MAP NO: 105C/11

ASSESSMENT REPORT: X

PROSPECTUS:

CONFIDENTIAL: X

OPEN FILE:

DOCUMENT NO: 093247

MINING DISTRICT: Whitehorse

TYPE OF WORK: Trenching

REPORT FILED UNDER: Anooraq Reource Corporation

DATE PERFORMED: August 1-15, 1994

DATE FILED: October 12, 1994

LATITUDE: 60 42

AREA: Evelyn Creek

LONGITUDE: 133 20

VALUE: $30,000

CLAIM NAME AND #: Eve 1-68, Adam 1-6

WORK DONE BY: J.T. Shearer

WORK DONE FOR: New Global Reources Ltd.

DATE TO GOOD STANDING	

REMARKS: Trenching to define gem quality rhodonite reserves. A 26 kg sample of rhodonite submitted to two gemologists was estimated to be worth US$2.40-$2.60 per pound. The deposit is estimated to contain 400 tons of gem quality rhodonite. The deposit has two minealogically different zones: northern tephroite-bustamite-rhodochrosite-qtz-py-minor rhodonite; southern rhodonite(red & pink)-tephroite-minor rhodocrosite.

Indian and Northern Affairs Canada | Affaires indiennes et du Nord Canada

M.R. file no.

R.M.M.R. file no.

Date forwarded 12 OCT '94

TRANSMITTAL FORM

From ▶ Mining Recorder at: Whitehorse

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

For action are:

- ☐ NEW APPLICATION FOR PLACER LEASE TO PROSPECT — Name
- ☐ RENEWAL APPLICATION PLACER LEASE TO PROSPECT — Name — Lease no.
- ☐ AFFIDAVIT OF EXPENDITURE ON PLACER LEASE — Name — Lease no.
- ☐ SECURITY DEPOSIT
- ☐ FINANCIAL ABILITY
- ☐ ASSIGNMENT OF PLACER LEASE NO. — From — To
- ☐ GROUPING APPLICATION UNDER SEC. 52(2) PLACER MINING ACT. — Owner
- ☐ DIAMOND DRILL LOGS — Claims — Claim sheet no.
- ☐ QUARTZ ASSESSMENT REPORT — Claims: Adam 1-6 Eve 1-6 8,78 — Claim sheet no.: 105-C-11

Please Number & Return 1 copy

Type of report: Trenching — Submitted by

Cls. work performed on: Eve 14 — $ req. for ren. application: 30,000.00

H Sawtwell
Signature

REPLY ACTION

Date returned

OFFICE OF THE REGIONAL MANAGER MINERAL RIGHTS OCT 17 1994 WHITEHORSE YUKON TERRITORY

Signature

802-37 (7-88)

093247

TRENCHING REPORT

ON THE

EVELYN CREEK RHODONITE PROPERTY

(EVE CLAIMS)
TESLIN RIVER AREA
WHITEHORSE MINING DISTRICT
YUKON TERRITORY

Longitude 60° 42'N and Latitude 133° 20'W
NTS 105C/11W

for

ANOORAQ RESOURCES CORPORATION
5219 Timberfield Road
West Vancouver, B.C. V7W 2Y5

by

J.T. SHEARER, M.Sc., F.G.A.C., P.Geo.
NEW GLOBAL RESOURCES LTD.
548 Beatty Street
Vancouver, B.C. V6B 2L3

August 30, 1994
Vancouver, B.C.

Fieldwork conducted between August 1 and August 15, 1994

CONTENTS

LIST OF ILLUSTRATIONS AND TABLES

SUMMARY

A large, gem-quality, metamorphosed, synsedimentary stratiform rhodonite deposit occurs on the Eve 14 claim, 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 Canol Road. The South Canol 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 1994, the main rhodonite showing was geologically mapped at a scale of 1:100 and extensively trenched using a Case 450 Loader - backhoe, Airtac drill and feather-wedge combinations. Approximately 2,000 cubic feet of footwall quartzite and rhodonite were excavated in 1994. One percussion hole was drilled into the northwestern, down-dip extension of the deposit to quantify the extent of gem rhodonite. Below the low grade north section of the deposit is red rhodonite and tephroite. Costs in 1994 were somewhat lower than 1992 work due to the absence of road washouts and equipment breakdowns.

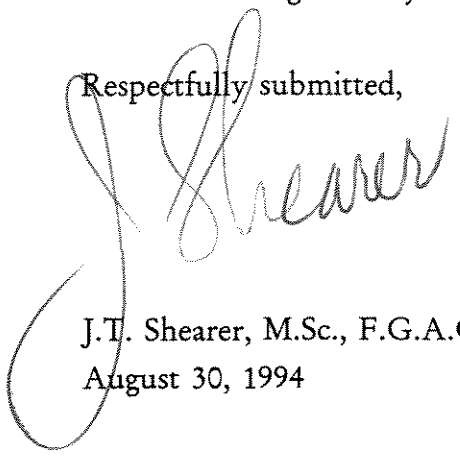
The rhodonite deposit is highly variable in both shape and mineralogy. Observations in 1991 were confirmed by the present work. The deposit can be roughly subdivided into (1) a northern tephroite - bustaminte - rhodochrosite - quartz - minor rhodonite zone and (2) a southern rhodonite (red and pink) - 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 and appears to be low grade on surface.

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 and isolated part of the Yukon. A revised tonnage estimate for the deposit of gem quality rhodonite based on 1994 mining experience is still about 400 tons with some potential of additional reserved down-dip.

Marketing strategies are presently the most important facet of the successful exploitation of this unusually high-quality rhodonite resource. 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., P.Geo.
August 30, 1994

INTRODUCTION

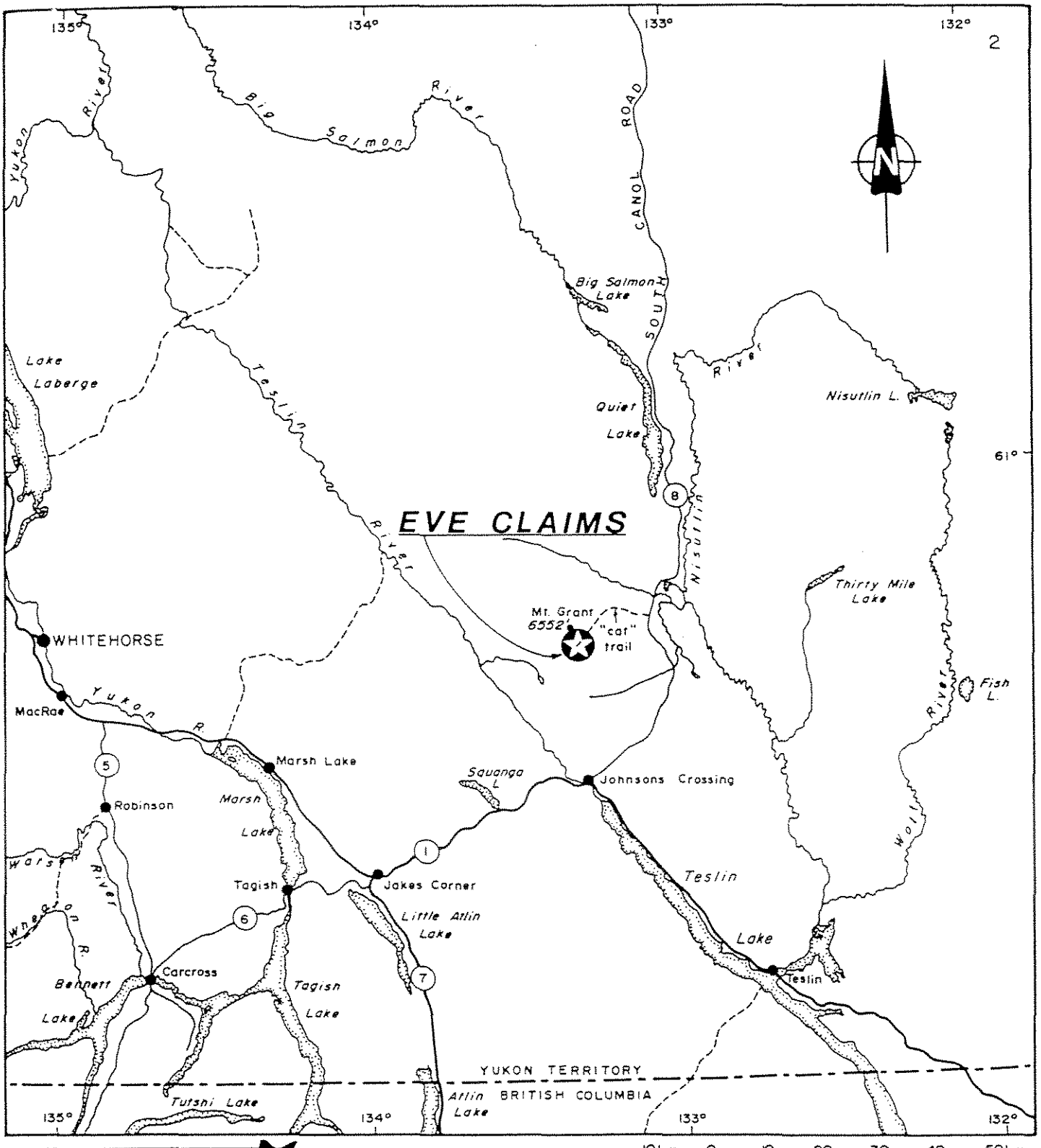
A large, gem-quality rhodonite deposit, wholly owned by Anooraq Resources Corporation, was investigated by a program of geological mapping, trenching and percussion drilling in 1992. This program further demonstrated that large quantities of rhodonite can be recovered at relatively low cost using the appropriate equipment.

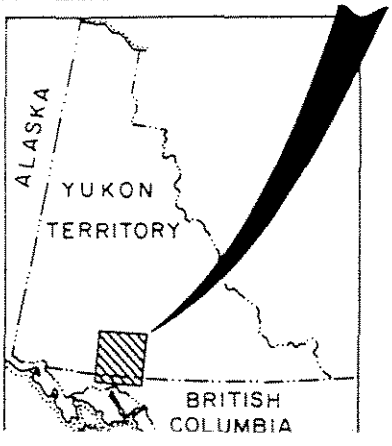
The property has produced prior to 1991 under different management (according to sketchy records) about 140 tons of highly variable quality rhodonite. The property was originally acquired in 1983 by Anooraq as a gold/silver prospect. Although the rhodonite zone was percussion drilled in 1968 by Mount 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 and 1992 (Shearer , 1991B).

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. 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 tephroite. 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, Portland, Oregon and Quartzite - Tucson, Arizona areas.





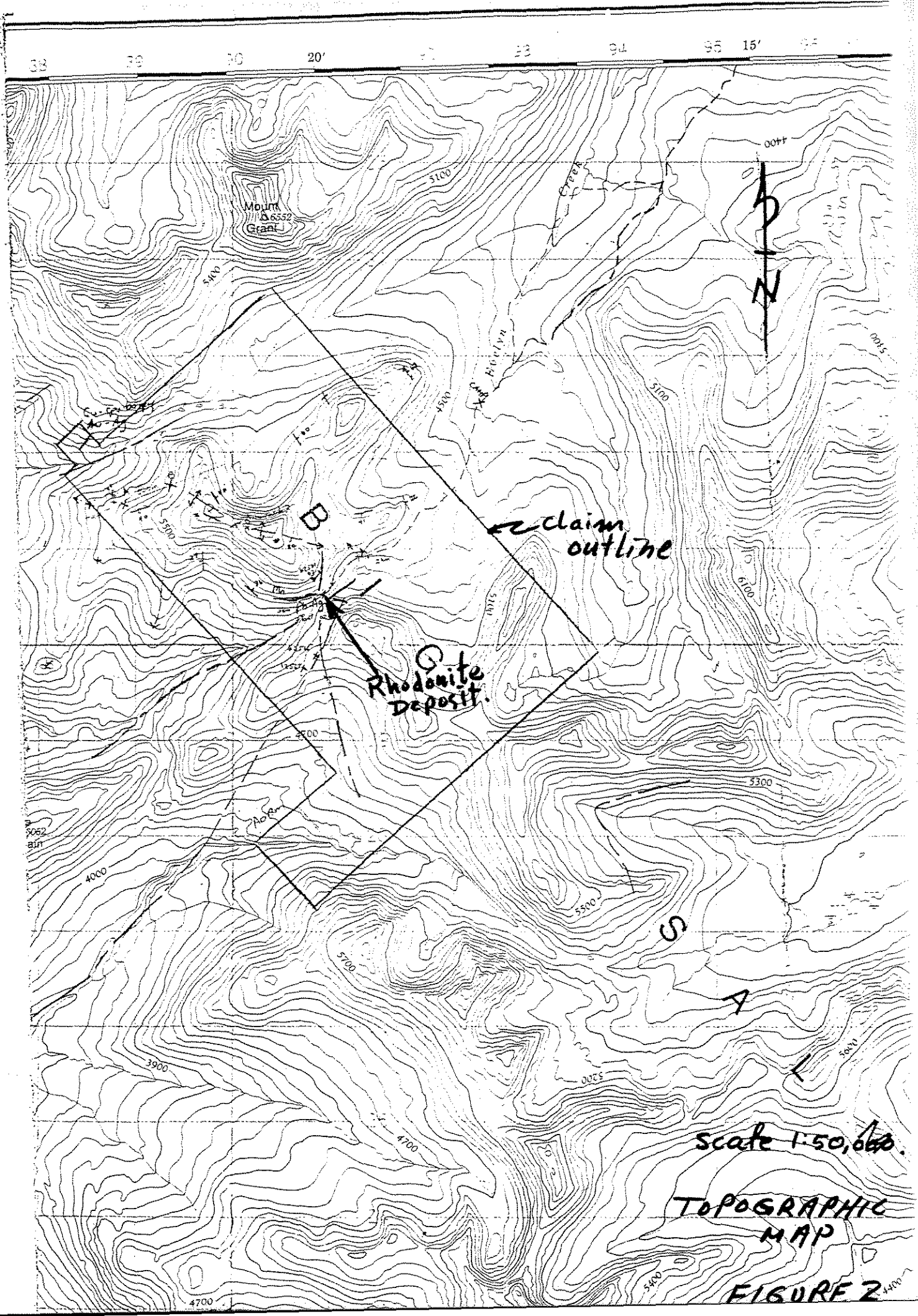
ANOORAQ RESOURCES CORPORATION	
EVE CLAIMS	
LOCATION	
Aurum Geological Consultants Inc.	February, 1987

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.

The 1994 trenching program gained access by a 22.3 km dirt road which starts from the South Canol Road at km 42. This access road, which was repaired in 1991 and 1992, 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 1992 consisted of covering wash-outs at 4.3 km, 8.2 km and 16.0 km with a D-7 bulldozer and case 450 Loader. Similar repairs were required in 1994. 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 the winter of 1991-1992 was unusual in the amount of snow which accumulated at higher elevations in the southern Yukon. This resulted in a very high volume run-off in the spring which damaged the access road. Apparently, 1994 was unusually dry with less run-off.

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.



TOPOGRAPHIC MAP

FIGURE 2

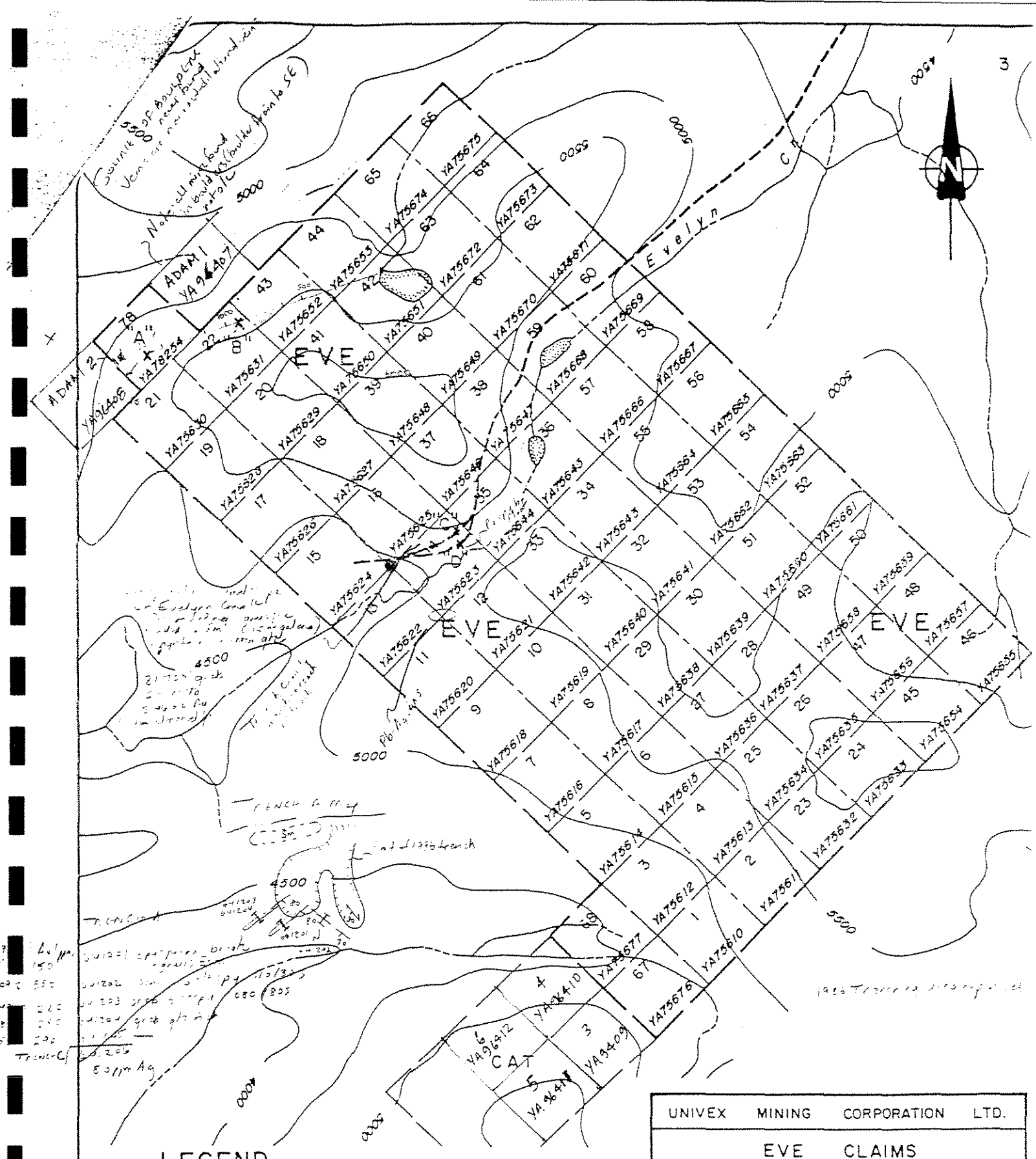
CLAIM STATUS

The property consists of the Eve 1 to 68, Eve 78 and Adam 1-6 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 1994 on EVE 14 can be grouped in five blocks of 16 claims to cover all of the property.

TABLE I

List of Claims

Claim Name	Record Number	Staking Date	Current Expiry Date
EVE 1	YA75610	May 15, 1983	Nov. 16, 2005
EVE 2	YA75611	May 15, 1983	Nov. 16, 2005
EVE 3	YA75612	May 15, 1983	Nov. 16, 2005
EVE 4	YA75613	May 15, 1983	Nov. 16, 2005
EVE 5	YA75614	May 15, 1983	Nov. 16, 2005
EVE 6	YA75615	May 15, 1983	Nov. 16, 2005
EVE 7	YA75616	May 15, 1983	Nov. 16, 2005
EVE 8	YA75617	May 15, 1983	Nov. 16, 2005
EVE 9	YA75618	May 15, 1983	Nov. 16, 2005
EVE 10	YA75619	May 15, 1983	Nov. 16, 2005
EVE 11	YA75620	May 15, 1983	Nov. 16, 2005
EVE 12	YA75621	May 15, 1983	Nov. 16, 2005
EVE 13	YA75622	May 15, 1983	Nov. 16, 2005
EVE 14	YA75623	May 15, 1983	Nov. 16, 2005
EVE 15	YA75624	May 15, 1983	Nov. 16, 2005
EVE 16	YA75625	May 15, 1983	Nov. 16, 2005
EVE 17	YA75626	May 15, 1983	Nov. 16, 2005
EVE 18	YA75627	May 15, 1983	Nov. 16, 2005
EVE 19	YA75628	May 15, 1983	Nov. 16, 2005
EVE 20	YA75629	May 15, 1983	Nov. 16, 2005
EVE 21	YA75630	May 15, 1983	Nov. 16, 2005
EVE 22	YA75631	May 15, 1983	Nov. 16, 2005
EVE 23	YA75632	May 15, 1983	Nov. 16, 2005
EVE 24	YA75633	May 15, 1983	Nov. 16, 2005
EVE 25	YA75634	May 15, 1983	Nov. 16, 2005
EVE 26	YA75635	May 15, 1983	Nov. 16, 2005



LEGEND

- claim boundary
- claim number
- tag number
- creeks
- elevation contour; interval 500 ft.
- trench
- road

500m 0 500 1000m

scale in metres

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

TABLE I Cont'd

Claim Name	Record Number	Staking Date	Current Expiry Date
EVE 27	YA75636	May 15, 1983	Nov. 16, 2005
EVE 28	YA75637	May 15, 1983	Nov. 16, 2005
EVE 29	YA75638	May 15, 1983	Nov. 16, 2005
EVE 30	YA75639	May 15, 1983	Nov. 16, 2005
EVE 31	YA75640	May 15, 1983	Nov. 16, 2005
EVE 32	YA75641	May 15, 1983	Nov. 16, 2005
EVE 33	YA75642	May 15, 1983	Nov. 16, 2005
EVE 34	YA75643	May 15, 1983	Nov. 16, 2005
EVE 35	YA75644	May 15, 1983	Nov. 16, 2005
EVE 36	YA75645	May 15, 1983	Nov. 16, 2005
EVE 37	YA75646	May 15, 1983	Nov. 16, 2005
EVE 38	YA75647	May 15, 1983	Nov. 16, 2005
EVE 39	YA75648	May 15, 1983	Nov. 16, 2005
EVE 40	YA75649	May 15, 1983	Nov. 16, 2005
EVE 41	YA75650	May 15, 1983	Nov. 16, 2005
EVE 42	YA75651	May 15, 1983	Nov. 16, 2005
EVE 43	YA75652	May 15, 1983	Nov. 16, 2005
EVE 44	YA75653	May 15, 1983	Nov. 16, 2005
EVE 45	YA75654	May 15, 1983	Nov. 16, 2005
EVE 46	YA75655	May 15, 1983	Nov. 16, 2005
EVE 47	YA75656	May 15, 1983	Nov. 16, 2005
EVE 48	YA75657	May 15, 1983	Nov. 16, 2005
EVE 49	YA75658	May 15, 1983	Nov. 16, 2005
EVE 50	YA75659	May 15, 1983	Nov. 16, 2005
EVE 51	YA75660	May 15, 1983	Nov. 16, 2005
EVE 52	YA75661	May 15, 1983	Nov. 16, 2005
EVE 53	YA75662	May 15, 1983	Nov. 16, 2005
EVE 54	YA75663	May 15, 1983	Nov. 16, 2005
EVE 55	YA75664	May 15, 1983	Nov. 16, 2005
EVE 56	YA75665	May 15, 1983	Nov. 16, 2005
EVE 57	YA75666	May 15, 1983	Nov. 16, 2005
EVE 58	YA75667	May 15, 1983	Nov. 16, 2005
EVE 59	YA75668	May 15, 1983	Nov. 16, 2005
EVE 60	YA75669	May 15, 1983	Nov. 16, 2005
EVE 61	YA75670	May 15, 1983	Nov. 16, 2005
EVE 62	YA75671	May 15, 1983	Nov. 16, 2005
EVE 63	YA75672	May 15, 1983	Nov. 16, 2005
EVE 64	YA75673	May 15, 1983	Nov. 16, 2005
EVE 65	YA75674	May 15, 1983	Nov. 16, 2005
EVE 66	YA75675	May 15, 1983	Nov. 16, 2005
EVE 67	YA75676	May 15, 1983	Nov. 16, 2005
EVE 68	YA75677	May 15, 1983	Nov. 16, 2005
EVE 78	YA78245	May 15, 1983	Nov. 16, 2005
ADAM 1	YA96407	Nov. 30, 1988	Oct. 16, 2000
ADAM 2	YA96408	Nov. 30, 1988	Oct. 16, 2000
ADAM 3	YA96409	Nov. 30, 1988	Oct. 16, 2000
ADAM 4	YA96410	Nov. 30, 1988	Oct. 16, 2000
ADAM 5	YA96411	Nov. 30, 1988	Oct. 16, 2000
ADAM 6	YA96412	Nov. 30, 1988	Oct. 16, 2000

HISTORY

The following historical notes are extracted from Shearer (1991B):

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 Anooraq 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 trenching, 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.

The 1991 program consisted of 1:5000 property-wide geological mapping, detailed geological mapping, trenching with a Cat-225 excavator and excavation of about 40 tons of raspberry red and deep pink rhodonite (Shearer, 1991B). A similar program was completed in 1992.

FIELD PROCEDURES

Trenching in 1994 was accomplished by a Case 450B Loader - backhoe excavator. Most of the 1994 excavation was from the north-central part of the deposit. Rhodonite breakage was done by drilling 1-5/8 inch diameter holes with an Airtrac drill powered by a 450 cfm air compressor. Secondary breakage was also done by a Darda hydraulic rock splitter. Large blocks up to several tons were split out. A D-7 bulldozer and Case 450B Loader were employed to repair the access road. The three larger washouts encountered in 1991 required major work in 1994. The 8.2 km washout needed a large amount of fill and remained very soft throughout the program. It is likely that this area will be blocked before freeze-up in 1994 and the road will have a significant washout which will require major fill when repaired for future projects. Mr. Paulin, who lives on Lower Evelyn Creek, could be contracted to repair the major road washouts with his D-7 bulldozer after the spring run-off, thus facilitating more accurate cost estimates for future work.

Hauling of stone was done by an International Loadstar 1700 3-ton truck equipped with a 7' x 12' power-take-off dump box and two loads with a larger tandem dump truck. 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). The largest chunk was over 3 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 directly to Vancouver.

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. Caira)

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

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° 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 eliptical 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) - plagiocase 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.

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 ppry 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		
		12	Diorite
	Intrusive contact		
		11	Peridotite, pyroxenite, serpentine
	Intrusive contact		
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		
	Probably unconformable	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

PLEISTOCENE AND RECENT

15 — *Drift and alluvium*

MESOZOIC

CRETACEOUS

COAST AND CASSIAR INTRUSIONS

13 — *Granite, granodiorite; diorite;* 13a, *gabbro, diorite; hornblendite, pyroxenite; granodiorite;* 13b, *syenite, monzonite, gabbro; granodiorite, diorite*

JURASSIC OR CRETACEOUS

Diorite

11 — *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*

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*

PALÆOZOIC

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

ENGLISHMANS GROUP (2,3)

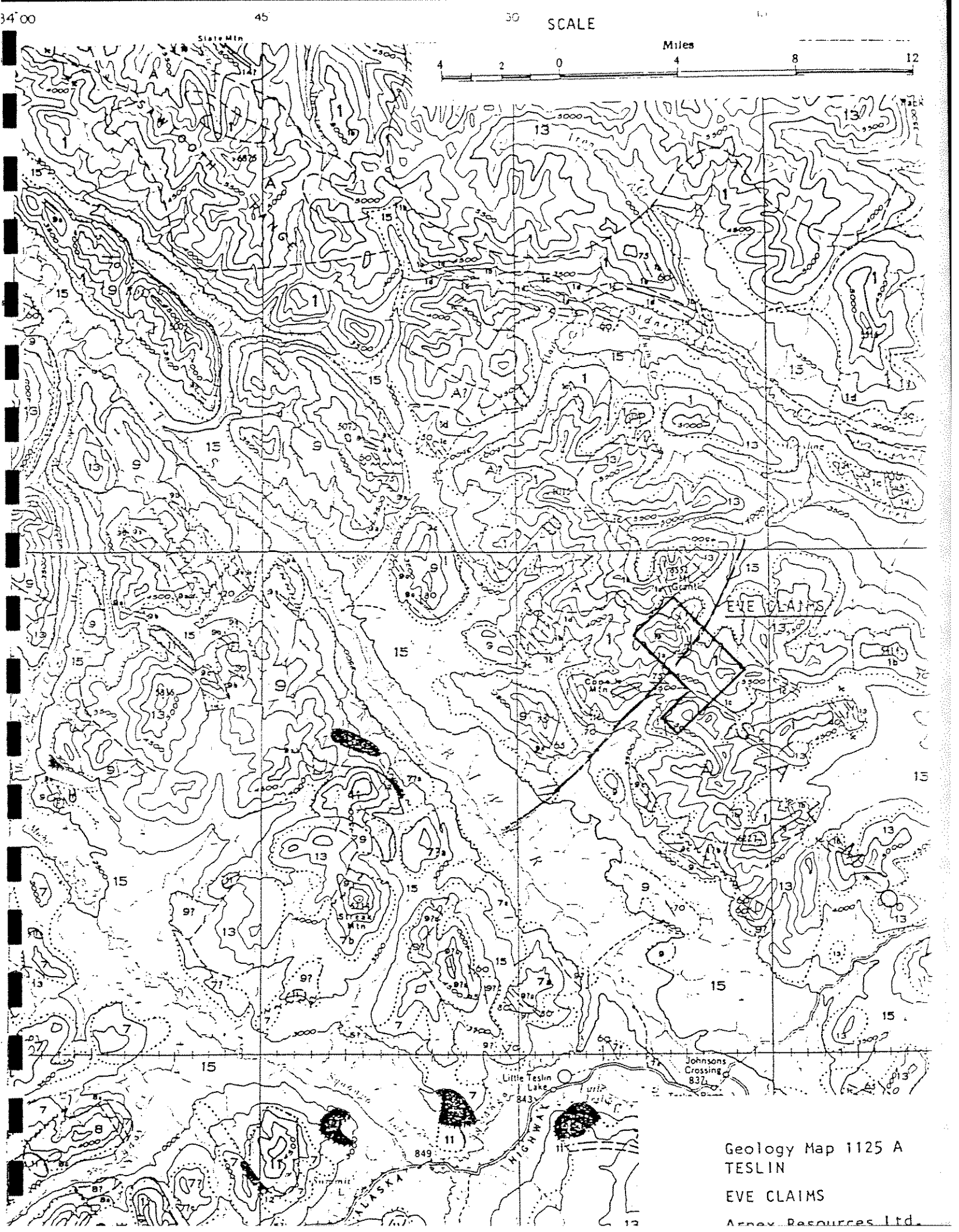
2 | 3 — 3. *Argillaceous quartzite, slate; phyllite, chert;* 3a, *arkosic grit;* 3b, *conglomerate;* 3c, *limestone;* 3d, *greenstone*
3A, *Quartzose and argillaceous schist and phyllite; minor limestone; mainly equivalent to 2 and 3, but in part to 1, and in part of uncertain age*
2. *Limestone*

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*

A — *Quartz-hornblende and quartz-feldspar-hornblende gneiss and amphibolite;*



Geology Map 1125 A
TESLIN

EVE CLAIMS

Arnex Resources Ltd.

(b) Local Geology and Petrology

Local geological mapping at a scale of 1:5000 was completed on the property by N.M. Caira between June 18 and 15, 1991, and was discussed in detail in Shearer (1991B).

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 loci for fault-shear zones. These horizons are weakly anomalous in gold (20-50 ppm), weakly anomalous in barium (120-760 ppm), and moderately anomalous in arsenic (60-375 ppm). Sampling in 1991 from pyritic chloritic-sericite quartz schists with pyritic seams and disseminations 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).

Gold-silver-copper mineralization occurs 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 chalcedonic quartz. The sample was taken from a 40 cm discontinuous quartz pod.

Map units 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 ± 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 (± biotitic) (± epidote) - rich rocks ± amphibolite makes up substantial part of unit.
Oldest	(1e)	Albite-rich gneiss ± 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.

The major structure in the area is a tightly folded anticline trending north-northwest.

The south boundary of the rhodonite deposit consits 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.

A section 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 ± veins together with subordinate rhodocrosite veins more common near the eastern periphery of the high grade core of the deposit.

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% MnO_2.

Three specimens around the rhodonite deposit were examined in thinsection, (Shearer, 1991) 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 gains.

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)

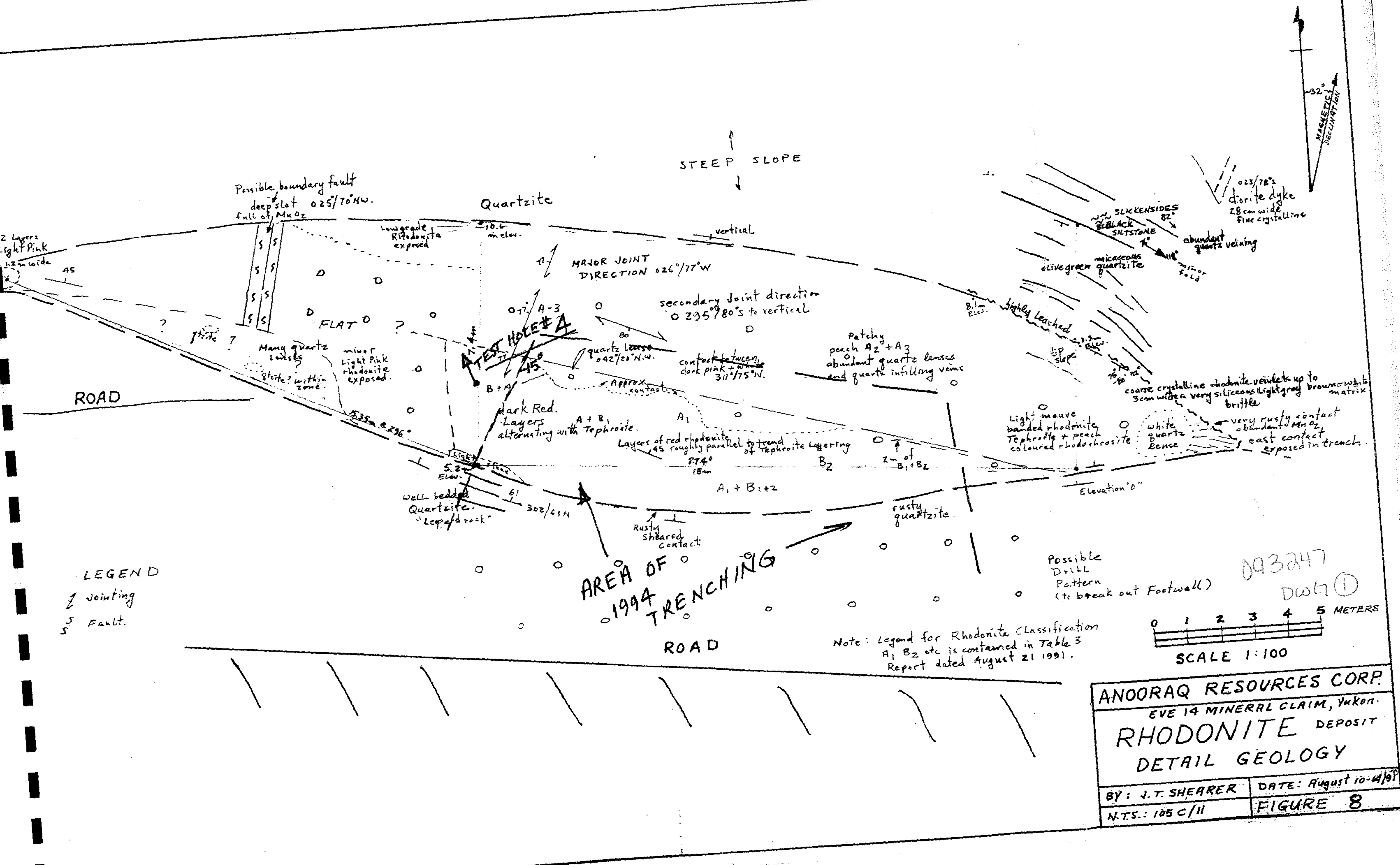
The manganiferous (rhodonite) horizon is mainly exposed in a large road cut at the headwaters of Evelyn and Dave Creeks.

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, 1992 and 1994, Figure 5. 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 5, 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 5.


STEEP SLOPE
Quartzite
Possible boundary fault
deep slot 025°/70°NW.
full of MnO2
Lowgrade Rhodonite exposed
10.6 m elev.
vertical
MAJOR JOINT DIRECTION 026°/77°W
secondary Joint direction 295°/80°S to vertical
FLAT
TEST HOLE #4
45°
quartz lense 042°/20°N.W.
contact between dark pink + white 311°/75°N.
Patchy peach A2 + A3
abundant quartz lenses
and quartz infilling veins
Approx. contact
Many quartz lenses
minor Light Pink rhodonite exposed
ROAD
Dark Red Layers alternating with Tephroite.
A + B1
Layers of red rhodonite roughly parallel to trend of Tephroite Layering
B2
A1 + B1+2
Light mauve banded rhodonite Tephroite + peach coloured rhodochrosite
white quartz lense
very rusty contact abundant MnO2
east contact exposed in trench.
coarse crystalline rhodonite veinlets up to 3cm wide in a very siliceous light grey brownish white matrix brittle
Elevation "0"
SLICKENSIDES
BLACK SILTSTONE
abundant quartz veining
olive green micaceous quartzite
minor fold
highly leached
023/78°S
diorite dyke
28 cm wide fine crystalline
MAGNETIC DECLINATION
32°
5.2 m Elev.
well bedded Quartzite "Leopard rock"
302/41N
Rusty Sheared Contact
rusty quartzite
AREA OF 1994 TRENCHING
Possible Drill Pattern (to break out Footwall)
LEGEND
Jointing
Fault.
ROAD
Note: Legend for Rhodonite Classification A1 B2 etc is contained in Table 3 Report dated August 21 1991.
093247
DWG 1
0 1 2 3 4 5 METERS
SCALE 1:100
ANOORAQ RESOURCES CORP.
EVE 14 MINERAL CLAIM, Yukon.
RHODONITE DEPOSIT
DETAIL GEOLOGY
BY: J.T. SHEARER
DATE: August 10-14/91
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 intertial 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, 1991A) within a simple (commercial) classification scheme based on the slabbing a large amount of material in the Lower Mainland 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 transluscent raspberry-red colour found in parts of the Evelyn Creek deposit. The contrast between the dark red rhodonite 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

1991-1994 trenching 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**		
Class:	**Gem**			**Carving**			**Waste**		
Grade:	Premium	A 1	A 2	B 1	B 2	C	D	E	F

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 dentrites 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 without indicating mineralogy (J.W. Antal, 1968; Mount Grant Mines Ltd., Assessment Report).

From the detail mapping, trenching and definition of gem grade rhodonite during 1994, 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 suggests 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 and 1994 trenching, Figure 5.

The percussion hole (Test Hole No. 2) drilled in 1994 is located in the northwest part of the deposit (refer to Figure 5 and Appendix V). Tephorite, red and pink rhodonite was intersected throughout the hold. The final sample interval (20-22 feet) contained pink rhodonite. This appears especially significant since on surface the north part of the deposit is very low-grade white rhodochrosite.

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 trenching in 1988, 1989 and 1991. Initially, Anooraq's attention was drawn to quartz veins containing gold/silver values, however, rhodonite became the main focus by 1986.

The 1994 program consisted of detail mapping of the rhodonite zone, extensive excavator-Airtrac trenching of the rhodonite zone and limited percussion drilling of the high grade raspberry red and uniform dark pink rhodonite. The 1992 excavation was mainly in large chunks, the largest of which was greater than 2 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 appears to have originated as an exhalitive 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. The percussion hole (Test Hole No. 2) suggests that red and pink rhodonite occurs at depth under the northern part of the deposit.

Trenching costs in 1994 were somewhat lower than anticipated due to the extensive planning, good weather and lack of equipment field repairs.

Reserves of gem quality rhodonite based on the 1992 program are estimated in the order of 400 tons.

Initial marketing efforts at major Gem Shows in Tacoma, Seattle, Vancouver, Portland and Arizona 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

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. A continued trenching program is recommended as follows:

(a) **Nominal 50 Ton Trenching Program,** a **carefully planned** and **executed** sequence of (1) road repairs, (2) drilling, (3) rock breakage (combination Loader and hydraulic splitter), (4) excavation and (5) haulage phases, is critical in order to keep costs under control and trench the quality of stone that is demanded by the market.

(1) **Road Repairs:** Experience in 1994 confirms that a bulldozer is required to open the road each year. Mr. B. Paulin, who lives near the mouth of Evelyn Creek, has a D-7 bulldozer for hire and can be contacted in early June to open the road during the first dry periods at a low, fixed cost.

(2) **Drilling:** A systematic drill plan has been formulated (refer to Figure 5) 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 and broken using a Darda hydraulic splitter.

(4) **Excavation:** This phase of mining needs to be co-ordinated with the hydraulic splitter breakage in order to keep costs down and avoid unnecessary standby time. Initially the backhoe attachment of the CASE 450 will 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 trucking outfits.) 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 a 24-ton-capacity highboy trailer. 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., P.Geo.

COST ESTIMATE FOR FUTURE WORK

50 Ton Program:

(Future (1995) costs may be slightly higher depending on freight and rental costs.)

Preparatory excavator work on north and south bench, limited drilling with airtrack drill, hydraulic splitter 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 and dump truck available and minimal road repairs.

Wages and benefits:	
Supervision/grading/planning/labour and GST	$ 9,400
Hydraulic splitter, truck and loader operator + helper & GST	9,700
Casual labour	1,000
Loading highway trailers	2,000
Drill rental	5,000
Hydraulic splitter rental	3,500
Truck haulage to Canol Road and Whitehorse	4,000
Camp supplies and food	2,000
Electric generator rental	1,000
Mob / demob of equipment	1,500
Repairs to company CASE 450	5,000
Transportation	1,500
Road repairs by B. Paulin	5,000
Fuel	3,000
Airfare	900
Freight (Whitehorse to Vancouver)	5,000
Communications	2,000
Meals and accommodation during mob/demob	800
Report preparation, drafting, word processing	1,500
GRAND TOTAL	$ 63,800

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APPENDIX 1

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) and I am a member in good standing with the Association of Professional Engineers and Geoscientists of B.C. (Member No. 19279).

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 "Trenching Report on the Evelyn Creek Rhodonite Property (Eve Claims), Yukon", dated August 30, 1994.

6. I have visited the property from August 1 to August 15, 1994 and also in 1991 and 1992 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.

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 30th day of August, 1994.

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

APPENDIX II

STATEMENT OF COSTS

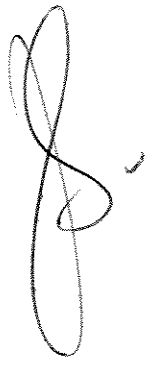
Evelyn Creek Rhodonite Property

1992

STATEMENT OF COSTS

Anooraq Resources Corporation
Evelyn Creek Rhodonite (Eve) Claims
August - September 1992

Project:	August-September
Geological mapping, road repairs, detailed trenching, percussion drilling	
Wages and Benefits:	
J.T. Shearer, M.Sc., Geologist: 17.5 days at $300	$ 6,125.00.00
S.L. Shearer, Helper, 16 days at $250	4,000.00
G.S.T.	708.75
Sub-total	10,833.75
Transportation:	
Truck rental (Aug. 1-15 plus mileage)	1,302.50
Gas	600.00
Freight for Rhodonite	5,350.00
Food and Accommodation:	
Hotel, meals and food as per expense account	2,013.08
Contract Drilling and Excavating (Tony Castle Contracting)	4,700.00
Bulldozer Contract Work (Tony Castle Contracting)	7,214.79
Dump Truck Cost (company truck), 10 days at $300	3,000.00
Camp, Tool Rental and Food for Camp	794.38
Case 450 Loader/Dozer and Backhoe Cost (company machine) 10 days at $400	4,000.00
Gas and diesel	1,275.50
Word processing and reproduction	204.00
GRAND TOTAL	$ 41,288.00



APPENDIX III

LIST OF PERSONNEL AND
DATES WORKED
1992
Evelyn Creek Rhodonite Property

APPENDIX III

LIST OF PERSONNEL AND DATES WORKED

Name	Position	Address	Dates Worked
Joe Shearer	Geologist	1817 Greenmount Ave. Port Coquitlam, B.C. V3B 2S7	Travelling July 30 (½), Aug. 1, 2, 3, 14, 15, 16, 17, 1994 Fieldwork Aug. 4-14, 1994 plus report preparation
Steve Shearer	Prospector/ Equipment Operator Operator	3345 Mason Ave. Port Coquitlam, B.C. V3C 3V4	Travelling Aug. 1, 2, 3, 15, 16, 17, 1994 Fieldwork Aug. 4-15, 1994
Bruno Paulin	Equipment Operator	General Delivery Johnsons Crossing, Yukon	Aug. 1-16, 1994
Solomon Paulin	Truck Driver/ Swamper	General Delivery Johnsons Crossing, Yukon	Aug. 1-16, 1994

APPENDIX IV

IMPORTANT NAMES AND ADDRESSES, YUKON 1992

IMPORTANT NAMES AND ADDRESSES

YUKON RHODONITE PROJECT

	Yukon Area Code
Morley Barker Claim Staker, Expeditor, formerly on Rhodonite in 1989, Whitehorse	633-2974
Bruce Cairns IBEC Contracting, Whitehorse D7 & D8 Bulldozer, 225 Excavator	office 668-5617 home 668-1689 fax 668-4449
Mr. Hazard Excavator 225, Teslin Accepted and then reneged on 1991 job	390-2610
Johnsons Crossing Store (gas, some supplies, campground)	390-2607
Bob McCormick Hoe operator, Johnsons Crossing, Teslin River	radio 2M3121 town E667-4335
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 Son: 633-4643 at night	633-6478
Tim Pyke Whitehorse Mechanic Owner of a Case 450B	home 667-7973
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	

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

APPENDIX V

DRILL RECORD

TEST HOLE NO. 4

EVELYN CREEK RHODONITE CLAIMS

1994

PERCUSSION DRILL RECORD

Evelyn Creek Rhodonite Claims, Yukon
Location: 1994 Trench Direction: 318° Dip: -16°
Length 22 Feet

TEST HOLE NO. 4

Chips collected in a plastic cyclone surrounding drill rod immediately outside hole, dust was screened out and the remaining chips examined using binocular microscope.

Sample Depth	Description
1-3 feet	Raspberry red rhodonite, tephorite with minor rhodochrocite
3-4 feet	Tephorite and pink rhodonite
4-5 feet	Abundant tephorite and deep red and pink rhodonite
5-6 feet	Tephorite, pale pink rhodonite and rhodochrocite
6-8 feet	Mostly pale rhodonite with abundant tephorite
8-10 feet	Mostly tephorite, minor pink and pale rhodonite, manganese oxide zone at 10 feet
10-11½	90% tephorite, 10% paler rhodonite and rhodochrosite
11½-13 feet	Very few chips, mostly tephorite and pale rhodonite, black dust common
13-15 feet	Tephorite, but more light pink rhodonite
15-17 feet	Tephorite, light pink rhodonite, black manganese oxide zone at 17 feet
17-19 feet	Black dust, more light pink rhodonite, minor tephorite
19-20 feet	Dominated by light and dark pink rhodonite
20-22 feet	Tephorite and pink rhodonite

END OF HOLE 22 FEET