

MAP NO.: ASSESSMENT REPORT X
105 C 11 PROSPECTUS
CONFIDENTIAL X
OPEN FILE

DOCUMENT NO: 092977
MINING DISTRICT: WHITEHORSE
TYPE OF WORK: TRENCHING MINING

REPORT FILED UNDER: ANOORAQ RESOURCES CORPORATION

DATE PERFORMED: JUNE, AUGUST, 1991 DATE FILED: AUGUST 21, 1991

LOCATION: LAT.: 60°42'N AREA: EVELYN CREEK

LONG.: 133°20'W VALUE \$: PHYSICAL

CLAIM NAME & NO.: EVE 1-68, 78
ADAM 1-6

WORK DONE BY: J.T. SHEARER; NEW GLOBAL RESOURCERS LIMITED

WORK DONE FOR: ANOORAQ RESOURCES CORPORATION

DATE TO GOOD STANDING:

REMARKS: ROAD REPAIRS, TRENCHING AND MINING WERE DONE ON THE PROPERTY IN 1991. A TOTAL OF 40 TONNES OF MEDIUM TO HIGH GRADE RHODENITE WAS MINED AND SHIPPED TO VANCOUVER. THIS REPORT IS ALSO A COMPILATION OF ALL PREVIOUS WORK DONE ON THE PROPERTY. A TOTAL OF \$50,000 WAS SPENT ON THE EXPLORATION AND MINING. DESCRIBED AS A GEM QUALITY, METAMORPHOSED, SYNSEDIMENTARY STRATIFORM RHODONITE DEPOSIT. HOST IS QUARTZITE AND BLACK SILTSTONE OF THE BIG SALMON METAMORPHIC COMPLEX.

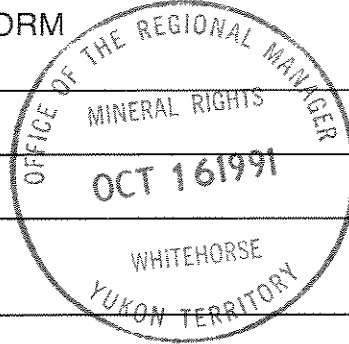
MARLIN 105C 017 ✓

mt. Grant 105C 018



M.R. file no.
R.M.M.R. file no.
Date forwarded 16 OCT. 1991

TRANSMITTAL FORM



From ► Mining Recorder at: WHITEHORSE

To ► Regional Manager, Mineral Rights at Whitehorse, Y.T.

For action are:

<input type="checkbox"/> NEW APPLICATION FOR PLACER LEASE TO PROSPECT	Name	
<input type="checkbox"/> RENEWAL APPLICATION PLACER LEASE TO PROSPECT	Name	Lease no.
<input type="checkbox"/> AFFIDAVIT OF EXPENDITURE ON PLACER LEASE	Name	Lease no.
<input type="checkbox"/> SECURITY DEPOSIT		
<input type="checkbox"/> FINANCIAL ABILITY		
<input type="checkbox"/> ASSIGNMENT OF PLACER LEASE NO.	From	To
<input type="checkbox"/> GROUPING APPLICATION UNDER SEC. 52(2) PLACER MINING ACT.	Owner	
<input type="checkbox"/> DIAMOND DRILL LOGS	Claims	Claim sheet no.
<input type="checkbox"/> QUARTZ ASSESSMENT REPORT	Claims	Claim sheet no.
	Type of report	Submitted by
	Cls. work performed on	\$ req. for ren. application

Paulhard
Signature

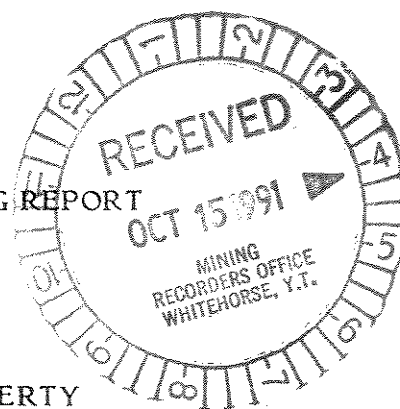
REPLY ACTION Date returned

FOR NUMBERING ONLY

092977

Signature

GEOLOGICAL, TRENCHING AND MINING REPORT



ON THE

EVELYN CREEK RHODONITE PROPERTY
(EVE CLAIMS)
SOUTH CANOL ROAD AREA
WHITEHORSE MINING DISTRICT
YUKON TERRITORY

Latitude: 60° 42'N / Longitude: 133° 20' W
N.T.S. 105C/11

092977

for

ANOORAQ RESOURCES CORPORATION
1020 - 800 West Pender Street
Vancouver, B.C.
V6C 2V6

by

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August 21, 1991
Vancouver, B.C.

Fieldwork conducted between June 17 to 26, 1991
and August 1 to 21, 1991

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SUMMARY

A large gem-quality, metamorphosed, synsedimentary stratiform rhodonite deposit occurs on the Eve claims, owned 100% by Anooraq Resources Corporation, which are situated at the headwaters of Evelyn Creek, Yukon, approximately 23 km directly north of Johnsons Crossing or 95 km east of Whitehorse, N.T.S. Sheet 105C/11, Latitude 60° 43' N; Longitude 132° 20' W.

Access is by a 22.3 km dirt road which starts from km 42 on the South Canal Road. The South Canal Road joins the Alaska Highway at Johnsons Crossing (km 1346) which is 110 km by road east of Whitehorse.

The rhodonite zone is hosted by manganiferous, olive green quartzites and black siltstones of the Big Salmon Metamorphic Complex. Regional structures are characterized by polyphase deformation. A thick carbonate unit also occurs throughout the claims.

In 1991, the property was geologically mapped at a scale of 1:5000 for the first time and all significant showings were examined and sampled. Approximately 40 tons of raspberry-red and uniform dark pink rhodonite was mined using a tracked excavator and shipped to Vancouver. Many chunks greater than 200 kg were produced with the largest individual stone being about 4 tons. Mining costs in 1991 were much lower than previous work and future costs could be even lower.

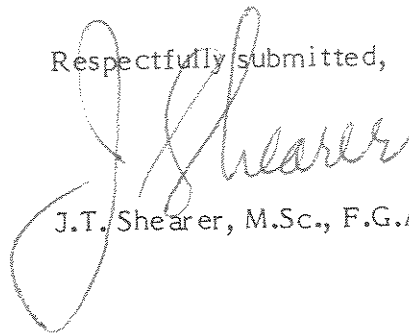
The rhodonite deposit is highly variable in both shape and mineralogy but can be roughly subdivided into (1) a northern tephroite - bustaminte - rhodochrosite - quartz - minor rhodonite zone and (2) a southern rhodonite (red and pink) -tephroite - minor rhodochrosite zone. The entire zone is stratiform and takes a pod-like form. The rhodonite bearing horizon has been traced 100 meters to the northwest and 250 meters to the southeast. The main pod is 4 to 7 meters wide and 25 meters long. However, the manganiferous horizon extending to the northwest and southeast of the main zone is very narrow.

Petrographic analysis suggests that the original metamorphic silicate mineral was tephroite (a manganese mineral with an olivine structure) which was subsequently altered to red and pink rhodonite. Rhodochrosite replaces both rhodonite and tephroite. Manganese garnet, spessarite, has developed extensively in the surrounding host rocks and is also noted as thin yellow veinlets cutting rhodonite.

Future mining plans are outlined. Particular attention is needed to formulate a long range mine plan which must then be executed with careful timing of each sequential phase to keep costs down in this remote part of the Yukon. A revised tonnage estimate for the deposit of gem quality rhodonite based on 1991 mining experience is about 400 tons with some potential of additional reserves down-dip.

Marketing strategies are presently the most important facet of the successful exploitation of this unusually high-quality rhodonite resource. Presumably, at least a large portion of the material in inventory should be sold to justify mining in the future. Sales in the rhodonite market depend on establishing a widely recognized "name" for quality stone of which the polishing characteristics are well defined and maintaining a steady supply.

Respectfully submitted,



J.T. Shearer, M.Sc., F.G.A.C.

INTRODUCTION

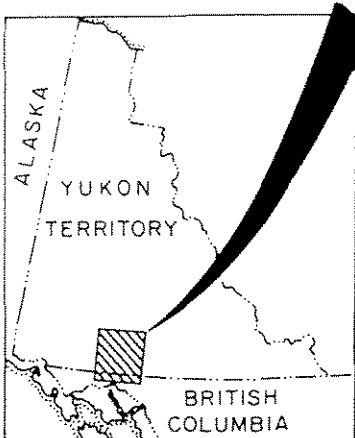
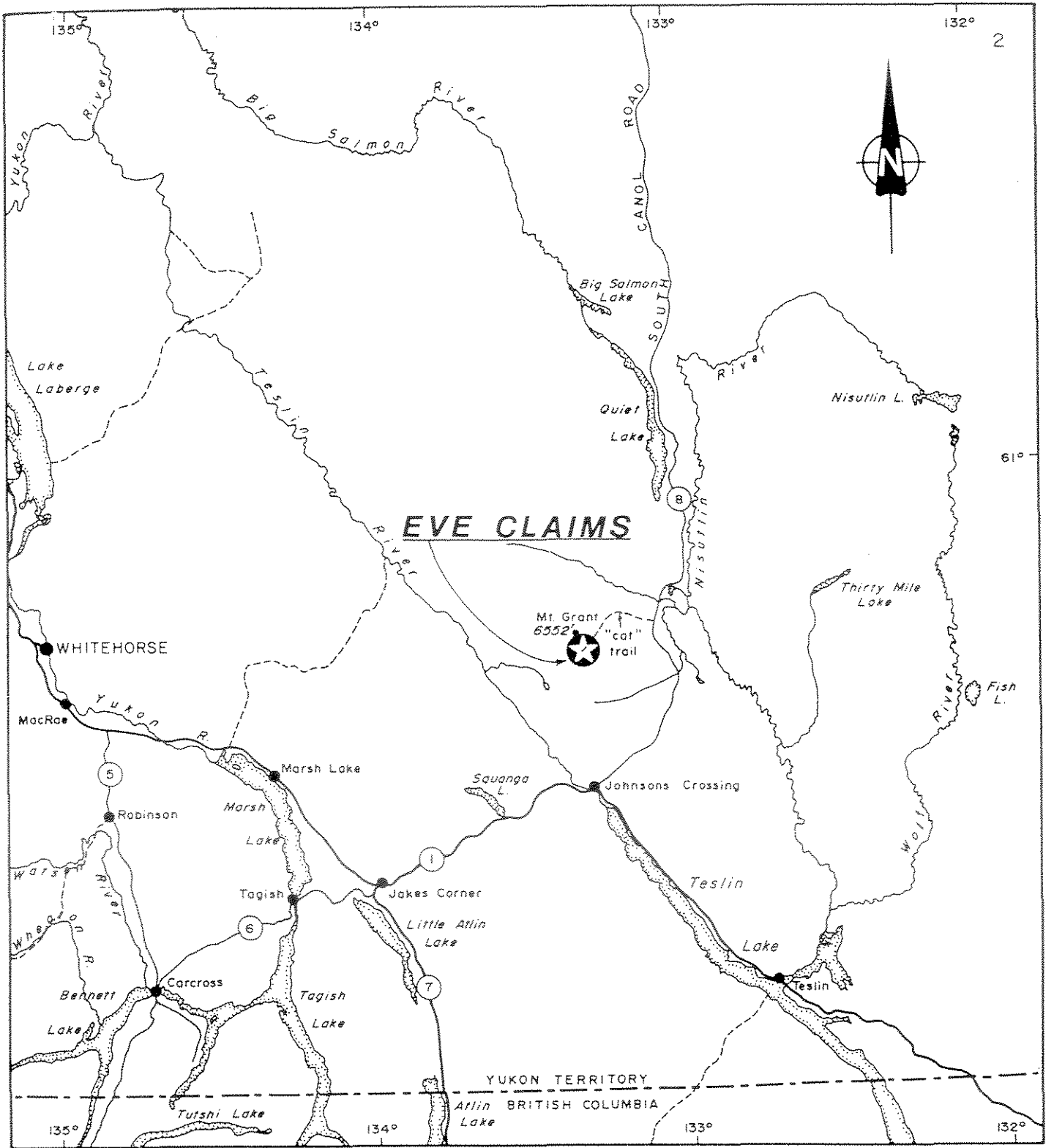
A gem-quality rhodonite deposit, wholly owned by Anooraq Resources Corporation, was investigated by a program of geological mapping, geochemical sampling, trenching and small-scale mining. Approximately 40 tons of high-grade rhodonite were produced in 1991 consisting mainly of a translucent raspberry red and uniform opaque, dark pink stone. The 1991 program demonstrated that large quantities of rhodonite can be recovered at relatively low cost using the appropriate equipment. Future mining costs should be even lower.

The property has produced prior to 1991 under different management (according to sketchy records) about 140 tons of variable quality rhodonite. The property was originally acquired in 1983 by Anooraq as a gold/silver prospect. Although the rhodonite zone was percussion drilled in 1968 by Mount Grant Mines Ltd., the gem potential was not recognized until 1987 when Anooraq focussed on the rhodonite deposit.

The 22.3 km access road, comfortable camp and excavations done on the rhodonite deposit, represent a considerable asset to the company. Future mining will depend on market conditions but can proceed on a systematic basis using the experience gained and documented in 1991.

The rhodonite market, which has similarities to the jade or other semi-precious stone commodity market, depends to a large degree on the quality of the stone, rarity (but dependable supply) and familiarity of the buyer with the finished product. Unfortunately, malicious rumours regarding blasting with explosives can adversely affect marketing strategies. A considerable amount of preparatory work is required to contact potential buyers, supply sample specimens and follow-up enquiries before substantial sales are realized. However, once a "name" is established, the marketing becomes relatively straight forward.

Anooraq rhodonite contains a significant quantity of an unusual translucent raspberry-red variety which is usually closely associated with greenish-blue "matrix". This red variety easily rivals or surpasses the quality of the red rhodonite marketed in the late 1960's as Imperial Red Rhodonite from New South Wales, Australia. Considerable interest has been expressed by potential buyers in regard to the red varieties at gem shows in the Vancouver, B.C. and Tacoma-Seattle, Washington State, and Portland, Oregon areas.



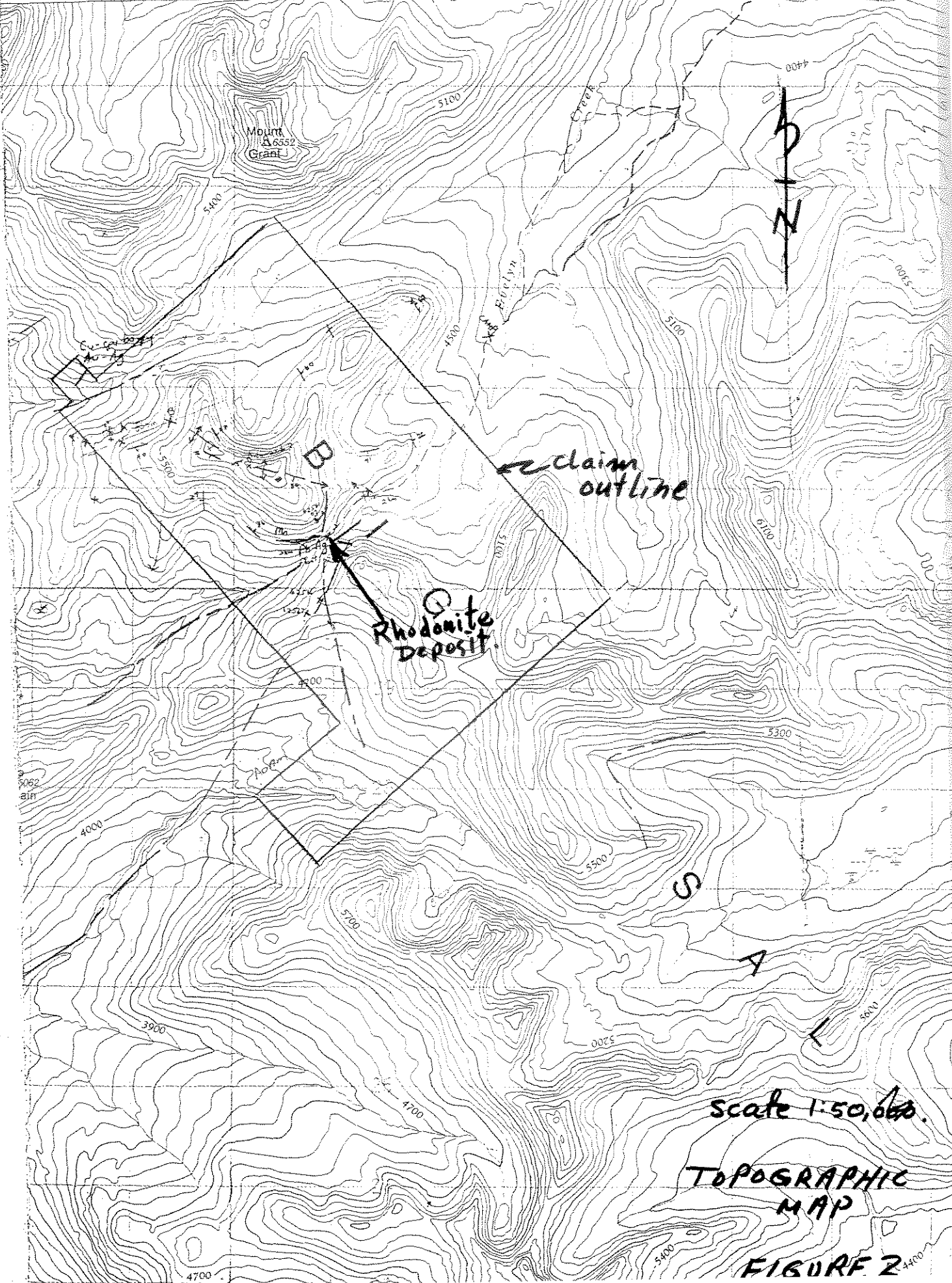
ANOOAQ RESOURCES CORPORATION	
EVE CLAIMS	
LOCATION	
Aurum Geological Consultants Inc.	February, 1987
Drawn by N.H. Checked by H.K. Scale 1:100,000	FIGURE 1

LOCATION AND ACCESS

The property is located in mountainous terrain about 23 km directly north of Johnsons Crossing (km 1346 on the Alaska Highway) or 95 km east of Whitehorse, Yukon Territory, Figure 1. The claim group is centered at 60° 42' North Latitude and 133° 20' West Longitude in N.T.S. Sheet 105C/11.

Access for the June 1991 geological mapping program was by helicopter from Whitehorse. The 1991 trenching program gained access by a 22.3 km dirt road which starts from the South Canal Road at km 42. This access road, which was repaired in 1991, was originally constructed in 1968 and then considerably improved in 1988-1989. Almost all drainages or seepages crossing the access road have been culverted. Repairs in 1991 consisted of replacing three culverts at 4.3 km, 8.2 km and 16.0 km with a D-7 bulldozer in a two day period. Since long stretches of the road are dirt, any sustained rain makes the road impassable even to 4-wheel drive vehicles. However, once the road has dried out over two or three days even 2-wheel drive vehicles can be taken into the rhodonite site. Local weather sources indicate that July 1991 was an unusually wet month in the southern Yukon.

The rhodonite zone is at an elevation of 5,200 feet below a steep south-facing slope. The Anooraq camp is situated just below treeline at 4,200 feet elevation. Camp consists of three well-built wooden frame buildings; a kitchen, dry-equipment storage and sleeping quarters for five persons. An older (1968) metal-clad trailer is located about 300 m south of the main camp and is presently set-up for sleeping quarters for five additional persons.



Scale 1:50,000.

TOPOGRAPHIC
MAP

FIGURE 2

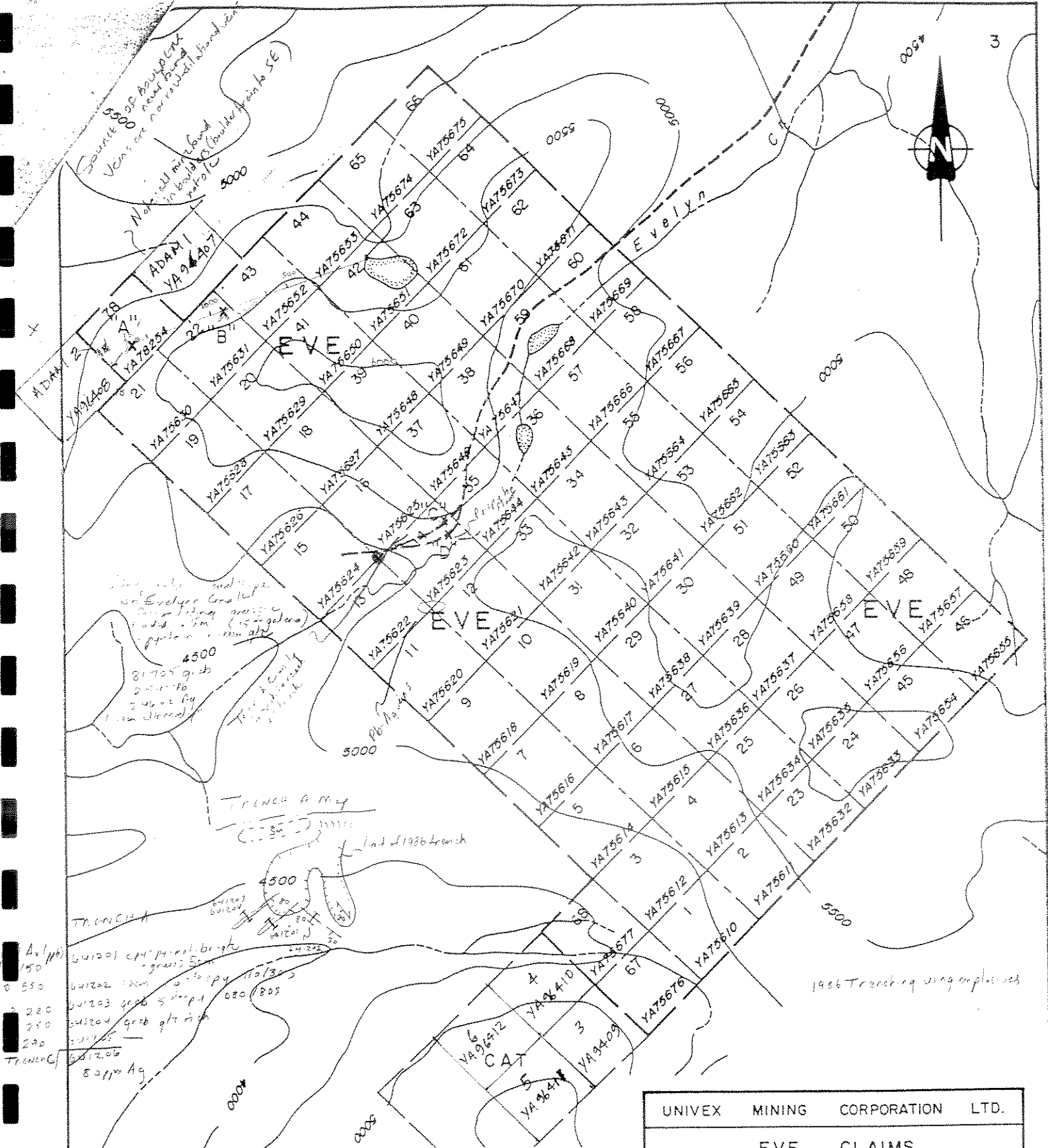
CLAIM STATUS

The property consists of the Eve 1 to 68 and Eve 78 quartz mining claims situated in the Whitehorse Mining Division, Yukon Territory, Figure 3. The claims are listed in Table 1 and cover an area of about 1,400 hectares. Located mineral claims acquire title pursuant to the Yukon Quartz Mining Act and require annual assessment work expenditures of \$100 per claim to be maintained in good standing. The current claim map shows an area surrounding the Eve claims designated as "R-9" which have been withdrawn from staking to "facilitate the settlement of Native Land Claims without prejudice to existing surface and subsurface rights." Assessment work performed in 1991 on EVE 14 can be grouped in 5 blocks of 16 claims to cover all of the property.

TABLE 1

List of Claims

<u>Claim Name</u>	<u>Record Number</u>	<u>Staking Date</u>	<u>Current Expiry Date</u>
EVE 1	YA75610	May 15, 1983	Nov. 16, 1996
EVE 2	YA75611	May 15, 1983	Nov. 16, 1996
EVE 3	YA75612	May 15, 1983	Nov. 16, 1996
EVE 4	YA75613	May 15, 1983	Nov. 16, 1996
EVE 5	YA75614	May 15, 1983	Nov. 16, 1996
EVE 6	YA75615	May 15, 1983	Nov. 16, 1996
EVE 7	YA75616	May 15, 1983	Nov. 16, 1996
EVE 8	YA75617	May 15, 1983	Nov. 16, 1996
EVE 9	YA75618	May 15, 1983	Nov. 16, 1996
EVE 10	YA75619	May 15, 1983	Nov. 16, 1996
EVE 11	YA75620	May 15, 1983	Nov. 16, 1996
EVE 12	YA75621	May 15, 1983	Nov. 16, 1996
EVE 13	YA75622	May 15, 1983	Nov. 16, 1996
EVE 14	YA75623	May 15, 1983	Nov. 16, 1996
EVE 15	YA75624	May 15, 1983	Nov. 16, 1996
EVE 16	YA75625	May 15, 1983	Nov. 16, 1996
EVE 17	YA75626	May 15, 1983	Nov. 16, 1996
EVE 18	YA75627	May 15, 1983	Nov. 16, 1996
EVE 19	YA75628	May 15, 1983	Nov. 16, 1996
EVE 20	YA75629	May 15, 1983	Nov. 16, 1996
EVE 21	YA75630	May 15, 1983	Nov. 16, 1996
EVE 22	YA75631	May 15, 1983	Nov. 16, 1996
EVE 23	YA75632	May 15, 1983	Nov. 16, 1996
EVE 24	YA75633	May 15, 1983	Nov. 16, 1996
EVE 25	YA75634	May 15, 1983	Nov. 16, 1996
EVE 26	YA75635	May 15, 1983	Nov. 16, 1996
EVE 27	YA75636	May 15, 1983	Nov. 16, 1996



LEGEND

- 46 claim boundary
- YA75655 claim number
- tag number
- creeks
- 5000- elevation contour; interval 500 ft.
- X trench
- road

500m 0 500 1000m

scale in metres

UNIVEX MINING CORPORATION LTD.			
EVE CLAIMS			
CLAIM MAP			
Aurum Geological Consultants Inc.			February, 1987
NTS 105C/11	Drawn by H.K. / N.H.	Scale 1:31,680	FIGURE 2

TABLE 1 CONT'D

<u>Claim Name</u>	<u>Record Number</u>	<u>Staking Date</u>	<u>Current Expiry Date</u>
EVE 28	YA75637	May 15, 1983	Nov. 16, 1996
EVE 29	YA75638	May 15, 1983	Nov. 16, 1996
EVE 30	YA75639	May 15, 1983	Nov. 16, 1996
EVE 31	YA75640	May 15, 1983	Nov. 16, 1996
EVE 32	YA75641	May 15, 1983	Nov. 16, 1996
EVE 33	YA75642	May 15, 1983	Nov. 16, 1996
EVE 34	YA75643	May 15, 1983	Nov. 16, 1996
EVE 35	YA75644	May 15, 1983	Nov. 16, 1996
EVE 36	YA75645	May 15, 1983	Nov. 16, 1996
EVE 37	YA75646	May 15, 1983	Nov. 16, 1996
EVE 38	YA75647	May 15, 1983	Nov. 16, 1996
EVE 39	YA75648	May 15, 1983	Nov. 16, 1996
EVE 40	YA75649	May 15, 1983	Nov. 16, 1996
EVE 41	YA75650	May 15, 1983	Nov. 16, 1996
EVE 42	YA75651	May 15, 1983	Nov. 16, 1996
EVE 43	YA75652	May 15, 1983	Nov. 16, 1996
EVE 44	YA75653	May 15, 1983	Nov. 16, 1996
EVE 45	YA75654	May 15, 1983	Nov. 16, 1996
EVE 46	YA75655	May 15, 1983	Nov. 16, 1996
EVE 47	YA75656	May 15, 1983	Nov. 16, 1996
EVE 48	YA75657	May 15, 1983	Nov. 16, 1996
EVE 49	YA75658	May 15, 1983	Nov. 16, 1996
EVE 50	YA75659	May 15, 1983	Nov. 16, 1996
EVE 51	YA75660	May 15, 1983	Nov. 16, 1996
EVE 52	YA75661	May 15, 1983	Nov. 16, 1996
EVE 53	YA75662	May 15, 1983	Nov. 16, 1996
EVE 54	YA75663	May 15, 1983	Nov. 16, 1996
EVE 55	YA75664	May 15, 1983	Nov. 16, 1996
EVE 56	YA75665	May 15, 1983	Nov. 16, 1996
EVE 57	YA75666	May 15, 1983	Nov. 16, 1996
EVE 58	YA75667	May 15, 1983	Nov. 16, 1996
EVE 59	YA75668	May 15, 1983	Nov. 16, 1996
EVE 60	YA75669	May 15, 1983	Nov. 16, 1996
EVE 61	YA75670	May 15, 1983	Nov. 16, 1996
EVE 62	YA75671	May 15, 1983	Nov. 16, 1996
EVE 63	YA75672	May 15, 1983	Nov. 16, 1996
EVE 64	YA75673	May 15, 1983	Nov. 16, 1996
EVE 65	YA75674	May 15, 1983	Nov. 16, 1996
EVE 66	YA75675	May 15, 1983	Nov. 16, 1996
EVE 67	YA75676	May 15, 1983	Nov. 16, 1996
EVE 68	YA75677	May 15, 1983	Nov. 16, 1996
EVE 78	YA78245	May 15, 1983	Nov. 16, 1996
ADAM 1	YA96407	Nov. 30, 1988	Oct. 16, 1991
ADAM 2	YA96408	Nov. 30, 1988	Oct. 16, 1991
ADAM 3	YA96409	Nov. 30, 1988	Oct. 16, 1991
ADAM 4	YA96410	Nov. 30, 1988	Oct. 16, 1991
ADAM 5	YA96411	Nov. 30, 1988	Oct. 16, 1991
ADAM 6	YA96412	Nov. 30, 1988	Oct. 16, 1991

HISTORY

The streams draining the Big Salmon Range into Teslin River were prospected for placer deposits by miners from the Dease Lake area previous to discovery of gold in the Klondike region in 1896. Workable placer gold deposits were located in the Livingston Creek area immediately northwest of Teslin Map Sheet in the Big Salmon Range by 1899 and a surge of exploration to the surrounding area ensued. In the following two decades, the Livingston placer camp produced more than 50,000 ounces of gold, but mining virtually ceased by 1920. By the early 1930's, the level of exploration activity again increased in the Big Salmon region with miners working on creeks in the Livingston Creek camp and on Iron Creek Cottonwood Creek between Big Salmon Range and Nisutlin River. However, the region again became dormant with the outbreak of World War II and next underwent exploration activity surges as a result of opening the Canol Pipeline Road to civilian travel and improved road access along the Alaska Highway. The advent of helicopter supported prospecting programs in the late 1950's resulted in additional exploration of the Teslin region (Macdonald, 1984).

The Evelyn Creek area has been staked or partially staked by several operators. The first recorded claims were located in 1955 by individuals investigating the manganese and chalcopyrite-bornite mineralization (Macdonald, 1984).

Mount Grant Mines Ltd. acquired the manganese prospect in 1967 (Antal, 1967). In 1968, a 14 miles (22.3 km) access road was constructed and a total of 2,901 feet (884 m) of percussion drilling was completed on the rhodonite showing. One of these percussion holes was observed in 1991, collared in the footwall (south) quartzite.

Claims in the area were staked by Cortex Silver Mines Ltd. in 1968 and Providence Mining in 1974 and apparently some small scale trenching for Au/Ag showings in narrow quartz veins was completed.

The Eve claims were located for Anoraq Resources Corporation in 1983 after management of the company received a notarized letter concerning high grade gold-silver values from quartz veins in the Evelyn Creek area. The property was

visited and reports written for Anooraq by A.O. Birkeland, I. Nelles and F.M. Smith in 1983. A report written by G. Macdonald in July 1984 recommended a \$102,500 two-phase program of geological mapping, soil and stream sampling, IP and VLF surveying, bulldozer trenching and road rehabilitation followed by 1,000 feet of diamond drilling. Apparently, no additional field work was completed in 1984 or 1985.

Trenching, utilizing explosives, was completed in four areas between September 26 to October 4, 1986. Of the two trenches attempted in the rhodonite zone only one was successful in reaching bedrock (Keyser, 1987A). Apparently, no fieldwork was completed in 1987.

In a letter dated May 27, 1987, H.J. Keyser calculates geological reserves of rhodonite as 4,763 tons "with all dimensions open".

Sketchy reports indicate the considerable road work was done in 1988 and a small quantity of rhodonite was produced and at least partially flown out by helicopter to the Canol Road in late 1988.

Mining of the rhodonite continued in 1989 when approximately 90 to 100 tons of material was produced and shipped to Vancouver. It is presently stored in the Maple Ridge warehouse (60 tons) and the White Pass dock in North Vancouver. The rhodonite mined in 1989 was extracted by drilling holes with a hand plugger and later a larger airtrack drill. Apparently, due to poor advice, relatively small sized muck was desired since the drill pattern averages about 15 cm between drill holes. Most holes are vertical but on the northeast and northwest corners of the deposit some angle holes were observed. No systematic mining plan is apparent.

Once the holes were drilled, an expanding agent call S-MITE was employed to break and create widespread fractures in the rock but avoid the intense microfracture common when using the more usual high-speed modern explosives. Judging from the S-MITE holes uncovered during 1991 mining, this method of fracturing rock works relatively well. The drill pattern could have been much more widely spaced and perhaps some horizontal holes should have been used for lift. Interestingly, at the bottom of some close spaced lines of S-MITE holes, the shattering was quite

intense over a short distance. The 1989 material was then broken by hand into smaller pieces and loaded into 750 kg fiberglass bags which were handled by a HIAB equipped truck. From an inspection of the 1989 warehouse bags it appears that there was little sorting of the 1989 production contrary to claims from the former operators.

FIELD PROCEDURES

Geological traverses in 1991 were plotted on a 1:5,000 photographic enlargement of the 1:50,000 government topographic map. Traverses were aided by hip chain, compass measurements and airphotographs. Rock, soil and silt samples were collected along the geological traverses. Magnetic declinations used was $32^{\circ}10'E$.

Trenching and rhodonite mining in 1991 was accomplished by a Caterpillar 225 narrow-tracked excavator. Most of the 1991 production was from areas already broken from S-MITE holes poured in 1989. Although similar machinery was on the property in 1989, the former operators did not utilize the equipment properly. In 1991, the 225 Excavator on narrow tracks proved to be small enough to maneuver around the steep side hill, but also had the power to break out the large blocks along fracture breaks. A D-7 bulldozer was employed to repair the access road. The three larger washouts were easily fixed in a few hours work. The 8.2 km washout was repaired but the small 14" culvert was repeatedly blocked by beavers until a unused 40" culvert, found farther up the road, was installed. It is likely that this culvert will be blocked before freeze-up in 1991 and the road will have a narrow washout which could be repaired by the company CASE 450 loader for future projects.

Hauling of stone was done by an International Loadstar 1700 3-ton truck equipped with a 7' x 12' power-take-off dump box. Approximately 6 tons of stone could be carried safely on a trip. The rhodonite was stockpiled at the Canol Road junction where it was further sized and final grading done before being placed on pallets (individual stones over 200 kg on a single pallet and small pieces in barrels). The largest chunks were over 4 tons in weight. The CASE 450 loader could easily handle blocks up to 3 tons and place them on the highway trailer. The trailer was hauled to Whitehorse where the stone was placed in a metal container for shipment to Vancouver by boat via Skagway.

GEOLOGY

a) Regional Geology

The Teslin 1:250,000 sheet was mapped and compiled by R. Mulligan during 1950-1953 and is available as Map 1125A, Figure 4, and Memoir 326 (Mulligan, 1963). Previous geological investigations in the general area include R.G. McConnell (1898), J.C. Gwillim (1901) and E.J. Lees (1936). Mapping along the Alaska Highway and Canol Road was done by C.S. Lord (1944) and E.D. Kindle (1946).

The Evelyn Creek property is underlain by metamorphic rocks of the Big Salmon Complex. The regional stratigraphic sequence is shown in Table 2. Locally, the complex consists of quartz-biotite schist, argillaceous slate, quartzite and thick limestone units. Cretaceous granitic rocks intrude the complex on the east part of the area (Mulligan, 1963).

The Big Salmon Complex is regionally metamorphosed and intensely deformed. Mulligan (1963) describes the age of the Complex as follows:

"The Big Salmon Complex comprises various rocks of sedimentary and volcanic origin, whose metamorphosed condition in general distinguishes them from those of other units. In this respect the unit corresponds to the Yukon Group of areas to north and west. However, it locally underlies Mississippian limestone of unit 2 with apparent conformity, and is believed to be mainly equivalent to Mississippian and earlier Paleozoic formations in Wolf Lake and McDame areas to the southeast. The age of the metamorphism, as indicated by the potassium-argon ratio of muscovite from the schists, has been determined as 214 million years.

Part of the complex may be the metamorphosed equivalent of units 2 and 3. On the other hand, a part near the western border of the outcrop area is of apparently relatively low metamorphic grade, and is not certainly distinguishable from nearby similar rocks of unit 9. The structure is generally highly complex and reliable stratigraphic subdivision is not feasible. In some places subdivision according to predominant lithological type is possible, however, and this has been attempted on the map."

The higher relative metamorphic grade of the rocks assigned to the Big Salmon Complex has been recognized by previous workers (Lord, 1944) and is a valid overall distinguishing feature although its stratigraphic significance is not clear throughout the map sheet. The characteristic metamorphism manifests itself both in mineralogy (dominated by biotite) and in structure.

Structurally, the regional metamorphism that characterizes unit 1 (and related parts of unit 3A) is expressed by the widespread development of cleavage, schistosity, and, more locally, gneissosity in the bedded rocks. In many places a pronounced pencil-structure results from the tendency of the rocks to break into long subcylindrical fragments marking the axial parts of small drag-folds."

Mulligan (1963) found that no major sections was exposed well enough to permit reliable stratigraphic interpretation.

In Big Salmon Range in the vicinity of the Eve claims, west of Nisutlin River, no fossiliferous marker horizon has been found. A thick crystalline limestone member, closely associated with greenstone on one hand and black argillaceous schist and quartzite on the other, extends along Sidney Creek and probably northwestward to the corner of the map-area.

TABLE 2
Stratigraphy of the Teslin Map-Area
(after Mulligan, 1963, notes by N. Cairn)

Mississippian and earlier	1 Big Salmon Complex	Quartz-mica and gneiss, quartzite, slate, greenstone, albite-epidote, amphibole gneiss, amphibolite, limestone, quartz plagioclase-amphibole, garnet gneiss
<hr/>		
Map Unit		
(1c)	Limestone unit - nearly all white or light grey moderate to strong recrystallized massive or banded in shades of white or bluish grey; buff coloured. Big Salmon Complex is higher grade metamorphism (biotite in schists or gneisses).	
(1b)	Dark grey or brown to black argillaceous quartz, slate, graphitic schist (micaceous) occurs in quartz-rich sections; well developed slaty cleavage.	
(1d)	Green, schistose chlorite, biotite, epidote-rich rocks and amphibolite made up a substantial part of this unit.	
(1e)	Albite-rich gneiss and albite-epidote amphibolite (volcanic origin), greenstones vary from unaltered porphyritic, amygdaloidal and fragmental structures indicate volcanic origin to banded quartz rocks of sedimentary origin. Augite-pseudomorphic by hornblende, actinolite, chlorite common as phenocrysts in meta lavas and flow breccias. Feldspars-sodic plagioclase and zoisite-epidote saussuritization; - high deformed and altered rocks -- albite-epidote-amphibole schists and amphibolite; - banded rocks in various shades of green containing granular quartz and epidote, chlorite, biotite + 2 ^o green amphibole (some appear to be tuffaceous quartzites or metavolcanics derived from volcanic terrain. Biotite spangles on surface are conspicuous features of greenstone. Albite gneiss speckled greenish grey foliated rock elliptical grains of albite (2 mm) in groundmass of chlorite, biotite, epidote. Porphyroblastic nature albite augen, quartz prominent and sericitic (white mica) quartz mica schist. Interbedded with dark green amphibole -- green hornblende, actinolite epidote, chlorite, albite.	
(1f)	Distinctive gneisses - border granite - strong lineation foliation smeared amphibole (feldspar fresh) - plagioclase quartz -25%, biotite, epidote, garnet (sphene-apatite), metaclastic - suturing and preferred quartz grain orientation. Limestone locally grades into volcanic rocks along strike. Limestone occurs in lenses elsewhere in thick volcanic sections. Limestone overlies and underlies greenstone. Skarn - coarsely crystalline epidote and garnet-pyrite.	
<hr/>		
Paleozoic?	A	Quartz-hornblende and quartz-feldspar-hornblende gneiss and amphibolite, diorite(?) in part gradational with, in part intrusive into 1

ERA	PERIOD	UNIT	
Mesozoic and Cenozoic	Cretaceous (and Tertiary)	14	Volcanic andesite, dacite ppy feldspar-qtz porphyry dykes (contemporaneous or younger)
Mesozoic	Cretaceous	13	Granite, granodiorite, diorite, gabbro, hornblendite, pyroxenite, syenite, monzonite
Jurassic or Cretaceous	Not in contact probably intrusive		
	Intrusive contact	12	Diorite
	Intrusive contact	11	Peridotite, pyroxenite, serpentine
Upper and/or Jurassic		10	Augite, porphyry, augite feldspar porphyry; lava, breccia agglomerate, argillite, sandstone, greywacke, conglomerate, chert
	Probably partly contemporaneous		
		9	Argillite, siltstone, sandstone, greywacke, conglomerate, limestone, minor lava
Upper Triassic	Not in contact	8	Lewess River Group; limestone, argillite, sandstone
Permian and/or Triassic	Probable conformity with 8, possible disconformity with 9	7	Volcanic rocks, chert, minor argillite, quartzite, limestone
Permian possibly later	Not in contact with 7-10, intrusive contact with 11, 12	6	Conglomerate, greywacke, limestone on 1-3; relationship to other rocks unknown
Paleozoic	Permian and Pennsylvanian		Fault(?) contacts, possible disconformity with 7
		7	Cache Creek Group; (in part) limestone
	Partly contemporaneous		
		4	Cach Creek Group; (in part) argillaceous and siltstone, greywacke, chert, minor limestone and conglomerate
	Not in contact, probable unconformity		
Mississippian	3 Englishmans Group (in part)		Argillite, quartzite, phyllite, chert, arkose, greywacke, grit, conglomerate, limestone, minor greenstone
	Probably local disconformity, partly(?) contain poroneous		
	2 Englishmans Group (in part)		Limestone

CENOZOIC

15

Drift and alluvium

CRETACEOUS

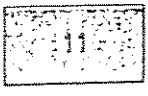
13

COAST AND CASSIAR INTRUSIONS
Granite, granodiorite; diorite; 13a, gabbro, diorite; hornblendite, pyroxenite; granodiorite; 13b, syenite, monzonite, gabbro; granodiorite, diorite

JURASSIC OR CRETACEOUS



Diorite



Peridotite, pyroxenite; serpentine

TRIASSIC AND/OR JURASSIC
UPPER TRIASSIC AND/OR JURASSIC

9

Argillaceous sandstone and siltstone, greywacke; 9a, conglomerate; 9b, black limestone; 9c, associated volcanic rocks

TRIASSIC
UPPER TRIASSIC
LEWES RIVER GROUP

8

Argillite and sandstone; 8a, limestone

PERMIAN OR (?) LATER

6

Conglomerate, greywacke, limestone

PENNSYLVANIAN (?) AND PERMIAN
CACHE CREEK GROUP (4,5)

4 5

5. Limestone; minor chert, argillite, slate, greenstone
4. Argillaceous and quartzitic siltstone, sandstone, greywacke; chert; minor limestone; 4a, chiefly banded chert; 4b, limestone; 4c, conglomeratic greywacke; 4d, banded argillite and argillaceous quartzite

MISSISSIPPIAN

2 3

ENGLISHMANS GROUP (2,3)
3. Argillaceous quartzite, slate; phyllite, chert; 3a, arkosic grit; 3b, conglomerate; 3c, limestone; 3d, greenstone
3A, Quartzose and argillaceous schist and phyllite; minor limestone; mainly equivalent to 2 and 3, but in part to 1, and in part of uncertain age
2. Limestone

PALAEZOIC

CRETACEOUS AND (?) TERTIARY

14

Andesite and dacite porphyry and agglomerate, feldspar-quartz porphyry and felsite dykes

TRIASSIC AND/OR JURASSIC (?)

10

Undifferentiated volcanic and sedimentary rocks; 10a, mainly augite, hornblende, and feldspar porphyry flows; agglomerate, breccia, tuff; 10b, greenstone; 10c, argillaceous siltstone, sandstone, greywacke; banded chert

PERMIAN AND/OR TRIASSIC

7

Volcanic and altered volcanic (?) rocks, chert; minor argillite and quartzite; 7a, intermediate lava and pyroclastic rocks; 7b, basic lava; 7c, limestone

MISSISSIPPIAN OR EARLIER (MAINLY)
BIG SALMON COMPLEX

1

Schist, gneiss, quartzite, greenstone, limestone; may be in part equivalent to younger units; 1a, chiefly quartzite and quartz-mica schist and gneiss; 1b, chiefly dark argillaceous slate, schist, quartzite; 1c, limestone; 1d, chiefly green, chloritic and epidotic rocks, biotite schist, amphibolite; 1e, albite gneiss, chlorite-epidote amphibolite; 1f, quartz-biotite-amphibole-epidote-plagioclase-garnet gneiss

.

Quartz-hornblende and quartz-feldspar-hornblende gneiss and amphibolite;

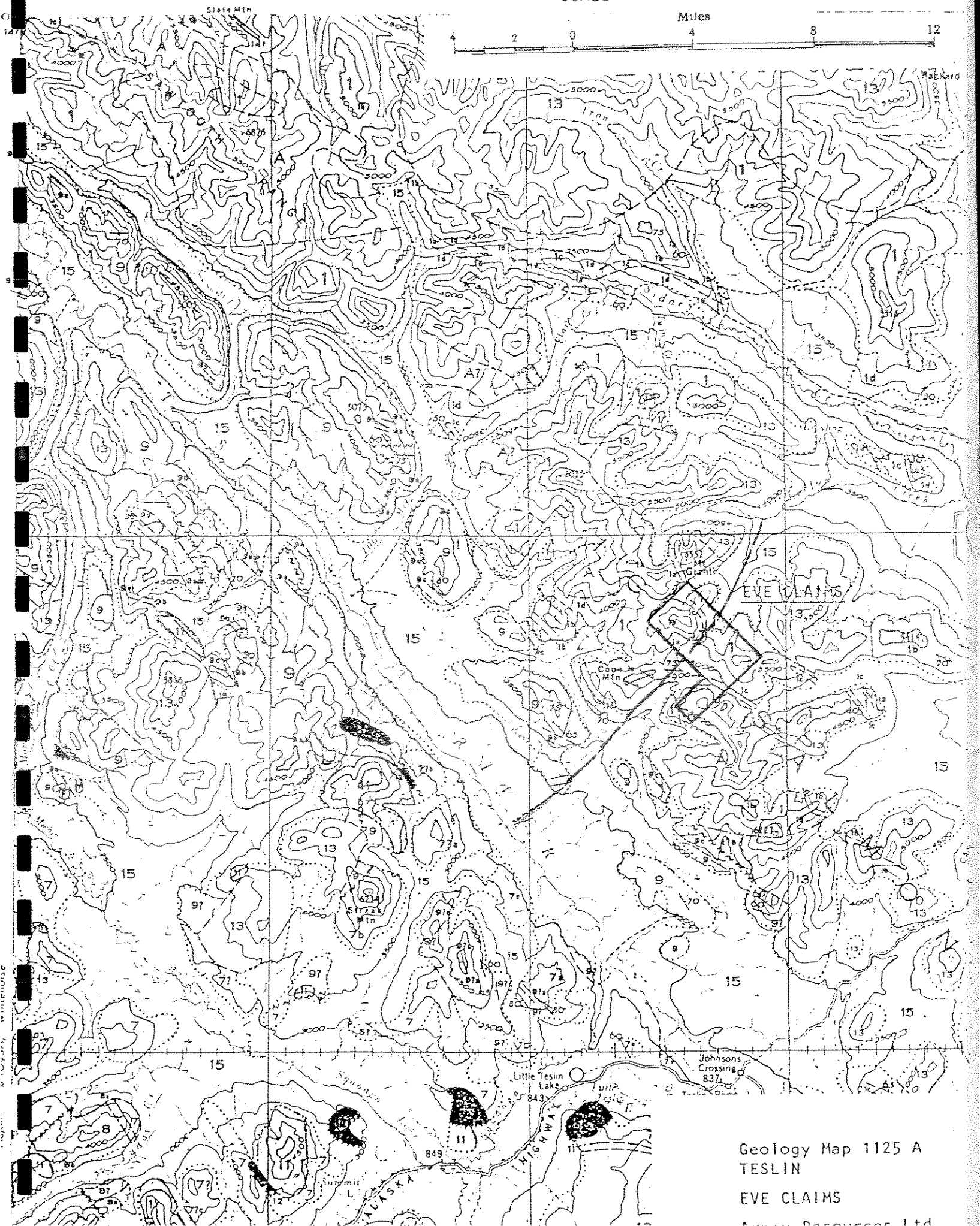
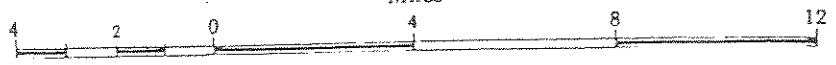
34°00'

45

30

SCALE

Miles



Geology Map 1125 A
 TESLIN
 EVE CLAIMS

Alaska Resources Ltd

(b) Local Geology and Petrology

Local geological mapping at a scale of 1:5000 was completed on the property by N.M. Cairn between June 18 and 15, 1991, Figure 5. Ms. Cairn is a highly qualified and experienced graduate geologist.

The property is underlain by Paleozoic metasediments-metavolcanics and an unknown age meta-intrusive rocks. Quartz veinlets (multidirectional stockwork) occur throughout the rhodonite showing and surrounding rocks. Veins may or may not contain disseminated pyrite. Unidirectional quartz veins occur throughout the Paleozoic quartz-muscovite schists and may be very weakly anomalous in gold.

Pyritic, siliceous meta-tuff(?) horizons form extensive red-orange soil gossans throughout the property and are locally loci for fault-shear zones. These horizons are weakly anomalous in gold (20-50 ppm), weakly anomalous in barium (120-760 ppm), moderately anomalous in arsenic (60-375 ppm). Two samples were moderately anomalous in copper coincident with weak gold values (50 ppb Au with 447 ppm Cu and 20 ppb Au with 270 ppm Cu). Both samples were taken from pyritic chloritic-sericite quartz schists with pyritic seams and disseminations (Appendix VI).

Gold-silver-copper mineralization at the northwest corner of the property (Eve 78 claim) associated with chlorite \pm quartz \pm magnetite veins in a meta-intrusive returned 125 ppb Au, 26.8 ppm Ag and 2970 ppm Cu respectively. The veins contained disseminated pyrite, chalcopyrite, magnetite hosted in zoned chalcödonic quartz. The sample was taken from a 40 cm discontinuous quartz pod.

Map units used on Figure 5 are as follows:

- | | | |
|----------|------|---|
| | 2 | Hornblende granodiorite (metamorphosed). |
| Youngest | (1a) | Quartzite \pm quartz mica schist (quartz muscovite-biotite schist) \pm gneiss, limestone. |

- | | | |
|-----------------------------|------|--|
| (Host to rhodonite deposit) | (1b) | Dark grey brown to black argillaceous quartzite massive to finely bedded \pm massive grey quartzite slaty and graphitic schist (micaceous) with quartzite beds (slaty cleavage). |
| | (1c) | Limestone unit - white to moderate grey or light buff to white, moderate to strong recrystallization and massive white to well bedded. |
| | (1d) | Green, chloritic (\pm biotitic) (\pm epidote) - rich rocks \pm amphibolite makes up substantial part of unit. |
| Oldest | (1e) | Albite-rich gneiss \pm albite-epidote amphibolite (metavolcanic origin). |

The limestone unit has 1 to 3 cm quartzite interbeds associated with a strong bedding cleavage. The limestone unit (1c) underlies conformably Unit 1a quartzite.

Geological cross-sections, Figure 6, illustrate the dominant style of deformation and the relationship between major map units. The major structure in the area is a tightly folded anticline trending north-northwest.

The south boundary of the rhodonite deposit consists of a banded massive to poorly bedded, white to light grey quartzite while the north contact consists of a well banded argillaceous wacke, graphitic argillite and quartzites, Figure 7.

A section measured by N. Cairn through the widest exposed portion of the deposit showed 8-11 m of good quality ore. The deposit is primarily rhodonite occurring as pervasive to selective replacement pods \pm veins together with subordinate rhodocrosite veins more common near the eastern periphery of the high grade core of the deposit (see 1:5000 scale map, Figure 5).

The lenticular shape of the rhodonite deposit may be related to a slight flexure in a small scale fold or actually coincident with the main axial trace of a large scale anticline centered on the property and forming a strataform-structural lens. The rhodonite deposit is coated with 3 cm to 25 cm of a manganese oxide rind with the narrower tail ends of the deposit in 90% MnO₂.

Three specimens around the rhodonite deposit were examined in thinsection, Appendix IV, to give a brief introduction to the varied manganese mineralogy and microtextures of the metamorphic suite. Specimen ANQ-1 is an example of the quartzites hosting the main rhodonite deposit and a descriptive term "Leopard rock" was used during mapping to refer to these distinctive units. All rocks in proximity to the deposit are stained to varying degrees by MnO_2 . "Leopard rock" commonly has irregular dark patches distributed throughout the specimen but is almost completely composed of recrystallized quartz grains. Minor tremolite forms bundles of long needle-like crystals. The irregular dark areas noted in handspecimen are combination of MnO_2 staining and the presence of cryptomelane (Mn biotite) occupying the interstitial space between quartz grains. Traces of spessarite occur as very small aggregates up to 0.2 mm in size which cross-cut and replace quartz grains.

Specimen ANQ-02 is an example of low-grade rhodonite mineralization that is dominated by massive tephroite and rhodochrosite. Rhodochrosite (or manganosiderite) forms a relatively equigranular interlocking mosaic of grains averaging 0.08 to 0.15 mm in diameter. Rhodochrosite zones in handspecimen correspond to the lighter "peach" coloured areas and is one of the youngest manganese minerals in the deposit. The oldest manganese mineral is the green-blue mineral named tephroite (a manganese silicate with an olivine structure). Some parts of ANQ-2 are composed of a very fine grained assemblage of what appears to be bustamite and spessarite.

Specimens ANQ-03 is a narrow rhodonite veinlet occurring distal to the main deposit. The rhodonite veinlet is relatively coarse crystalline (subhedral grains up to 2.1 mm long) rhodonite grains cut by micro-veinlets of rhodochrosite. Rectangular micro-quartz lenses replace rhodonite along the main cleavage direction. The rhodonite vein is hosted by a muscovite schist containing crowded spessarite crystals up to 0.05 mm in diameter.

RHODONITE MINERALIZATION AND TRENCHING RESULTS (RHODONITE CLASSIFICATION AND RESERVES)

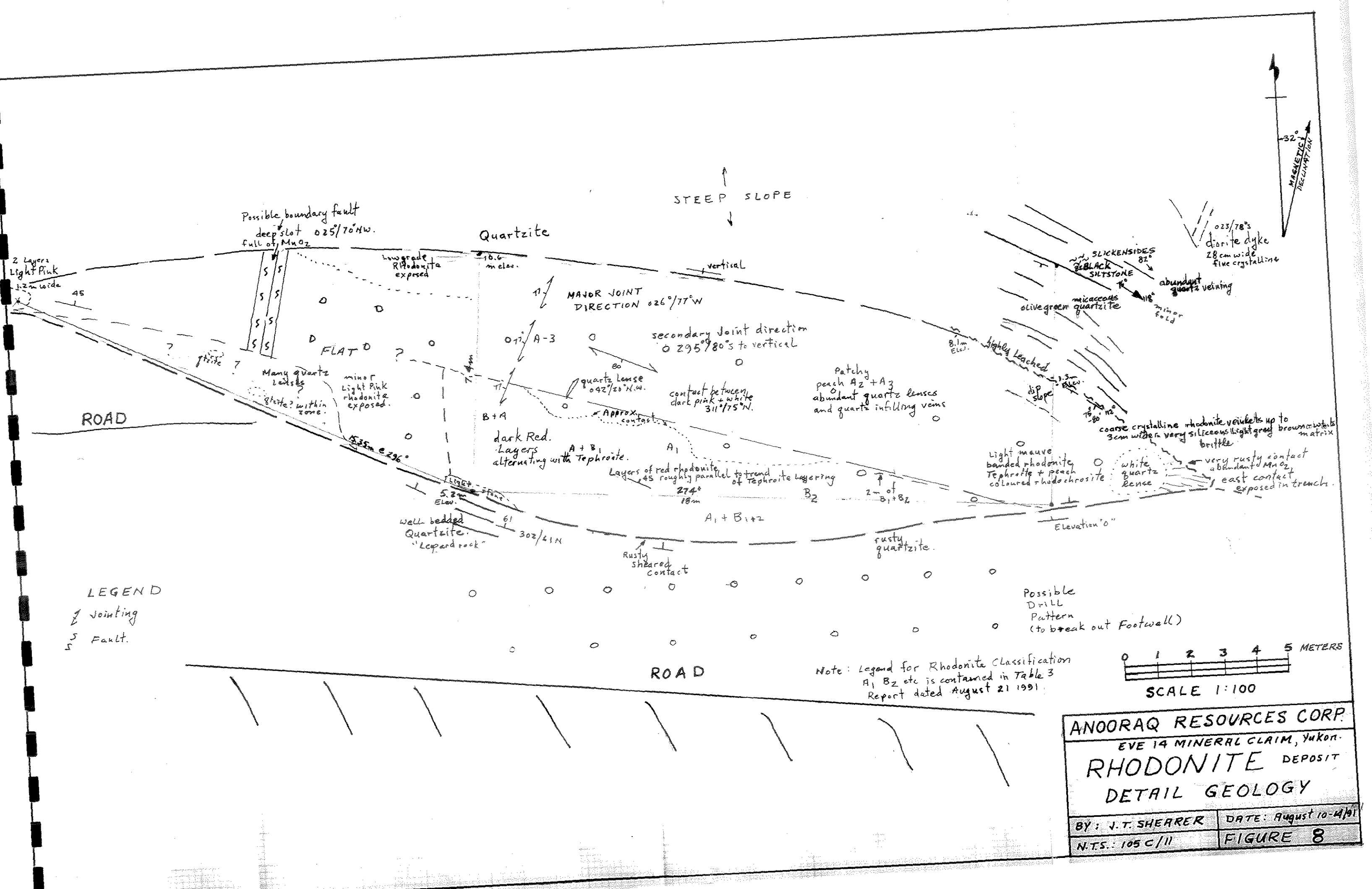
The manganiferous (rhodonite) horizon is mainly exposed in a large road cut at the headwaters of Evelyn and Dave Creeks.

Although manganese minerals have been known to be abundant in the Evelyn Creek area since at least the early 1950's, the possibilities of economic gem quality rhodonite was apparently not investigated until 1986. Minor trenching with explosives in 1986 (Keyser, 1986) and a re-evaluation of percussion drilling by Mount Grant Mines Ltd. in 1968 resulted in focussing attention away from the small Ag-Cu and Ag-Pb potential and onto gemstone possibilities.

Four specimens (26 kg) of rhodonite were submitted to two Vancouver gemologists (M.M. Posilovic, 1987, and G.R. Stacey, 1987). Mr. Stacey examined one slabbed piece and concluded that this specimen had a value of \$2.40 - \$2.60 per pound FOB mine site in U.S. funds. Ms. Posilovic estimated that the specimens she examined were gem quality rhodonite worth a "wholesale market value of U.S. \$2.50 a pound".

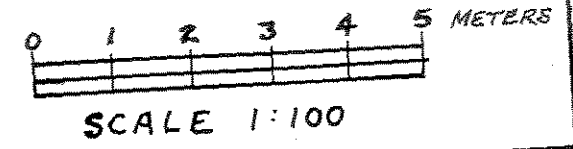
The rhodonite deposit was mapped in detail in 1991, Figures 7 and 8. The main rhodonite occurrence has surface indications that imply a westward extension of about 100 meters past the main (thickness) lens and appears to continue to the east for at least 250 meters. However, these extensions are very narrow and of poor quality rhodonite. The rhodonite deposit is lenticular but stratiform in nature. Detailed trenching on the southern fault contact shows that in general the contact dips between 61° and 79° to the north, Figure 8, but the eastern edge of the deposit is actually relatively shallow to horizontal fault. Property mapping suggests that the main rhodonite lens may be related to a slight flexure in small scale folds approximately coincident with the axis of the large scale anticline.

The main rhodonite deposit is on a small scale highly variable but can generally be subdivided into (1) a northern tephroite - bustamite - rhodochrosite - quartz - spessartite - pyrite - minor rhodonite zone and (2) southern rhodonite (red + pink) - tephroite - minor rhodochrosite zone, Figure 8.



LEGEND
 ↗ Jointing
 S Fault.

Note: Legend for Rhodonite Classification A1 B2 etc is contained in Table 3 Report dated August 21 1991.



ANOORAQ RESOURCES CORP.	
EVE 14 MINERAL CLAIM, Yukon.	
RHODONITE DEPOSIT	
DETAIL GEOLOGY	
BY: J. T. SHEARER	DATE: August 10-1991
N.T.S.: 105 C/11	FIGURE 8

Internally, the red rhodonite layers strike subparallel to the southern contact (300° Az) and dip 45° to 60° to the north (also subparallel to the south contact dip). Seams of red rhodonite also dip 30° - 40° to the southeast around tephroite fragments.

The stratiform form of the rhodonite deposit, field relationships and textures strongly suggest that it originated as an ocean floor hydrothermal system that was metamorphosed to produce the present mineralogy which is not in equilibrium. A probable sequence of events is as follows which is typical of rhodonite deposits in the Cassiar and Cowichan Lake areas (Shearer, 1988):

- 1) deposition of manganese-rich cherts at the seawater-sediment interface, principally MnO_2 ;
- 2) metamorphism to produce tephroite;
- 3) later metamorphism and alteration of tephroite to red and pink rhodonite;
- 4) alteration of rhodonite + tephroite to produce massive rhodochrosite and spessarite and late stage rhodonite - bustamite veining;
- 5) open space filling + brecciation by quartz.

The raspberry-red rhodonite is intimately associated with tephroite cores. Commonly, the deepest red rhodonite occupies the interstitial space between massive tephroite breccia fragments. Red rhodonite also forms irregular veinlets up to several centimeters wide separated from tephroite patches by narrow zones of rhodochrosite.

The red rhodonite from Australia, marketed in the late 1960's as "Imperial Red Rhodonite", is also closely associated with tephroite (Hall, 1959). This rhodonite is from the Black and White Mine also known as O'Neill's Danglemah Deposit located a short distance northwest of Tamworth, New South Wales. The unusual colour of "Imperial Red" is explained by Corbett (1966), Page 873:

"Minute defect structures in the crystal lattice have caused a colour alteration. This has been enhanced and deepened by oxidation dispersing minute amounts of manganese dioxide through the spaces between crystals and, logically the individual crystals are larger than those of ordinary rhodonite which is microcrystalline and would allow no such dispersion."

However, Nelson et. al. (1990) have noted in thinsection a range in interference colours of rhodonite which may reflect differing calcium content. This may also have an effect on the macroscopic colour and transparency.

The varieties of rhodonite from Evelyn Creek have been subdivided (Shearer, 1991) within a simple (commercial) classification scheme based on the slabbing a large amount of material in the Maple Ridge warehouse. This classification is shown in Table 3. It is normally applicable to cut blocks and cannot be applied to outcrops or rough blocks without extensive chipping, core drilling or sawing. Rhodonite grade varies widely in gem qualities based mainly on (1) colour, (2) impurities, (3) degree of fracturing and (4) structure. The Evelyn Creek rhodonite has a distinct advantage over other rhodonite localities due to the translucent raspberry-red colour found in parts of the Evelyn Creek deposit. The contrast between the dark red and greenish-blue tephroite make attractive spheres.

Fractures are a serious defect in any gemstone. If present in carving stone or polished item there is a likelihood of breakage where the fractures are only weakly healed. Previous mining at Evelyn Creek employed the expanding agent S-MITE to minimize the occurrence of micro-fractures. Structure refers to the grain imparted by preferred orientation of the component minerals (Leaming, 1973). Evelyn Creek rhodonite is mainly isotropic. Desirable and undesirable properties may persist from one grade to another, for example bright red rhodonite may be so fractured that it cannot be used for commercial purposes.

Reserves

1991 Mining has helped to quantify the parameters required to more accurately estimate how much gem quality rhodonite is present in the main deposit.

Previous geologic reserves were done by Keyser (1987) and J.W. Antal (1968). Keyser's figure was based on 1986-1987 surface trenching - mapping and the 1968 percussion drill records. He estimated the surface dimensions of the rhodonite at

TABLE 3

February 1991
J.T. Shearer

GRADES
OF
RHODONITE

Type:	Commercial				Non-Commercial			
	Gem		Carving		Waste			
Class:	A		B		C	D	E	F
Grade:	Premium	1	2	1	2			

Grade is generally applicable to cut blocks and usually cannot be applied with accuracy to outcrops or very large boulders without core drilling or sawing.

Description:

- Premium : Dark pink colour, relatively coarse crystalline generally uniform colour throughout, few fractures, isotropic structure, hard, takes a good polish, translucent, hard.
- A-1 : Fine grained, massive pink rhodonite dominant, minimum of fleshy white areas, takes a good polish, minor fractures.
- A-2 : Fine grained pink rhodonite, considerable amount of white-fleshy areas (polishes less uniformly), minor fractures, opaque, softer. Note: black manganese hairline fractures and dendrites acceptable in Grade A-1 and A-2.
- B-1 : White-fleshy areas dominant, very mottled, some small rhodonite zone available for small cabochons, more abundant of inclusions of bluish-grey material, wide spaced fractures acceptable.
- B-2 : Inclusions of bluish-grey material abundant, rhodonite less common, white areas are frequently abundant. Wide spaced fractures acceptable.
- C : Structurally uniform, generally poor colour, abundance of manganese oxides and inclusions, wide spaced fractures, poorer polish possible.
- D : Structurally uniform, generally poor colour or extremely variable colour, fracturing becoming increasing close spaced, takes a poor polish.
- E : Abundant major fractures and microfracturing colour usually poor although good colour can be negated by too much fracturing.
- F : Structurally anisotropic, commonly schistose, minor rhodonite development, highly fractured.

15 x 6 meters and projected the depth to 15 meters to arrive at reserves of 4,763 tons.

J.W. Antal estimates reserves of "manganese" at 25,000 tons with indicating mineralogy (J.W. Antal, 1968; Mount Grant Mines Ltd., Assessment Report).

From the detail mapping, trenching and definition of gem grade rhodonite during 1991, the dimensions of the red and pink rhodonite suitable for gem purposes is more accurately a triangular area averaging 1.75 meters wide by 16 meters long by an observed depth of 5 meters which gives an approximate reserve of about 400 tons. The actual depth of the main deposit may be considerably more than 5 meters. A limited tonnage may be present under the "flat" area in the northwest part of the deposit. The limits of the gem rhodonite deposit to the east and west have been defined by 1991 trenching, Figure 8.

TABLE 4

1991 RHODONITE PRODUCTION

August 16, 1991 (Friday) - First Load (scale weight 39 Ton - 16 ton truck = 23T)

<u>Pallet No.</u>	<u>Estimated Tons</u>	<u>Approx. Measurements</u>	<u>Cubic Feet</u>	<u>Pounds</u>	<u>Quality Description</u>
(1)	1/2	1½ x 1½ x 3	= 6.75 x 180	1,215	Red raspberry with lots of blue-green
(2)	1/4	4½ x 3½ x 1½	23.6 x 200	4,300	Pink with lots of black lines on outerpart
(3)	1/2	17 chunks avg. 65 lb.		1,200	
(4)	1-1/4	one large chunk 2 x 3½ x 1-3/4 4 small chunks - 200 lb.	12.25	2,200 + 200	Raspberry red, very good chunk, smaller chunks good also
(5)	1-1/4	3 barrels: red; 1 - 10 lb. (2) red; 10 - 40 lb. (3) pink; 1 - 10 lb.	800 lb. each	2,400	
(6)	1-1/4	3 barrels: pink; 10 - 40 (4) red; 10 - 40 (6) red; large (7) 50 lb.			
(7)	1-1/4	3 barrels: pink; 10 - 40 (5) red; 50 - 100 (8) pink; 10 - 40 (9)			
(8)	4-1/4	4½ x 4½ x 2½	47.8	8,606	Veined red, pink on one side with some A-2, lots of uniform pink
(9)	2-1/4	5 x 3½ x 1½	26½	4,725	Raspberry red on one end, pink on one end, uniform pink, beautiful stone

TABLE 4 CONT'D

<u>Pallet No.</u>	<u>Estimated Tons</u>	<u>Approx. Measurements</u>	<u>Cubic Feet</u>	<u>Pounds</u>	<u>Quality Description</u>
(10)	3-3/4	4½ x 4 x 2-1/3	41.99	7,558	10 beautiful rocks, raspberry red in large part, some dark, interspersed with red
(11)	3-1/4	3 x 4 x 3	36	6,480	Some raspberry red with A-2 and A-1
(12)	smaller chunks of red				
(13)	1-3/4	4½ x 2 x 2½	20.25	3,645	Mainly uniform pink, some A-2 on copper side, cracked on underside
August 18, 1991 (Sunday) - Second Load					
(14)	1	9 chunks one 1,000 lb.		2,000	Dark raspberry red
(15)	1	4 chunks, pink		2,000	Uniform pink
(16)	1	3 chunks		2,000	Quartz mixed with uniform pink on one large chunk
(17)	1-1/4	3 x 2½ x 2 = 15		2,700	Mixed light pink to spotted RR, quite fractured
(18)	1	6; 3 big chunks		2,000	Reddish pink
(19)	.675	3 red; 2 x 1 x 2½		1,500	Raspberry red
(20)	1	6 chunks		2,000	Dark and lighter uniform pink
(21)	1.8	3 chunks		1,800	Dark pink, some red
(22)	1	large & small pink		2,000	Pink with minor qtz lenses
(23)	1-1/4	1 chunk red & pink mixed 2½ x 2 x 3 = 15		2,700	One chunk of uniform pink, some dull red on top edge
(24)	0.75	8 pink with some red 100 - 200 lb.		1,500	Pink with some red, in a single chunk
(25)	0.6	20; 20 - 80		1,200	Some large 60 lb. red, mostly 30 - 60 lb. pink
(26)	0.6	12; 20 - 20		1,200	Pink mainly with one 50 lb. red
(27)	0.6	18; 40 - 100 lb.		1,200	Pink 50 - 100 lb. some reddish pink, RR
(28)	0.5	10 - 100 lb. mostly deep pink		1,000	Smaller 60 - 100 lb. pink

TABLE 4 CONT'D

(29)	0.7	20; 40 - 150 some pink-red mixed	1,400	20 - 100 lb. pink
(30)	.67	13 (pink); 2 nice red 120 - 140 lb.	1,200	20 - 80 lb. pink, some reddish pink
(31)	1.2	3 barrels: barrel 14 - pink 1 - 19 lb. barrel 15 - pink 10 - 80 lb. barrel 12		3 barrels pink
(32)	1.2	3 barrels: barrel 10 - red 40 - 140 lb. barrel 13 - pink 10 - 40 lb. barrel 11 - pink 10 - 40 lb.		3 barrels red
(33)	.5	fiberglass bag red		Mostly red, smaller chunks 5 - 40 lb.

CONCLUSIONS

A large gem-quality rhodonite deposit occurs on the 14 Eve claim which is 100% owned by Anooraq Resources Corporation. Access is normally by a 22.3 km dirt road that roughly parallels the Evelyn Creek Valley starting at km 42 on the South Canol Road (Highway 6).

Previous work consisted primarily of percussion drilling the "manganese" (rhodonite) zone in 1968 and small-scale mining in 1988 and 1989. Initially, Anooraq's attention was drawn to quartz veins containing gold/silver values, however, rhodonite became the main focus by 1986.

The 1991 program consisted of 1:5000 geological mapping of the property, sampling, detail mapping of the rhodonite zone, extensive excavator trenching of the rhodonite zone and strike extensions and mining of 40 tons of high grade raspberry red and uniform dark pink rhodonite. The 1991 production was mainly in large chunks, the largest of which was greater than 4 tons in a single block.

The rhodonite deposit is lenticular in shape but stratiform within a sequence of olive green quartzites and dark siltstones. Thick limestone units occur near the deposit. The zone probably originated as an exhalative manganese oxide deposit at the seawater-sediment contact and the present mineralogy reflects the regional metamorphic grade of the Big Salmon Complex.

The deposit is highly variable over small distances but can be generally subdivided into (1) a northern tephroite - bustamite - rhodochrosite - quartz - minor rhodonite zone and (2) a southern rhodonite (red and pink) - tephroite - minor rhodochrosite zone.

Mining and trenching costs in 1991 were much lower than previous work due to the utilization of a tracked excavator to break out large chunks of rhodonite.

Reserves of gem quality rhodonite based on the 1991 program are estimated in the order of 400 tons which is substantially lower than previous estimates (but still represents a large quantity of rhodonite).

Initial marketing efforts at major Gem Shows in Tacoma, Seattle, Vancouver and Portland have demonstrated a strong interest by lapidary customers in the raspberry-red rhodonite. It is the author's opinion that volume sales will follow this initial period of establishing contacts (quality and supply guarantees) with the marketplace, stone brokers and specialty manufacturers.

RECOMMENDATIONS

Since the quartz veins containing gold/silver values have been shown by several workers to be small and disrupted, no further work on these targets is required.

The gem-quality raspberry-red rhodonite has superior colour and translucency which has created considerable interest in end-users such as sphere makers and jewelers. When the 1989 stockpile and 1991 red production is sold or inventories are low, a continued mining program is recommended as follows:

- (a) **Nominal 100 Ton Production**, a carefully planned and executed sequence of (1) road repairs, (2) drilling, (3) rock breakage (combination S-MITE and hydraulic splitter), (4) excavation and (5) haulage phases, is critical in order to keep costs under control and produce the quality of stone that is demanded by the market.
 - (1) **Road Repairs:** Since water bars have been put in at strategic locations in 1991, the amount of road repairs during future mining projects (for at least 2-3 years) should be relatively low. The company CASE 450 loader/dozer should be able to handle the job during dry weather.

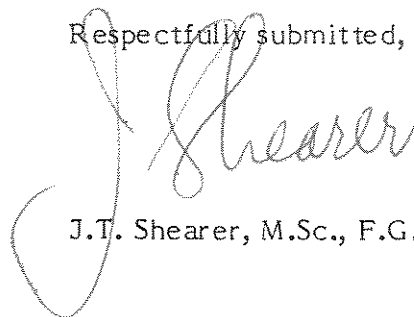
- (2) **Drilling:** A systematic drill plan should be formulated (refer to Figure 8) to bench down through the northern low-grade portion of the deposit (minimal drilling required since the excavator can pry out most of the material) and creation of a free-face by digging (or breaking) the southern quartzite contact.

- (3) **Rock Breakage:** Once a free-face has been created to the south, the gem-quality rhodonite zone can be drilled with widely spaced holes (4 to 5 foot spacing) in such a pattern to take advantage of the main and subsidiary joint directions using a combination of S-MITE and a hydraulic splitter.

- (4) **Excavation:** This phase of mining needs to be co-ordinated with the S-MITE breakage in order to keep costs down and avoid unnecessary standby time. Initially the backhoe attachment of the CASE 450 may be adequate. Having a hoe operator living near Johnsons Crossing (Bob McCormick) who operates a fishing tour business may allow for a more flexible excavation schedule.

- (5) **Haulage:** If a forklift or fork extensions for the CASE 450 two-way bucket can be obtained, I would recommend placing the excavated high-grade stone directly onto pallets made out of 2x4 or 2x6 lumber. (These type of pallets can be ordered from White Pass). Once the stone has been placed on the pallets, the small chunks can be secured by chicken wire enclosures. The pallets can be hauled to the Canol Road for loading onto 24 ton capacity. A smaller tandem axle flat deck truck could haul directly from the site to Whitehorse. The availability and contract price of each option would be the deciding factor.

Respectfully submitted,



J.T. Shearer, M.Sc., F.G.A.C.

COST ESTIMATE FOR FUTURE WORK

100 Ton Program:

(1992 costs may be slightly higher depending on freight and rental costs.)

Preparatory excavator work on north and south bench, limited drilling with airtrack drill, S-MITE breakage excavator production of large pieces, haulage to Canol Road, shipping to Whitehorse - Vancouver warehouse. Estimated timing: 3 to 4 weeks (28 days) of field time depending on weather. Note: assuming company CASE 450 loader/backhoe available and minimal road repairs.

Wages and benefits:	
Supervision/grading/planning/labour	\$ 8,400
Mining/drilling/hydraulic splitter	7,700
Casual labour	1,000
Loading highway trailers and forklift rental	1,000
Drill rental	5,000
S-MITE, hydraulic splitter rental	3,500
Truck haulage to Canol Road	4,000
Camp supplies and food	2,000
Electric generator rental	1,000
Contract excavator (75 hours at \$125/hr)	9,375
Mob / demob of equipment	1,500
Repairs to company CASE 450	1,000
Transportation (4x4 from Whitehorse)	1,500
Fuel	2,000
Airfare (2 persons Vancouver-Whitehorse return & freight of gear)	1,600
Freight / container shipping (Whitehorse to Vancouver)	10,000
Communications	1,000
Meals and accommodation during mob/demob	600
Report preparation, drafting, word processing	<u>1,500</u>
Sub-total	63,675
Contingency (10%)	<u>6,325</u>
 GRAND TOTAL	 <u>\$ 70,000</u>

or 35¢ per pound

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APPENDIX I

STATEMENT

OF

QUALIFICATIONS

J.T. Shearer, M.Sc., F.G.A.C.

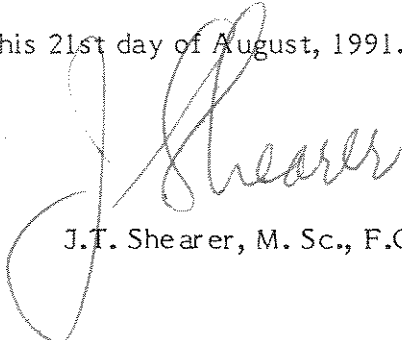
Evelyn Creek Rhodonite Property

STATEMENT OF QUALIFICATIONS

I, JOHAN T. SHEARER, of 1498 Columbia Avenue, in the City of Port Coquitlam, in the Province of British Columbia, do hereby certify:

1. I am a graduate of the University of British Columbia, B.Sc. (1973) in Honours Geology and the University of London, Imperial College (M.Sc. 1977).
2. I have over 20 years of experience in exploration for base and precious metals and other commodities in the Cordillera of Western North America with such companies as McIntyre Mines Ltd., J.C. Stephen Explorations Ltd., Carolin Mines Ltd. and TRM Engineering Ltd.
3. I am a fellow in good standing of the Geological Association of Canada (Fellow No. F439).
4. I am an independent consulting geologist employed since December 1986 by New Global Resources Ltd. at 548 Beatty Street, Vancouver, British Columbia.
5. I am the author of a report entitled "Geological, Trenching and Mining Report on the Evelyn Creek Rhodonite Property (Eve Claims), Yukon, dated August 21, 1991.
6. I have visited the property from August 3 - August 18, 1991 and carried out geological mapping and sample collection. I am familiar with the regional geology and geology of nearby properties. I have previously examined other rhodonite properties such as Hill 60 and Osirus A deposits (Cowichan Lake area), Salt Spring Island, Keremeos area and Cassiar area. I have also cut and polished a large amount of rhodonite of all types. I have become familiar with the previous work conducted on the Evelyn Creek property by examining in detail the available reports, plans and sections, and have discussed previous work with persons knowledgeable of the area. N.M. Cairn, who mapped and sampled the property is an experienced and knowledgeable graduate geologist.
- 7) I do not own or expect to receive any interest (direct, indirect or contingent) in the property described herein nor in securities of Anooraq Resources Corporation in respect to services rendered in preparation of this report.
- 8) I consent to authorize the use of the attached report and my name in the company's Statement of Material Facts or other public document.

Dated at Vancouver, British Columbia, this 21st day of August, 1991.


J.T. Shearer, M. Sc., F.G.A.C.

APPENDIX II

STATEMENT OF COSTS

Evelyn Creek Rhodonite Property

1991

STATEMENT OF COSTS
 Anooraq Resources Corporation
 Evelyn Creek Rhodonite (Eve) Claims
 June to August, 1991

Project:	<u>August Mining</u>	<u>June Exploration</u>
Geological mapping, road repairs, detailed trenching production of rhodonite for testing, rock, soil and silt sampling.		
Wages and Benefits:		
J.T. Shearer, M.Sc., Geologist: 21 days at \$300/day	\$ 6,300.00	
L. Williams, Miner, 21 days at \$250/day	5,775.00	
N. Cairn, Geologist, 12 days at \$210/day		2,520.00
B. Bower, 10 days at \$120/day		<u>1,200.00</u>
Sub-total	12,075.00	3,720.00
Transportation:		
Truck rental (Aug 1-21, 1991), at \$40/day	1,290.00	
Gas		3,068.00
Helicopter Charter, 4 hours at \$767 per hour	743.18	3,068.00
Freight for Rhodonite 3 trips @ \$605, \$79/ton x 40 tons	4,935.00	
Airfare (Vancouver-Whitehorse return, 2 persons and motel)		1,600.00
Food and Accommodation:		
Hotel and meals	1,577.61	
Food (June estimate)		250.00
Analytical (Chemex Labs Ltd.) 32 samples Au @ plus ICP at 9.25 per sample		296.00
Bulldozer Contract Work (IBEX Contracting Ltd.) 37 hours at \$120/hr	4,440.00	
Excavator Contract Work (IBEX Contracting Ltd.) 49 hours at \$120/hr	5,880.00	
Mobilization & Hoe & Bulldozer (August 4)	350.00	
Demobilization of Excavator (August)	350.00	
Mobilization of 3-ton dump truck & Case 450 hoe-loader	350.00	
Dump Truck Cost (company truck) 10 days at \$300/day	3,000.00	

STATEMENT OF COSTS CONTINUED

	<u>August Mining</u>	<u>June Exploration</u>
Case 450 Loader/Dozer and Backhoe Cost (company machine) 10 days at \$400/day	\$ 4,000.00	
Camp Supplies (propane, gloves)	78.85	
Site Supplies (pallets, steel drums, film & gas)	707.20	
Aerial Photographs of Area		\$ 84.53
Report Preparation	900.00	
Drafting and Map Enlargement	160.00	250.00
Petrology and Thinsection Preparation	221.46	
Word Processing and Reproduction	204.00	
Communications (radiophone & landphone)	435.16	
GRAND TOTALS	<u>\$41,697.46</u>	<u>\$ 9,268.53</u>

APPENDIX III

LIST OF PERSONNEL AND
DATES WORKED

1991

Evelyn Creek Rhodonite Property

APPENDIX III

LIST OF PERSONNEL AND DATES WORKED

<u>Name</u>	<u>Position</u>	<u>Address</u>	<u>Dates Worked</u>
Joe Shearer	Geologist	1498 Columbia Avenue Port Coquitlam, B.C. V3C 1C3	Travelling Aug 1 & 2 Fieldwork Aug 3 to 19; Travelling Aug 20 + 21 Report preparation & petrology = 21 days field = 3 days office
Lorne Williams	Prospector/ Equipment Operator	P.O. Box 2168 Hope, B.C. V0X 1L0	Travelling Aug 1 & 2 Fieldwork Aug 3 - 19 Travelling Aug 20 + 21 = 21 days field
Nadia M. Cairn		1020 - 800 W. Pender Vancouver, B.C. V6C 2V6	Travelling June 17 June 18, 19, 20, 21 22, 23, 24, 25; Travelling June 26 = 10 days field = 2 days office
B. Bower		1020 - 800 W. Pender Vancouver, B.C. V6C 2V6	Travelling June 17 June 18, 19, 20, 21, 22, 23, 24, 25; Travelling June 26 = 10 days field

APPENDIX IV

PETROGRAPHIC DESCRIPTIONS

Evelyn Creek Rhodonite Claims

-- PETROGRAPHIC ANALYSIS --

Project: Eve Claims, Whitehorse M.D., Yukon Territory
For: Anoraq Resources Corporation, Vancouver, B.C.
Location: Evelyn Creek Area - Teslin River, via 42 km turn-off from the Canol Road

SPECIMEN NUMBER: ANQ - 01

Location: Host rock along strike to east, (Rock 23R)

Hand Specimen:

Black to dark grey weathering, also rusty weathering zones are common, Very hard, siliceous, White quartzite banded and stained black along fractures by manganese oxide, Many of the black areas are irregular in outline, Primary quartz grains (clasts) average about 1 mm in diameter, Recrystallized, Fibrous green mineral (chlorite or tremolite-type mineral) locally abundant forming small 1 to 3 mm rosettes (this fibrous mineral is rusty weathering), Well fractured and many of the fractures have been rehealed, Traces of disseminated pyrite.

Field Rock Name: Manganese - oxide stained, white quartzite ("Leopard Rock").

Thinsection Examination:

Estimated Mode:

94%	Quartz (mainly recrystallized clastic grains)
tr	Quartz (secondary crystals)
4%	Tremolite
1%	Pyrite
2%	Biotite (cryptomelane)
1%	Garnet (spessarite)
1%	Opauques (manganese oxide replacement of tremolite)
tr	Calcite (rhodocrosite)

The large irregular, black stained areas observed in handspecimen are the areas in thinsection which have the interstitial space between quartz grains filled with a brown flaky cryptomelane (resembling biotite) or manganophyl.

Quartz grain size averages about 0.25 mm in diameter. The largest framework grains are up to 0.8 mm in diameter. Large parts of the section exhibits recrystallization of the quartz into an interlocking mosaic with slightly sutured grain boundaries. All quartz grains are characterized by wavy extinction.

ANQ-01 CONTINUED

Minor garnet (spessarite) $Mn_3 Al_2 Si_3 O_{12}$ occurs as small aggregates up to 0.2 mm in size which cross-cut and replace quartz grains. Some tiny quartz inclusions (0.04 mm) were observed within the garnet groups. Individual garnet grains range between 0.05 to 0.1 mm. More euhedral and larger garnet crystals are associated with the tremolite lenses. These garnet crystals are up to 0.25 mm in diameter. Commonly these garnet crystals have small cores composed of quartz. The garnet aggregates are roughly aligned subparallel to the tremolite lenses.

Pyrite occurs as large (up to 1 mm) cubes replacing quartz. The edges of some pyrite grains have a thin layer of rhodochrosite.

Tremolite is found as thick bundles of long needle-like crystals. The largest bundle is 1.1 mm wide by 9.2 mm long. The large tremolite lenses cross-cut quartz grains. Small tremolite lenses or crystal groups appear to form along the grain boundaries of quartz or have a rough radiating pattern out from cross-cutting micro-fractures. Black manganese oxide has selectively replaced tremolite in some lenses. One tremolite bundle terminates in a large group of garnet (0.8 mm across).

Rock Name: Altered, (tremolite-spessartite) recrystallized quartzite.

-- PETROGRAPHIC ANALYSIS --

Project: Eve Claims, Whitehorse M.D., Yukon Territory
For: Anoraq Resources Corporation, Vancouver, B.C.
Location: Evelyn Creek Area - Teslin River, via 42 km turn-off from the on
Canol Road

SPECIMEN NUMBER: ANQ - 02

Location: 13 R (main deposit)

Hand Specimen:

Black manganese-oxide staining on weathered surface, Generally brown sugary appearance, Pink rhodonite on end of handspecimen, peach to flesh coloured (softer-rhodochrosite) material associated with darker brown to greenish-blue tephroite zones, Specimen cut by numerous 1 mm wide lighter brown veinlets, Microfractures emanating from S-MITE filled drill hole.

Field Rock Name: Low-grade rhodonite (dominated by massive rhodochrosite and tephroite)

Thinsection Examination:

Estimated Mode:

28% Rhodochrosite (manganiferous carbonate)
tr Quartz
15% Rhodonite (fine grained)
34% Tephroite
22% Bustamite-Spessarite (very fine grained assemblage)
1% Pyrite + Opaques - MnO₂

Rhodochrosite - Mn (Ca, Fe+2) CO₃ occurs as a relatively equigranular, interlocking mosaic of grains averaging between 0.08 to 0.15 mm in diameter. In thinsection rhodochrosite has many optical similarities to calcite. The rhodochrosite areas correspond to the lighter "peach" coloured areas of the handspecimen. Rhodochrosite veinlets cut the rhodonite-spessarite areas. However, all rhodochrosite veinlets are themselves corroded or cut by the enclosing groundmass.

Minor rhodonite (Mn, Ca, Fe) SiO₃ is found associated with a very fine grained and moderately crystalline bustamite-spessarite assemblage which is observed, in part, in the handspecimen as the brownish zones. Rhodonite grain size is less than 0.1 mm.

Large areas of the slide are composed of tephroite which is strongly pleochroic in green and light brown, high relief and shows bright second order dispersion colours of blue and red. This mineral is seen in hand specimen as the bluish-green massive zones. Tephroite is the earliest metamorphic manganese silicate mineral. Tephroite is a manganese olivine - Mn₂ (SiO₄) and also was noted as small isolated grains associated with the manganiferous carbonate.

Rock Name: Tephroite-rhodochrosite-bustamite (spessarite) rock.

-- PETROGRAPHIC ANALYSIS --

Project: Eve Claims, Whitehorse M.D., Yukon Territory
For: Anoraq Resources Corporation, Vancouver, B.C.
Location: Evelyn Creek Area - Teslin River, via 42 km turn-off from the Canol Road

SPECIMEN NUMBER: ANQ - 03

Location: East continuation of rhodonite horizon

Hand Specimen:

Schistose, Brown, Very fine-grained host rock containing a 1.5 to 2.5 cm wide brownish-pink moderately coarsely crystalline concordant rhodonite vein, Subsidiary rhodonite veinlets cross-cut the schist, Dark purplish porphyroblasts occur in the schist up to 2 mm square, Disseminated pyrite up to 5 mm is common, Rhodonite vein appears to be replaced by minor quartz, perhaps as pressure shadows between boudins.

Field Rock Name: Low-grade rhodonite vein in brown schist

Thinsection Examination:

Estimated Mode:

35%	Rhodonite
10%	Rhodochrosite - coarse assoc. with rhodonite
13%	Rhodochrosite - fine assoc. with muscovite
8%	Quartz
21%	Muscovite
9%	Spessarite
1%	Bustamite
3%	Tremolite

Coarse crystalline rhodonite (in subhedral grains up to 2.1 mm long) is cut by narrow veinlets (0.2 mm wide) of rhodochrosite. All rhodonite grains are also replaced to varying degrees by rhodochrosite giving the rhodonite grains a pronounced corroded appearance. Rectangular micro-quartz lenses located within the rhodonite crystals parallel to the main cleavage direction commonly replace rhodonite throughout the specimen. Rhodonite is only weakly pleochroic and optically positive.

Quartz forms irregular elongated grains greater than 1 mm in length with sutured grain boundaries against adjacent quartz grains. Quartz occurs in linear lenses up to 1.5 mm wide running the length of the specimen and alternate with rhodochrosite and calcite layers. The carbonate layers have replaced some of the quartz. Tiny needles (tremolite?) are common throughout many of the quartz layers.

ANQ-03 CONTINUED

Spessarite occurs as small anhedral to subhedral grains up to 0.05 mm in diameter mainly as crowded zones distributed fairly evenly throughout the muscovite portion (brown host rock of the handspecimen). Muscovite forms bundles of small flakes between and bending around the spessarite crystals. Occasionally muscovite flakes up to 1.2 mm long where noted. These long muscovite flakes are adjacent to the quartz layers. The muscovite-spessarite-rhodochrosite lenses have corroded the large rhodonite grains. Minor spessarite has developed up to 0.6 mm within the rhodonite crystals. Rarely, small rhodonite grains are found within the muscovite area surrounding by spessarite crystals.

Calcite also forms irregular micro-veinlets throughout the specimen which cross-cut all other minerals. The veinlets are composed of sparry grains up to 0.4 mm long.

A narrow rhodonite-bustamite veinlet occurs along the edge of the thinsection up to 0.6 mm wide. This veinlet is also cut by muscovite and rhodochrosite-calcite.

Rock Name: Muscovite-spessarite schist hosting a coarse crystalline rhodonite vein.

SAMPLES
(N. Caira, 1991)

- NMC-01 (rock) 12" chip iron stained, pyritic quartz veins traceable over 10', hosted within limy quartzite (recrystallized limestone), tensioned vein.
- NMC-02A (soil) Soil sample - 10' x 10' red soil gossan (C horizon) and associated pyritic siliceous schist.
- NMC-03 Assorted rock chip from presumed subcrop associated with soil gossan -hot rocks; quartz-pyrite (siliceous schist) meta-rhyolite tuff (dips from 6 / 2' - 4 - angular boulders from 150 m x 50 m area.
- NMC-04 5400' loc'n I qtz vein hosted within pyritic quartzite (limy), 12" wide qtz vein intermittently trouble for 30 m (coarse grained pyrite).
- NMC-05 at 5000'; 15' chip across qtz-muscovite-pyritic schist felsic tuff prof. pyrite - conchoidal, 3-5%, zone may be fault related (quartz vein to HW, unaltered tuff to FW).
- NMC-06 Iron stained pyritic metasediment package, pyritic rhyolitic tuff within dirty argillaceous metasediments, 3' chip.
- NMC-07 at 6000' above snow cornice an upper rhodonite ridge, carbonatized ± manganese oxide coated quartzite (Unit 1b), rock looks dolomitized; 3' chip, 165/164 NE - first glance looks like rhodochrosite.
- NMC-08 at 5180' on first ridge west of rhodonite 8' chip of str. 1 m. siliceous - sericitic - pyritic schist, carbonatized due to adjacent limestone.
- NMC-09A (silt) at 4825' silt sample - taken from drainage where Cu-Au vein showing is supposed to be - flat to moderate slope, moderate stream flow.
- NMC-10 at 5150' o/c abundant 20-60 cm rusty pyritic quartz vein rubble and chloritic seams projected above where trenches are supposed to be, trace chalcopyrite (malachite) along bedding? seams. Host rock is banded qtz-chl gneiss highly deformed into 8 cm folds.
- NMC-11 In outcrop just above qz vein rubble siliceous pod of chalcedonic qtz veining ± pyrite - malachite stain, approx. 40 cm wide pod within gneissic rocks, 3 cm to pods of 15 cm cpy-malachite-azurite ± pyrite.
- NMC-12 8 chip sample across sheared metamorphosed gneiss (metaintrusive) coarse grained pyrite.

- NMC-13 20 ft. chip across bedded sequence of weak graphitic phyllite, rocks +2' rhyolite tuff horizon, 1-3% pyrite (coincident with axis of bld-fault zone).
- NMC-14 at 4000' siliceous - graphitic - pyritic schists; 10' chip across strongly link blded, rhyolite tuff?, vuggy quartz carbonate infillings, jarosite?
- NMC-15 4' chip sample sheared, foliation-bdd strong limonite - pyrite - rhyolitic tuff - pale blue grey.
- NMC-16 Eastern rhodonite extension occurs as a 1.5 foot wide seam strataform within banded quartzites (Mn-garnetiferous quartzites) traces of rhodonite - bed 110 Az / vertical.
- NMC-17 at 5000' just past 1st - chloritic schist, unfractured, jarosite-limonite - crustiform carbonate - ser - silsch hosts 1 cm - 8 cm qtz-pyrite-galena veins (silver?); 4' chip across shear zone? 090/72N.
- NMC-18 20' chip (coincident with previous sample 83-CMT-814 (actual shear zone is 25-30' wide (boil zone?), crusty carbonate, intense limonite - jarosite, 3-4% cubic pyrite hosts 3 cm - 10 cm qtz veins approx. 10%.
- NMC-19 6 m (20' chip) across hangingwall quartzite unit to rhodonite showing, limonite + MnO₂ + on fractures, 1-2% diss. pyrite.
- NMC-20 6m (20' chip) starting at rhodonite contact, 3-4% diss. pyrite within siliceous pale pink qtzite (rhodonite) cut by 4-8 mm., coarse grained rhodocrosite veins + irregular rhodocrosite pods - note: pale silvery mineral 1 mm (tetrahedrite?) forms salvage to veins + as disseminations.
- NMC-21 16 foot (5 m) chip, oblique across rhodonite face, increase in 3 mm -1 cm clear qtz veins; increase in grade of rhodonite.
- NMC-22 60 cm chip at most western trace of rhodonite across remaining width; high grade rhodonite here, qtz vein and galena + possible trace of yellow sphalerite.

EVELYN CREEK, YUKON

Anoraq Resources Ltd.

June 26, 1991 (B.Bower)

Rock Descriptions

Gneissic & Schistose Units (Big Salmon Complex)

- i) Qtz-biot-chl + hbl. Gneiss.
Rock is grey to dk. grn. on weathered surface and fairly massive looking. Fresh surface is grey-grn, fine to med. grained, well foliated with abundant small mafic lenses or wisps within a recrystallized silicate matrix (qtz-feldspar). Mafic wisps are 4 to 10 mm in length and look to be made up of chlorite/biotite and minor hbl. These mafic wisps parallel the rock foliation.
- ii) Amphibolite.
Rock is gray-grn. on weathered surface and fairly massive and angular. Fresh surface is dk. grn. colour and equigranular with a weak foliated fabric. Rock consists of a fine qtz-feldspar groundmass and abundant very fine hornblende (chloritized)? laths weakly aligned throughout. Trace pyrite. Gradational contact with gneissic units.
- iii) Qtz-felds.-chl. + sericite (muscovite) gneiss schist.
Rock is gray-grn. to rusty colour on weathered surface. Usually foliated type outcrops. Fresh surface is light grey to grey colour, fine grained with small qtz-feldspar porphyroblasts or augens. Fine chlorite + sericite wisps throughout, parallel to rock foliation. May contain disseminated pyrite up to 3-4% in places.
- iv) Qtz - sericite - muscovite - pyrite schist (gneiss)
Very rusty yellow-brown weathering. Rock is light grn. to whitish-yellow on fresh surface with a strong foliated to gneissic texture. Fine dissem. euhedral to deformed pyrite occurs throughout up to 5%. Augen shaped qtz eyes up to 5-6 mm.
- v) Chlorite + Sericite + Qtz Schist (Gneiss).
Rock is dk. grn. to grn. on weathered surface. Massive to well foliated type outcrops. Fresh surface is grn. coloured and well foliated and is primarily chlorite with variable amounts of sericite/feldspar/qtz. May contain disseminated pyrite up to 2-3% and calcite str.

Non-Gneissic Rocks (Big Salmon Complex)

- a) **Limestone Unit**
Lt. grey to tan buff weathering, fairly massive to well bedded. Fresh surface is white to light grey-tan colour and is usually equigranular in hand specimen. Groundmass often looks recrystallized due to regional metamorphism and folding. Unit may often be somewhat limonitic to hematitic giving various shades of reddish or pinkish "hues". Minor qtz stockworks are also present near the gneissic contact with this unit.

Field Samples for Assay and 30 Element ICP

BB05: Select grab sample; sample taken from float material in talus slope. Actual outcrop is covered with talus from just above ... the float material is of local origin. Material sampled is a qtz-muscovite-sericite gneiss with abundant pyrite approx. 5%.

BB012: Sample across 1 m width. Sample of a qtz-feldspar-chlorite schist with disseminated pyrite throughout approx. 3-5%.

BB013: Qtz vein on ridge top. Sample from a qtz vein within a qtz-biotite-chlorite gneiss on ridge top. Vein is milky white to clear and is 5-6 cm wide with 1-2% pyrite.

BB014: Qtz - biotite - chlorite - gneiss. Sample of wallrock material from qtz vein sample in BB013. Sample was across about 1 meter of pyritic gneiss. Pyrite approx. 2-4%.

BB016: Qtz-feldspar-chlorite/sericite gneiss. Sample across a pyritic zone in outcrop. Sample is the most pyritic material about 1 meter wide. Pyrite is approx. 3-4%.

BB018: Qtz-sericite-pyrite schist (gneiss). Select grab sample from a wide pyritic zone in outcrop and subcrop on ridge top. Pyrite occurs as dissemination up to 5-6%.

BB019: Qtz vein material. Select grab sample of qtz material in qtz-sericite-pyrite schist. Qtz contains 1-2% pyrite and trace galena?

BB020A: Stream silt sample. Sample taken just below area of qtz-sericite-pyrite schist outcrops. Stream silt is a rusty yellow-brown colour. Elevation 5360'.

BB020: Qtz-sericite-pyrite schist. Select grab sample from pyritic zone in outcrop area. Zone is about 20 meters in outcrop. Pyrite up to 5%.

BB021: Qtz-sericite-pyrite schist. Select grab sample of qtz rich material in pyritic zone. Sample near contact of major limestone unit. Qtz occurs as small veins up to 10 cm that "pinch and swell".

BB022: Qtz vein material. Sample of qtz material within a pyritic-chlorite-sericite-qtz schist about 3 meters wide. Milky white to clear qtz with minor pyrite along vein selvages.

BB023: Chlorite-sericite-quartz schist. Select grab sample from pyritic schist with semi-massive pyrite-qtz seams up to 50-60% pyrite. Pyritic seams are 5-10 cm wide.

BB024: Chlorite-sericite-qtz schist. Select grab sample from pyritic unit about 6 meters wide. Sample is mainly of a carbonate - chlorite - pyrite vein approx. 10-15 cm wide.

APPENDIX V

SELECTED PHOTOGRAPHS OF 1991 WORK



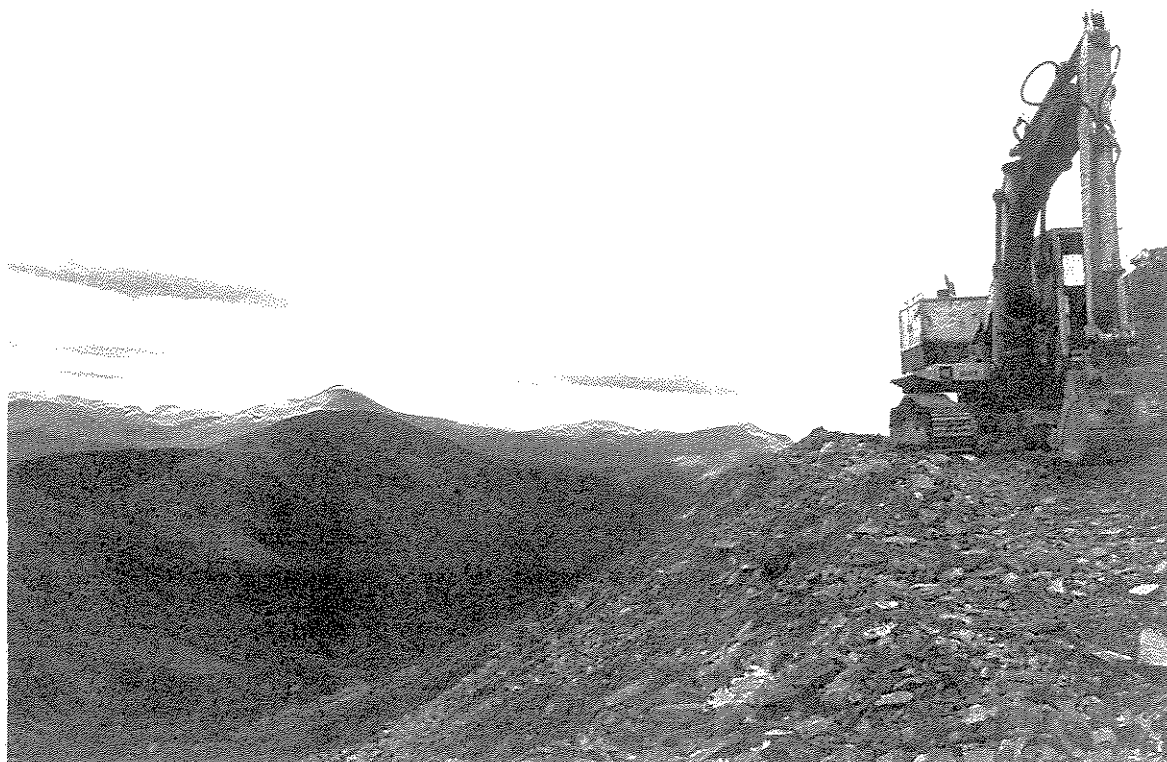
VIEW OF CAMP in middle ground, upper road to rhodonite
Deposit



Looking southwest from Rhodonite deposit, Jakes Corner
in the distance



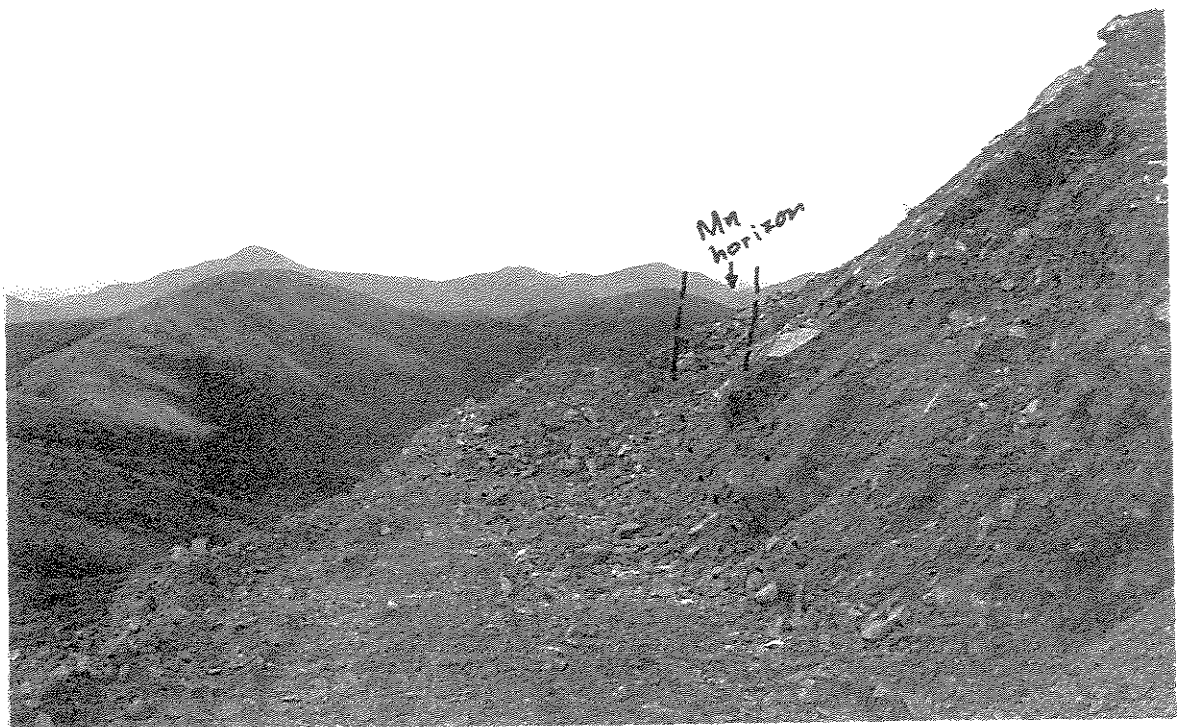
Looking southeast from Rhodouite DEPOSIT, continuation of manganiferous horizon in middle ground.



Looking west from Rhodouite Deposit.
CAT 225 Excavator on narrow tracks.



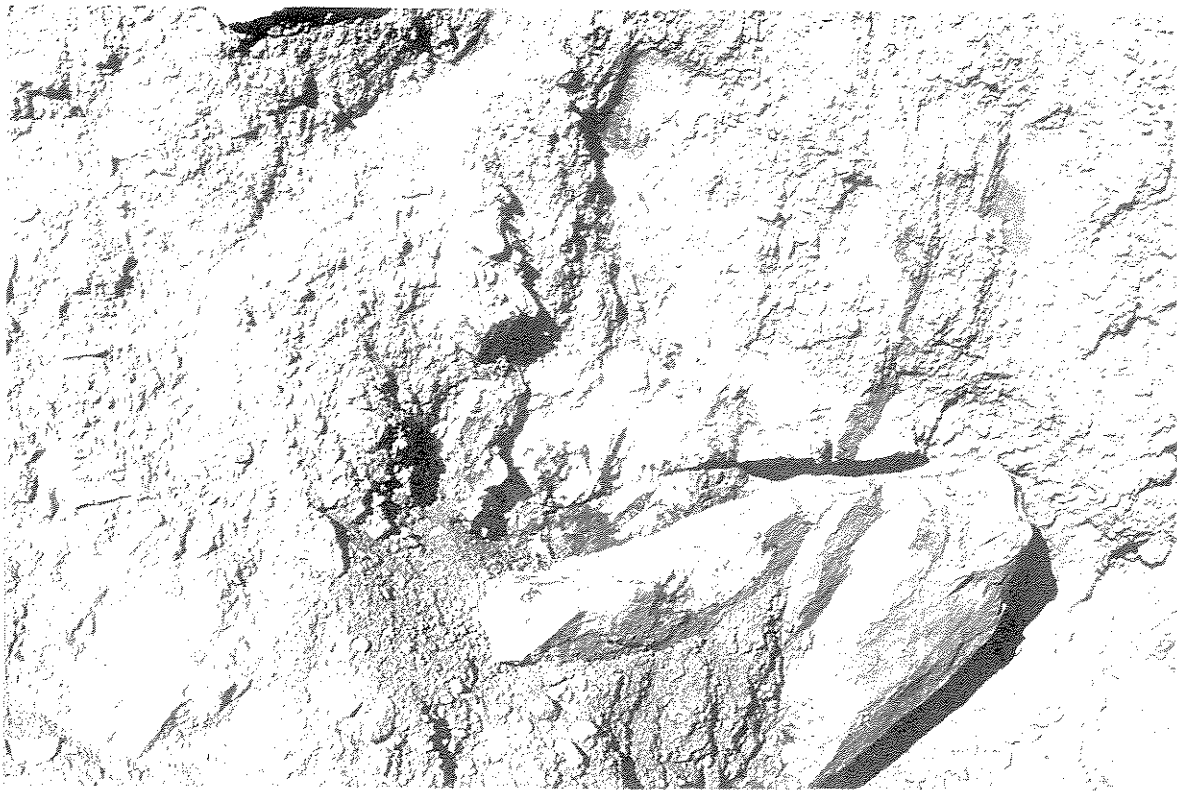
Rhodonite Deposit Looking west



west end of manganiferous horizon, narrow + discontinuous
Low grade.



High grade south portion of Rhodonite Deposit.



Digging to the west showing some of the lower grade boulders in overburden (some potential exists to find higher grade)



Trenching to the west of high grade zone - needs to be drilled + broken out.



Prying out high grade with 225



Prying out highgrade : note 1989 S-MITE filled holes.



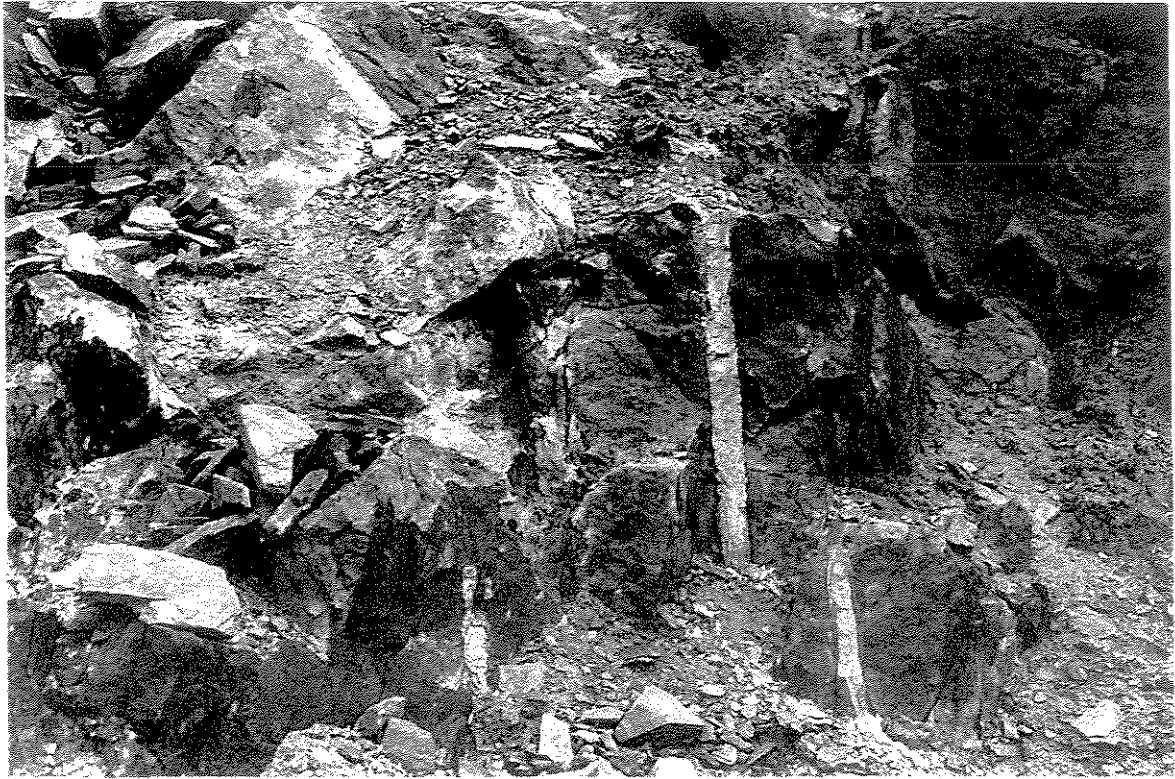
Prying out highgrade : note close spaced S-MITE holes



prying-out high grade



eastern end of south part of Rhodonite Deposit



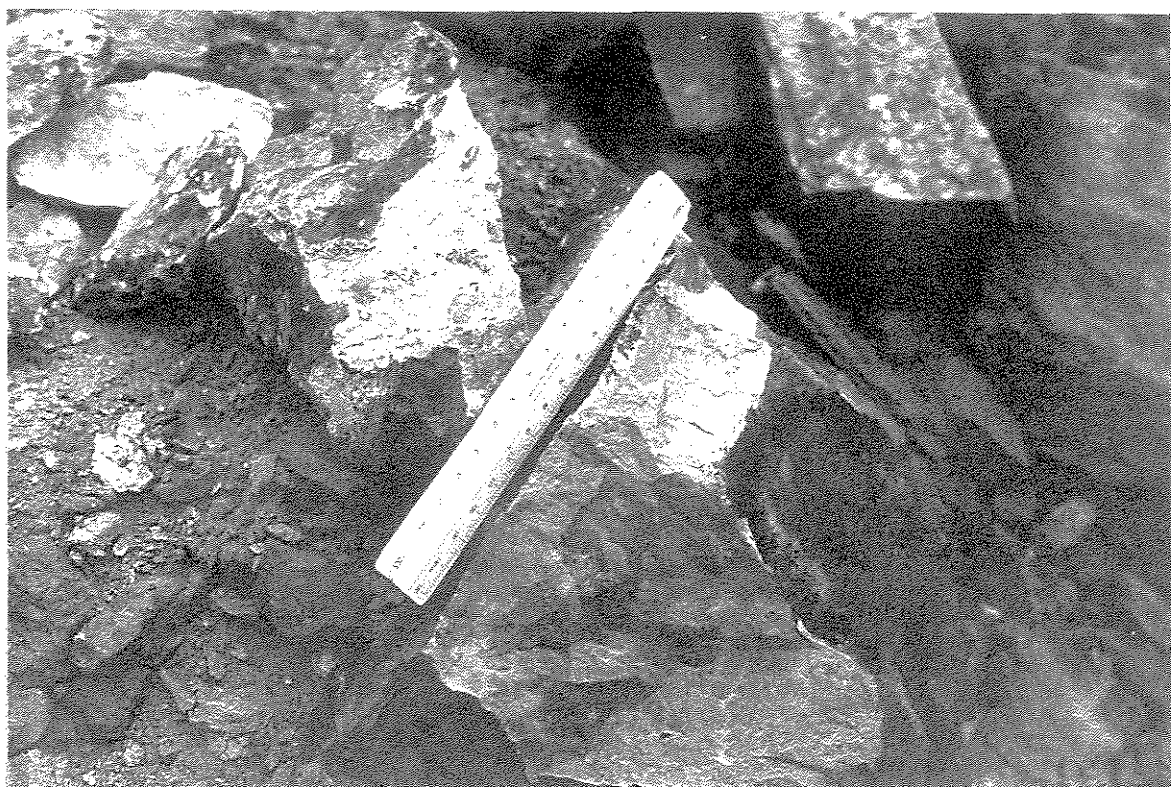
close-up of highgrade area.



broken highgrade.



Initial pink from loose on surface



raspberry-red.



Pink stock pile



Loading dump truck.



FIRST LOAD to Camol Road



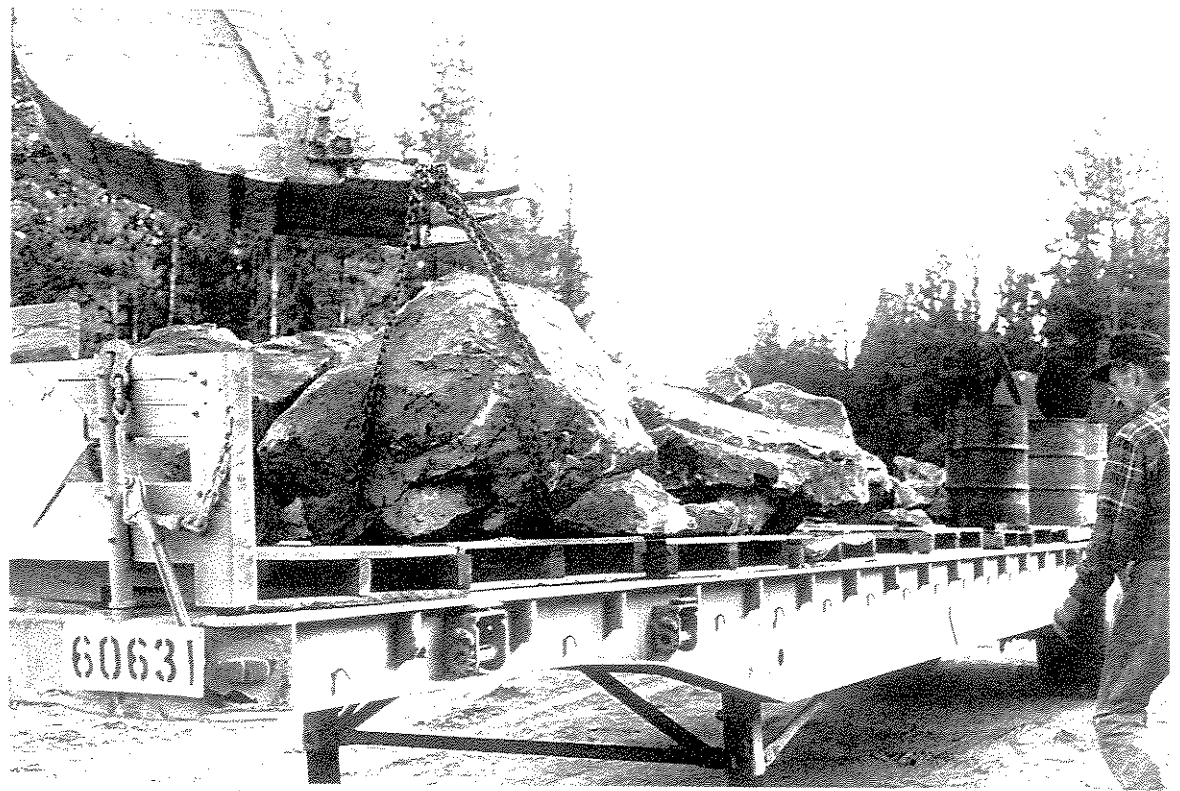
Dumping at Camol Road staging area.



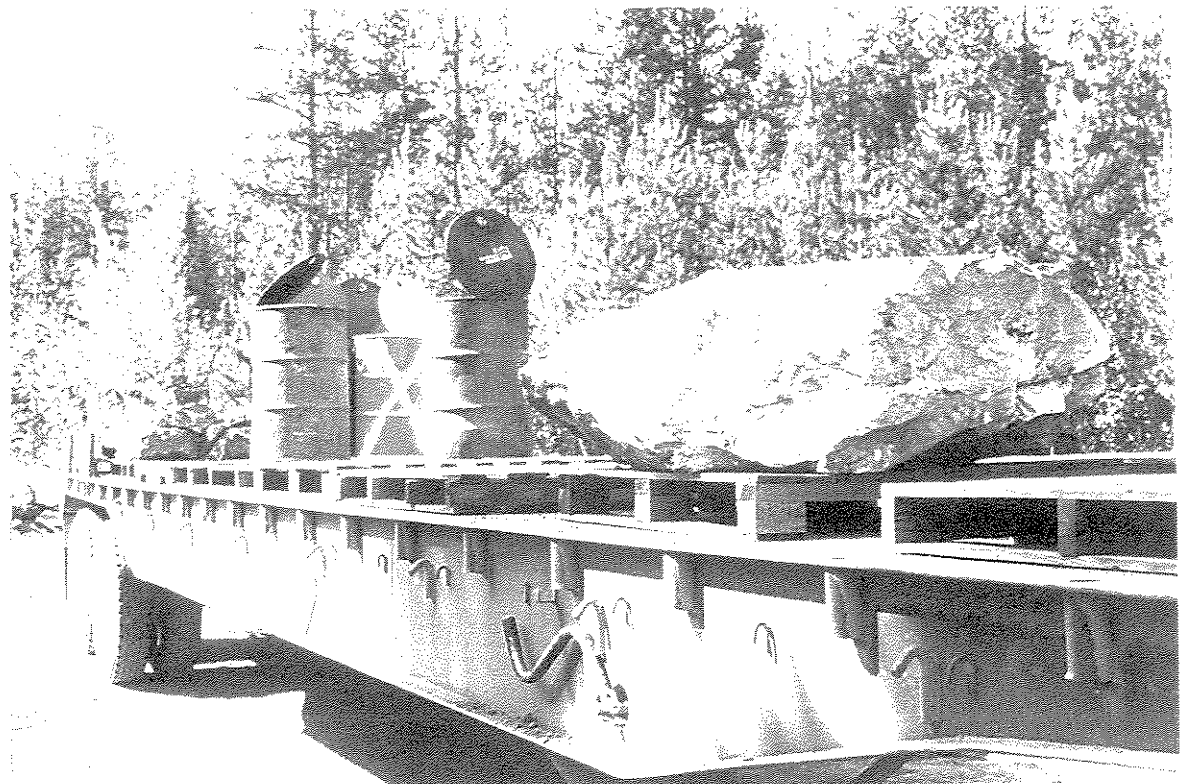
CASE 450 Loading 2 ton chunk of Pink



The only chunk loaded by the 225.



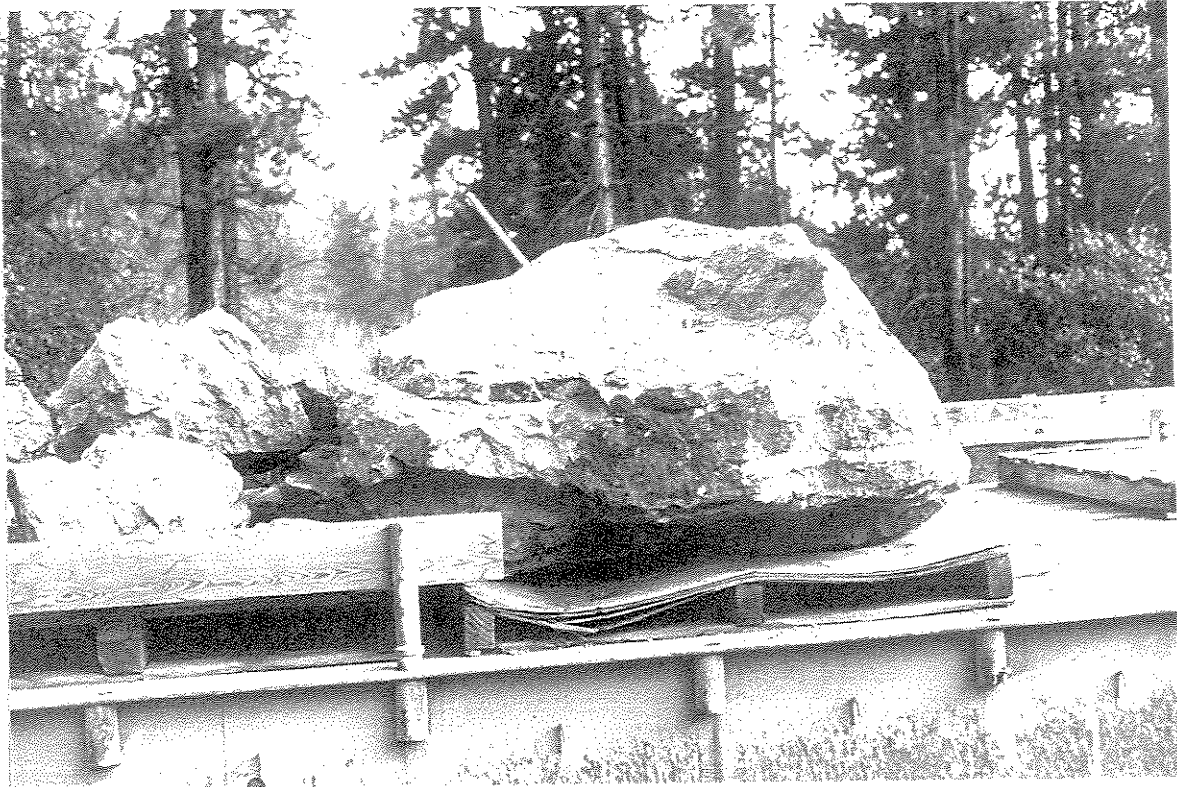
4 ton chunk

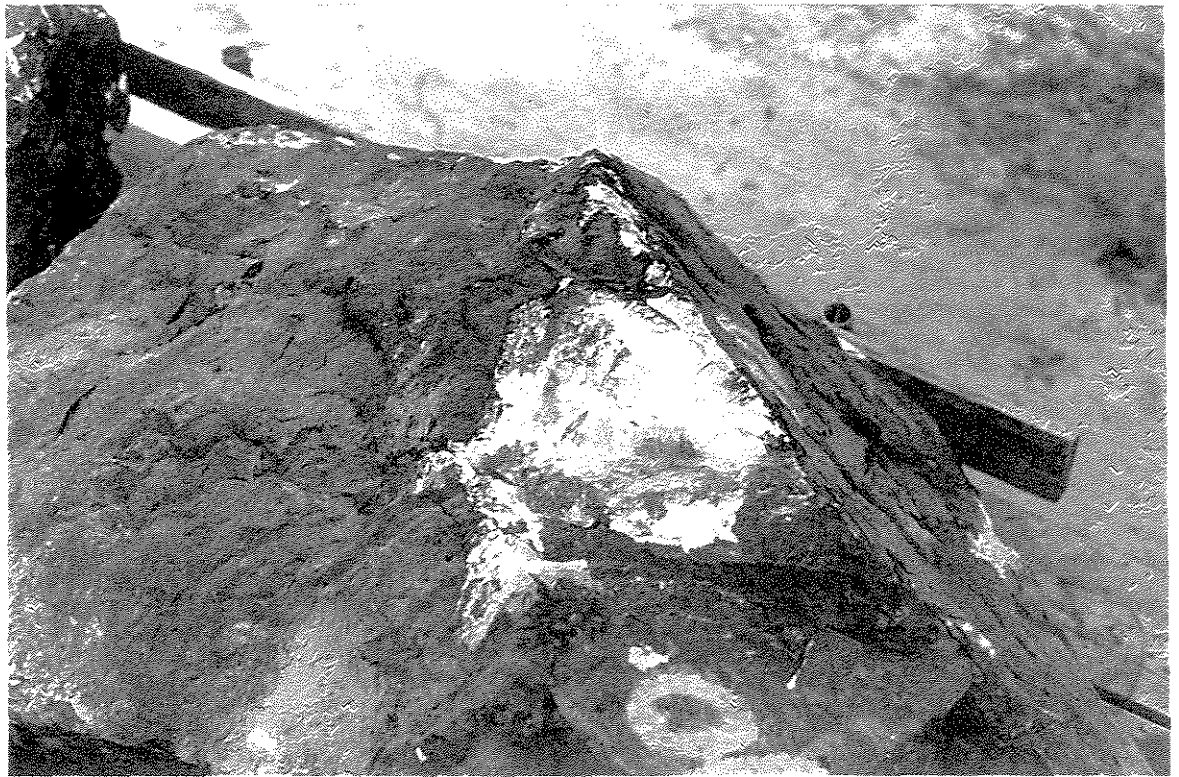


blocks + barrels on highboy.



chunk No 4.

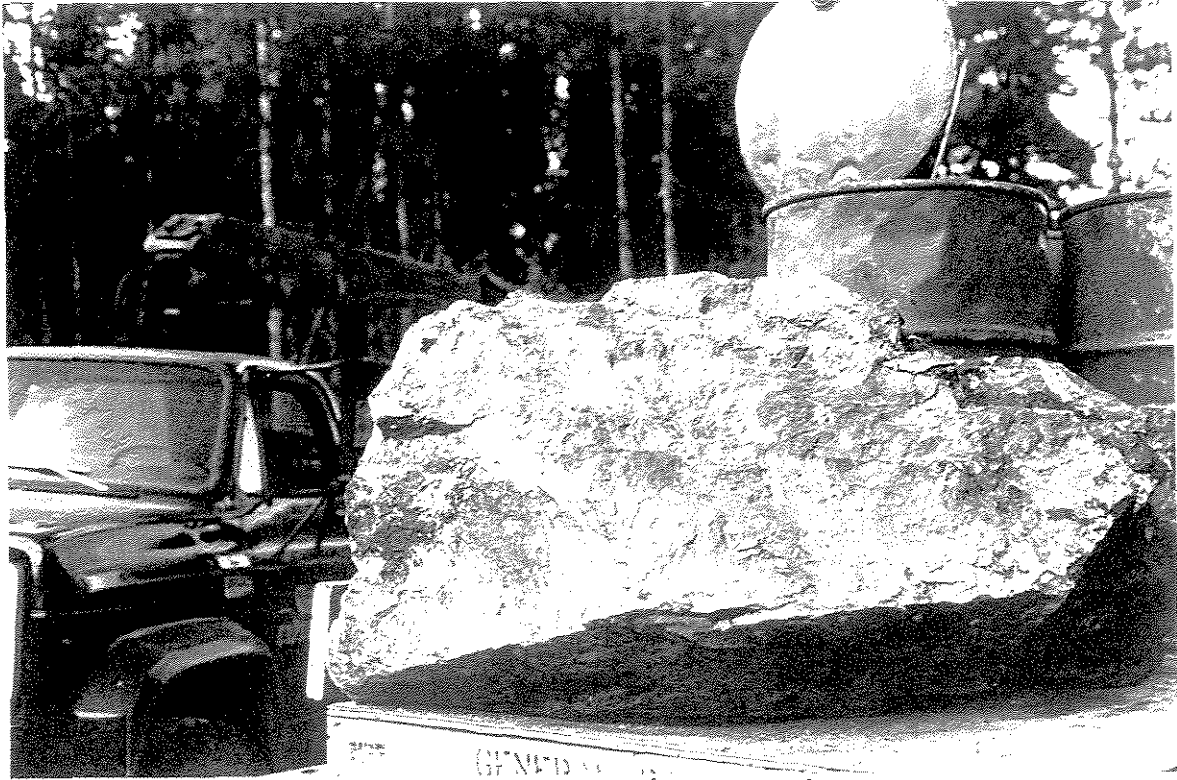




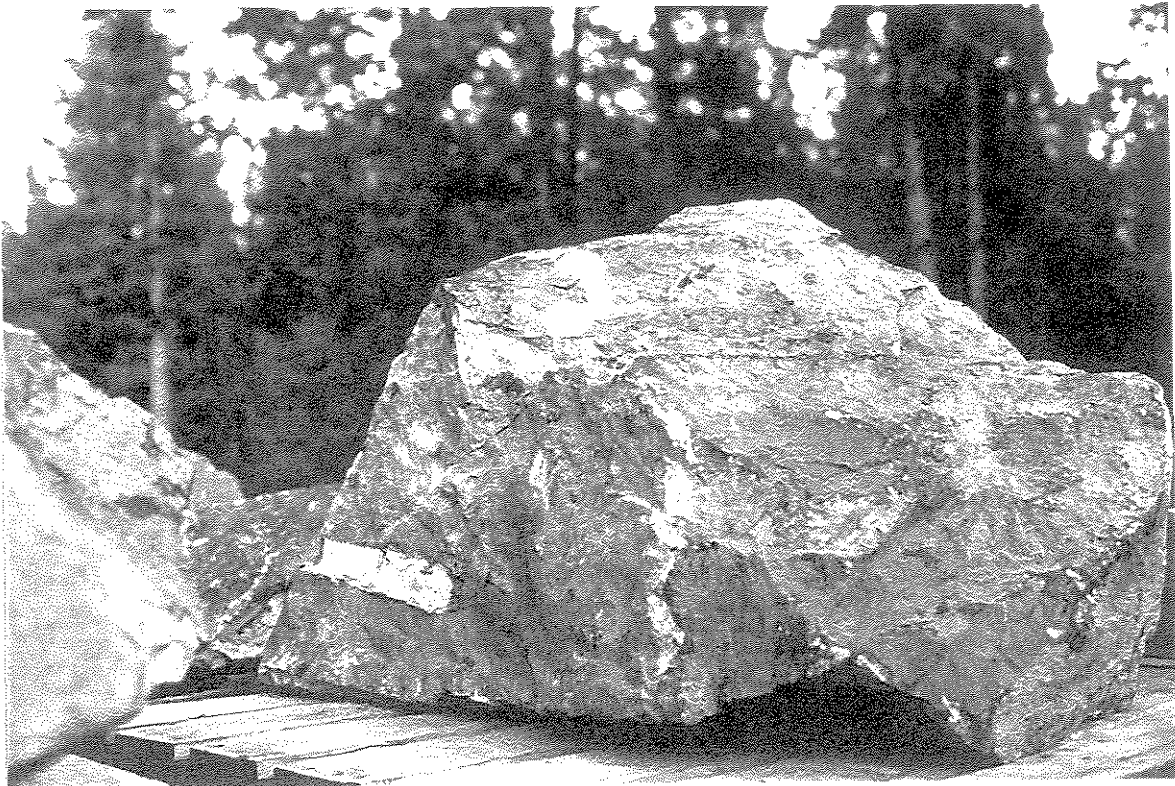
chunk 10



Pallet No 12



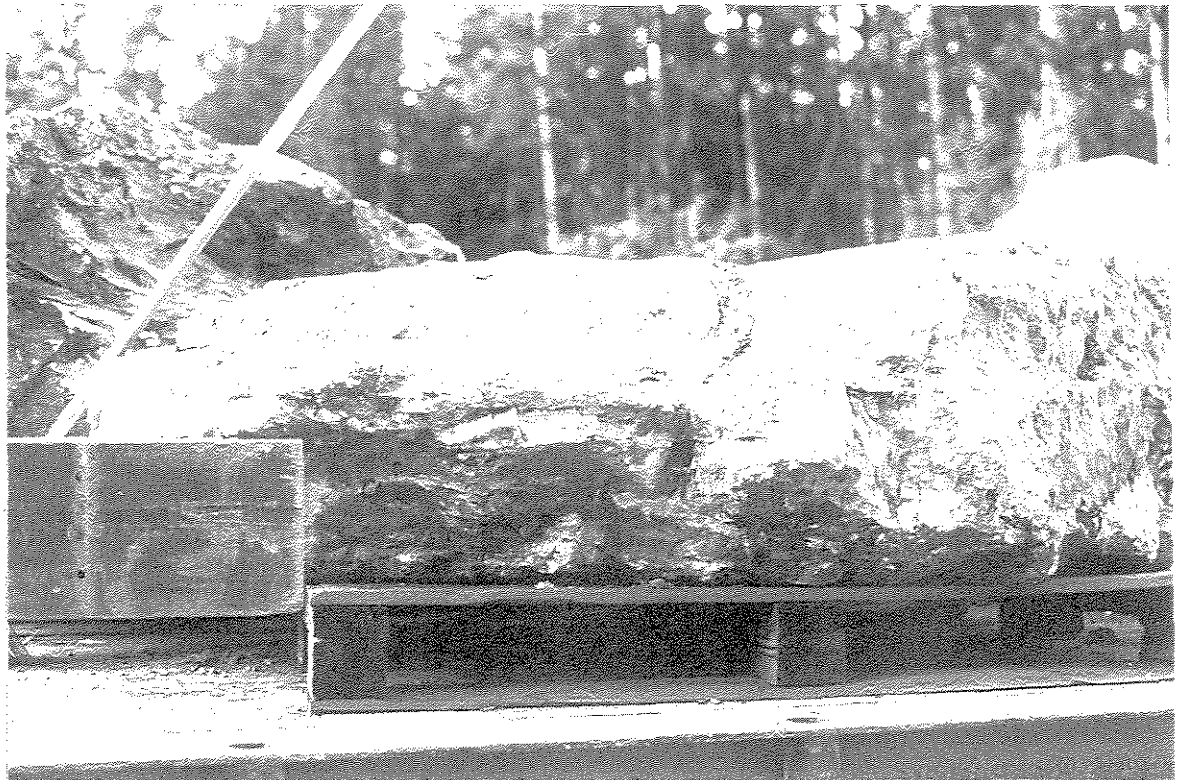
chunk No 2, Sideo Hiab in background.

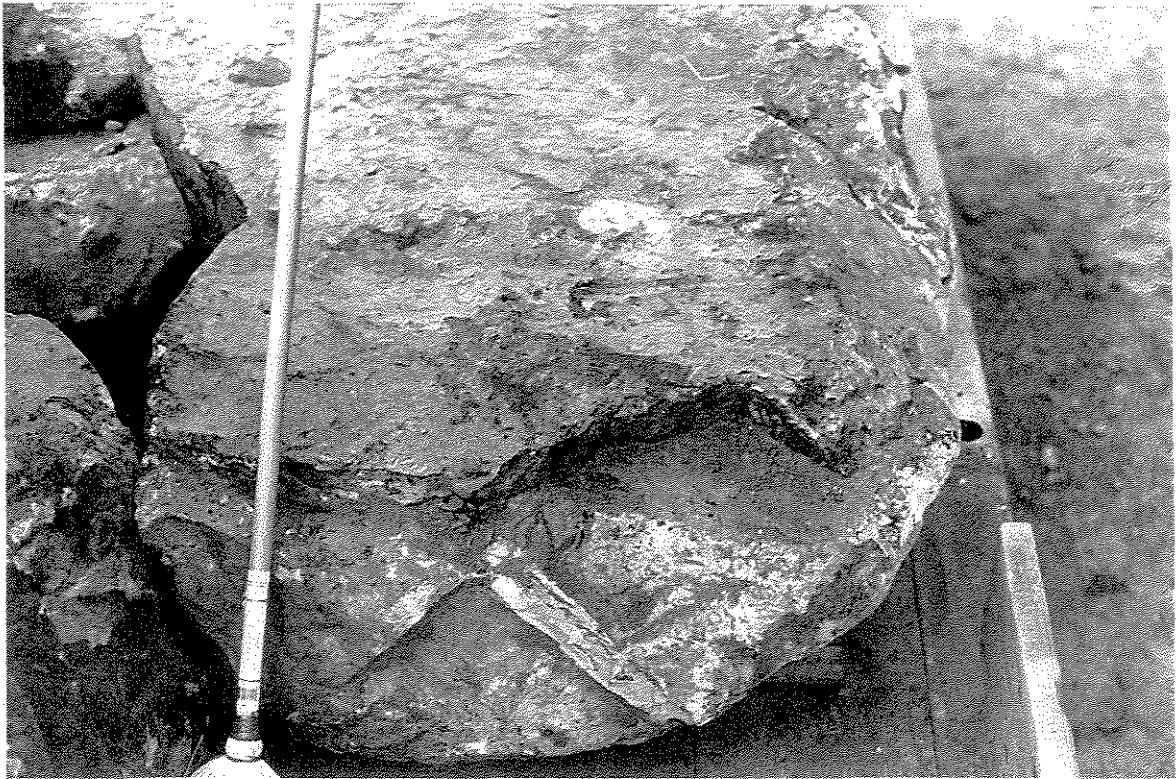


chunk No 1.

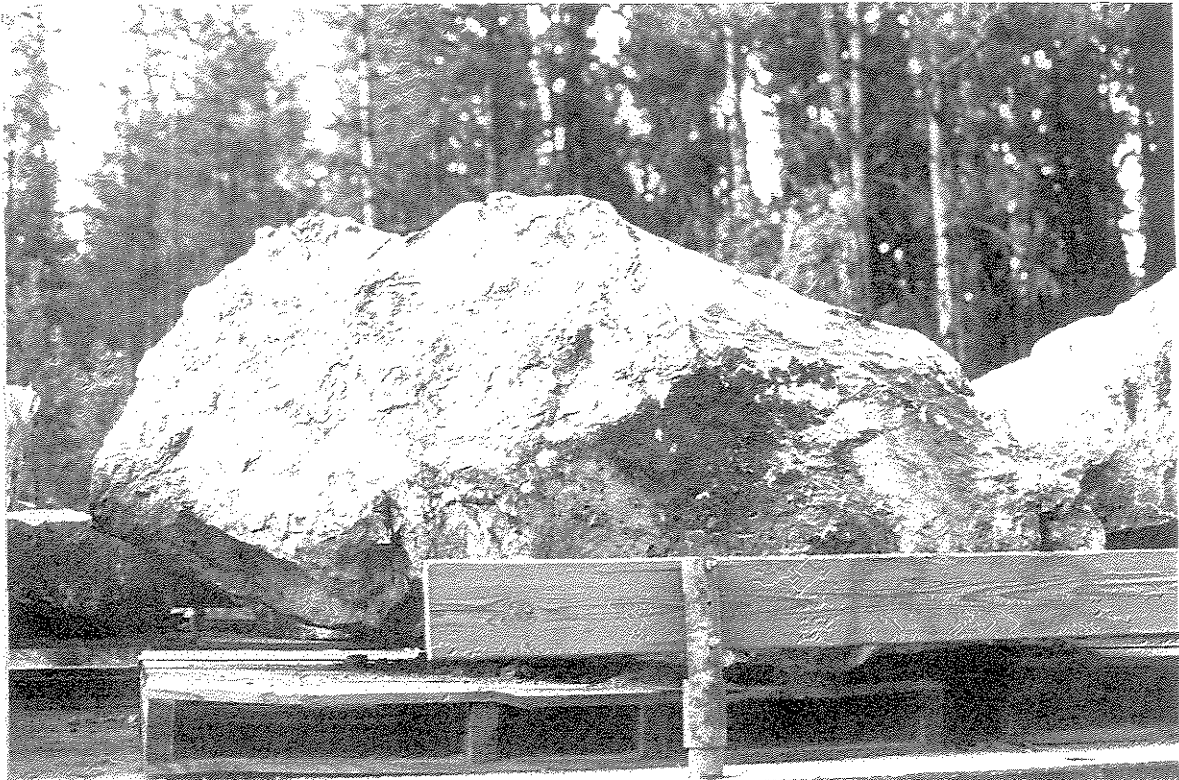


Load ready to ship





Chunk No 9.



side view of chunk 10.



Strapping down



TRUCK heading for Whitehorse with Load No 1 22 TONS



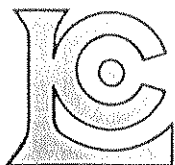
View looking west from rhodonite deposit.



VIEW west from Camp

APPENDIX VI

ANALYTICAL PROCEDURES AND ASSAY CERTIFICATES



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
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PHONE: 604-984-0221

To: ANOORAQ RESOURCES CORPORATION

1020 - 800 W. PENDER ST.
VANCOUVER, B.C.
V6V 2V6

A9118079

Comments: ATTN: NADIA CAIRA CC: BOB DICKENSON

CERTIFICATE

A9118079

ANOORAQ RESOURCES CORPORATION

Project: ANQ-01
P.O. #:

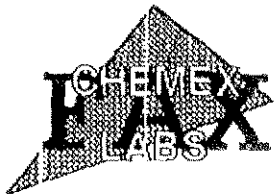
Samples submitted to our lab in Vancouver, BC.
This report was printed on 17-JUL-91.

SAMPLE PREPARATION

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION
214	32	Received sample as pulp

ANALYTICAL PROCEDURES

CHEMEX CODE	NUMBER SAMPLES	DESCRIPTION	METHOD	DETECTION LIMIT	UPPER LIMIT
100	32	Au ppb: Fuse 10 g sample	FA-AAS	5	10000



Chemex Labs Ltd.

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Page Number 1
Total Pages 1
Certificate Date 17-
Invoice No. 149
P.O. Number :

Project: ANQ-01
Comments: ATTN: NADIA CAIRA CC: BOB DICKENSON

CERTIFICATE OF ANALYSIS A9118079

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA											
BBO-05 6.0g	214 --	< 5	Taken as the base grab sample - 1st grab	pyrite #1									
BBO-12 6.0g	214 --	< 5	1st top of 1st grab	pyrite #1									
BBO-13 6.0g 1st	214 --	< 5	1st top of 1st grab	pyrite #1									
BBO-14 6.0g	214 --	< 5	1st top of 1st grab	pyrite #1									
BBO-16 6.0g	214 --	< 5	1st top of 1st grab	pyrite #1									
BBO-18 6.0g	214 --	< 5	1st top of 1st grab	pyrite #1									
BBO-19 6.0g	214 --	< 5	1st top of 1st grab	pyrite #1									
BBO-20 6.0g	214 --	20	1st top of 1st grab	pyrite #1									
BBO-21 6.0g	214 --	< 5	1st top of 1st grab	pyrite #1									
BBO-22 6.0g	214 --	< 5	1st top of 1st grab	pyrite #1									
BBO-23 5.1g 1st grab	214 --	* 50	1st top of 1st grab	pyrite #1									
BBO-24	214 --	< 5	1st top of 1st grab	pyrite #1									
NMC-01 12" chip	214 --	< 5	1st top of 1st grab	pyrite #1									
NMC-03 12" chip	214 --	45	1st top of 1st grab	pyrite #1									
NMC-04 12" chip	214 --	20	1st top of 1st grab	pyrite #1									
NMC-05 15" chip	214 --	30	1st top of 1st grab	pyrite #1									
NMC-06 25" chip	214 --	20	1st top of 1st grab	pyrite #1									
NMC-07 3.5" chip	214 --	< 5	1st top of 1st grab	pyrite #1									
NMC-08 2.0" chip	214 --	< 5	1st top of 1st grab	pyrite #1									
NMC-10 1.0" chip	214 --	< 5	1st top of 1st grab	pyrite #1									
NMC-11 4.0" chip	214 --	125	1st top of 1st grab	pyrite #1									
NMC-12 3" chip	214 --	< 5	1st top of 1st grab	pyrite #1									
NMC-13 2" chip	214 --	< 5	1st top of 1st grab	pyrite #1									
NMC-14 1" chip	214 --	< 5	1st top of 1st grab	pyrite #1									
NMC-15 4" chip	214 --	< 5	1st top of 1st grab	pyrite #1									
NMC-16 1.5" chip	214 --	< 5	1st top of 1st grab	pyrite #1									
NMC-17 1" chip	214 --	< 5	1st top of 1st grab	pyrite #1									
NMC-18 1" chip	214 --	30	1st top of 1st grab	pyrite #1									
NMC-19 1" chip	214 --	< 5	1st top of 1st grab	pyrite #1									
NMC-20 1" chip	214 --	< 5	1st top of 1st grab	pyrite #1									
NMC-21 1" chip	214 --	< 5	1st top of 1st grab	pyrite #1									
NMC-22 1" chip	214 --	< 5	1st top of 1st grab	pyrite #1									

Min 1

check showing

10/1/91
12/1/91



Chemex Labs Ltd.

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ENVIRONMENTAL RESOURCES CORPORATION

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Page Number: 1-A
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 Certificate Date: 12-JUL-91
 Invoice No.: 19117316
 P.O. Number:

Project: AND-01
 Comments: ATTN: NADIA CAIRA CC: BOB DICKENSON

CERTIFICATE OF ANALYSIS A9117316

SAMPLE DESCRIPTION	PREP CODE		Aq ppm	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Pb	Ga	Hg	K	La	Mg	Mn	Mo
			Aqua R	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	%	ppm	ppm
BBO-05	205	294	< 0.2	0.73	5	160	< 0.5	< 2	0.22	< 0.5	4	86	8	2.62	< 10	< 1	0.47	< 10	0.41	165	3
BBO-12	205	294	< 0.2	2.36	< 5	690	< 0.5	< 2	0.24	< 0.5	9	320	9	3.39	< 10	< 1	0.96	< 10	2.21	650	< 1
BBO-13	205	294	< 0.2	1.34	5	240	< 0.5	< 2	0.20	< 0.5	3	230	4	1.79	< 10	< 1	0.35	< 10	1.35	400	5
BBO-14	205	294	< 0.2	2.17	< 5	380	< 0.5	< 2	0.36	< 0.5	10	81	15	3.78	< 10	< 1	0.73	< 10	1.92	610	7
BBO-16	205	294	< 0.2	1.12	5	270	< 0.5	< 2	0.25	< 0.5	< 1	94	4	1.88	< 10	< 1	0.53	< 10	0.61	305	1
BBO-18	205	294	< 0.2	1.05	< 5	140	< 0.5	< 2	0.04	< 0.5	2	124	3	3.42	< 10	< 1	0.27	< 10	0.88	75	6
BBO-19	205	294	< 0.2	0.23	< 5	80	< 0.5	< 2	0.41	< 0.5	< 1	240	4	1.07	< 10	< 1	0.06	< 10	0.21	290	< 1
BBO-20	205	294	< 0.2	0.62	< 5	90	< 0.5	< 2	0.01	< 0.5	< 1	103	6	2.07	< 10	1	0.18	< 10	0.37	165	1
BBO-21	205	294	< 0.2	0.20	< 5	40	< 0.5	< 2	0.03	< 0.5	< 1	222	3	1.29	< 10	< 1	0.13	< 10	0.03	50	< 1
BBO-22	205	294	< 0.2	0.88	< 5	48	< 0.5	< 2	2.29	< 0.5	7	242	24	2.08	10	< 1	0.06	10	1.02	1395	1
BBO-23	205	294	1.4	1.97	10	40	< 0.5	< 2	0.06	< 0.5	258	187	447	>15.00	< 10	< 1	0.09	10	1.07	420	< 1
BBO-24	205	294	< 0.2	1.75	5	40	< 0.5	< 2	3.23	< 0.5	30	82	99	7.12	10	< 1	0.05	10	1.86	1855	< 1
BMC-01	205	294	< 0.2	0.21	< 5	< 10	< 0.5	< 2	2.30	< 0.5	2	315	25	0.61	< 10	2	< 0.01	< 10	0.06	60	1
BMC-03	205	294	< 0.2	0.38	60	190	< 0.5	< 2	0.02	< 0.5	2	200	28	2.62	< 10	1	0.21	10	0.02	25	1
BMC-04	205	294	< 0.2	0.39	< 5	170	< 0.5	< 2	0.57	< 0.5	1	280	18	1.96	< 10	< 1	0.13	< 10	0.30	240	8
BMC-05	205	294	< 0.2	0.02	< 5	140	< 0.5	< 2	0.13	< 0.5	1	136	87	4.89	< 10	< 1	0.22	< 10	0.21	85	4
BMC-06	205	294	< 0.2	2.68	5	120	< 0.5	< 2	0.31	< 0.5	32	209	270	10.30	10	< 1	0.14	< 10	1.80	675	< 1
BMC-07	205	294	< 0.2	0.70	20	170	< 0.5	< 2	1.04	< 0.5	19	170	27	4.46	10	< 1	0.17	30	0.73	825	< 1
BMC-08	205	294	< 0.2	2.44	155	170	< 0.5	< 2	3.46	< 0.5	22	311	47	5.70	20	< 1	0.07	20	3.58	2290	< 1
BMC-10	205	294	< 0.2	0.39	< 5	20	< 0.5	< 2	0.11	< 0.5	3	272	53	1.22	< 10	1	0.03	< 10	0.23	170	2
BMC-11	205	294	26.8	1.20	< 5	120	< 0.5	70	0.15	0.5	11	106	2970	3.63	< 10	< 1	0.66	10	0.52	350	2
BMC-12	205	294	< 0.2	1.22	5	200	< 0.5	< 2	0.27	< 0.5	6	133	73	2.15	< 10	< 1	0.68	20	0.55	560	1
BMC-13	205	294	0.0	0.68	375	760	< 0.5	< 2	0.11	< 0.5	5	206	85	2.54	< 10	< 1	0.17	10	0.30	520	2
BMC-14	205	294	< 0.2	1.29	375	820	< 0.5	< 2	0.09	< 0.5	1	161	53	3.56	< 10	< 1	0.37	10	0.83	120	4
BMC-15	205	294	0.6	0.57	210	430	< 0.5	< 2	1.00	< 0.5	6	231	46	2.26	< 10	< 1	0.10	10	0.83	548	2
BMC-16	205	294	< 0.2	0.38	75	40	< 0.5	< 2	0.38	0.3	6	190	73	3.72	< 10	< 1	0.03	< 10	0.58	>10000	< 1
BMC-17	205	294	< 0.2	1.99	< 5	80	< 0.5	< 2	1.30	< 0.5	7	78	34	4.02	< 10	< 1	0.16	10	1.78	760	1
BMC-18	205	294	1.2	1.22	5	80	< 0.5	< 2	0.02	< 0.5	1	170	16	2.43	< 10	< 1	0.23	< 10	1.03	500	1
BMC-19	205	294	< 0.2	0.73	185	180	< 0.5	< 2	0.10	< 0.5	10	197	60	2.09	< 10	< 1	0.06	< 10	0.45	2350	1
BMC-20	205	294	2.8	0.21	110	10	< 0.5	< 2	2.11	4.5	12	21	15	1.44	10	< 1	0.02	10	0.65	>10000	2
BMC-21	205	294	< 0.2	0.13	65	200	< 0.5	< 2	2.33	1.5	11	18	5	0.80	10	< 1	0.01	10	0.50	>10000	4
BMC-22	205	294	< 0.2	0.14	5	< 10	< 0.5	< 2	3.27	1.0	12	12	6	1.52	10	< 1	0.01	10	0.99	>10000	1

CERTIFICATION: *B. Coughlin*

Select of 20
 Selective of 20
 15' d.p
 u.s' at p
 10cm pd. chelating
 g/fc/4 py-mal

034 004 0032 P.02



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers
 212 Brooksbank Ave., North Vancouver
 British Columbia, Canada V7J 2C1
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To: ANCO-10 RESOURCES CORPORATION

1020 - 800 W. PENDER ST.
 VANCOUVER, B.C.
 V6V 2V6

Page Number : 1-B
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 Certificate Date: 12-JUL-91
 Invoice No. : 19117316
 P.O. Number :

Project : ANCO-01
 Comments : ATTN: NADIA CAIRA CC: BOB DICKENSON

CERTIFICATE OF ANALYSIS A9117316

SAMPLE DESCRIPTION	PREP CODE		ANALYSIS												
			As	Al	P	Fe	Ca	Co	Kr	Li	Ti	V	W	Zn	
			ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
BBO-03	205	294	0.06	4	390	8	< 5	4	6	0.10	< 10	< 10	16	< 10	16
BBO-12	205	294	0.06	17	460	4	< 5	7	8	0.19	< 10	< 10	81	> 10	69
BBO-13	205	294	0.03	5	430	< 2	< 5	3	15	0.08	< 10	< 10	48	> 10	34
BBO-14	205	294	0.05	8	690	2	< 5	3	16	0.19	< 10	< 10	63	< 10	56
BBO-16	205	294	0.05	4	200	< 2	< 5	2	10	0.05	< 10	< 10	2	< 10	28
BBO-18	205	294	0.04	4	110	16	< 5	1	6	< 0.01	< 10	< 10	2	< 10	26
BBO-19	205	294	0.02	4	150	4	< 5	< 1	6	< 0.01	< 10	< 10	1	< 10	6
BBO-20	205	294	0.04	3	340	56	< 5	1	7	< 0.01	< 10	< 10	2	< 10	102
BBO-21	205	294	0.05	3	250	8	< 5	< 1	4	< 0.01	< 10	< 10	1	< 10	2
BBO-22	205	294	0.01	22	150	19	< 5	1	40	< 0.01	< 10	< 10	10	< 10	26
BBO-23	205	294	0.01	15	220	32	< 5	3	3	0.02	< 10	< 10	19	< 50	354
BBO-24	205	294	0.05	11	720	6	< 5	11	152	0.09	< 10	< 10	59	< 10	98
BNC-01	205	294	< 0.01	9	30	14	< 5	< 1	28	< 0.01	< 10	< 10	2	< 10	18
BNC-03	205	294	0.02	11	130	36	< 5	1	10	< 0.01	< 10	< 10	8	< 10	8
BNC-04	205	294	0.02	8	140	70	< 5	2	36	< 0.01	< 10	< 10	13	> 10	18
BNC-05	205	294	0.08	4	530	22	< 5	3	36	0.02	< 10	< 10	6	< 10	44
BNC-06	205	294	0.01	31	360	16	< 5	4	4	< 0.01	< 10	< 10	37	< 10	124
BNC-07	205	294	0.03	107	910	8	< 10	4	29	< 0.01	< 10	< 10	24	< 10	92
BNC-08	205	294	0.02	146	1410	2	< 5	8	95	< 0.01	< 10	< 10	76	< 10	100
BNC-10	205	294	0.03	7	100	10	< 5	1	7	0.06	< 10	< 10	17	< 10	14
BNC-11	205	294	0.02	2	350	1335	< 5	2	9	0.08	< 10	< 10	21	< 10	90
BNC-12	205	294	0.03	7	290	32	< 5	2	16	0.05	< 10	< 10	21	< 10	58
BNC-13	205	294	0.01	65	520	16	< 5	1	13	< 0.01	< 10	< 10	56	< 10	184
BNC-14	205	294	0.01	14	750	10	< 10	2	11	0.01	< 10	< 10	41	< 10	58
BNC-15	205	294	0.01	39	520	8	< 5	1	87	< 0.01	< 10	< 10	37	< 10	64
BNC-16	205	294	< 0.01	13	150	250	< 5	1	17	< 0.01	< 10	< 10	40	17	364
BNC-17	205	294	0.03	5	470	10	< 5	4	40	0.17	< 10	< 10	69	< 10	59
BNC-18	205	294	0.02	3	290	176	< 5	1	4	< 0.01	< 10	< 10	4	< 10	196
BNC-19	205	294	0.01	35	360	20	< 5	1	10	0.02	< 10	< 10	24	> 10	62
BNC-20	205	294	0.01	20	290	158	< 5	< 1	49	< 0.01	< 10	160	32	90	206
BNC-21	205	294	0.01	12	270	194	< 5	< 1	51	< 0.01	< 10	140	29	70	62
BNC-22	205	294	< 0.01	10	370	222	< 5	< 1	45	0.01	< 10	180	34	150	88

CERTIFICATION:

B. Campbell

07/16/1991 14:49 PACIFIC SENTINEL GOLD 604 684 8292 P.03



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Analysts

212 Brooksbank Ave., North Vancouver
British Columbia, Canada V7J 2G1
PHONE: 604-984-0221

To: ANOORAQ RESOURCES CORPORATION

1020 - 800 W. PENDER ST.
VANCOUVER, B.C.
V6V 2V6

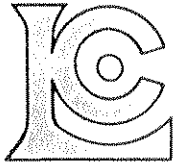
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Invoice No. : 1911731
P.O. Number :

Project : ANQ-01
Comments: ATTN: NADIA CAIRA CC: BOB DICKINSON

CERTIFICATE OF ANALYSIS A9117315

SAMPLE DESCRIPTION	PRNF CODE	Ag ppm	Al %	As ppm	Ba ppm	Be ppm	Bi ppm	Ca %	Cd ppm	Co ppm	Cr ppm	Cu ppm	Fe %	Ga ppm	Bg ppm	K %	La ppm	Mg %	Mn ppm	Mo ppm
Silt ↓ BNC-20A	201 202	< 0.2	0.98	10	100	< 0.5	< 2	0.88	< 0.5	2	8	21	3.22	< 10	< 1	0.09	10	0.90	375	1
BNC-02A	201 202	0.8	0.41	365	310	< 0.5	< 2	0.03	< 0.5	< 1	27	97	5.62	10	< 1	0.29	30	0.03	10	3
BNC-09A	201 202	< 0.2	1.28	20	80	< 0.5	< 2	0.36	< 0.5	5	9	132	2.12	< 10	1	0.16	10	0.71	405	< 1

CERTIFICATION: B. Caplan



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British Columbia, Canada V7J 2C1
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Page Number :1
Total Pages :1
Certificate Date: 17-JUL-91
Invoice No. : I9118079
P.O. Number :

Project : ANQ-01
Comments: ATTN: NADIA CAIRA CC: BOB DICKENSON

CERTIFICATE OF ANALYSIS

A9118079

SAMPLE DESCRIPTION	PREP CODE	Au ppb FA+AA												
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BBO-14	214 --	< 5												
BBO-16	214 --	< 5												
BBO-18	214 --	< 5												
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NMC-06	214 --	20												
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NMC-21	214 --	< 5												
NMC-22	214 --	< 5												

CERTIFICATION:

Bob Vork



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Page Number :1
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CERTIFICATION: _____

Mark Vank



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CERTIFICATE OF ANALYSIS

A9118079

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NMC-21	214 ---	< 5												
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CERTIFICATION:

APPENDIX VII

IMPORTANT NAMES AND ADDRESSES, YUKON

IMPORTANT NAMES AND ADDRESSES

YUKON RHODONITE PROJECT

	<u>Yukon Area Code</u>
Morley Barker Claim Staker, Expeditor, formerly on Rhodonite in 1989, Whitehorse	633-2974
Bruce Cairns IBEX Contracting, Whitehose D7 & D8 Bulldozer, 225 Excavator	office 668-5617 home 668-2689 fax 668-4449
Mr. Hazard Excavator 225, Teslin Accepted and then renege d on 1991 job	390-2610
Johnsons Crossing Store (gas, some food supplies, campground)	390-2607
Bob McCormick Hoe operator, Johnsons Crossing, Teslin River	radio 2M3121 town # 667-4335
Mining Recorder (Whitehorse) Room 201, Federal Building 305 Main Street Whitehorse, Yukon Y1A 2B5	1-403-667-6849 Fax: 1-403-668-5109
North Lake Motel & Restaurant (Teslin)	390-5271
Bruno Paulin (lives on Lower Evelyn Creek 10-11 months of the year, worked on Rhodonite 1968 & 87), has bulldozer, compressor and drills Wife in Whitehorse 10 a.m. - Noon Son: 633-4643 at night	633-6478
Orville Smith (Teslin) Equipment operator, storage of equipment	390-2516
Grant Stewart Construction Road construction, Watson Lake	536-7472
Teslin Lake Motors (Walter Duncan) has forklift	

- continued -

White Pass Transport, Whitehorse, Harry Kuljack
Trailer for moving stone & shipping
\$620 to Whitehorse, \$78/ton shipping

668-6400
dispatch 667-6883

Workers' Compensation Board (Yukon)

667-5645
fax 667-2380

Yukon Motel (Teslin, Y0A 1B0)

390-2575
390-2568
fax 390-2003

Indian and Northern Affairs Canada
Gordon Dumas, General Delivery,
Teslin, Y.T.
Resource Management Officer
Water, Land & Forests, Teslin District

403-390-2531
Fax: 403-390-2682



- LEGEND
- Z Hornblende gneiss
 - 1a Quartzite & quartz mica schist
 - 1b dark argillaceous quartzite
 - 1c Limestone
 - 1d chloritic amphibolite
 - 1e Albita-rich gneiss
 - av fault
 - o outcrop area
 - z zoning
 - h bedding

0 100 200 300 Meters
Scale 1:5,000

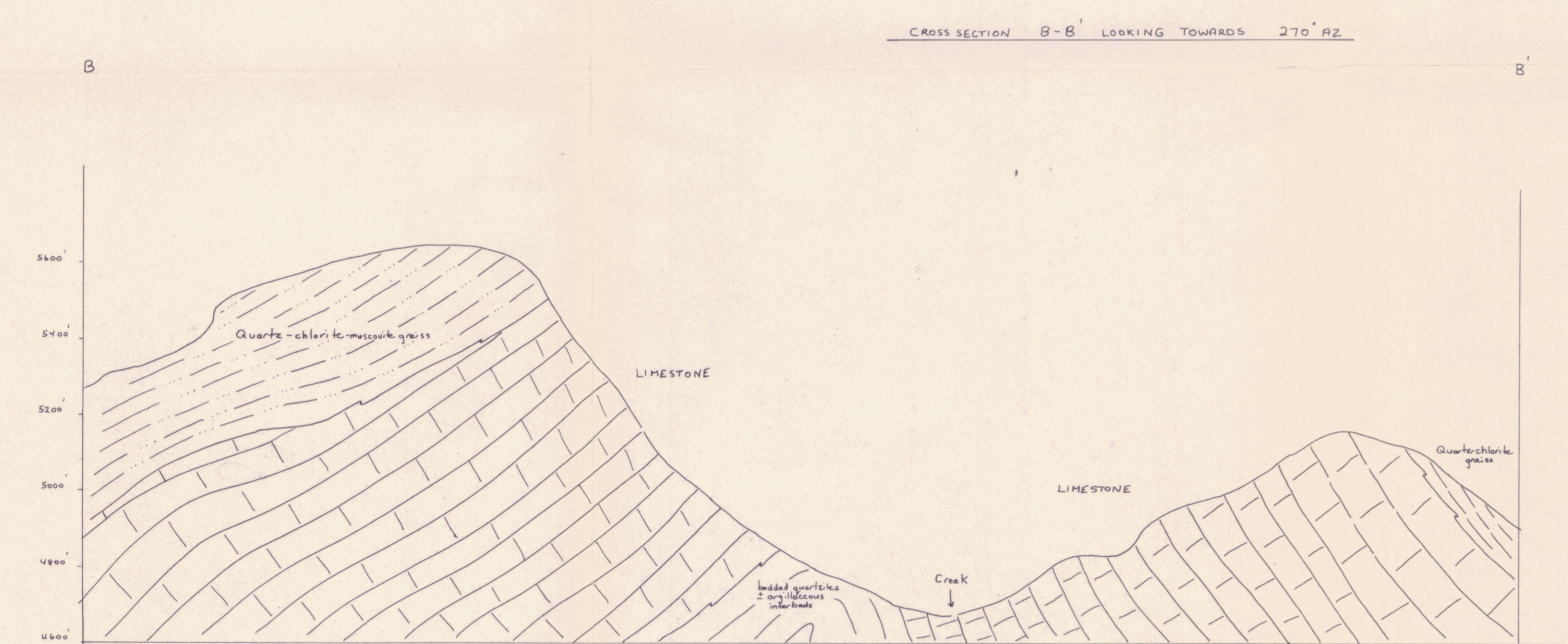
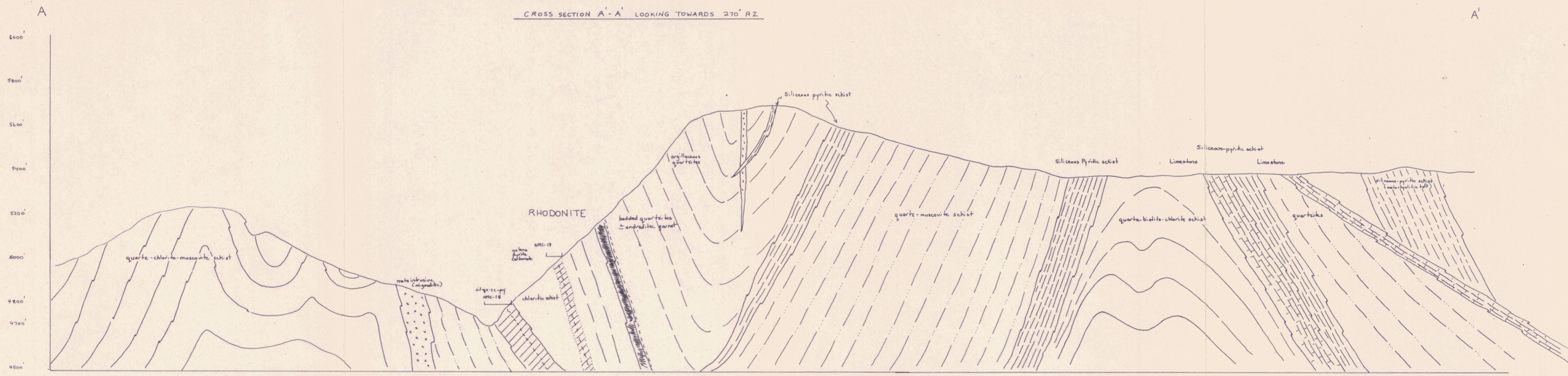
ANDORAQ RESOURCES CORP.
Evelyn Creek Rhodonite

Property Geology MAP # 105411

Scale 1:5000
Mapping by N. Cairn

FIGURE 5

092977



SCALE 1:5000

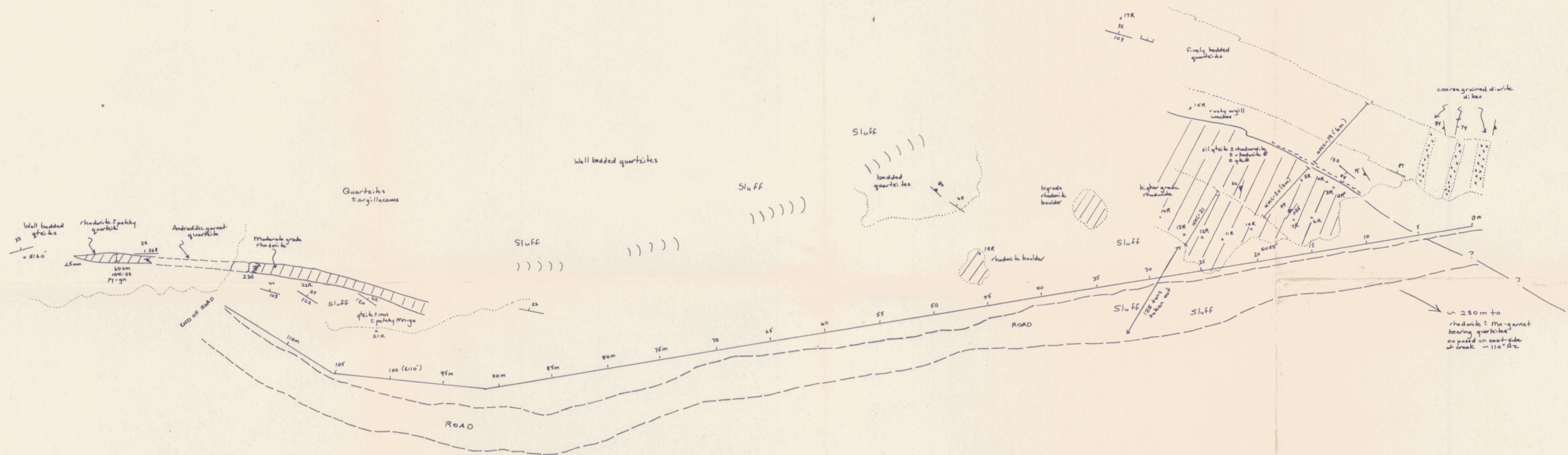
ANOORAQ RESOURCES CORPORATION
MOUNT GRANT RHODONITE
CROSS SECTIONS A-A', B-B'

092977 326
MAP# 1059/11

FIGURE 6

DETAILED SURFACE PLAN MAP OF RHODONITE SHOWING

N
↑
SCALE 1CM = 2.5M



092977.327
MAP# 1059/11

FIGURE 7

NOTICE

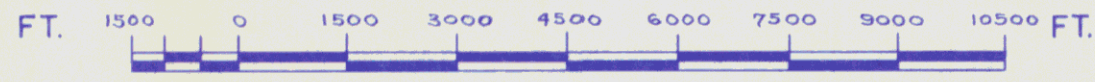
THIS MAP IS ISSUED AS A PRELIMINARY GUIDE FOR WHICH THE DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT WILL ACCEPT NO RESPONSIBILITY FOR ANY ERRORS, INACCURACIES OR OMISSIONS WHATSOEVER.

SHEET 105C-II

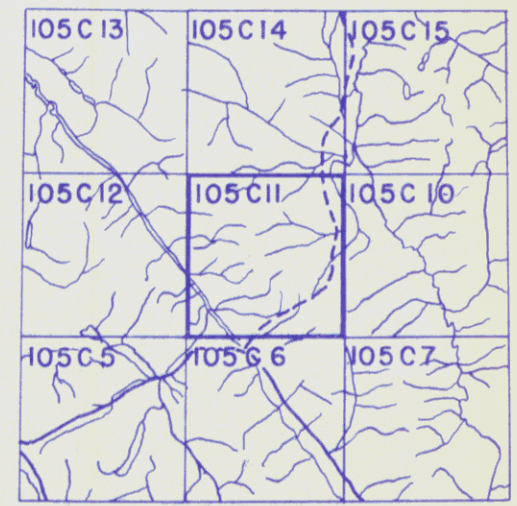
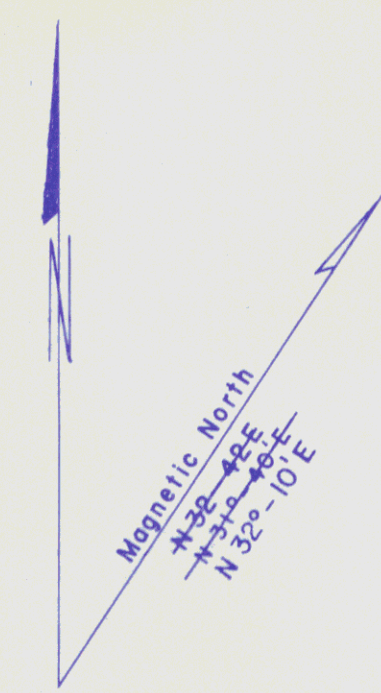
LATITUDE 60°30' To 60°45'
LONGITUDE 133°00' To 133°30'

CANADA
DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES
NORTHERN ADMINISTRATION AND LANDS BRANCH
LANDS DIVISION

SCALE: 1/2 MILE TO 1 INCH



ISSUED UNDER THE AUTHORITY OF THE MINISTER OF NORTHERN AFFAIRS AND NATIONAL RESOURCES



Note: Entry on certain lands is withdrawn from staking in cross-hatched areas to facilitate the settlement of Native Land Claims without prejudice to Existing Surface and Subsurface Rights.

8 JULY 88

29 Nov 80

12 Jan 72

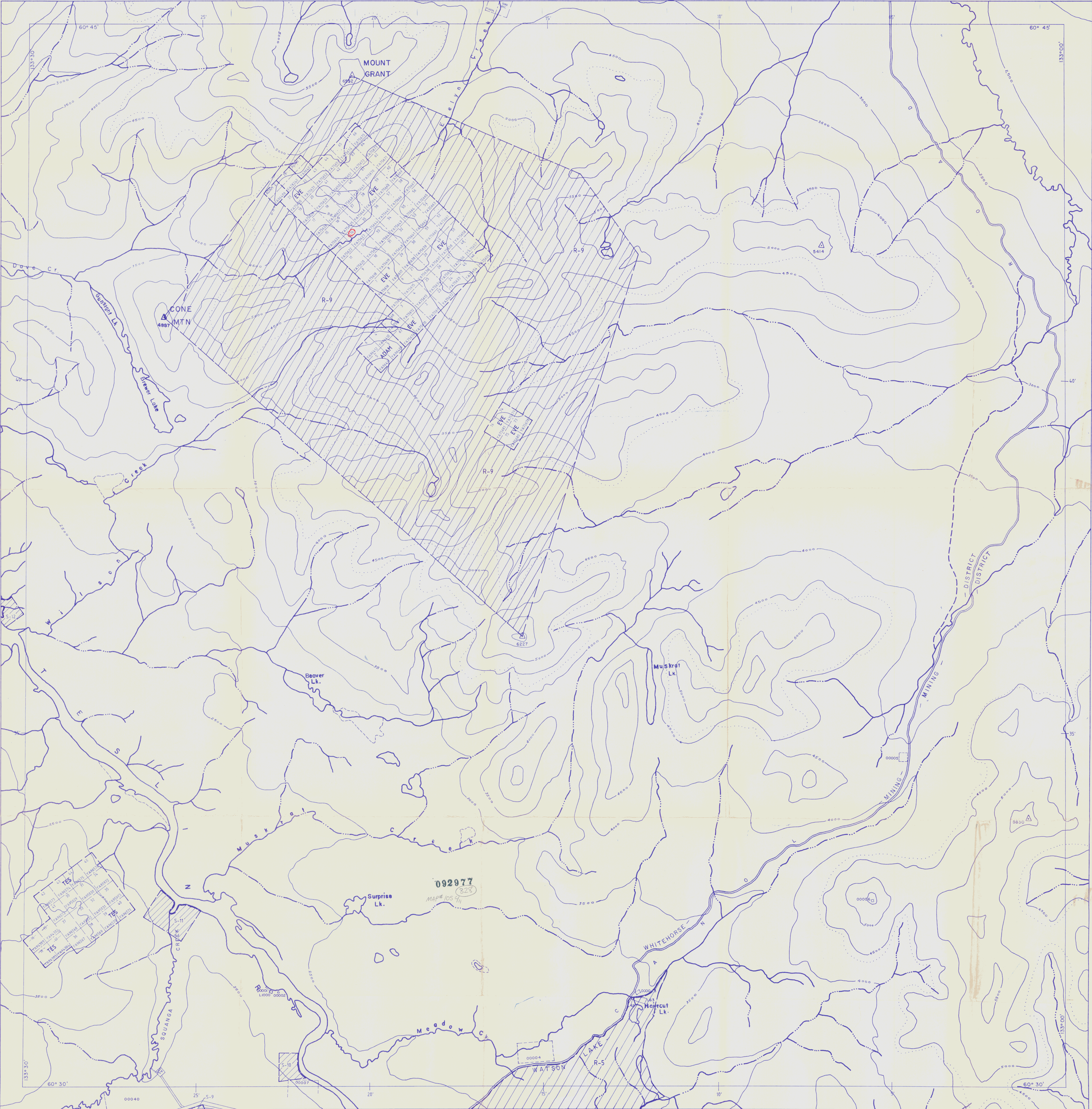
19 Jan 70

23 APRIL 99

26 MAR 92

06 OCT 88

WHITEHORSE 23 April 56 12 Jul 62



092977
328
MAP# 105 911