BRITISH COLUMBIA

PROSPECTORS ASSISTANCE PROGRAM

MINISTRY OF ENERGY AND MINES

GEOLOGICAL SURVEY BRANCH

PROGRAM YEAR:	1999/2000
REPORT #:	PAP 99-36
NAME:	ROBERT BRUCE ANDERSON

BRITISH COLUMBIA
PROSPECTORS ASSISTANCE PROGRAM
PROSPECTING REPORT FORM (continued)

B. TECHNICAL REPORT

- One technical report to be completed for each project area.
- **Refer to Program Requirements/Regulations 15 to 17, page 6.**
- If work was performed on claims a copy of the applicable assessment report may be submitted in lieu of the supporting data (see section 16) required with this TECHNICAL REPORT.

Name Robert Bruce Anderson Reference Number 99/2000 #91

LOCATION/COMMODITIES

Project Area (as listed in Part A) Burns Lake MINFILE No. if applicable

Location of Project Area NTS 93L & 93K Lat 54° 18' 14 Long 125° 05' 43

Description of Location and Access 1100 square k ~~east of~~ west of Burns Lake, access by Highway 16, Highway 35, B.C.F.S. Lakes district Logging roads.

Main Commodities Searched For opal

Known Mineral Occurrences in Project Area Eagle ck staking reserve

WORK PERFORMED

1. Conventional Prospecting (area) 1100 sq kil.
2. Geological Mapping (hectares/scale)
3. Geochemical (type and no. of samples)
4. Geophysical (type and line km)
5. Physical Work (type and amount)
6. Drilling (no. holes, size, depth in m, total m)
7. Other (specify)

SIGNIFICANT RESULTS

Commodities opal Claim Name see attached report.

Location (show on map) Lat. Long Elevation

Best assay/sample type crystal opal - 590 grams.

Description of mineralization, host rocks, anomalies opal amygdules, veins & matrix hosted in vesicular volcanics.

Supporting data must be submitted with this TECHNICAL REPORT

Information on this form is confidential for one year from the date of receipt subject to the provisions of the *Freedom of Information Act.*

OPAL PROSPECTING REPORT
ON THE
MAXAN LAKE REGION

Omineca Mining Division
Burns Lake B.C.
Latitude 54^{0} 18' 14
Longitude 125^{0} 05' 43
U.T.M. 689000E 6021000N
N.T.S. 93L & 93K

for

British Columbia Ministry
of Energy and Mines
Prospectors Assistance Program

by

R.B. Anderson, prospector
January 12, 2000

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LIST OF ILLUSTRATIONS

INTRODUCTION

Over the summer of 1999, I, R.B. Anderson undertook a methodical search for precious opal in the Burns Lake area of British Columbia. With the assistance of a grant from the Prospectors Assistance Program offered by the British Columbia Ministry of Energy and Mines, I, my assistant Lee Dunn and fellow prospector John Anderson were able to spend thirty four days in the field. Between July 23rd and Sept 20th sixty five man days were devoted to the search.

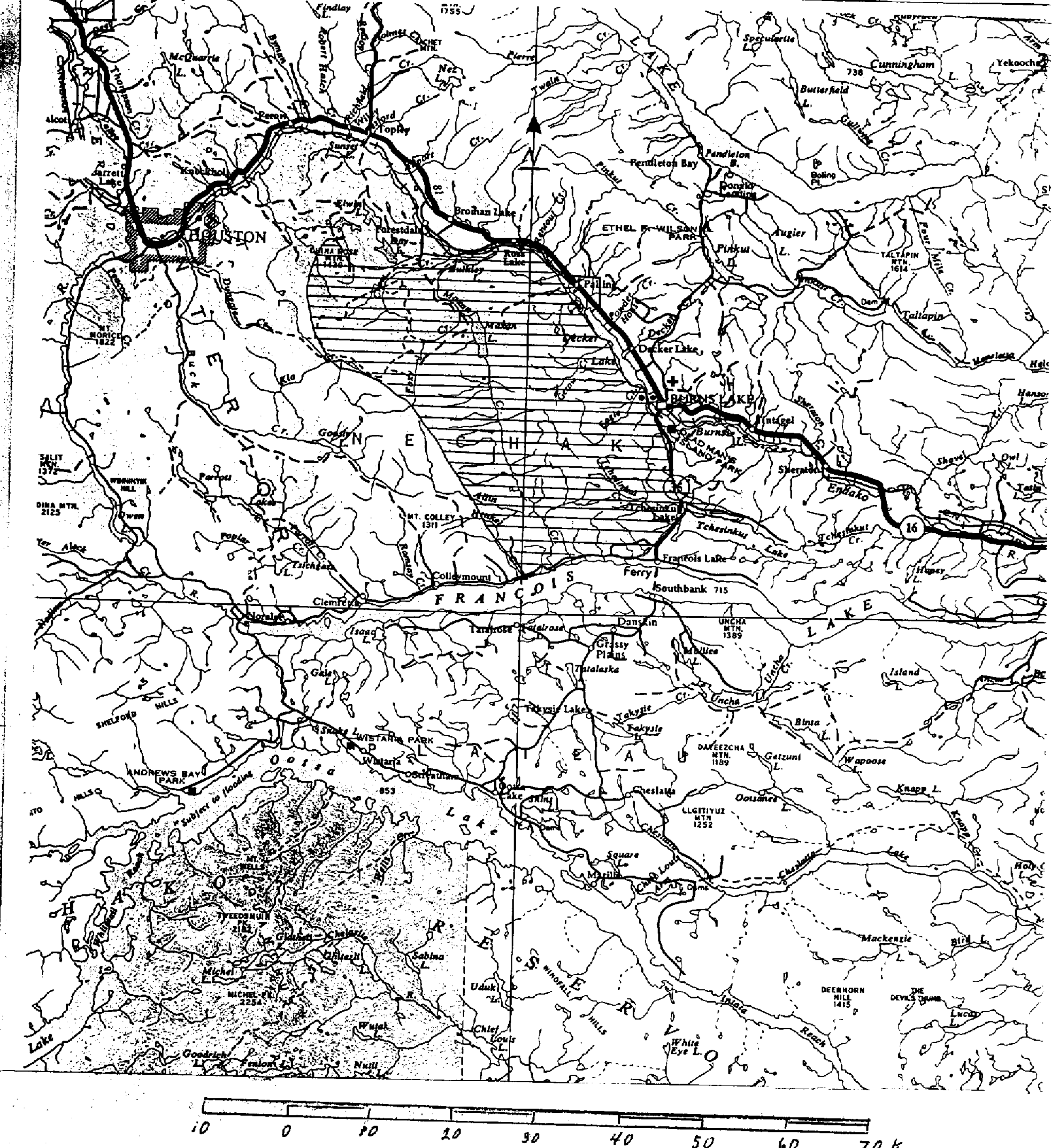
The area in question is comprised of approximately 1100 square kilometers centered around Maxan Lake and its water shed, it is heavily timbered and overlaid by up to 20 meters of glacial till. Results, while not conclusive, were very encouraging, fourteen opal showings in six different zones and five claim groups totalling 22 units. Due to the size of the area it was decided to concentrate on disturbed areas such as roads, logging slashes, landings and creeks. Not untill the presence of opal was confirmed was it deemed feasible to attempt prospecting over undisturbed ground. Other problems with opal prospecting is the lack of any geochemical signature, the inability of opals to survive any transporting mechanism and distinguishing between common opal and chalcedony, as well as rockhounds who may have striped sites clean of any visible opal. Initial reconnaissance over the area was by truck, searching for sites free of glacial overburden, followed by painstaking visual search of gravels, clays and outcrops. Evaluation of showings was by volume, size and quality of opals found. Locations were mapped using a Magellan 315 handheld G.P.S. unit and compass and hip chain.

REGIONAL GEOLOGY

The area in question is underlaid by volcanics of the Oligocene-Miocene Endako group. J.E. Armstrong described it so:* This group consists of relativly flat lying lava flows comprised chiefly of green, red, brown and black dacite, andesite and basaltic, amygdoidal and vesicular flows. the degree of vesicularity varies greatly and in places resembles pumice. Larger vesicules show horizontal elongation and average an inch in length. Chalcedonic and opalescent quartz, cream colored calcite, chlorite, pectonlite, prchnite and zeolites form the amygdules.

All the known opal showings fit this description very well. Almost all volcanics seen were mafic, with the exception of three occurances of rhyolite tuffs, one at the hoodoos of Nourse Creek, and at two quarrys, one at 12K on the Maxan F.S.R. and the other at 9K on the Thompson F.S.R.. The only other felsic volcanic seen were rhyolite clasts in the andesite breccia of the JOY anf LACY claim groups. All showings other then the JOY and LACY share common characteristics, most stiking being that all seem to occur within contact zones between flows of hard vesicular black basalts and a friable andesitic breccia. At the WOW, ICE and AGATE claim groups all specimens found were in hardpan clay, or C horizon, almost certainly the remains of an andesitic flow. At Nourse Creek, Agate Point and along the Thompson and Maxan F.S.R.s these contacts are exposed and visible. It is not known what relevance this may have on opal occurrances, however it is clear that successful discovery and mining of opal must take place within the C horizon or clay altered volcanics.

*G.S.C. Memoir 252, pages 74-75.



1F SCALE-- 1: 600,000

AREA OF 1999 OPAL EXPLORATION

WOW

Location: Map N.T.S. 93L/08
U.T.M. Nav 83- 688360E/6024690N

The WOW showing covers 1.1 kilometers of abandon logging road, over which was found a large selection of multicolored and crystal opal, hydrophane and large chalcedony boulders and geodes. Access to the WOW can be gained from highway 16 via the Thompson F.S.R. and the Maxan F.S.R..

The opal found on the WOW fall into four groups, multi colored (white, tan, brown, black, red and green) boulders of common opal averaging 10-20 cm in diameter, bone white fragments of mammillary opal, white to smoky hydrophane, found as infill in geodes and mammillary masses and tran slucent blue to clear crystal opals, also found as mammillary masses. The best quality opal found was a 590 gram translucent blue mammillary mass. All the mammillary opals are obviously the remains of much larger opal geodes. Of equal intrest are the large mammillary chalcedony geodes, hosted in multi colored opal, the largest measured 60cm interior diameter.

Suspect breccia fixation.

Almost all the opals found were float hosted in or on light brown dense clays. There is very little outcrop on the WOW, all an andisitic breccia with clasts of basalt anywhere from 10mm to 75 cm in diameter, chlorite and limonite alteration is pervasive. I belive the clays are simply altered andisite, with silica rich clasts surviving.

The Wow was staked as the WOW 1-8 claim group on August 20th, 1999.

ROSE LAKE CUTOFF 4.5K

Location: Map N.T.S. 93L/08
U.T.M. Nav 83- 689125E/6030235N

The Rose Lake Cutoff 4.5K showing consists of 400 meters of andesitic breccia bluffs bordering on the Rose Lake Cutoff road. Access can be gained from highway 16 at Rose Lake B.C.. Opals here are bone white amygdules, usually 5-10mm in diameter, or irregular areas of matrix replacement, also quite small. The opals and an equal amount of chalcedony are sparsely distributed throughout a light to dark grey andesitic breccia, clasts are basalt and average 1-2 cm diameter, the breccia is quite competent and otherwise unaltered.

ICE

Location: Map N.T.S. 93L/08
U.T.M. Nav 83- 687400E/6023730N

The Ice showing consists of a 425 meter length of spur road 300 meters south of the Thompson F.S.R. at 13.75K. Access can be gained from highway 16 via the Thompson F.S.R. and the Maxan F.S.R.. The opal found on the Ice is a multi colored (white, tan, brown, black, red and green) common opal, found as boulders ranging in size from 5 cm diameter pebbles up to the largest, a boulder 70 X 30 cm and weighing approximately 25 kilograms. An estimated 175 kilograms of opal was collected on site in the course of exploration. There is no outcrop on the Ice, however examination of float and clays lead me to belive that the Ice is underlaid with an adesitic breccia containing basalt clasts similar to that found at the Wow and Maxan Creek showings. The most striking point of the Ice is that this is the only showing in which there is very little chalcedony.

The Ice was staked as the ICE 1-4 claim group on Sept 3rd, 1999.

MAXAN CREEK

Location: Map N.T.S. 93L/08
U.T.M. Nav 83- 686630E/6024690N

The Maxan Creek showing consists of approximately 1.7 kilometers of logging road begining at the Maxan Creek bridge on the Thompson F.S.R., east for 800 meters and then north for 900 meters on a newly constructed road at 15.2K. Access can be gained from highway 16 via the Thompson F.S.R. and the Maxan F.S.R.. The opal found on the Maxan Creek is predominatly multicolored (white, tan, brown, black, red and green) boulders of common opal ranging in size from pea gravel to 25 cm diameter. Several specimens of a translucent blue opal with faint color play were found, these are 1-3 cm wide veins found in basalt float. A large amount of chalcedony and chalcedony geodes were found here as well, most geodes exhibit a mammillary or botryoidal formation. The opals are hosted in a dense light grey clay, there is very little outcrop on the Maxan Creek showing. What outcrop is visible is an andesitic breccia with large clasts of blue black hard basalts up to 30 cm diameter and smaller clasts of andesite that is almost pumice in texture.

As the entire Maxan Creek showing is part of staking reserve,#3143, there were no claims staked.

THOMPSON 12K

Location: Map N.T.S. 93L/08
U.T.M. Nav 83- 688990E/6025625N

The Thompson 12K showing consists of scattered outcrops over 600 meters of 2.3 kilometers north of Thompson F.S.R. 12K. The Thompson 12K showing can be accessed from highway 16 via the Thompson F.S.R. and the Maxan F.S.R.. Opals here are 1-10mm white amygdules, they are hosted in a light

grey vesicular andesite, amygdules of chalcedony and opal are thinly distributed throughout, approximately 10% of the amygdules are opal. Several road cuts show a flat lying contact with a friable andesite breccia exhibiting pervasive manganese alteration.

MAXAN 13.5K

Location: Map N.T.S. 93L/08
U.T.M. Nav 83- 692090E/6019230N

The Maxan 13.5K showing consists of 300 meters of exposed basalts between 13.2K and 13.5K on the Maxan F.S.R.. Access can be gained from highway 16 via the Maxan F.S.R..

Opals found here are 1-10mm diameter amygdules, light blue and slightly translucent, or thin coatings within the larger vesicles. The opals are hosted in a weathered vescular basalts, slightly magnetic, exhibiting chlorite, carbonate and limonite alteration. Vesicles are often filled with amygdules of quartz, chalcedony, calcite and opal, opal forms perhaps 10% of amygdules. No opal larger then 1 cm diameter was seen, while amygdules of quartz, chalcedony and calcite were often as large as 10 cm diameter. Calcite "roses" were occasionally found in the largest vesicles.

MAXAN 7.5K

Location: Map N.T.S. 93L/08
U.T.M. Nav 83- 694020E/6023540N

The Maxan 7.5K showing consists of a 75 X 10 meter area of basalt boulders on the east side of the road. The Maxan 7.5K showing can be accessed from highway 16 via the Maxan F.S.R.. Only one opal was found at this showing, a 5 mm wide vein of white, red and crystal in a 10 cm diameter

basalt boulder. Basalts here have very few vesicles and no amygdules were seen, they appear to be barren of silica in any form, leading one to suspect the opal found to have been transported during road construction or maintance.

MAXAN 12.2K

Location: Map N.T.S. 93L/08
U.T.M. Nav 83- 691580E/6019690N

The Maxan 12.2K showing consists of 600 meters of exposed basalts between 12.2K and 12.8K. The Maxan 12.2K showing can be accessed from highway 16 via the Maxan F.S.R.. Opal found here are amygdules 1-10 mm diameter, white or light blue and slightly translucent. They are hosted in a light to dark grey vescular basalt, slightly magnetic with moderate chlorite alteration. Vesicles contain amygdules of chalcedony, agate, calcite and opal, chalcedony and calcite amygdules tend to be much larger then that of opal, often up to 10 cm length and 5 cm thick. Road cuts on the slope below the showing expose horizontal interbedding of basalt and andesitic breccias, with the basalt exhibiting the same characteristics as the showing on the main road.

AGATE HEAVEN

Location: Map N.T.S. 93K/04
U.T.M. Nav 83- 308460E/5997980N

The Agate Heaven showing consists of 350 meters of subcropping andesitic breccia exposed by a spur road off the Maxan F.S.R.. The Agate Heaven showing can be accessed from highway 16 via the Maxan F.S.R., at 41.75K an unmarked spur road turns east, 750 meters down this road turn north and proceed for 2.2. kilometers. Opals found here are white

or green, usually teardrop shaped and 10-30 mm diameter. Often the opal will be encapsulated in chalcedony and free of its volcanic host. Chalcedony is very common here and is found as teardrops as large as 15 cm long. These teardrops and pieces of chalcedony which appear to have been a breccia matrix litter the clays in profusion. No other showing boasts such a consistantly large and uniform distribution of chalcedony and opal, in addition several opal shards found display faint color play. The opals are hosted in dense light orange clays, almost certainly the remains of an andesite, what solid rock remains show intense chlorite and epidot alteration.

Agate Heaven was staked as the AGATE 1-2 claim group on September 1st, 1999.

NOURSE CREEK

Location: Map N.T.S. 93K/04
U.T.M. Nav 27- 306800E/5994200N

The Nourse Creek showing consists of six different opal occurances in and around seven kilometers of creek. Nourse Creek, also known as Allin Creek, can be accessed from highway 16 by two routes. Via highway 35, the Francois Lake road and the Henkel F.S.R. or via the Maxan F.S.R.. Opal found at 3.9K on the Henkel F.S.R. are 5-10 mm white amygdules hosted in a dark gray unaltered basalt. Opal found at the base of the hoodoos are blue-white translucent veins, 1-2 cm width, found in basalt talus, one of these displayed faint color play. Opal found in the creek bed 500 meters upstream of the first waterfall and 250 and 400 meters upstream of the second waterfall are amygdules up to 10 cm diameter, blue and white and are hosted in a blue black silicious basalt immediatly below a contact with an andesite breccia. Opal found 50 meters upstream

of the Nourse Creek bridge at 44K on the Maxan F.S.R. resemble the green teardrops found at Agate Heaven and are hosted in a friable andesitic breccia. Outcrop exposed along the creek show horizontaly interbedded basalts, andesites, rhyolite tuffs and related breccias. While the potential for precious opal appears strong, exploration of the creek and its banks is difficult due to an average creek depth of .5 to 1.5 meters.

JOY

Location: Map N.T.S. 93K/04
U.T.M. Nav 83- 312220E/5996380N

The Joy showing consists of an 8 X 4 meter area of subcroping andesitic Breccia. The Joy can be accessed from highway 16 via the Maxan F.S.R. and the Anders F.S.R.. Opal found at the Joy occurs as crystal in 5 mm wide stringers and as an equally thin coating in large fractures. It is hosted in a light to dark grey andesitic breccia with large rhyolite clasts and pervasive limonite alteration. Limonite covered with crystal opal gives the opal a deep purple appearance.

The Joy was staked as the JOY 1-4 claim group on July 30th, 1999.

LACY

Location: Map N.T.S. 93K/04
U.T.M. Nav 83- 312670E/5997280N

The Lacy showing consists of a 5 X 10 meter area of subcroping andesitic breccia. The Lacy can be accessed from highway 16 via the Maxan F.S.R. and the Anders F.S.R.. The Lacy and the Joy are exactly one kilometer apart,

Lacy at 43K and the Joy at 44K. The Lacy and Joy also share the same style of opals and identical geology, there is essentially no differance between the two. Nor is there any outcrop between the two, raising the possibility of a one kilometer strike length.

The Lacy was staked as the LACY 1-4 claim group on July 30th, 1999.

AGATE POINT

Location: Map N.T.S. 93K/04
U.T.M. Nav 27- 327950E/5998400N

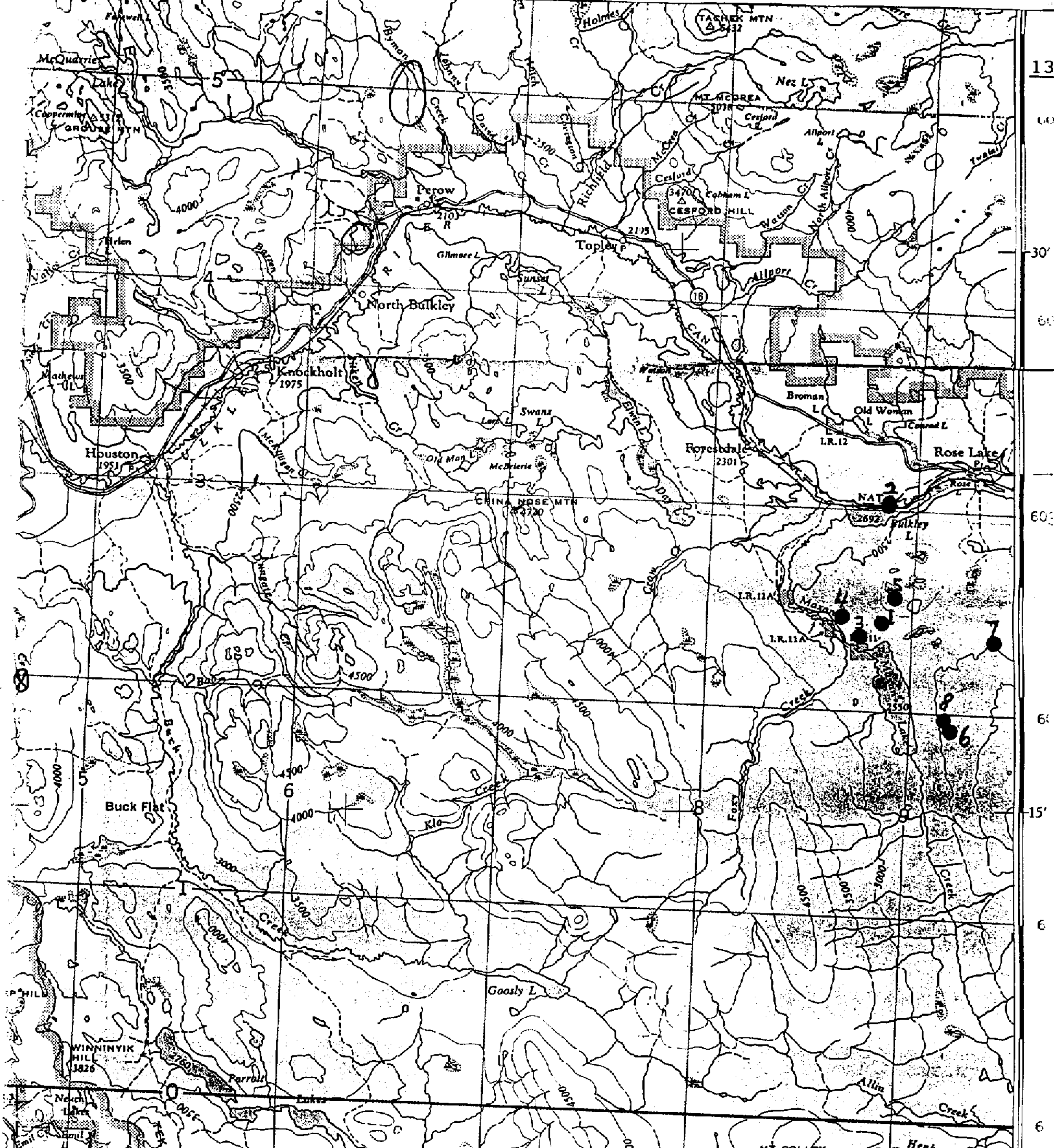
Agate Point is a British Columbia Forest Service Recreation site on the north shore of Tchesinkut Lake. Agate Point can be accessed from highway 16 via highway 35 and the Tchesinkut East road. Opal found at Agate Point are white, crystal, translucent blue and hydrophane, most are 5-10 mm amygdules, or beads, the rest are 10 mm wide veins. Faint color play has been seen in several amygdules of hydrophane and crystal, usually visible only under magnification. The opals are hosted in light grey, slightly magnetic vesicular basalts interbedded with andesitic breccias, by far the majority of amygdules are chalcedonic. Opal bearing basalts can be found for 500 meters along the lake shore and for at least one kilometer north of the lake. As Agate Point is a recreation site and quite close by a residential area it was decided not to sake a claim, despite the zones potential for precious opal.

EAGLE CREEK

Location: Map N.T.S. 93K/04
U.T.M. Nav 27- 313500E/6009600N

The Eagle Creek opal beds are part of Staking Reserve

#297/85 and were examined in order to familiarize myself with the geological enviroment in which opals may be found, as well as providing a standard by which opal showings can be evaluated. The Eagle Creek opal beds can be accessed from highway 16 via highway 35, Eagle Creek road, Eagle Creek F.S.R. and a 1.9 kilometer trail from the end of the Eagle Creek F.S.R.. Opals at Eagle Creek are white or light blue, occuring as 5-10 mm amygdules found in interbedded basalt and andesite flows. All volcanics are magnetic and often display chlorite and epidot alteration. While opals here are common and easily recovered, I would not have judged it a worthy staking target.



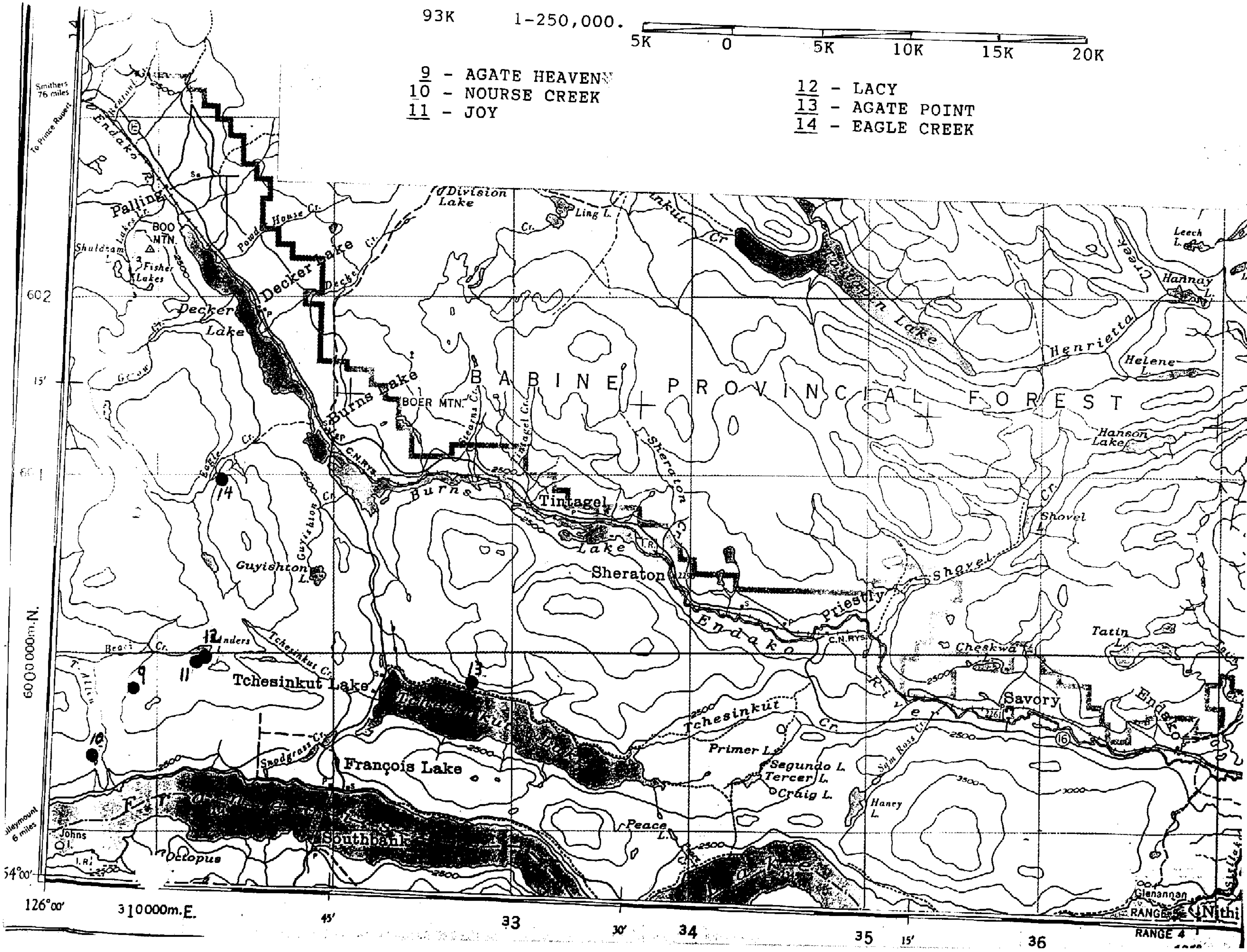
93L 1-250,000.

5K 0 5K 10K 15K 20K

1 -)W
2 - .OSE LAKE CUTOFF 4.5K
3 - ICE
4 - MAXAN CREEK
5 - THOMPSON 12K
6 - MAXAN 13.5K
7 - MAXAN 7.5K
8 - MAXAN 12.2K

15' 30' 15' 126°00'

65 66 67 68 69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10 - NOURSE CREEK
11 - JOY
12 - LACY
13 - AGATE POINT
14 - EAGLE CREEK
BABINE PROVINCIAL FOREST
Smithers 76 miles
To Prince Rupert
Endako R.
Palling
BOO MTN.
Shuldram L.
Fisher Lakes
Decker Lake
Powder House Cr.
Division Lake
Ling L.
Burns Lake
BOER MTN.
C.N.RYS.
Tintagel
Sheraton
Sheraton Cr.
Guyishton L.
Guyishton Cr.
Eagle Cr.
Tchesinkut Lake
Tchesinkut Cr.
Anders L.
Beach Cr.
François Lake
Snodgrass Cr.
Southbank
Octopus
Johns L.
Primer L.
Segundo L.
Tercer L.
Craig L.
Peace L.
Haney L.
Priestly
Shovel L.
Shovel Cr.
Cheskwa L.
Savory
Tatin L.
Hanson Lake
Helene L.
Henrietta
Hannay L.
Leech L.
Glenannan
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34
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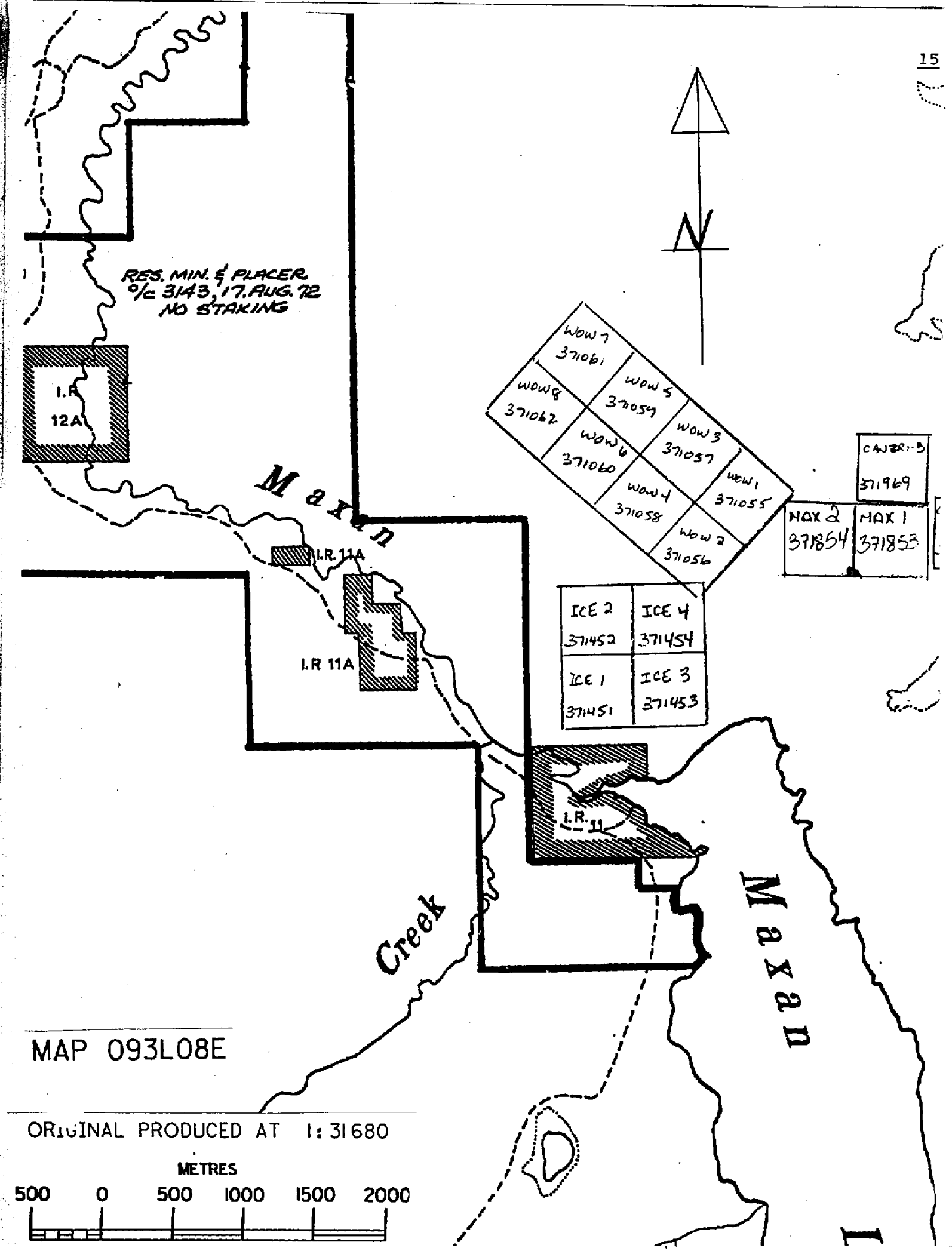
RES. MIN. & PLACER
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Maxan
I.R. 11A
I.R 11A
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WOW 5
371059
WOW 8
371062
WOW 3
371057
WOW 6
371060
WOW 1
371055
WOW 4
371058
WOW 2
371056
CANZR 3
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MAX 2
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ICE 2
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ICE 4
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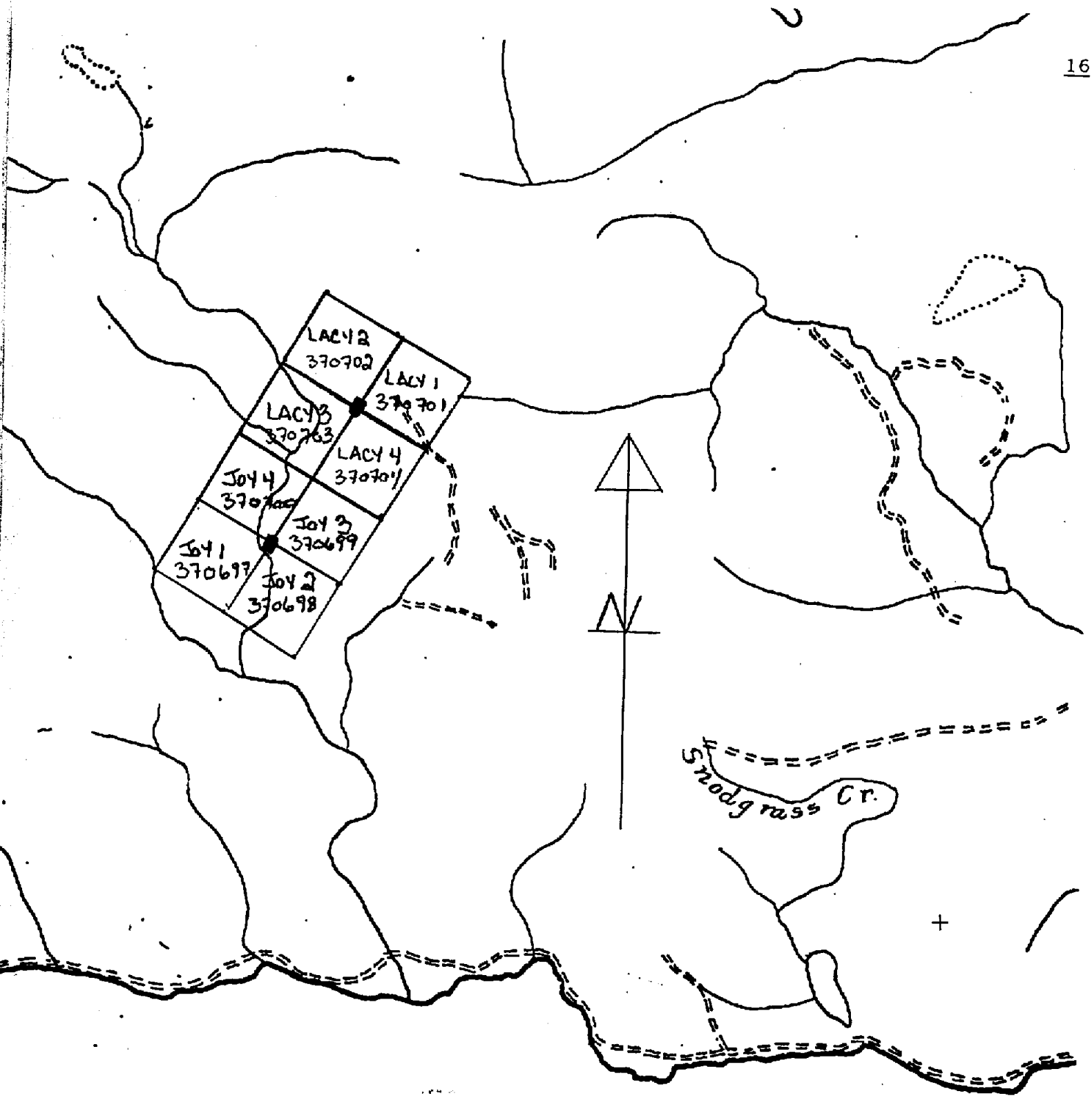

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I S L A K

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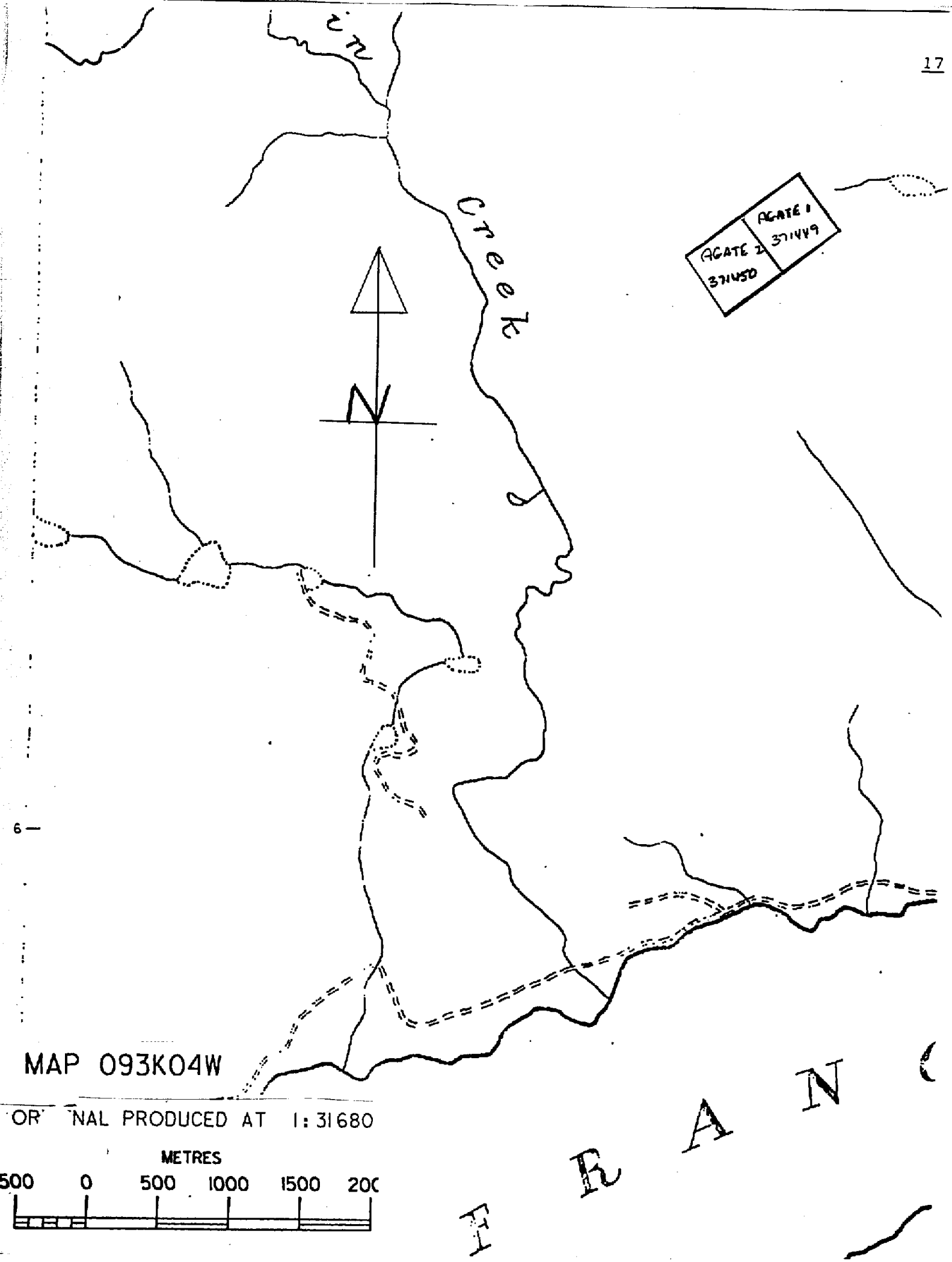
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6
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SUMMARY

This program has, I belive, been a success. While precious opal was not found, areas of high potential have been identified and the best of these staked. Unfortunatly the program was cut short due to financial difficultys, never the less initial reconnaissance was performed over the entire project area. Road prospecting went quickly due to extensive overburden and the ease of vesicular basalt identification. Once I understood the brittleness of opal I was forced to abandon searching alluvial gravels, thus shortening the reconnaissance further. Attempts to prospect undisturbed ground was quite unsuccessful, quickly becoming a search for exposed gravels and clays.

The propertys staked have varing potentials, the Joy and Lacy have the lowest potential and the Ice, Wow and Agate the highest. Should no precious opal be found, the chalcedonys and common opal may well find a market with lapidary enthusiasts.

Future exploration of these claims will involve trenching, bulk soil sampling and washing of clays and soils with a pressure washer. Ease of access, low water demands and unskilled labour should create a low cost form of exploration which would work equally well as a mining and recovery process.

I, Robert Bruce Anderson, P.O. Box 5092, Smithers B.C. V0J-2N0, do certify that:

1. I have been working in the mineral exploration industry in British Columbia since 1973. I have been employed as a prospector by Pamicon Developments Ltd. (1989), Kookabarra Gold (1990), Golden Rule Resources (1991), Lac Minerals Inc. (1993-94), Golden Hemlock Inc. (1995) and Homestake Canada Inc. (1996-98).
2. I have trained Lee Dunn, a grade 12 student living in Smithers B.C., to conduct a visual groundsearch for silica mineralization.
3. I have trained John Anderson, an experienced field worker with Pamicon Developments Ltd. living in Grand Forks B.C., to conduct a visual groundsearch for silica mineralization.
4. I have based this report on field work carried out by L. Dunn, J.Anderson and myself in July, August and September of 1999.
5. I have a direct interest of 100% in the Wow, Ice, Agate, Lacy and Joy opal propertys.

Signed on the 11th day of January, 2000.

Robert Bruce Anderson

R Bruce Anderson