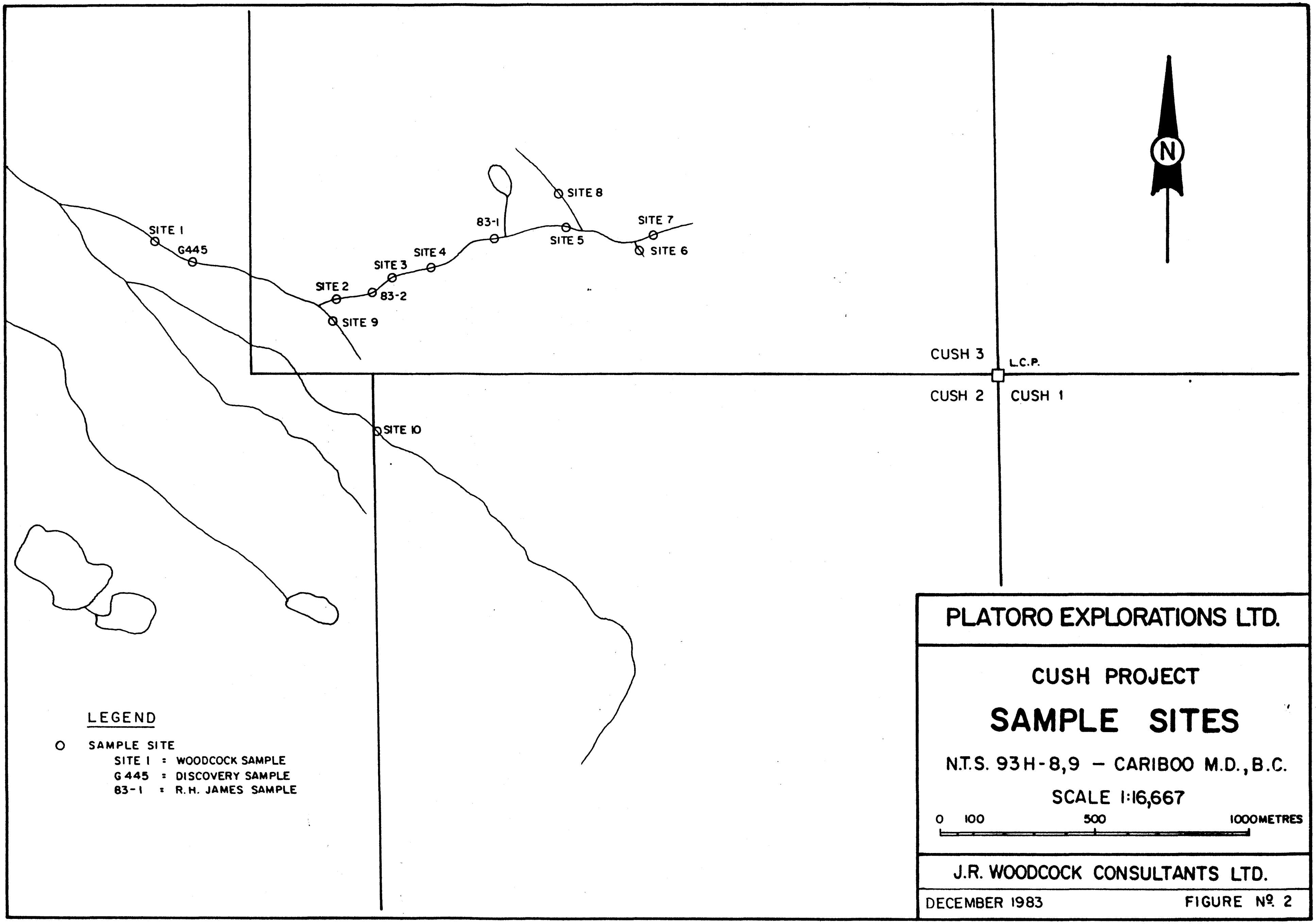
Geology and geochemistry	$25,000	
Allowance for lines and geophysics	20,000	$ 45,000

PHASE II (drilling)

2000 feet of core at $30	$60,000	
Mobilization and miscellaneous drill costs	15,000	
Helicopter	16,000	
Freight, travel, vehicle	3,000	
Food and supplies	2,500	
Assays and geochemistry	3,500	
Engineering and report	12,000	
Filing assessment work	5,000	
Contingency at 15%	17,000	134,000
TOTAL		$179,000

Respectfully submitted,

J. R. Woodcock, P. Eng.



LEGEND

O SAMPLE SITE
SITE 1 = WOODCOCK SAMPLE
G 445 = DISCOVERY SAMPLE
83-1 = R.H. JAMES SAMPLE

PLATORO EXPLORATIONS LTD.

CUSH PROJECT

SAMPLE SITES

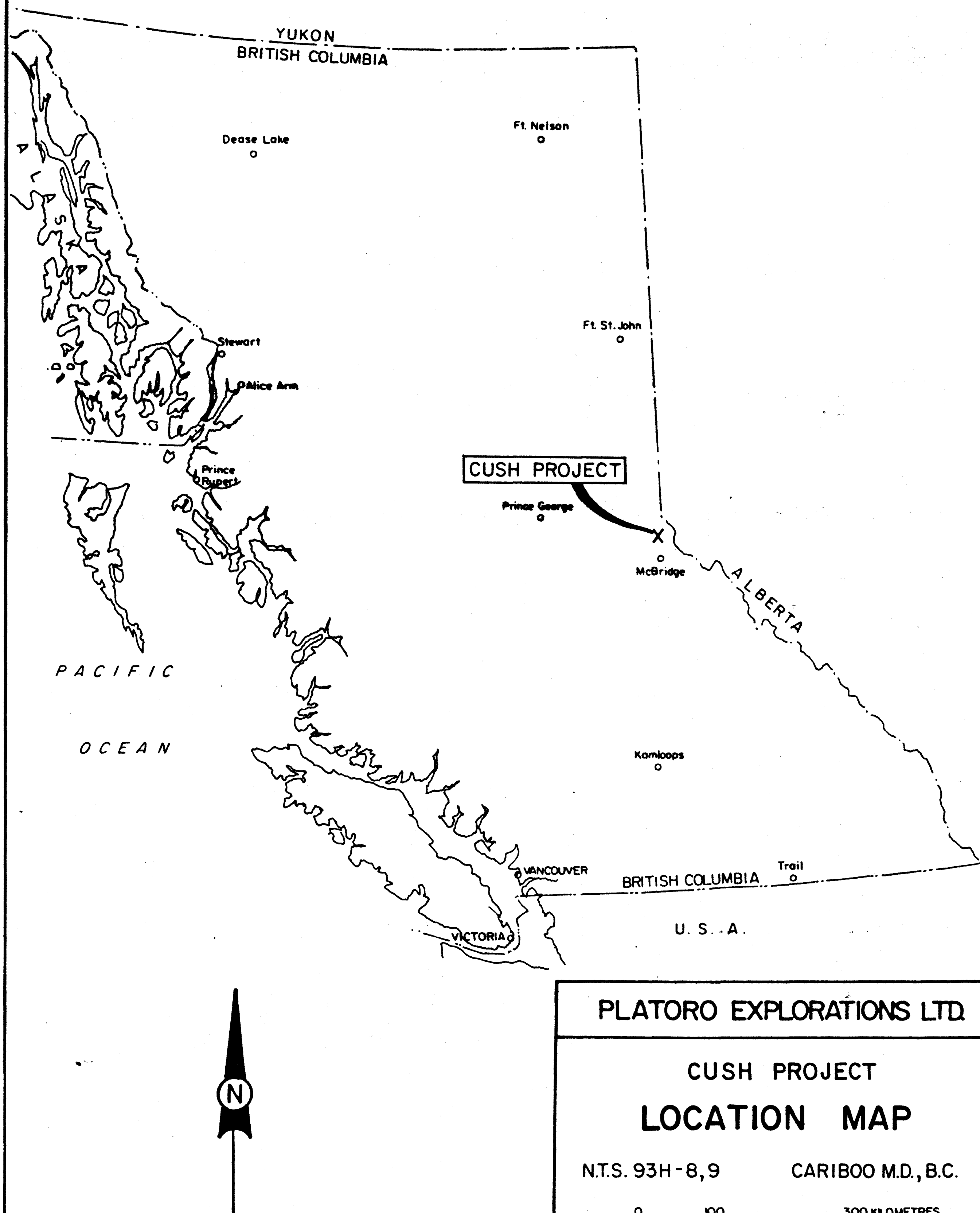
N.T.S. 93H-8,9 – CARIBOO M.D., B.C.

SCALE 1:16,667

0 100 500 1000 METRES

J.R. WOODCOCK CONSULTANTS LTD.

DECEMBER 1983 FIGURE Nº 2



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CUSH PROJECT

LOCATION MAP

N.T.S. 93H-8,9 CARIBOO M.D., B.C.

0 100 300 KILOMETRES
0 100 200 MILES

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DECEMBER 1983 FIGURE Nº. 1