

MAP NO.: ASSESSMENT REPORT X
115 ~~A~~ 12 PROSPECTUS
G CONFIDENTIAL X
OPEN FILE

DOCUMENT NO: 092510
MINING DISTRICT: Whitehorse
TYPE OF WORK: GEOCHEMICAL

REPORT FILED UNDER: D.E. Makkonen and L.E. Smith

DATE PERFORMED: May 28-29, 1988

DATE FILED: July 25, 1988

LOCATION: LAT.: 61°31'N

AREA: Reed Creek

LONG.: 139°39'W

VALUE \$: 1,400.00

CLAIM NAME & NO.: TOBY 1-14 (A97449-462)

WORK DONE BY: T.V. Makkonen

WORK DONE FOR: D.E. Makkonen and L.e. Smith

DATE TO GOOD STANDING:

REMARKS: # 68 KELLI

In 1988, 62 reconnaissance soil samples were taken around the head of Reed Creek. Two samples were strongly anomalous in gold and arsenic, with values of 13.0 ppb Au, 350 ppb As, and 125 ppb Au, >1000 ppm As respectively. Seven other samples returned moderately anomalous gold values.

XRAL

05-NOV-87

REPORT 2458

REF. FILE 29716-J5

PAGE 1 OF 1

SAMPLE	AU OZ/TON	CU %	ZN %	AG OZ/TON
YUKON1	0.001	--	--	--
YUKON2	TRACE	--	--	--
YUKON3	0.007	2.28	--	0.47
YUKON4	TRACE	--	--	--
YUKON5	0.038	--	9.70	TRACE

092510



GEOCHEMICAL REPORT

ON

TOBY MINERAL CLAIMS

WHITEHORSE MINING DISTRICT

YUKON TERRITORY

Latitude 61°31'N, Longitude 139°39'W

NTS 115 G 12

Performed for

D.E. Makkonen and L.E. Smith

by T.V. Makkonen



Fieldwork performed on 28 and 29 May, 1988.

092510

This report has been examined by
the Geological Evaluation Unit
under Section 53 (4) Yukon Quartz
Mining Act and is allowed as
representation work in the amount
of \$ 1400.00.

J. J. Brenner
for Regional Manager, Exploration and
Geological Services for Commissioner
of Yukon Territory.

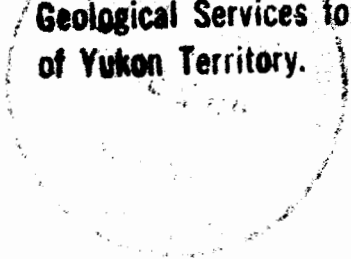


TABLE OF CONTENTS

Introduction.....	1
Property, Location & Access.....	1
History & Previous Work.....	2
Geology.....	2
Geochemistry.....	4
Summary & Recommendations.....	4
Statement of Qualifications	
Appendix I. Statement of Costs	
Appendix II. Assay Certificates	

LIST OF FIGURES

No.

1. Claim Location Map
2. Sample Location Map

INTRODUCTION

The TOBY claims were staked in May, 1987 to cover a possible hard rock source area for placer gold in the western tributary of Reed Creek. The property is jointly owned by D.E. Makkonen and L.E. Smith.

Reconnaissance soil sampling of the property was carried out on 28 and 29 May, 1987 by D.E. and T.V. Makkonen.

PROPERTY, LOCATION & ACCESS

The TOBY property is located on the northeast side of the Kluane Range 12 miles south-southwest of the Donjek River Bridge on the Alaskan Highway. The TOBY claims adjoin the KELLI property and are accessible via an 8-mile winter road which leaves the Alaska Highway at Mile 1126 and provides access to a placer operation on the west tributary of Reed Creek. The claims cover a treeless ridge at 5000 - 6000 ft elevation at the headwaters of Reed and Jody Creeks.

The property consists of 14 contiguous claims registered with the Whitehorse Mining Recorder as follows:

Claim Name	Record No.	Expiry Date
TOBY 1-14	YA 97449 - 462	28 MAY, 1988

The claims are jointly owned by D.E. Makkonen and L.E. Smith of Nanaimo, B.C.

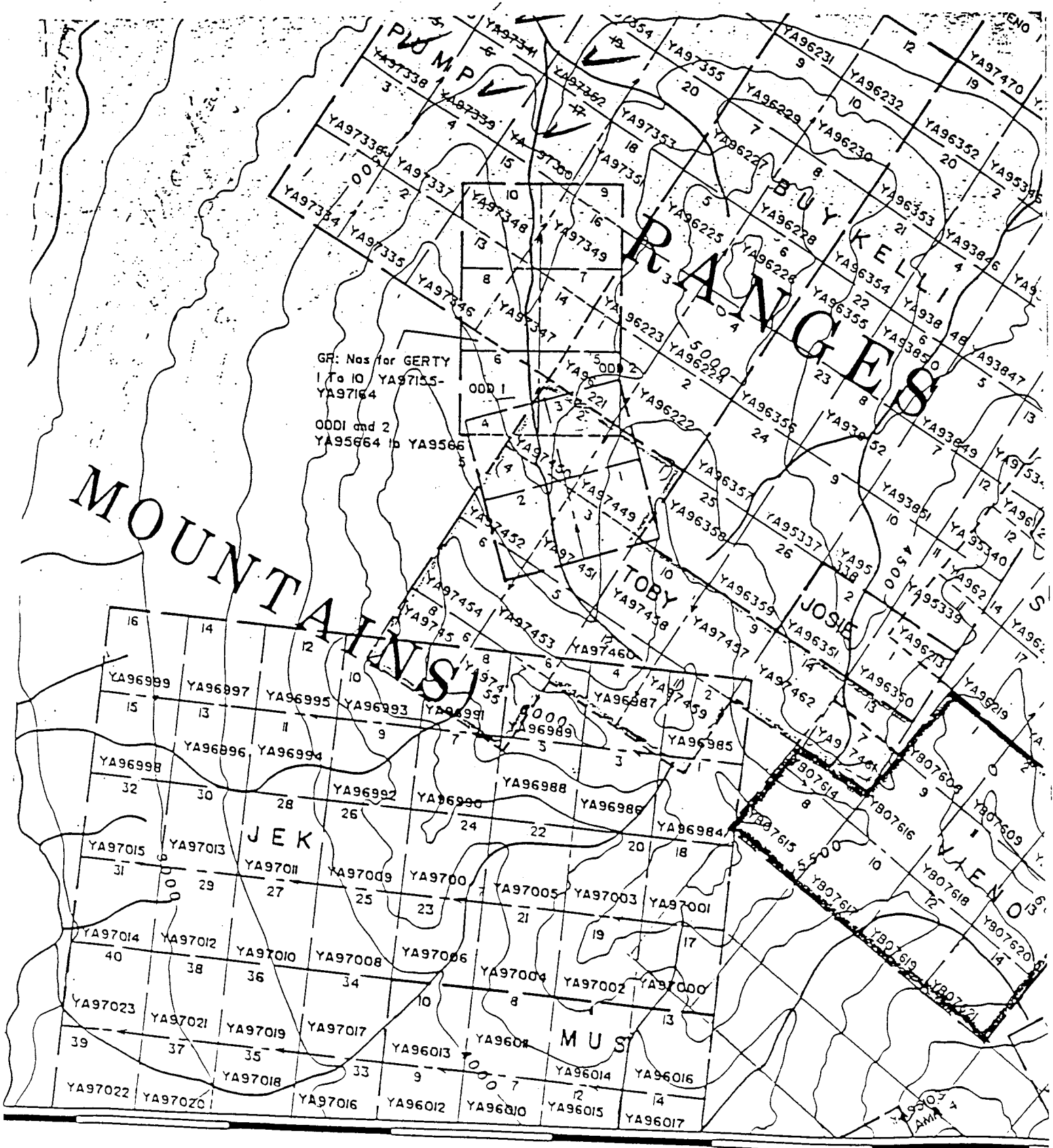


FIGURE 1

CLAIM LOCATION MAP

40'

HISTORY & PREVIOUS WORK

The property was staked in May, 1987 to cover the headwaters of a gold-bearing tributary of Reed Creek. There is no evidence of previous hard-rock exploration on the claims.

GEOLOGY

The oldest rocks on the property are andesitic tuff and volcanic breccia of the Pennsylvanian Station Creek Formation. A thin sequence of shale and limestone of the Permian Hasen Creek Formation overlying the pyroclastic rocks is unconformably overlain by amygdaloidal basalt flows of the Triassic Nikolai Formation. Gabbro sills and dykes of Upper Triassic age intrude the sedimentary and volcanic sequence. Conspicuous feldspar porphyry dykes of Oligocene age intrude the Triassic and older rocks.

TABLE OF FORMATIONS

Oligocene

Feldspar porphyry dykes and small intrusions

Upper Triassic

Nikolai Group

- medium-grained gabbro dykes and sills,
probably feeders for Mikolai Group
basalts.

-dark green and maroon amygdaloidal
basalt flows

- - - - - UNCONFORMITY - - - - -

Lower Permian

Hasen Creek Formation

-shale, minor conglomerate, limestone

Pennsylvanian

Station Creek Formation

-Massive green lithic tuff and andesite
volcanic breccia.

GEOCHEMISTRY

Twenty-nine soil samples were taken at 200 foot intervals along the ridge crest between Reed and Jody Creeks, and thirty-three contour soils were taken at 100 foot intervals around the head of Reed Creek at 5000' elevation. All samples were sent to Bondar-Clegg and Co., Ltd, North Vancouver, B.C. where they were prepared by crushing and pulverizing the entire sample to -80 mesh. On all samples, gold was determined by fire assay pre-concentration followed by colorimetric analysis. In addition, following fire assay pre-concentration, nineteen of the contour soil samples were analysed for platinum and palladium.

Two samples were strongly anomalous in gold and arsenic with values of 130 ppb Au and 350 ppb^m As, and 125 ppb Au and >1000 ppb^m As respectively. Seven other samples returned moderately anomalous gold values in the range 50-95 ppb Au. Visual inspection of the results suggests a strong correlation between Au and As. Pt and Pd generally gave a weak response.

SUMMARY & RECOMMENDATIONS

Reconnaissance soil sampling carried out in 1987 turned up coincident gold-arsenic anomalies which should be followed up by detailed prospecting and further geochemistry, followed by hand or bulldozer trenching if justified.

TOBY CLAIMS

SOIL SAMPLES - 10401 - 10428 EVERY 200'

- 10429 - 10447
- 10460 - 10477 } 100'

- ALL LOCATIONS FLAG + NUMBERED.

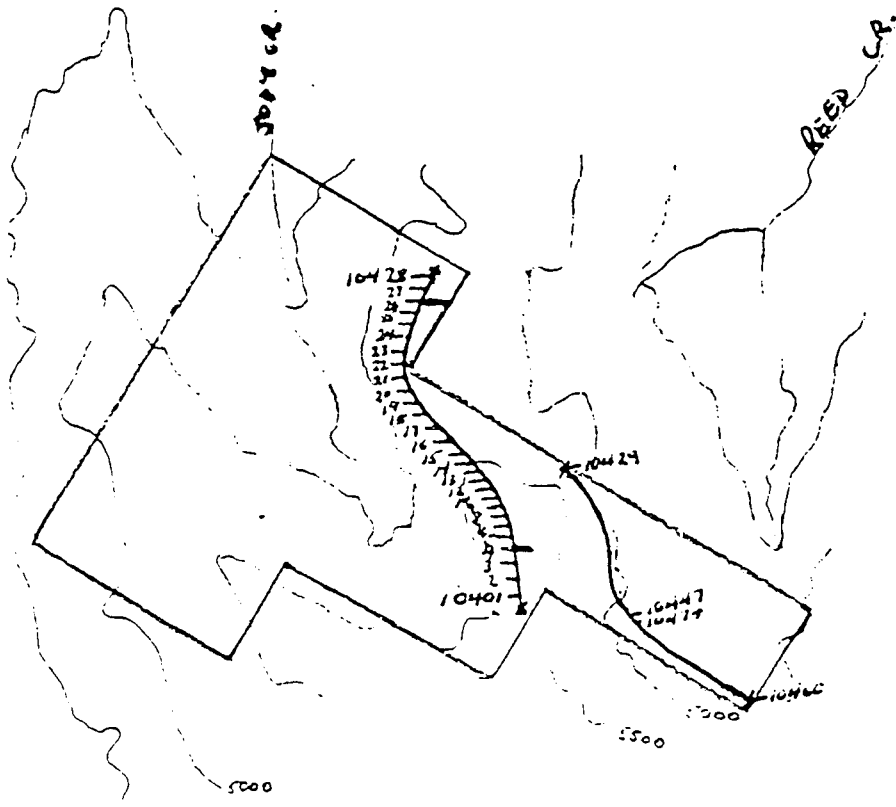
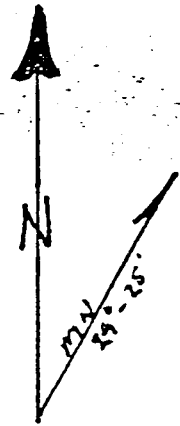


FIGURE 2

SAMPLE LOCATION MAP

SCALE: 4" = 1 MILE

STATEMENT OF QUALIFICATIONS

I, Toby V. Makkonen, of Toronto, Ontario, with residential addresses in Haines Junction, Yukon and Toronto, Ontario, do hereby declare:

- a) I am a retired professional prospector, formerly employed by Esso Minerals Canada Ltd., of Toronto, Ontario.
- b) I have been actively engaged in mineral exploration in Canada for over 40 years, including 10 years with Esso Minerals Canada Ltd..
- c) I have supervised the work described in this report.

A handwritten signature in cursive script, reading "T. V. Makkonen", is written above a horizontal line.

T. V. Makkonen

FIELD PERSONNEL

T. V. Makkonen, Prospector
General Delivery
Haines Junction
Yukon
YOB 1L0

D. E. Makkonen, Prospector
General Delivery
Haines Junction
Yukon
YOB 1L0

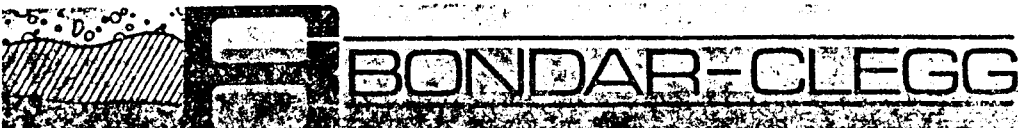
APPENDIX I
STATEMENT OF COSTS

WORK ON "TOBY CLAIMS"

- SOIL SAMPLES WERE TAKEN OVER (2) DAY PERIOD (MAY 28TH & 29TH 1988)
- TOTAL OF 62 SAMPLES
- ALL LOCATIONS WERE MARKED AND NUMBERED ON GROUND AND MAP
- CLAIMS WERE ACCESSED BY TRUCK AND 4 WHEEL BIKE TO AND FROM HAINES JCT.
- SAMPLES WERE THEN TAKEN TO "BONDAR-CLEGG" FOR ANALYSIS.

EXPENSES

- 2 MANDAYS @ \$100. ⁰⁰ per day	\$ 200. ⁰⁰
- 2 DAYS FOOD & EXPENSES \$50. ⁰⁰ per	\$ 100. ⁰⁰
- 2 DAYS YAMAHA 4 WHEEL RENT	\$ 100. ⁰⁰
- FUEL TO AND FROM HAINES JCT.	\$ 42. ⁰⁰
- ANALYSIS "BONDAR-CLEGG")	\$1075. ²⁵
	<hr/>
	\$ 1517. ²⁵
	<hr/>



SAMPLE SHIPMENT NOTICE

OTTAWA

VANCOUVER

WHITEHORSE

Please analyze by special assay prepared
 normal geochemical methods, the enclosed unprepared samples

If special, please provide special instructions and/or additional remarks

Total No. Samples _____ No. Parcels in Shipment _____

Type of Samples	No. of Samples	Sample Numbers (Series)	Elements to be Analyzed	Remarks
5x	28	10441 → 10478	Au As	
	15	10480 → 10474	✓ ✓	
	10	10420 → 10447	✓ ✓ H PL	

Size Fraction to be analyzed (geochem. Only) _____

Disposal of Oversize: Store 1 month Dispose of Return
 Disposal of Pulps: Store 1 year Dispose of Return

Date Shipped _____ Via _____ Prepaid

Results and Invoices To Be Sent To: Collect

62 Au @ 750 → 415.00
 62 Au @ 400 → 248.00
 12 Au @ 15.00 → 180.00
 62 5x Si @ 1.00 → 62.00
 TOTAL \$1,605.00

Results
 Invoice

Douglas Makkonen
 Box 5211, Haines Junction, Yukon
 Y0B 1L0
 (34-207)

Paid in Advance by cheque #212
 (1000.00)

Results
 Invoice

Samples Submitted By *John P.*

Checked by 1745 → 17462

Client Project Number 1089 1-14

Samples Received By John Reeve

Date Received June 9/82

Received from Douglas
Makponen 100.00 for
rent on Yamaha 4 wheel
bike for May 28 + 29
1987.

Lorne E. Smith

APPENDIX II
ASSAY CERTIFICATES



REPORT: V88-03966.0 (COMPLETE)

REFERENCE INFO: CLAIM NO. YA97449-462

CLIENT: MR. DOUG MAKKONEN
 PROJECT: TOBY 1-14

SUBMITTED BY: UNKNOWN
 DATE PRINTED: 23-JUN-88

ORDER	ELEMENT		NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	Au	Gold - Fire Assay	62	5 PPB	FIRE-ASSAY	Fire Assay AA
2	Au/wt	Sample weight/grams	53	0.1 G		
3	Au/wt	-20 Au Sample Weight	12	0.1 G		
4	Pt	Platinum	18	15 PPB	FIRE-ASSAY	
5	Pd	Palladium	18	2 PPB	FIRE-ASSAY	
6	As	Arsenic	62	2 PPM	NITRIC PERCHLOR DIG	Colourimetric

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
S SOILS	62	1 -80	62	DRY, SIEVE -80	62

NOTES: @ indicates SMALL SAMPLE WEIGHT

REMARKS: 'IS' INDICATES INSUFFICIENT SAMPLE.

REPORT COPIES TO: MR. DOUG MAKKONEN

INVOICE TO: MR. DOUG MAKKONEN

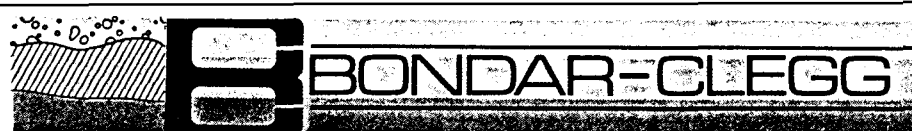


REPORT: V88-03966.0

PROJECT: TOBY 1-14

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Au/wt G	Au/wt G	Pt PPB	Pd PPB	As PPM
S1 10401		17	10.0				34
S1 10402		14	10.0				140
S1 10403		10	10.0				38
S1 10404		133	10.0				350
S1 10405		30	10.0				190
S1 10406		40	10.0				8
S1 10407		8	10.0				41
S1 10408		9	10.0				32
S1 10409		5	10.0				21
S1 10410		13	10.0				23
S1 10411		12	10.0				160
S1 10412		45	10.0				48
S1 10413		19	10.0				43
S1 10414		<5	10.0				22
S1 10415		5	10.0				21
S1 10416		29	10.0				49
S1 10417		8	10.0				38
S1 10418		7	10.0				14
S1 10419		11	10.0				39
S1 10420		7	10.0				23
S1 10421		18	10.0				49
S1 10422		17	10.0				130
S1 10423		18	10.0				51
S1 10424		9	10.0				22
S1 10425		8	10.0				28
S1 10426		125	10.0				>1000
S1 10427		<5	10.0				16
S1 10428		7	10.0				12
S1 10460		21	10.0				65
S1 10461		43	10.0				75
S1 10462		27	10.0				90
S1 10463		22	10.0				120
S1 10464		19	10.0				65
S1 10465		20	10.0				53
S1 10466		32	10.0				180
S1 10467		19	10.0				33
S1 10468		7	10.0				37
S1 10469		9	10.0				27
S1 10470		9	10.0				32
S1 10471		12	10.0				49



REPORT: V88-03966.0

PROJECT: TOBY 1-14

PAGE 2

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Au/wt G	Au/wt G	Pt PPB	Pd PPB	As PPM
S1 10472		59	10.0				70
S1 10473		28	10.0				85
S1 10474		7	10.0				18
S1 10429		42	5.0		<15	4	65
S1 10430		19		10.0	<15	10	36
S1 10431		64	10.0		<15	4	85
S1 10432		85	2.0	8.0	45	10	110
S1 10433		53	2.0	8.0	<15	4	140
S1 10434		22		10.0	20	4	90
S1 10435		95	4.0		<15	6	75
S1 10436		20	3.0	7.0	15	4	58
S1 10437		<5		10.0	<15	10	47
S1 10438		24	5.0		20	8	80
S1 10439		11		10.0	20	8	70
S1 10440		13		10.0	<15	10	55
S1 10441		22	10.0		20	10	95
S1 10442		30		10.0	<15	10	90
S1 10443		40		5.0	<15	6	110
S1 10444		72	5.0		15	2	95
S1 10445		60	1.0		<15	6	85
S1 10446		31		10.0	<15	8	130
S1 10447		42		1.0	15	15	140