### MARGARET ELIZABETH / ZIP PROJECT

Summary Report

Target Evaluation 98-036

EVALUATION SURVEY

NTS MAP SHEET 105 H/3 Lat. 61º 08' - Long. 129º 27'

## MARGARET ELIZABETH AND ZIP CLAIMS (YA45535) and (YA69006)

Report prepared by

#### VAN KRICHBAUM

Field work done AUG. 1 - SEPTEMBER 18,1998

ECONOMIC DEVELOPMENT LIBRARY BOX 2703 WHITEHORSE, YUKON Y1A 2C6

**.**....

. ..

4

# MARGARET ELIZABETH/ZIP PROJECT Summary Report Target Evaluation 98-036

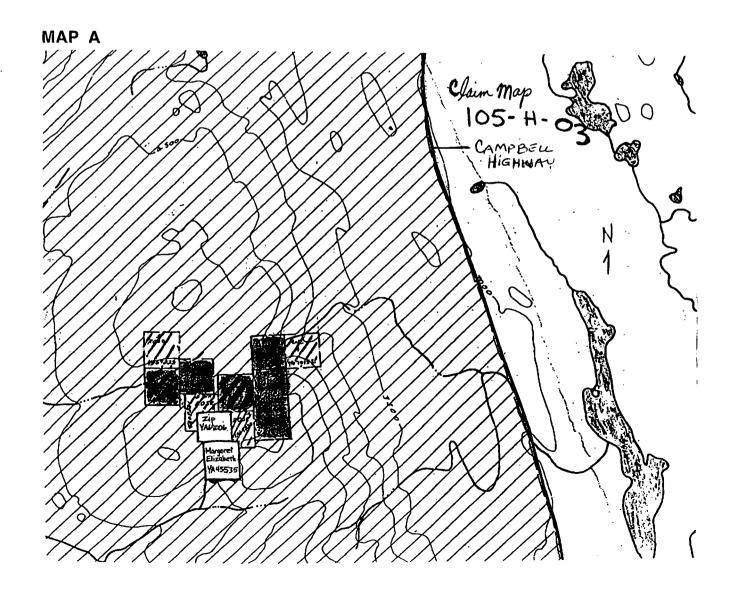
## TABLE OF CONTENTS

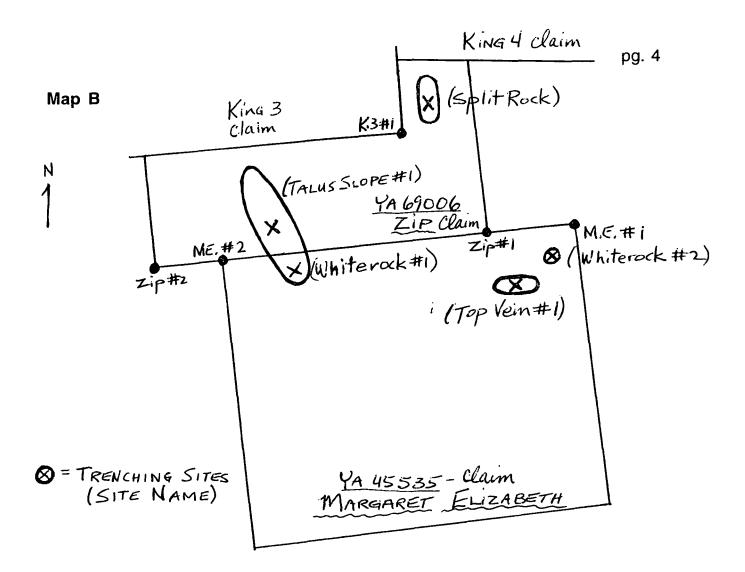
Α.	Project location and access p. 3
B.	Exploration Target p. 4
C.	Geology p. 5
D.	Work performed p. 6
E	Results (general) p.12
	1. Seam deposit volume data p.13
	2. Seam deposit quality data p.15
	3. Seam deposit evaluation p.17
	4. Table - Summary of resultsp.18
F.	Conclusions p.19
G	Recommendations (general) p.20
H.	Equipment recommendations p.21
1.	Appendix A Daily journal
J.	Appendix B Photographs

## MARGARET ELIZ./ZIP PROJECT Summary Report Target Evaluation 98-036

#### Project location & access

The Project location is on NTS map sheet 105 H/3 at the Zip (YA69006) and Margaret Elizabeth (YA45535) claims area. The claims were accessed using a 4x4 truck on a mining road West from approximately Km. 132 (mile 82) on the Campbell Highway to the top of the mountain where the claims are located. We accessed the trenching sites using an Argo (ATV) on the claims sites. See Map A below for the general location, and Map B (page 4) for the specific sites trenched.





#### **Exploration Target**

The exploration targets were nephrite jade (actinolite/tremolite) deposits. Specific targets were nephrite boulder trains showing on the Margaret Elizabeth and Zip claims, various "whiterock sites", and two sites where initial work was started last year. Initial investigations last year proved one vein occurrence and one podiform/stringer occurrence, but these were open for depth and along strike. These sites in this report have been renamed as <u>Top Vein #1</u> and <u>Whiterock #1</u>. In last year's summary report (YMIP #97-057) they were previously named as Site #1 and Site #2, respectively.

Large economic seams of nephrite exist on adjacent claims. It was hoped to prove similar economic veins on our claims.

#### <u>Geology</u>

Nephrite jade deposits in B.C. and Yukon are all associated with middle Paleozoic to Triassic rocks thought to have been part of the oceanic crust but now found as large allochthonous slabs thrust over continental rocks. All deposits of nephrite are associated with serpentinites intrusive into or in fault contact with suites of greenstone, chert, limestone, etc. that range in age from Late Devonian to Late Triassic, although most are Late Paleozoic age. One of the most important of these rock assemblages is the Cache Creek ophiolitic complex of Late Devonian or Early Mississippian age.

In Yukon, in the Campbell Range, Mississippian: and Devonian sediments were intruded by serpentinites in narrow sill-like bands. Subsequent tectonic events led to the obduction or over-thrusting of these rocks onto the continental rocks in Mesozoic time. Since nephrite deposits are believed to have formed when the serpentinites were intruded or very shortly thereafter, final disposition of nephrite deposits probably rarely corresponds to the place of origin.

The formation of nephrite is associated with the faulting and intrusion of serpentinite. Metasomatic nephrite occurs between serpentinite and other rocks of various chemistry when there is permeation of calcium rich hydrothermal solutions at the contact. The alteration of serpentine by calcium rich ground water also occurs at or near the serpentinite-calcium rich limestone rock contact. This results in material exchange between them and subsequent recrystallisation of both rocks at the contact reaction zone. It is at these contacts that the metasomatic nephrite forms. Metasomatic nephrite is usually found in small lenticular fault bounded, lodes or veins and is finely felted.

In the Frances Lake area, Mississippian and Devonian sediments are intruded by serpentinites in narrow bands that parallel the regional strike. They are conformable with the bedding planes, i.e. they are sill-like bodies. "Whiterock" contact reaction zones are usually present within the serpentinite, and undergo alteration with the formation of both rodingite and nephrite, usually around the outside of the whiterock.

It is at such contact reaction zones on the Margaret Elizabeth and Zip claims that the project work was performed.

#### Work Performed

,

Work done at the project location was primarily trenching, measuring, mapping and sampling of the nephrite occurrences, as well as further prospecting the immediate area on the Margaret Elizabeth and Zip claims. Weather was cooperative at first, but over the course of the project it become more and more of a detrimental factor at the site while the work was being performed, building up to snow/sleet storms by the end of Aug..

Trenching was done at several locations where indications seemed most likely for success. Trenching was done by Paul Amann (Paul Amann Industries) from Watson Lake using a Kobelco 300 SK track excavator with a "thumb" to facilitate rock handling. In addition, Paul Amaan had a D-8 Cat ripper adapted to fit on the excavator (in place of the bucket) to rip frozen ground and broken rock. This ripper worked very well, and made much of the work accomplished this year possible.

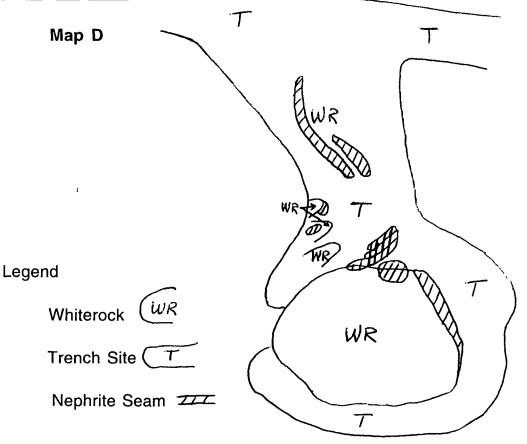
At <u>Top Vein #1</u>, approximately 15 meters (50 ft.) of trenching 9 meters (30 ft.) wide and 2 meters (6-8 ft.) deep was done. The material consisted of weathered and broken rock, which became increasingly solid as deeper material was encountered. Scattered permafrost was found. The site has a Northern aspect, and some permafrost was expected. As trenching got deeper, work became progressively more difficult and slow. Finally, progress became so slow that deeper digging was terminated. Approximately 270 cubic meters of material was removed in trenching at <u>Top Vein #1</u> and placed beside the excavator to create pads to extend the trenching. Because nephrite was encountered along the entire trench, none of the trench was backfilled. Please refer to Map C below showing the trenching performed at <u>Top Vein #1</u>.

Мар <u>С</u>	<u> </u>	#1 claim post Margaret Eliz.
Legend	<i>°</i>	YA 45535
Trench Site		
Nephrite Boulder		
Nephrite Seam		0

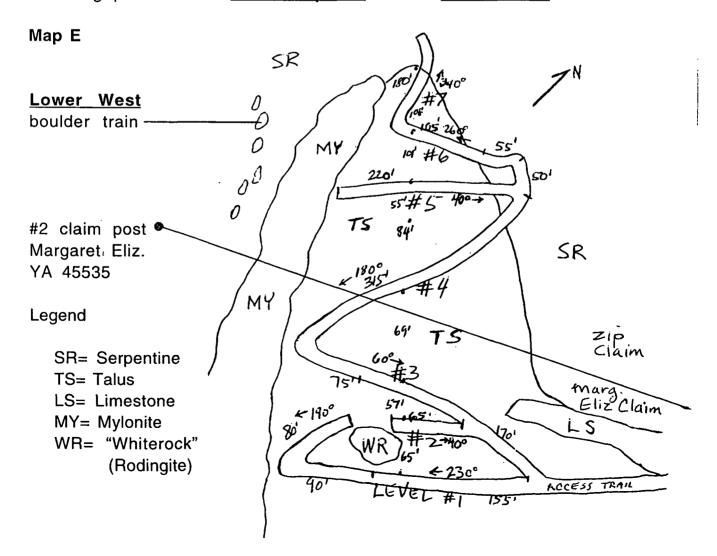
#### pg. 7

## Work Performed - (continued)

At Whiterock #1, a trench had been previously dug most of the way around a 10 meter (35 ft.) diameter rodingite "whiterock" showing. The trench varied from 2-5 meters (7-17 ft.) wide and 2-3 meters (7-10 ft.) deep. This location was chosen because prospects appeared good for locating more seams at this site. One podiform seam was exposed at this site last year, but it's exposure was not completed due to frozen ground, and, as a result, the pod's dimensions could not be determined. The north side of the "whiterock", where the pod was located, was first excavated with the bucket because the ground had thawed from last year. Then, the ripper was used for deeper trenching as the digging got too difficult. More frozen ground and rock was encountered, including small blocks of ice. At the base of the pod the jade became a series of stringers. These were followed, and they continued on a northern strike down the slope. Within the pod and stringer area the trenching dimensions were approximately 6 meters (20 ft.) by 18 meters (60 ft.) by 3 meters (10 ft.) deep. As a result, approximately 325 cubic meters was moved trenching at this site. Please refer to Map D below showing the trenching performed at or near Whiterock #1.

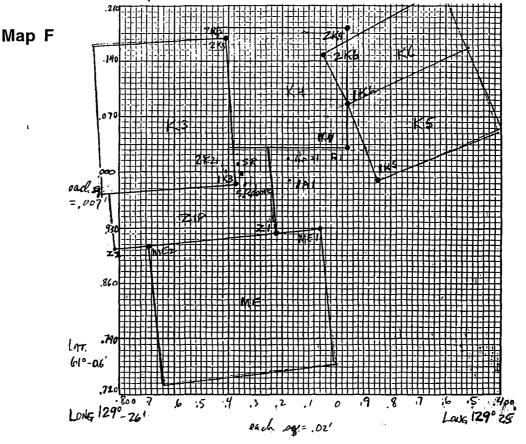


Nephrite boulder trains continued for 200 meters on the surface These suggested that the stringers downslope from the stringers. probably continued, perhaps intermittently, much further down the slope. It was decided to excavate trenches across the steep slope to try to trace the stringers and in order to determine their dimensions at surface. This necessitated a series of switchbacks across the slope. Trenching was done deeply, and then backfilled in order to create further access for the excavator to travel across the slope. In addition, there was no where else to put the excavated material in order to not bury any more surface showings than necessary downslope. Some excavated moss "mats" were placed on the slopes to help stabilize the slopes and to start regeneration of native vegetation. It is planned to allow one winter for the slopes to stabilize and settle, and then apply forest grass seed mix. It is hoped that this shade tolerant mixture will take on the North facing slope. This talus slope trenching site is named Talus Slope #1. Map E below shows the trenching performed at Talus Slope #1 and the Lower West site.



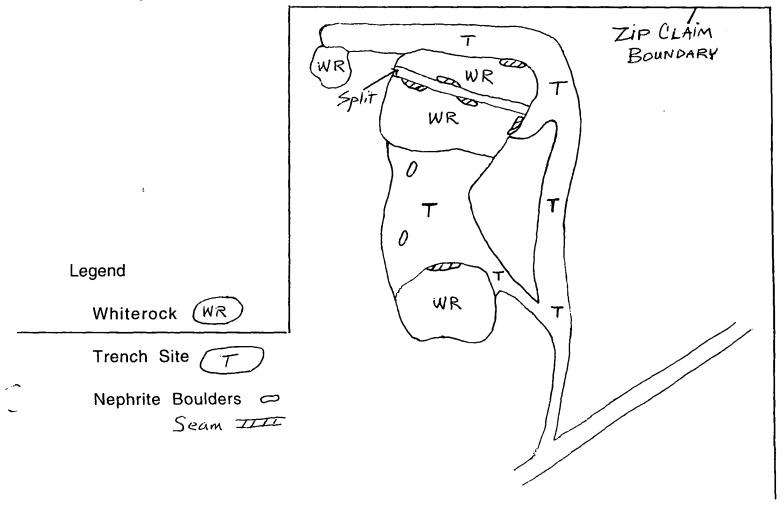
Another nephrite boulder train was found on the Zip claim by carefully prospecting the immediate area. The nephrite has no immediate proximity to any visible reaction zone at the surface. Because the project was nearing an end, and because access would be very difficult for the excavator, it was decided to core drill the boulders with a small hand held Packsack Drill. All materials to conduct a small drill program were moved into place, but bad weather moved in and prevented further work at this site for this summer/fall season. More work needs to be done to determine the volume and value of this deposit. Please refer to Map E on page 8 for the location of this promising boulder train. It is called the Lower West site.

Claims mapping was also done. The entire cluster of claims at this site is confusing because the claims are irregular in size, overlapping, claim posts are fallen over and hard to locate, and the locator lines (direction between claim posts) are in various directions. Because of this, and to be certain that all trenching was done on our claims, it was decided to use a GPS to verify all claims. The claim posts were located with considerable difficulty, and their positions fixed with a 'Garmin 45' handheld GPS. Their positions were placed by coordinate on graph paper, and the claims were drawn in. Please refer to **Map F** below for the location and the placement of the claim posts and the claim boundaries on the mountain.

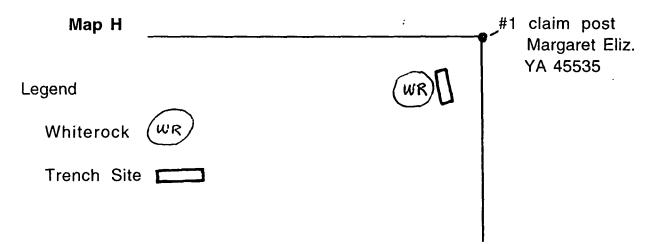


As a result of the GPS work, another possible nephrite site was found to be on the Zip Claim, and it was trenched also. This site consists of a large "whiterock" knob with a large split in it, a smaller one above it, and weathered serpentine ground between them. Lose rock was removed at the edges of the "whiterock", mostly on the North sides where the exposure was better. Weathered serpentine material was trenched around the North sides of, and between, the two "whiterock" knobs. Trenching was done deeply, and then backfilled in order to create further access for the excavator to travel across the slope. In addition, there was no where else to put the excavated material in order to not bury any more surface showings than necessary downslope. Some excavated moss "mats" were placed on the slopes to help stabilize the slopes and to start regeneration of native vegetation. It is planned to allow one winter for the slopes to stabilize and settle, and then apply forest grass seed mix. It is hoped that this shade tolerant mixture will take on the North facing slope. This trenching site is named Split Rock. Please refer to Map G below showing the trenching performed at Split Rock.

Map G



Another rodingite "whiterock" showing was also trenched. There were a few small pieces of nephrite (less than 20 pounds total) on the surface within 5 meters of the site, and suggested possible nephrite pods underneath. The whiterock itself was too competent for trenching more than two feet deep. Instead, the weathered serpentine was trenched to the East, next to the "whiterock" and where the nephrite pieces were found. Although reaction zones were found, no nephrite was encountered, so the site was backfilled and restored to it's original profile. Please refer to Map H below showing the trenching performed at <u>Whiterock #2</u>.



Samples were pressure washed right at the work site on the locally named 'Jade Mountain.' Samples were then selected for saw testing to establish the range of quality for each trench site.

Mapping the float and veins of nephrite was done to accurately determine dimensions of the deposits to establish the quantity, and sampling, was done to establish quality for evaluation of the deposit.

Sawing and polishing of samples was done at the main camp to determine qualities such as color, translucency, cracking, black spots and mottling to make accurate market determinations of grade and unit price (price per pound and kilo).

Reclamation of trench sites by backfilling was done wherever possible. The site was backfilled with material from the trench to the natural contour level, and smoothed out. Where any soil existed, it was smoothed over the top.

#### <u>Results (general)</u>

•Numerous metamorphic "whiterock" alteration assemblages and contacts between serpentine and limestone are evident at the project location. All trenched sites illustrated the common observation that nephrite seams are associated with "whiterock" alteration and serpentine or serpentinite metasomatic contact reaction zones.

•The contacts between the nephrite, serpentine, limestone and calcsilicate rocks are sharp. At some places, nephrite develops as pods or contact reaction zone seams. In some places the nephrite seams exhibit smaller parallel complex sub-seams or stringers.

•There are differences in nephrite quality found at these sites in terms of color, amount of black spots, fracturing and schistosity. The highest quality occurs at the rodingite "whiterock" sites. The lowest quality occurs when the nephrite is at the contact between serpentinite and mylonitic calcarious mudstone. Those sites where serpentine undergoes contact metasomatic metamorphism with limestone produced highly variable quality nephrite.

•The original geologic interpretation for this part of the Yukon was that the serpentine occurred as an allochthonous ophiolitic thrust sheet. A newer proposed interpretation of the geology suggests that at least some of the serpentine may have formed in place instead of being an overthrust sheet. At <u>Top Vein #1</u>, the long consistent linear vein system indicates it is probably fault controlled contact metamorphism. The nephrite seam curves southward at the eastern end, indicating that deformation likely occurred later during plate tectonic emplacement of the land mass. My interpretation at <u>Top Vein #1</u> is that the serpentine intruded into the country rock, and then the whole unit was later emplaced at its present location by tectonic forces.

•Another nephrite boulder train was found on the Zip claim (<u>Lower West</u>) by carefully prospecting the immediate area. Chip samples appeared promising, but bad weather moved in and prevented core drilling at this site for this summer/fall season. More work needs to be done to determine the volume, value and source of this promising boulder train.

#### Results (general)-continued

•No other economic mineralization was found. There is an abundance of serpentine at the site, and it could possibly be economic for landscape material or for quarry material if any unfractured material can be found. Occasionally, small pockets of bowenite are found at the site, but are too small to be mined commercially for carving material.

Seam deposit volume data - for a summary, see Table #1 on page 18.

The largest nephrite vein itself is at <u>Top Vein #1</u>. It is proven in excess of 30 m. long, and indications are that it may be even 50 m. long or more. The width of the seam remained surprisingly uniform over it's length, at a width of approx. 1.6 m (4-5 ft.). Dip was difficult to determine because of fractures in the seam, but the best estimate is 80 degrees to the South. It was difficult to dig deeply with the excavator along the seam because of consolidated rock and permafrost. Even with the D-8 ripper tooth, the depth of the seam was not able to be determined. However, due to the long length and the uniform width of the seam, the depth could be on the order of 10 meters or more. The approximate best low volume estimate would be 240 cu. m. (50m. x 1.6m. x 3m.). At 3 tonnes per cubic meter, this represents a probable reserve of approx. 720 tonnes (800 tons). The length and depth still need more trenching to accurately determine the size of this seam.

At the Whiterock #1 trenching site, the exposed "seam" was much more irregular than at Top Vein #1, and measurements are not easy to report. A pod removed during trenching was 10 tonnes (11 tons). Below the pod, the nephrite stringer veins swelled and pinched out. Those exposed by trenching, are difficult to quantify. They were found with considerable frozen water between the stringer veins. For that reason we called this area the "ice seams". The trench exposed at Whiterock #1 was approx. 20 meters (65 ft.), the average seam width was .5 meters (20 inches), but the depth is unknown. If the stringer seam depth is 1.6 meter (5 feet), and seams are developed for one half the trench length, then they are estimated to contain at least 8 cu. m. (20m. x .5m. x 1.6m. deep x 50 %), or 24 tonnes (27 tons). A visible seam(s) exists in the "whiterock", and is easily 1 tonne (1 ton). Because there is a trench around the "whiterock". this site should be fairly easy to saw with diamond wire to see if hidden seams exist. Much remains to be done to determine volume estimates.

#### Seam deposit volume data - (continued)

The **Talus** Slope #1 site, while there were lots of apparent nephrite boulder train indications, turned out to be a disappointment. Only one large (3.5 tonne) buried nephrite boulder was encountered in trenching the talus slope, along with several smaller ones, and no nephrite seams. For a trench length of 300 meters, this was unexpected. What was encountered, below the rock talus surface, was highly weathered serpentinite(?) dirt, as deep as the excavator could trench on the sidehill (a minimum of 3 meters (10ft.) deep). Bedrock was not encountered in most or all of the trenching. When rock was encountered at depth below the surface boulder trains, it was broken serpentine with no indications of contact reaction zones or nephrite seams. It might not have even been bedrock. The apparent talus field nephrite boulder trains seem to be float from the Whiterock #1 site above, and not from bedrock nephrite seams buried below the talus slope. Perhaps 20 tonnes (22 tons) of nephrite were encountered, all talus.

At the West end of the lowest full traverse of <u>Talus Slope #1</u>, a possible reaction zone was encountered in the mylonite. However, the "jade " encountered was of such poor quality that it is doubtful it could even be called nephrite. Other similar "jade " like rock was found at this site on the surface. It evidently came from seams nearby, probably just upslope. The material is definitely noncommercial in quality.

At the <u>Lower West</u> site, another nephrite boulder train was found on the Zip claim by carefully prospecting the immediate area. Five larger nephrite boulders were found, the largest being approximately 10 tonnes (11 tons), and some smaller ones. The volume of nephrite rock is at least 27 tonnes (30 tons). The large size boulders, in a string not far apart from each other, especially at the lower end of the string, strongly suggests a seam underneath or nearby upslope. More work needs to be done to determine the volume and value of this deposit.

At <u>Whiterock #2</u>, another rodingite "whiterock" showing was also trenched. There were a few small pieces of nephrite (less than 20 pounds total) on the surface within 5 meters of the site, and suggested possible nephrite pods underneath. Although reaction zones were found, no nephrite was encountered underground, so the site was backfilled and restored to it's original profile.

#### <u>Seam deposit volume data - (continued)</u>

The last site trenched was the Split Rock site. The site consisted of two "whiterock" knobs trending downhill on a north-facing slope. Two pieces of nephrite were found between the two knobs, and some were found just below the lower knob. There was about a 1 meter wide split in the lower (and larger) "whiterock" - enough room to pass through. In the split a nephrite seam was found that resembled a flattened tube. It was passing through the "whiterock" at a right angle to the split. A nephrite seam was also found on the north and east face. The volume of nephrite found at this site is difficult to estimate because the seams are very irregular in shape and were found just within the "whiterock" itself. How far the seams go and how large they are is just speculation. However, I will venture an estimate of at least 5 cu. meters. At 3 tonnes/cu. m., this site could easily yield 15 tonnes (17 tons) of good quality nephrite. Further work is recommended for this site. Because of the split in the "whiterock", this site should be fairly easy to saw with diamond wire.

#### Seam deposit quality data

At <u>**Top Vein #1**</u>, the nephrite associated with the "serpentine contact alteration" zone is more schistose at the east end of the seam than the middle section of the seam. The western end of the seam has the most integrity. The seam has olive to bright green color, and a few to many "black spots." Again, there seems to be trends depending on the position within the seam. The more desirable properties, bright green and an absence of black spots, increase from east to west. Some desirable bright green chrome spotting is also present. Again, these are more common in the western portion of the seam. Because of this trend and increased slope angle, the eastern-most end of the seam was not trenched any further. It still remains open on strike to the East.

The <u>Whiterock #1</u> site nephrite is more fracture free, less schistose, with a more desirable green color, fewer undesirable black spots and more desirable chrome spots than the nephrite associated with the "serpentine contact alteration" at <u>Top Vein #1</u>. The best nephrite found trenching for this project was at Whiterock #1. The quality of some of the jade was A" grade, and we believe it is the best nephrite jade found so far in the Yukon. One large pod (10 tonne) was zoned. It had a lighter green color at the center, surrounded by a darker but still bright green outer layer.

#### Seam deposit quality data - (continued)

The <u>Talus Slope #1</u> site, while there were lots of apparent nephrite boulder train indications, seems to be float from the <u>Whiterock #1</u> site above, and not from bedrock nephrite seams buried below the talus slope at least, none were found. The nephrite in the boulder trains on the talus slope varied considerably. Some approached the quality found in the pod veins of the "whiterock" and the stringer veins below, but many are of lower quality and have no known source. Therefore, unfound seams probably exist below the talus slope. At the West end of the lowest full traverse of <u>Talus Slope #1</u>, a possible reaction zone was encountered in the mylonite. However, the "jade" encountered was of such poor quality that it is doubtful it could even be called nephrite. Other similar "jade " like rock was found at this site on the surface. It evidently came from seams nearby, probably just upslope. The material is definitely noncommercial in quality.

At the **Split Rock** site the nephrite found was exceptionally hard, as evidenced by the ringing sound they exhibited when struck with a rock hammer. The color is more 'blue' than any other nephrite found during the project. Spots are minute, and present a pleasing character to the nephrite. Some of the nephrite is exceptionally translucent at this site. The quality is good to very good, and the color is unique. This nephrite could be very desirable for the right market.

The <u>Lower West</u> site was another nephrite boulder train found on the Zip claim by carefully prospecting the immediate area. Chip samples appeared promising, especially as one sampled further upslope in the boulder train. For the future, it is recommended to core drill the boulders with a small hand held packsack type drill because access would be very difficult for an excavator. More work needs to be done to determine the volume and quality of this deposit.

At <u>Whiterock #2</u>, another rodingite "whiterock" bordered with serpentine was also trenched. There were a few small pieces of nephrite (less than 20 pounds total) on the surface within 5 meters of the site, and suggested possible nephrite pods underneath. Although reaction zones were found, no nephrite was encountered. The trench was reclaimed by backfilling with the excavated material to the original profile.

#### Seam deposit evaluations

**Top Vein #1** nephrite from the west end of the seam has an estimated conservative unit value of approx. \$5.00/kg. (2.25/lb.) based on current large volume market prices for that quality. Nephrite from the middle and east end of the seam has an estimated unit value of only \$2.20/kg. (1.00/lb.) based on current large volume market prices for that quality. If the assumptions are made that the seam is only as long as has been excavated, and it is excavated to a depth of 3 m., and only one half of the material is marketable, then the deposit has an estimated value of approx. \$360,000 for the west end (10m. long x 1.6m. wide x 3m. deep x 3 tonnes /cu. m. x \$5.00/kg. x 50%) and approx. \$630,000 for the middle and east end (40m. x 1.6m. x 3m. x 3 tonnes/cu. m. x \$2:20/kg. x 50%). The total value for this seam is approx. \$900,000 and the ave. unit value is \$2.75/kg for the material sold (and \$0.00/kg. for the material unsold).

The volume at <u>Whiterock #1</u> was not able to be estimated accurately. However, the unit value should be approx. 11.00/kg (5.00/lb.). The value of <u>Whiterock #1</u> is approx. 385,000 (11 tonnes at the "whiterock" plus 24 tonnes for the "ice seams" x 11.00/kg. It could be more than this estimate once the depth of the deposit is determined.

The value of the Whiterock #2 site is nill - no nephrite seam was found.

The value of the <u>Talus Slope #1</u> site is difficult to accurately calculate because the nephrite rocks are all sizes, from small chips to boulders of 3.5 tonnes (4 tons), and they are all qualities from very poor to very good. In addition they are almost too numerable to count, especially the small ones. Therefore, the estimated volume is 20 tonnes (22 tons) that are marketable at an average unit value of \$5.00/kg (2.25/lb.), or \$100,000.

<u>Split Rock</u> nephrite should have a unit value of \$11.00 /kg. (\$5.00 /lb.). As the 15 tonnes were a conservative estimate for the nephrite volume at this site, then the conservative estimated value for this site is \$165,000.

Because the nephrite at <u>Lower West</u> was chip sampled only, a very low unit value of 2.75/kg. (1.25/lb.) will be used for now. Lower West's valuation is 75,000 (25 tonne x 2.75/kg.

The total valuation for the YMIP Target Evaluation project is \$1,725,000.

## <u>Seam deposit evaluations - (continued)</u>

**Top Vein #1** represents the largest monetary value of the two excavated deposits due to its sheer volume. However, the smaller <u>Whiterock #1</u> deposit is much higher quality, and has a much higher unit value. It should also be much easier to market, along with the <u>Split Rock</u> site nephrite jade.

Site Name	Deposit- Type	Ave. Quality Gd-Med-Poor	Volume∸ Tonnes	Unit Price \$/kg.	Evaluation - Each Site
Top Vein#1	Contact Metamor.	Med Poor	720 T. One-half saleable	2.75	\$ 990,000
Whiterock #1	Whiterock reaction	Good	35 T.	11.00	\$ 385,000
Talus Slope#1	Talus	Medium	20 T.	5.50	\$ 100,000
Whiterock #2	Whiterock reaction	None found	0 Т.	0.00	\$ 0
Split Rock	Whiterock reaction	Good	15 T.	11.00	\$165,000
Lower West	Unknown	Medium	27 T.	2.75	\$75,000

## Table - Summary of Deposit Results

1

Total Site Value = \$ 1,725,000

A word of caution should be made about the evaluation. While some of the nephrite is at the surface, not all is easily saleable. Some should be targeted at specialty markets, such as New Zealand for the darker jade material (<u>Split Rock</u> type). Some is more suited for the tile or table top market (<u>Top Seam #1</u>), and some is definitely Carving or Gem grade (<u>Whiterock #1</u> and <u>Split Rock</u>). The nephrite still in the ground or rock is going to be difficult to remove without innovative mining techniques. Some of the nephrite will probably never be saleable at a profit. The cutoff grade will be governed by the quality and expenses at each site.

## **Conclusions**

•Five different trenches were done. Two were continuations of previous trenching started last year (<u>Top Seam #1</u> and <u>Whiterock #1</u>). These proved to be significant economic nephrite resources. Of the three new trenches, one site (<u>Split Rock</u>) also proved to be a significant economic nephrite resource, one trench did not encounter any nephrite seams of value (<u>Talus Slope #1</u>), and one trench did not encounter any nephrite seam at all (<u>Whiterock #2</u>).

•One more nephrite boulder train (<u>Lower West</u>) was found by prospecting the immediate area on the Margaret Elizabeth and Zip claims. Because of it's similarity to the <u>Top Vein #1</u> occurrence, there is a chance that it also is associated with nephrite seams. Excavation needs to be done to determine if more seams exist at this site, and the volume and value of the expected deposit.

•Two different deposit types were observed. One was the "whiterock" association deposit type which occurs on the outside of or within a mass of rodingite within serpentine. Nephrite was also found associated with the "serpentine contact alteration" metasomatic deposit type which occurs with the alteration of serpentine by calcium rich ground water at or near the serpentinite-calcium rich sedimentary rock contact.

•A trend was observed that the "whiterock" association deposit type seems to produces much higher quality nephrite with more desirable brighter green color, more translucency, less schistosity, more desirable chrome green spots and fewer undesirable black spots than the nephrite found with the "serpentine contact alteration" metasomatic deposit type.

•<u>Top Vein #1</u> represents the largest monetary value of the two excavated deposits due to its sheer volume. Three trenches uncovered nephrite seams with an estimated conservative value of over \$1,500,000 Canadian. However, the smaller <u>Whiterock #1</u> and <u>Split Rock</u> deposits are of higher quality and have a higher unit value. They should also be easier to market. With additional trenching of the <u>Lower West</u> site, the total estimated value could increase significantly. Some talus downslope of <u>Whiterock #1</u> is also a valuable nephrite resource.

## **Recommendations** (general)

•The <u>Lower West</u> boulder train site should be further explored with a drill program, as well as the two "whiterock" seam sites (<u>Whiterock #1</u> and <u>Split Rock</u>) prior to doing any more trenching, and before starting any mining, except as noted below.

•A diamond cable saw system might be a more economical way than drilling to test the sites for seams because cable sawing would produce a complete transect, better than several drill holes that might hit or miss the twisting, pinching and swelling, and sometimes 'worm like' nephrite seams found in this "whiterock" deposit type. Initial mining could also be accomplished at the same time. Due to the prominent outcropping of the "whiterock" knobs containing nephrite seams, and the wide split at the **Split Rock** site, it should be possible to mine them using a diamond cable saw system.

•It is recommended that more trenching be done at the "ice seams" area at <u>Whiterock #1</u> after the site thaws out more. This promising site is still not exposed enough to accurately determine the potential there.

•One more nephrite boulder train (<u>Lower West</u>) was found by prospecting the immediate area on the Margaret Elizabeth and Zip claims. Because of it's similarity to the <u>Top Vein #1</u> occurrence, there is a chance that it also is associated with nephrite seams. Excavation needs to be done to determine if more seams exist at this site, their volume and the value of the expected deposit.

•A market analysis should be done by sending sawn and polished samples to prospective buyers. In the nephrite jade market there is no numerical quantitative standard for grading and analysis, such as there is with ores. Rather, the unit price is driven by the aesthetic <u>qualitative</u> properties of the nephrite, combined with the market forces of supply and demand. At this point in time, the nephrite supply is low in Canada, the world's largest supplier of nephrite jade. It should be evident soon what the demand is going to be, since the world's largest buyers of nephrite jade are dealing with the 'Asian meltdown' in their economy. From what we have heard, the market should still be strong due to continued demand from China, whose economy has remained stronger than the rest of Asia.

## **Equipment** recommendations

•Equipment recommendations to complete the project are the following:

- 1. Track excavator with a "thumb" similar to that used in 1998 to prepare trails on the claims, strip the top cover, trench, handle large rock and reclaim the disturbances. Also very highly recommended is a D-8 Cat ripper adapted to fit on the excavator (in place of the bucket) to rip frozen ground and broken rock. This ripper combination worked very well, and made much of the work accomplished in 1998 possible.
- 2. Core drill capable of coring up to 5 m. (17 ft.) to examine the nephrite boulders and "whiterock" projections for depth and make quality determinations of seams encountered.
- 3. Air or hydraulic rock chisels, splitters, and wedges to facilitate trenching where fractured rock are located. Due to the importance of the fracture free quality in the nephrite unit price, blasting can not be used for trenching.
- 4. Small hand-held diamond saw to saw slots for wedging and make quality determinations of seam faces encountered.
- 5. Diamond field saw with a blade diameter of at least 30-36 inches to facilitate trenching where solid rock is located.

# Appendix A - Daily journal

i.

L

i

2-4×415 6 AUGUST Argotrailer Thurs. 2-4×4's 1 Asgo trailer Fri. AUGUST 7 Hoe walks rest of way to claims Hoe haulad from town by Jedway. to mine road at mile 82 Campbell Highway Hoe digs Trench in front of whiters Hoe walks in to mire road of sean material Ab Camp Uniterack + serventine contact the fixes washouts in road to has no reaction yone for nephrite Howeve , there appears make access easier for 4×4's Decision is to contine trenching of whiterook sergertine contact Small float + subsean material is ported from hoe trench material for pampling Souring to determine quality of sean material above in whiteroord 

Sat. Sunday AUGUST 9 2-4×4'5 2.4×4's 8 AUGUST AOÚT Argo + Trailer ArgoTraile Hoe (7) Hoe Trenches to level #3 and Hoe trenches below initial White rock site . Distances 60 ft whiterock site a flocounters more nephrite seams in the whiterock at level 2 approx. At level #3 there are Sefinitely 2 15 vertical feet below initial seams, one "foamy" on the west level. side and one regular on the Seams are 1-2 flet wide and material is "foating in texture The cluit is proceeding at a direction directly down life from the whitehock, northerly. appearance on the outside, other material is smooth. Fappears that there are 2 sams Sowing was done on sample rack material the will sam. from the eastern trench site # from last year. Quality was nade B, with no white book Quelty factors observable are good attestion and no black pote but and great color, and four but the color is just acceptable not real bright grae Translucence is very good, approx " visibility. Many creches are near the outside, - no black spots. out inch) and less toward the Tanning - Coveralls, Tranny + Argo Find more clain posts #2. 4.64836 and # 2 14 68812 - marine and the second

Mon 2-4+4's (7) the AUGUST 11 10 AUGUST (7) Hoe Ango+ trailer 2-4×45 Ango Itraile Then ching continues below renching is done across the the goal of hitting bedrock level # 3, across the slope More whiterock Serpentine contact is encountered but on strike with the previous whiterach / ne shite trend there are no reaction yones Deep tranching was kone as Decision is made to trench Dut & chips of serpentine were even lower a switch back the most common material. On it made to come back the steep Rope trenching was only possible to a depth of 8-10 exposure trend which Strikes north-South lovel = 1 is next Here little rephrite was. Encountergel, only the occasion So for the amount of white ack loat boulder -nephrite Seams is Cers the the ice scamp ar en no more Veather was masty cold with Seams have been found rain and high winds. This made for slow going along with the deep trenching. Progress was of replace no any reaction - Jones Just se partine rock And to the point where the and diff whiterock strike would have started but no whiterock has yet been encountered . 

12 AUGUST Well 444 Argo Hrailen AOUT (7) Hoe 6 The ThursAugust 13 2-4-X4's V/K/M/S/L Laura leaves for Ontario R M/S/J go to trenching site Irenching continues as the day and fill in for access and Veade to trench further don the slope in hopes of finding more bedrock and more contact reaction yones to reduce burial of slop elelow Kesults are descouraging for finding any reaction on where the ice seams " have Results below whiterock gone - no where is beliock boulder trains are equally disappointing - no whiterout bedroch is below, and Thus no reaction yongs were found. Incar to the talus surface - can't even find bedrock Level #4 Trenching below the - boulder trains yilds nothing also beliew the ice seams yields nothing, Decide to make the trench across the slope one more time and if no success to end the -trenching on the falue slope Paul Amaan goes to form tor fuel For hoe. Leaves have on min and is taking a kind any off Works a full day

Town Sat. AUGUST 15 14 AUGUST Fre AOUT 2:4x4/water trailer Pave with Don to return to RV/W/S work on equipt. State Jason to home in the eve on the bus at Watcon Lake, -also pick. Van gres to mine road with Daron to tow Vanis 1/x4 78 Jamp. up Ann purts and get camp Supplies and new camp cook V/R/M/S/J work on equipt. goes to town Sat might with 4X4 h tow (Vans truck) for repairs and noch samples Install pafety langet. on field or good, mental Mict load of water for camp. - contact pork bound is sharp. - some mino cracking with minor "water staining." Angie Latournoux arnes by bis

4XX Argottrailer 16 AUGUST Sunday Money AUGUST 17 ARGO/Trailer 4×4 + Argo to claims U/M/S-4X4 & Ango go up mointain and do Grs work on Lip claim V/R/M/S -GPS the Spilt rack, Ase continues trenching on lower - GPS other claim posts Parel to the for side Quest lavels - set up will system on saw poratic cloat nephrite is promited - Oring = malter (in and of meridiale country quality but month. The material is fine distand North chins mostly <u>Despentine and occasionally large</u> Servent: unweathered port below determination + test salving - get up water blasting gun Br leaning I mples and seams by hootening mp a Sandblasting Belsock was encountered on the Weiten & of the level #5 A and and of sand - works great remear until - mulomite bedrock produced a ration none write a preno seam of mephrite, The quality is grade Bor 8- with a lack Daright green Colon-colon is Samples of Jean were take Danning tests Continue GPS Works on Surrounding

4X. 4/Ago+traile 4×4 Argo/traila Wed. 18 AUGUST Water Punys/gen. wes Aligust 19 V/M/S 4×4 + Ago up claims site R/M/S 4×4 + Argo up to claims site Hoe trenches pit # 1 from 1997. Hoe moves to Whiterock site and elemine the dig of and the Starts working on the exposed pod in the fuliteroch on extent of the nephrite seam The north face using the ripper showing Hoe is effective somewhat on Trenching encounteral no prost removing the whiterock in as ear on ground where it was where it is notically crached Hoe is using the rippen curve as a prying cam to increase the leverese the whiterook entourlast last year. Kesults were encouraging Mephrit is still very hand to remove Hoe is effective on whiterock only of the pat, but was intermittant and for twister on fault dislocated Screpentinite was found on the north with reparted brings (chipputs and prys to gradually move sile and calcareous mudstone on and Stress, the whiterock as The Smith The hoe gets deeper into the more solid part of the whiterock Collected water from pit on King #5-Claim with hose from gen + with pump to 45 gel drum in Argo -Some nephrito separates from pod in noper left and below. then complied with 200 gal. Motel tank by whiteroch site Look nigh on 4×4 to go to main camp 

20 AUGUST Arge/trailer AOUT Hor E Hoe ACUT 21 Thurs. Fri. Saw pock test cuts for quality ane at the main camp with Hol continues as previous day gradually exposing more and The 36" dramond som blade, mae of the sol of nephrite to belamine whether it ends enlarges, or whatever, Kents are unexpatted. Natural breaks show high quality med. neen nephite but cutes on three Hifferent samples all show With about 4 feet of whiteroch removed the good is driping clightly to the South and White streaks, patchas and inclusions, and the nephrite staying about the same as bigcolor tends a little bit more to the olive green more that undesireable color. The pipper is more effective than the bucked for the Hoe succeeds in breaking pool work on "solid rock" - it off of the white och in Emain can get into smalle cracks lieber lack about 5 tons and crannies and event The pool is very unusual more laverage with the cam in that it is dehler on the shaped shark outside and pale in the conta - like a giant broken in half EGG. Nephrite por quality starys increased depth - chips are excellent quality The pod nephite is excellent anglity very hard very nice Depth is still undetermined few Homo black spots on black

4×4 Avgo/fanikugust 23 Hoe DAOUT 23 Sunday Sat ... 22 AUGUST Ango/traile VRM/S 444 to claims sites. V/R/M/S 444 to claims site Then ching is started at the oplit Noch site, on the upper whiter of Amost southern + western of the clister Hoe works on taking the daneworks top overhang of the white rocks Has to reposition pad, adding to it ground below whiterock and Rephrite was encountered on the Easter Cleans up with the buck at Sams of nephrito st surface and just below, which was disappointing side (again !) - seems tabethe norm on the mountain Bouldars were float material, and no plain way encountered in the Trench, However Hoe workstill dark at end of there is the possibility stopes purcher dag on starting level #6. 0 the whiterock as doon that seam. This will be unvestigated with the The lower road is seeded in rippen The Reach out between the with forestry grass sood mile whiteroche and the plit- nicht willow no contact reaction zones only forpen twie and serpentind deathered to dist Rocks at flatsite continue to be pressure washad for quality and Nephite quetity was high in the quality traits of color blueich grean and il ofter way too - attle on to spots Molume determinations, and very hand, and far apparent craches the second and the second to the second to Rochs continued to cleaned (pressure woshed) for evaluation and the second The second second second second second

24 AUGUST Ago/traile. AUGUST 25 Monkay Tues. 4×4 to claims site U/R/M/S Vary in main Camp, Paul Amaan the operator arrives in mid afternoon Toloching continues at the split rock site, this time going to the East side and directly around to along the north side. and Secides, after helpent with some repairs on Argo, to start larly the next Morning instead. Spends supper + mgt + breakfast. -Paul helps inspert rock + discussion of trenching. Again rephrite float was encountered to the East and also to the north. R/V/m/s work on landy repairs and rest. We have been working The large rocks were only on the surface, and below was more Heady danse from 8:00 Am + 12:00 Am (midmight) weathered serpentine Soil, Algo in two places a yellow soil found that had rock in I that looked bot water for camp after making new water fillings on a water tank 0.00 like apatite - Samples were taken for assay very unique P Two contact metamospine pephrito seams were encountered done the split-rock whiterork. Quality was low to med on the East, and Very good Make stopping list for form Work on report /GPS/mapping, on the north side. Aswestigation of the split in the whiteroth was productive with nephrite of high quality found inside although it is phyraccessible Paul goes to Town. 

4×4 4×4 Ango/trailer Nel. Thurs AUGUST 27 26 AUGUST Hoe AOUT S Hoe (5) K 4×4 to claims site and Hoe putson ripper and works montors the trenching V/S/A go to town to supplies thower more on pit # 11 on the top to define beins in situ "lik place Fracture lines are diaconal at - Martin does test sawing at main camp SE/N.W. stukes, brechen, pean Select & male rocks for cutting and move them into place. into locking blocks that are hard to distodye. The seam is solidh in place, and will be hard to thing - also does same at whiter only site Shopping at town goes of but Mans 4×4 is the not repaired. especially the west side of the trench below the pod seam. The Saw results are not conclusive The site # I are fairly nice, good around is them out some more and hand sections of white wele are exposed. Josile is possibly rephrite Color and little white marking because where they have been broken other parts are heaven, white in 2 places, replite was found. included, and some Thas poor green color - more murkey or blive green. It seems that the chemical reaction yone to produce replate extende the footwold whiteroch and should provide a pathfinder signa-ture for prospecting to hidden seams Willeuse Check 25.0 at top 30.6 bottom = 5, 6 miles (9,5 Km.)

28 AUGUST Ango/thailer AOUT (5) fre Arro/Availler AUGUST 29 Fri. Sat. Hoe operation called to cancel coming today for noon. Trenching sites flattend out for reclamation Some origonal vegetation mits are placed Cut rocks for test evaluation after moving & repositioning son on bern sides on in center area of trench. Some sites have soil spreak over top. Rochs cut were from the split-Preparation is make for drilling rock at the lower + westernment are as follows of part of the ZIP claim. Boulder 1. Rock is very hand -some pieces toppears to be float, isolated Nine like metal (chime). 2 Color is blinish groon with Selon, Appears to be 6-8 ton Alack spots Black spots 3. Sampler one relativelij Crack with "sunpowder rock" contact instead at the usual whiteroch 4 there is some fatterning with or serpentine sock Koch is ported with live to while areas, but they are make preliminen estimates -minon in volume. Get another lond of water for camp Evaluation of the mineral property. Her Roturater Hank and relight - hook up 100 lb proprie Cyl, as The other one han out. Take garlage to the land fill (dump)

4×4 4X4. Wate traile Ago/Haile AUGUST 31 30 AUGUST San. Mon Epump 4 ×4 to claims site &/ M/S 21/2 LB Hoe openation takes day off so we spend day in Mail Camp Work at loading samples with Replenish camp water with another 250 gal. load The foe. Rochs are gathered at 3 main sites to date including Samples at the main camp. Saw testing of samples from Thereching is done. Roge brings several loads down The mountain to the stacing. Samples from the whiterook site area at the harpe below are med dask green with waterwith his 4×4. Anarta and markes and some black spots Sean dothe same with the Color patichas of chrone gree are lindent, but not as porvasive Ago and the Argo trailer Kockesare talegoing at a merked as hoped for. Some minogractures by paint apoto as to their origin are present. - blue for split rock nephrite Samples from the upper site are light med. to med. Lash - yellow for whiterioch nephite -nomark for site #1 neplinte of stranger and patches of white 14 and a star and a st material prephrite?) - life white Couds Not gam on carving grade, but could supply a specialty -market for carving, or floor tiles.

4X4 Util. (ATV) Trailer SEPTEMBER Argo/trailer. SEPTEMBRE (5) Wed Argo Araila SEPTEMBER 2 Tues. Hoe is off for the day. 4×4 to claims Hoe welks down from claims site to Campbell Highway 2 Ango loads of samples are More rock pamples and collected collected from all the man trench sites and taken to the utility trailer and to the man a construction of the second second Secondary camp is clanad up and almost all equipment camp for evaluation. Water lines are drained and is removed except some of the a lood of equipment from the upper camp at the claims Roch is handled to Watson Lake to the main camp. for more pow testing. This derision is because the saw wining on Some rock is saured at the renerator is acting upain the main camp from the whiters-k Sain run on 110 dolts, bogs down the generator, and the trench site. Colon was a pleasing green / grey with chrome green and black poter, and one white patch, Some / lots Saw molor won't run on 220 Volts oven whe Oscar Electric of Whitehouse was called fit is a of water markes Some others Baldo motor from their shop) chackes in patches but no instance of any information water staining is present - conclusion - grade B/B-

Fri. Argo SEPTEMBER SEPTEMBRE **4** Don's Cargo Van thurs. 3 SEPTEMBER SEPTEMBRE V/m/D go up to claimis with Martin Sean Angella laws camp for Fort St. John, BC Drain water out of main tank Van + Rozan are left for test. Savoing and final clasms site. mapping and clean up. Go low Talus slope site with Ago to "ice seams" area - check for any items possibly forgolta also to Top Seam and the split Rock site Main camp is cloaned up in preparation for shut-down Tools are put away, equipment is moved and thered. Stuff is organized and gathered together. Walk Down From Whiterock to lower West Boulder train site and drain wate barrel at the drill site - wrap up hose, store barrel, way too Morning was used to help m/S/A pack up then stuff cold to drill, wery icy wind and Margaretta (Van's wife) + Don Friske arive late to help Van get his stuff backe to Fort St-John B.C. as his truck hasn't got fixed yet. Will have to drill next year at lower West site, not this year. Take last load of small sample site at Paul Amaan's camp to roo

20 Hrace 10 Wed. thurs. SEPTEMBER SEPTEMBRE 9 Roge cess Km 142 · er - Km 108 a be on organin 50

4X4 San / Gen SEPTEMBER 14 Pres. Washer 13 SEPTEMBER Sum: Mon 414 Saw/Gen / P. Wash. Saw + water /elect. Load the 36" sina Solline up saw to some and show load of nephite . 2.2. 5 lake in trail Noc 6 II) for culting n seme angle to

4X4 4X4 Press Wash SEPTEMBER 16 Saw/Gen SEPTEMBRE 16 Wed. 15 SEPTEMBER Tues Pressure Wash San / Glu. Cut piece from the largest pod Finish cut on rock from from the Whiterock - a piece yesterday. Great results of the EGG. Quality of rock is excellent Quality is excellent - nephile when cut in the other plane - apparently the pheres thectures is hard solid / crack free The color is med. bright gran and it glows, Very few spots at at the end and don't pentrite Deeply - perhaps only 3-4 inches may. Polishan very well. Cut another ice seam / sub-seam Cut Split Rock same le and the quality is even better Than ice sear cut yesterday - Color is bright green "A" grade material Polishes to mirror finish - Great quality. Very hand highly translucent some "ghosty" markes deepen in e Noch. Color is pale but of dark green tone (low color, Sofar, the samples from the white ork a storiation plaction donsit mones (Whiterock #1, "ice Second and split Forch have been (int sub seam from "ice very good to excellent; and seams" site - Very nice material much botton them the quality of good colon, translucent, some nephite at Top Seam 14 ( water staining, some chrone green poto (Site #/).

SEPTEMBER 18 Fri. 17 SEPTEMBER Thurs. Make another cutting site Cut another Split-Rock site sample - Quality is greatly Shuffle saw Jwater / elathic and rocks around. reduced by the the good amount of craches In the rock. Cut Split Rock site nephrito - turno out to have lots of soft black spots and a reas with white also. Not good quality. Otherwise, the properties arent that bad. Shell, in that condition it has very low market walne. - Second with at right angle spields same fracturing (first sample but so far with another ppht rock sample is This much fracturing) art, this one is different again -Sample is dark Went pleasing Cut Whiteroch seam nephite gree no cracky on black -turns out to be darken on spots very hard and uniform color (no splotchy / clouchy inclusions). Good translingency the outside, like the EGG. Polishes very since Goodpock has chrone green spots, also, Lookes like replante offer associated with new yealand Cut light / white wein area greenstone. of rock above - only so-so here. Iverall conclusions. More variety Cut above rock again again nothing spectacular. then expected, cutting is nerosseng. To date mine inner quality and whiterock jack is best, the phit rock

## Appendix B. - Photographs

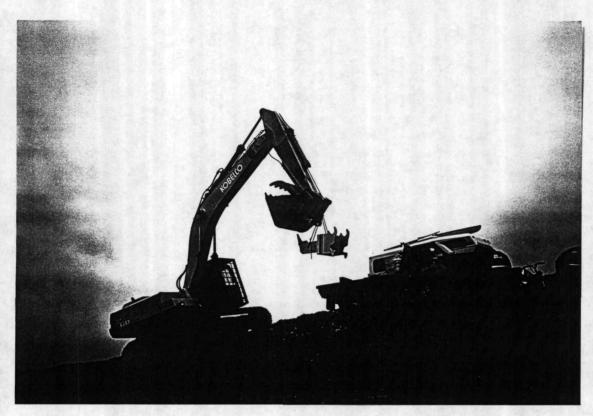
ł

ı

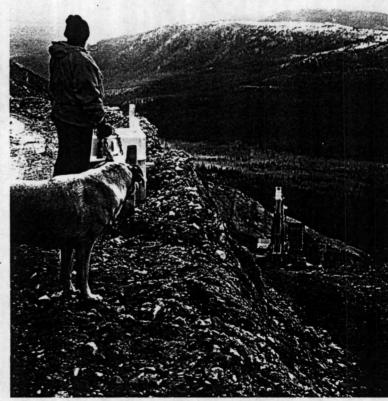
|

.

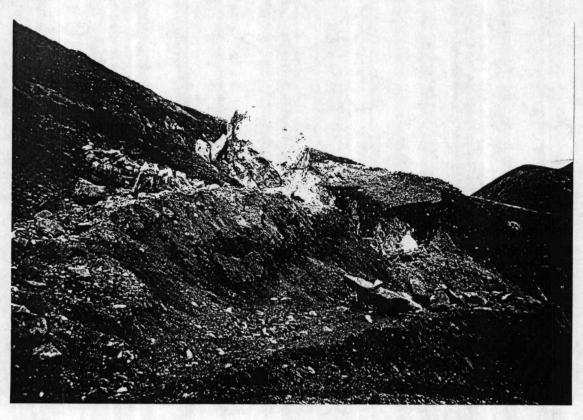
. £



KOBELCO HOE -with ripper



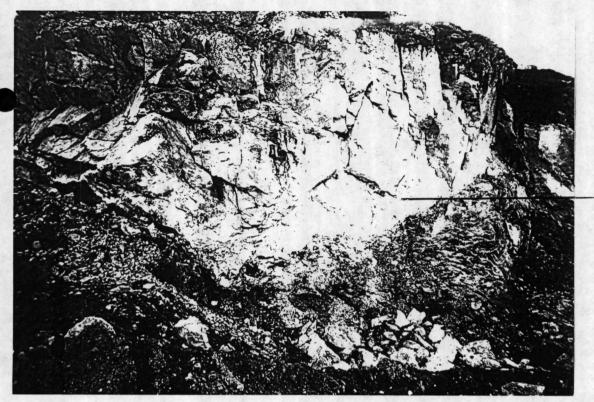
NOTE the SLOPE ANGLE For TALLS SLOPE #1



WHITEROCK #1 site

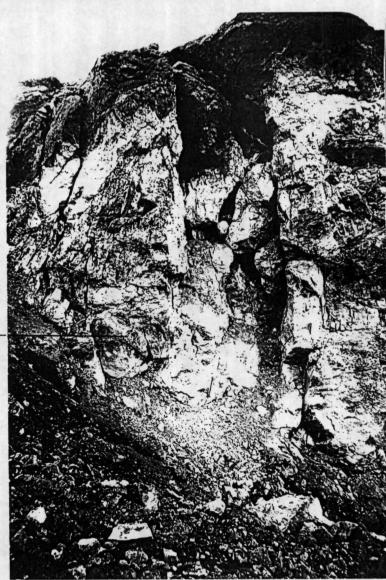


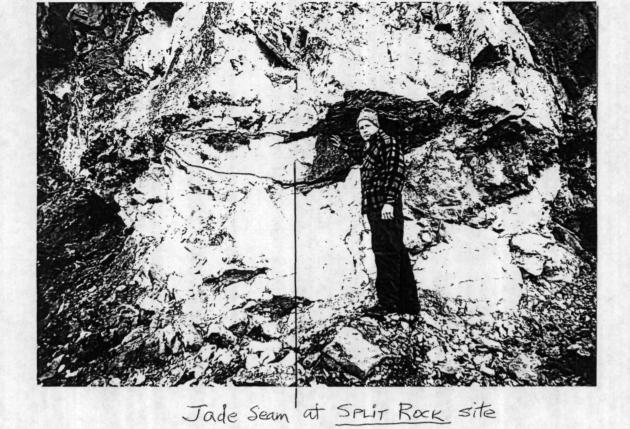
Tacus Store#1 site

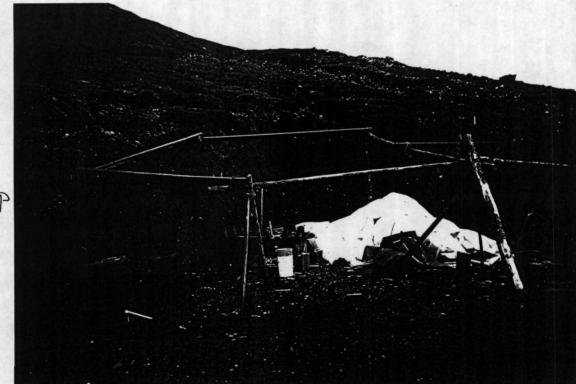


Jade Seam at SPLIT ROCK site

Jade Seam uncoveredat <u>SPLIT Rock</u> site







Equiptment storage camp

Final expenses - Submission #2 Margaret E./Zip Project Target Evaluation #98-036

-	• •	Costs : as per grant application comendations		
1.	1. Rock field saw (36" blade): 9 days @ \$75.00/day [rental rate = \$100.00/day x 75% = \$75.00/day]			675.00
2.	Generato	nerator (6.25 KW gasoline): 1 month @ $$112.50$ tal rate = $$450.00$ /month x 25% = $$112.50$ /mo.]		112.50
3.	Pressure	Washer: 1 month @ \$73.75 ate = \$295.00/month x 25% = \$73.75/m	= \$	73.75
4.	4x4 Truc	k: 1 month @ $$ 362.50/month$ 0/month x 25% = $$362.50/mo.$ ]	= \$ _	362.50
	[#1100.0	-	iip. Total \$	1223.75
Final	expense	s - Submission #2		
•	• •	Costs : as above	= \$	1223.75
B. Camp Costs : 8 man-days @ \$35.00/day				280.00
	nsportatio	= \$	102.48,	
	•	· · · · · · · · · · · · · · · · · · ·	= 136 Km	
2. 1	i way from	h base camp to Watson Lake x 108 Km =	<u>108 Km</u> 244 Km	
			244 Niii -	<u></u>
	ł	Final expenses - Submission #2	= \$	1606.23
- 1	to the gra	<b>2 - (one half above total)</b> (excepting that the above is o nt maximum of \$20,000 for the YMIP Table funding	nly for \$ <u>6</u>	
Projec	ct Total	Submission #1 Total \$ 38.606.27 Submission #2 Total \$ 1,606.23		

(Final expenses of photocopies, binders etc. to prepare report not included)

\$ 40,212.50

Project - Total Cost

Preliminary expenses - Submission	#1	Sept.7/98
Margaret E./Zip Project		
Target Evaluation #98-036		

A.	Equiptment Costs : as per grant application and YMIP recomendations		
		= \$	2697.00
	2. Diamond drill (backpack type): 3 days @\$60.00/day [rental rate = \$ 80.00/day x 75% = \$60.00/day]	= \$	180.00
	3. Rock field saw (36" blade): 20 days @ \$75.00/day [rental rate = \$100.00/day x 75% = \$75.00/day]	= \$	1500.00
	4. Generator (5 KW diesel engine):1 month @\$198.75 [rental rate = \$795.00/month x 25% = \$198.75/mo.]	= \$	198.75
	5. Generator (6.25 KW gasoline): 1 month @\$112.50 [rental rate = \$450.00/month x 25% = \$112.50/mo.]	= \$	112.50
	<ul> <li>6. Water pump: 1 month @\$60.00/month</li> <li>[rental rate = \$240.00/month x 25% = \$60.00/mo.]</li> </ul>	= \$	60.00
	7. Chain Saw: 1 month @ \$ 112.50/month [rental rate = \$450.00/month x 25% = \$112.50/mo.]	= \$	112.50
	8. Pressure Washer: 1 month @ \$73.75 [rental rate = \$295.00/month x 25% = \$73.75/mo.]	= \$	73.75
	9. 4x4 Truck: 1 month @ $$362.50/month$ [ $$1450.00/month x 25\% = $362.50/mo.$ ]	= \$	362.50
	10. 4x4 Truck: 1 month @ $$ 362.50/month$ [\$1450.00/month x 25% = \$362.50/mo.]	= \$	362.50
	11. GPS: 1 month @ $$25.00$ [\$100.00/month x 25% = \$25.00/mo.]	= \$	25.00
	12. Radio telephone: 1 month @ $$25.00$ [\$100.00/month x 25% = \$25.00/mo.]	= \$	25.00
	13. ATV Trailer: 1 month @ \$90.00 [\$360.00/month x 25% = \$90.00/mo.]	= \$	90.00
	14. Rock Sample Hauling Trailer: 1 month @ $112.50$ [\$450.00/month x 25% = \$112.50/mo.]	= \$	112.50
	15. Track excavator: 154 hours @ \$150.00/hour + GST [\$ 23,100.00 x 1.07] (receipt included)	= \$	24,717.00
	16. Trucking for excavator: 2 trips @ \$480.00/trip + GS [960.00 x 1.07](receipt included with #15. above)	T = \$	1027.20
	Equip. To	otal \$	31,656.20

A. Equiptment Costs : as per page 1 = \$ 31656.20 B. Camp Costs : 134 man-days @ \$35.00/day = \$ 4690.00 C. Gasoline : 420 liters @ \$0.659/liter (receipt included) = \$ 276.78 . \* \* \* \* \* \* \* \* \* \* D. Diesel = \$ 201.36 E. Generator Oil : 20 liters @ \$2.28/liter (receipt included) = \$ 48.79 F. Propane : 100 lb. and 20 lb. refill (receipt included) = \$ 56.50 E. Transportation : 3992 km. @ \$0.42/km = \$ 1676.64 1. 38 trips x 92 Km each way to work site = 3496 Km 2. 4 trips from base camp to Watson Lake x 226 Km = 440 Km 3. 7 trips from base camp for water x 8 Km 56 Km = 3992 Km ż

Total \$ 38,606.27

Submission #1

۱

t

(one half above total)

\$ 19,303.13

Van Krichbaum Box 6752 Fort St. John, B.C. V1J 4J2 (250) 785-5368

Jan. 8, 1999

Dear Sir

Please find enclosed the second submission for YMIP Target Evaluation funding for Project #98-036.

Thanks to your program to help evaluate our property, we are now considering to option or sell the claims.

If any problems exist with the Summary Report, please do not hesitate to contact me at my winter address above, or contact me by telephone.

Sincerely. -Man

Van Krichbaum

Final expenses - Submission #2 Margaret E./Zip Project Target Evaluation #98-036

· · · 、

**,** ?

• •	nt Costs : as per grant application recommendations				
	1. Rock field saw (36" blade): 9 days @ \$75.00/day [rental rate = \$100.00/day x 75% = \$75.00/day]				
2. Gener [rent	50 = \$ 112.50				
3. Press	=\$ 73.75				
[renta	al rate = \$295.00/month x 25% = \$73.75/n	no.]			
4. 4x4 1	Fruck: 1 month @ <b>\$</b> 362.50/month	= \$ <u>362.50</u>			
[\$14:	50.00/month x 25% = \$362.50/mo.]				
	Equ	ip. Total \$ 1223.75			
Final exper	nses - Submission #2	n sing nama mana kalin dan pagin paga ning ning ning kan dan sing nama dan yaka nang mana ving			
A. Equipmer	nt Costs : as above	= \$ 1223.75			
• •	ts : 8 man-days @ \$35.00/day	= \$ 280.00			
C. Transport	= \$ 102.48				
1. 2 trips x 34 Km each way to mine road = 136 Km					
2. 1 way from base camp to Watson Lake x 108 Km = $108$ Km					
		244 Km			
	Final expenses - Submission #2	2 = \$ 1606.23			
	#2 - (one half above total) (excepting that the above is	= \$803.11 only for \$ <u>696.87</u> )			
	grant maximum of \$20,000 for the YMIP eligible funding.	Target Evaluation			
Draiget T-4	al Submission #1 Tatal # 29 606 2	7			
Project Tot					
	Submission #2 Total \$ 1.606.2	<u></u>			

(Final expenses of photocopies, binders etc. to prepare report not included)

Project - Total Cost \$ 40,212.50