

JUNE 6/81

KS-4  
BIG CREEK

SNOWY

BIG CREEK

WORKING AT HEADWATERS OF ~~SANAGOTA~~  
RIVER ON RUSTY ZONES IN CACHE  
CREEK UNIT 4.

KST1-22 - RUSTY BANDED QTZ-  
CARB GOSSAN TOOK CHIP SAMPLE  
NO SULPHIDES NOTED.

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ROCK IS MADE OF LAYERS OF GRAY,  
WHITE, YELLOW AND RED QTZ-CARB.  
MAY BE REPLACEMENT OF BANDED  
LMST OR OTHER SED. ROCK.

THE ALTERED QTZ-CARB ROCKS ARE  
ROUGHLY CONCORDANT WITH THE  
FOLIATION IN OVERLYING GREENSTONES?  
OF THE CACHE CREEK GROUP. HOWEVER  
THE CONTACT DOES PINCH AND SWELL  
IN THE ORDER OF A FEW METRES.

THERE ARE A NUMBER OF QTZ-  
CARB BANDS IN THE CLIFF FACE  
RANGING IN THICKNESS FROM A  
FEW METRES TO 10'S OF METRES

ALL THE QTZ-CARB IS HIGHLY  
FRACTURED AND BROKEN, PERHAPS  
BECAUSE IT IS A BRITTLE ROCK.

THE QTZ-CARB ZONES ARE VERY  
IRREGULAR IN MINERALOGY. SOME  
AREAS ARE PURE QTZ AND OTHERS  
ALMOST PURE CARBONATE. MOST  
AREAS ARE A MIXTURE.

BE A CARBONATIZED AMYGDALONIAL  
VOLCANIC OR VOLCANICLASTIC, WITH  
INTERESTING LIGHT GREEN GYPSUM  
VEINETS AND A LITTLE MALACHITE.

THE OTHER GOSSAN IS POSSIBLY  
AN ALTERED INTRUSIVE THAT IS  
NOW COMPLETELY FRACTURED AND  
BROKEN BUT NO MINERALIZATION WAS  
OBSERVED.

ALSO NEAR THE BEGINNING OF  
THE AFTERNOON WE FOUND THAT  
BANDS OF CARBONATE BRECCIA WITH  
WELL DEVELOPED COCKSCOMB TEXTURE  
IT LOOKS SIMILAR TO A SPECIMEN  
MIKE THICKE RECOVERED FROM  
THE SAM CLAIMS (P6) ABOUT  
8 MILES SE.

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THE CONTACT BETWEEN THE QTZ-CARB AND THE GREENSTONE IS AT LEAST LOCALLY GRADATIONAL OVER A DISTANCE OF  $\approx 2$  METERS THE QTZ-CARB BEDS BECAME LESS FREQUENT AND THE AMOUNT OF GREENSTONE PROGRESSIVELY INCREASES.

SOME OUTCROPS OF GREEN PHYLLITE HAVE A THINLY BEDDED CHARACTER WHICH MAKES THEM LOOK LIKE META-SILTSTONES.

KST1-23 - THINLY LAMINATED GREEN META-SILTSTONE [50M ABOVE -22]


WENT DOWNSTREAM A FEW KM TO LOOK AT MORE RUSTY ZONES IN UNIT 4 OF CACHE CREEK GRAB.

KST1-24 - GRAB SAMPLE FROM TALUS FLOAT, LOCATED WHERE SAMOTVA RIVER NARROWS AT LARGE <sup>ALUVIAL</sup> FAN.

<sup>SECONDARY</sup> SAMPLE IS MOSTLY GRAY CHERTY MATERIAL WITH SOME CARBONATE. MINOR PYRITE WAS OBSERVED. THE CACHE CREEK FLOAT LOOKS SIMILAR TO THE ROCKS BACK NEAR KST1-23.

016°/75 NW - BANDING IN QTZ-  
CARB.

140°/35° SW FOLIATION IN  
GREEN PHYLLITES  
(GREEN STONES)

 SOME ZONES OF GOS  
APPEAR UP TO 100 M THICK

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LITTLE FURTHER UPSTREAM SAMPLED  
MORE TALUS FLOAT.

KSTI-25 - TALUS FLOAT, <sup>WHITE-GRAY</sup> PYRITIC  
QTZITE (SECONDARY SILICA) AND  
PYRITIC LAMINATED GREEN PHYLLITE.

KSTI-26 - MORE FLOAT A LITTLE  
FURTHER UPSTREAM. THE SAME  
GRAM SILICEOUS UNIT, EXHIBITS  
WEAK BANDING. THIS ROCK HAD  
FROM 2-5% PYRITE, LOOKED  
PRETTY SWICY.

KSTI-27 - ENDOGENIC & HYDROTHERMAL  
MAFIC INTRUSIVE ROCK, WITH DISSEM.  
CHALCOPYRITE LOOKS SIMILAR TO ONE  
AT COPPER MT, PRINCETON.  
(FLOAT)

KSTI-28 - GRAY PYRITIC SECONDARY  
CHERT. CONTAINS FEW % PYRITE.  
(FLOAT)

KSTI-29 - WHITE QTZ WITH  
ABUNDANT DISSEMINATIONS & VEINS  
OF PYRITE (UP TO 25%). PROBABLY  
SILICEOUS PHASE OF RUSTY ZONE  
ON CLIFFS ABOVE.  
(FLOAT)

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KST1-30 - HEMATITIC CHALCEDONY BRECCIA WITH 1-2% PYRITE. HAS BOTH LAMINATED AND CLASTIC APPEARANCE.  
CHALCEDONY IS GRAY WITH RED HEMATIZED AREAS.

WENT FURTHER UPSTREAM AND GRABBED A COUPLE SILTS DRAINING THE GOSSAN AREA.

RLT1-55, RLT1-56

### SUMMARY

THE GOSSANS IN THE CACHE CREEK ROCKS ALONG THE WEST SIDE OF THE SAMOTUA RIVER LOOK QUITE FAVOURABLE TO GOLD MINERALIZATION.

MOST OF THE GOSSAN IS A LIGHT GRAY LOCALLY PYRITIC MICROCRYSTALLINE SILICAE ROCK. LOCALLY CARBONATE, WHITE QZ, AND HEMATITE ARE COMMON.

THE CACHE CREEK ROCKS WHICH HAVE BEEN ALTERED APPEAR TO BE MOSTLY META-SEDS. THINLY LAMINATED TEXTURE IS COMMON. MOST CACHE CREEK ROCKS ARE SOFT GREEN PHYLLITES.

NEARBY PHYLITES (GRAY) OF CACHE  
CREEK? GROUP

017° / 45° NW - FOLIATION

JUNE 6/80

SUMMARY CONT'D

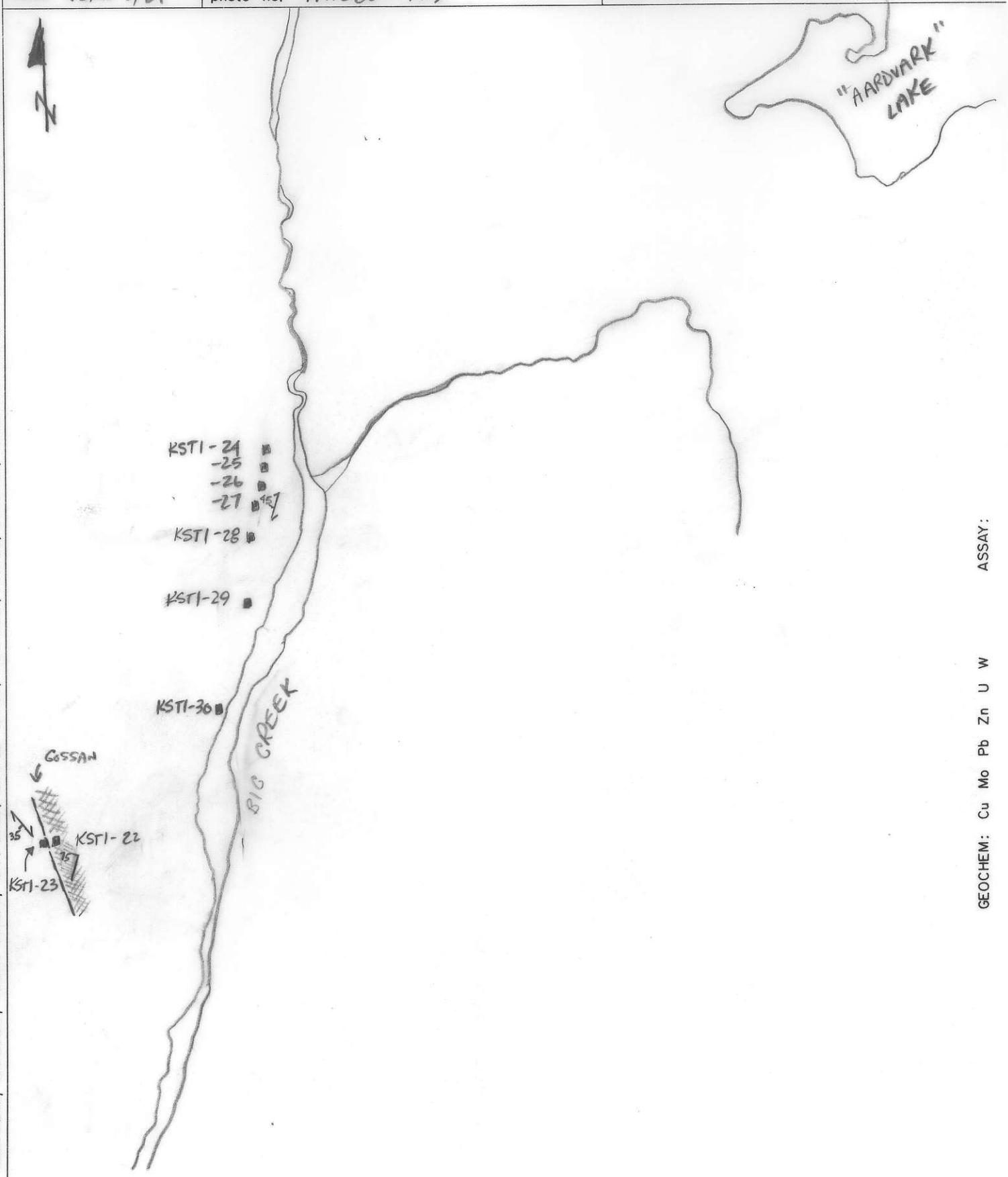
ALSO ~~NOTED~~ <sup>FOUND</sup> IN THE TALS WAS  
ABUNDANT DIORITE? WHICH HAD BEEN  
EXTENSIVELY ALTERED WITH EPIDOTE  
AND HEMATITE. ALSO PRESENT WERE  
PYRITE AND SOME BLEDGS OF CHALCOPIRITE.



Project TLSEQUAH	NTS 104 K	Scale 164 K	Page 1 of 1	Traverse K5-4
Sampler KEN SHANNON ROB LAZARBY	Location, Target (words) HEADWATERS SOMATUA RIVER-GOSSANS		Sample Nos	KST1-22 → 30
Date JUNE 6/81	photo no.	A11586-109	Cert. Nos	

- GOSSAN, MINERALS
- INTRUSIVE
- LIMESTONE DOLOMITE
- SILT X SOIL ● ROCK ■ PAN △ WATER ○
- SHALE
- CHERT
- VOLCANIC
- CONGLOMERATE
- SANDSTONE SILTSTONE

SPECIMEN SITE A,B,...; DO NOT WRITE ON OTHER SIDE OR USE COLOURS  
 DON'T FORGET CONTOURS, DRAINAGE, NORTH ARROW, LAT/LONG, SAMPLE SITES, WORKINGS, TRAILS, GOSSANS, OBSERVED GEOLOGY: DEFINED ——— INFERRED--- ASSUMED.....



GEOCHEM: Cu Mo Pb Zn U W  
 ASSAY:

SUMMARY JUNE 6/81

KS-4

A LARGE AREA OF GOSSANS IN CACHE CREEK GROUP ROCKS AT THE HEAD OF THE SAMOTUA RIVER; WAS EXAMINED BY TALUS SAMPLING. THE BULK OF THE GOSSAN APPEARED TO HAVE BE PRODUCED BY REPLACEMENT OF PERMEABLE ZONES IN THE CACHE CREEK GROUP METASEDIMENTS. MOST OF THE REPLACEMENT WAS BY MICROCRYSTALLINE SILICA WITH SOME CARBONATE (CALCITE AND OTHERS) AND ALSO SOME AREAS OF COARSELY CRYSTALLINE WHITE QUARTZ. LOCALLY THE QUARTZ-CARBONATE GOSSAN WAS QUITE PYRITIC (UP TO 5-10%) AND LOOKED LIKE A FAVOURABLE AU HOST.

THE GOSSAN ZONES WERE CRUDELY CONCORDANT WITH FOLIATION IN THE COUNTRY ROCKS AND SEEMED TO GRADUALLY FADE OUT OVER < 1 M NEAR THE CONTACTS. HOWEVER LOCALLY THE GOSSANS CROSS-CUT STRATIGRAPHY AND WERE PERHAPS STRUCTURALLY CONTROLLED IN THESE AREAS. WHEN EXAMINED IN DETAIL THE GOSSAN PROVED TO BE SURPRISINGLY VARIABLE IN MINERALOGY AND TEXTURE. PERHAPS THIS COULD BE RELATED TO CHANGES IN HOST ROCK LITHOLOGY. THE QTZ-CARB GOSSAN WAS HIGHLY FRACTURED AND OFTEN FORMED RUBBLY OUTCROPS.

ABUNDANT HEMATITE-EPIDOTE DIORITE FLOAT WAS ALSO FOUND ALONG THE CLIFFS BESIDE THE RIVER. SOME DISSEMINATED PYRITE AND BLENDS OF CHALCOPYRITE WERE OBSERVED. WHETHER THERE IS A GENETIC RELATIONSHIP BETWEEN THESE PORPHYRY-CU INTRUSIVES (AS IN APPLE, LIME CLAIMS, RIOCANEX) AND THE QUARTZ-CARBONATE ALTERATION HAS NOT BEEN ESTABLISHED YET. THERE CERTAINLY IS A LOT OF CU IN THIS SOUTH-EAST CORNER OF THE TULSEQUAH MAP-AREA.

THIS AREA APPEARS TO HAVE GREAT POTENTIAL FOR AU DEPOSITS; THERE ARE ABUNDANT QUARTZ-CARBONATE GOSSANS, SOME OF WHICH ARE QUITE PYRITIC.