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Gold Commissioner's Office
VANCOUVER, B.C.

Gus Claim Group

Nelson M. D., B. C.

Assessment Report

Oct. 1999

82F 004

By M. A. Kaufman

49° 02' 54" N
117° 14' 33" W

26,048

Table of Contents

Appendix

In Pockets

Introduction

The Gus Claim Group (Gus 1 - 13) is located in the West Kootenays, approximately 7.5 km NE of the Canada - U.S.A. Nelway border crossing. The west margin of the claims is along the east shore of Rosebud Lake.

Access is by the Rosebud Lake Road and thence by a 4x4 logging road starting east of the SE part of Rosebud Lake and going ENE to the old Lone Silver Mine and beyond to an area which I call the "East Gold Anomaly". During 1999, Mr. Frank Zmavac, owner of 40 acres of surface along the north shore of the lake, placed a locked cable gate barring access to the old mine/logging road. With the gate locked, the claims must be accessed by the B. C. Hydro line road which follows the east shore of Rosebud Lake, and joins the mine/logging road a short distance east of Zmavac's gate.

I have been actively exploring this area since the late 1980s, when I was contracting for Lacana (Corona). After Corona relinquished its claims, I reacquired the ground by staking. The exploration history of the area has been well covered in past assessment reports, and will only be briefly summarized here. Lacana (Corona) carried out extensive soils and rock geochemical surveys, and discovered the "East Gold Anomaly." Orvana Minerals Corp. optioned the claims from Corona, and drilled one hole to test the north portion of this anomaly. The hole did not intersect economic grade, but there was significant gold in places, some highly anomalous, found in altered limey argillite of the Nelway Formation. My work since 1994 has involved following up and extending the previous exploration by geochemical and geophysical exploration. During 1996 contractor Lloyd Geophysics Inc. found an EM conductor under the swamp area which is located a short distance south of Orvana's drill hole on the "East Gold Anomaly"

The 1999 work programme involved running one line of gravity survey by contractor Peter E. Walcott & Associates over Lloyd's EM conductor, the purpose of which was to determine whether the conductor is caused by an underlying body of massive sulfide. This report will deal primarily with the results of this gravity survey.

Previous assessment reports covering the Gus Claims are as follows; #25704, 25090, 24748, 24199, 23711 and 23438.

Summary Geology

As the geology has been described in previous assessment reports, I will only provide a summary here.

Physiographically, much of the Gus Claim Group is traversed by an ENE trending shallow valley which appears to follow the trend of the thrust faults which have been mapped in this area. A narrower NNE trending swampy depression occupies the portion of the "East Gold Anomaly" where the Lloyd Em conductor has been found. This low area is thought to be controlled by a "transverse fault". Both of these valleys probably contain relatively deep glacial overburden (say 3 metres or more). Small areas of bedrock are found in upland areas south of the main valley, and east, west and north of the swampy depression, but even most of the uplands are overburden covered.

The area is chiefly underlain by Lower Cambrian Laib Formation phyllites, Middle Cambrian Nelway Formation limestones and dolomites, and Middle Ordovician Active

Formation argillites, limestones and slates. The property is traversed by the NE trending SE dipping Black Bluff Thrust Fault, which has caused the section to be overturned. A package consisting of older Laib sediments underlain by younger Nelway sediments overlies still younger Active Formation sediments. The contact between the Nelway limey sediments and the underlying Active Formation argillite-phyllite probably marks the trace of the thrust, but the thrust zone appears to be imbricate and complex.

Minor production of very high grade gold-silver ores has been taken from three old mines situated on the property, the Lone Silver, Davne and Lucky Strike. The Lone Silver production was from irregular shoots of brecciated Nelway Formation dolomite and from underlying Active Formation phyllite. The mineralized zones occur right on the Black Bluff Thrust, and are probably controlled by it. Both the Davne and Lucky Strike Mines are on WNW striking, steep dipping narrow fissure veins cutting "upper plate" formations, respectively Nelway silty lime and Laib phyllite. Though the two mines are .5 km apart, they may be controlled by the same fault. Between the two mines is the NE trending swampy depression described above. Outcrops within the "East Gold Anomaly" show intersecting NNE and WNW fracturing. Small mineralized showings and anomalous metal values have been found along these fracture zones.

Gravity Survey

The gravity survey was essentially flat, showing no indication of massive sulfides underlying the Lloyd EM conductor. A brief report by Peter E.Walcott & Associates is in the appendix of this report, and profiles are found in the pocket.

Interpretation And Conclusions

The Lloyd conductor is most probably caused by a fault zone. It is probably the strongest fault zone in the area surveyed. Although there is no associated massive sulfide body, there could well be bodies of lesser sulfide content along this fault zone. As anomalous values are seen along weak fractures in nearby outcrop areas, the conductor is still worthy of a drill test.

M. A. Kaufman

Oct. 11, 1999

PROFESSIONAL
PROVINCE OF
M. A. KAUFMAN
BRITISH COLUMBIA
ENGINEER
Expiry Date Dec. 31, 1999

Statement of Costs

Canadian Funds

Peter E. Walcott & Associates
Gravity Survey --$1,162.33.

M. A. Kaufman Living Expenses
one day at $90.00/day --$90.00

M. A. Kaufman Vehicle Expenses
500km at $.35/km ---$175.00

Sub total --- $1427.33

U. S. Funds

M. A. Kaufman Time

Aug. 3, 23; check out survey line,
map prep., legal work
re. surface access ------- 1 day
Aug. 27; assist with gravity survey ---1 day

~~Aug~~ Oct. 7 -11; reports, map prep. -------1 day

Total M. A. Kaufman Time 3 days at $400.00/day ----------$1,200.00

Copies --$26.53

Sub total --$1226.53

Convert to Canadian $1226,53x1.45 ------------------------$1777.58

Grand Total ---$3204.91 Canadian

Statement of Qualifications

I, M. A. Kaufman hereby state that I have worked as a mining geologist and mining engineer for 42 years.

I received an A, B, degree in geology from Dartmouth College in 1955, and an M. S. degree in geology and mining engineering from the University of Minnesota in 1957.

I am currently registered as a Professional Engineer/Geologist in the province of British Columbia.

From the period 1955 - 1965 I worked for the major companies Kennecott Copper Corp., Giant Yellowknife Gold Mines (Falconbridge), Kerr-McGee, and Hunting Survey Corp., Ltd. I then worked independently as a consultant and contractor, mainly for major companies. From 1969 through 1988, I was a principal of the consulting and contracting firm of Knox, Kaufman, Inc. From 1989 to present I have worked as an independent consultant and prospector.

SURVEY SPECIFICATIONS.

The gravity survey was carried out using a Scintrex CG3 Autogravimeter; a microprocessor based automated gravity meter with a readout resolution of 0.005 mgals and a standard deviation of less than 0.01 mgals. Its automatic capabilities such as stacking of readings, compensation for change in tilt by electronic sensors, software correction for residual temperature changes in temperature stabilized vacuum bottle, and storing and recording of data allow for highly accurate and more cost effective gravity surveying.

Values of observed gravity were obtained every 15 metres (30 metres in places) along the traverse at points located by 5" spikes driven flush with the ground. Tidal corrections were automatically calculated by the microprocessor of the instrument.

The elevations of the stations were obtained to 6-centimetre accuracy using a Sokkia total station and a prism reflector. The importance of station elevation accuracy is better understood by noting the rule of thumb correlation between observed gravity and elevation change namely 3 cms elevation difference makes for a 0.01 mgal observed gravity difference.

Station positioning was converted to UTM co-ordinates on the Gus traverse to calculate the latitude correction. No latitude correction was necessary on the Mel traverse as it was run east-west.

APPENDIX

DISCUSSION OF RESULTS.

General.

The resultant Bouguer anomaly is only relative, as it is not tied to any absolute gravity station; i.e. it is absolute plus or minus a constant.

The Bouguer anomaly is that part of the difference between the observed and theoretical gravity at any point on the earth which is purely due to lateral variations of density beneath the surface. To obtain this quantity observations have to be corrected to allow for changes in gravity with latitude and height and for the attraction of topography.

When the topography is relatively flat the elevation correction – that part assuming an infinite slab of thickness equal to the station height – can provide a sufficiently accurate method of reducing the data to sea level or for that matter any other datum.

If there are considerable irregularities in elevation then an allowance must be made for the departures from the infinite slab of rock between the observation point and sea level i.e. the gravity effects of all hills above the station heights and the mass deficiencies due to valleys – these are assumed to be filled with Bouguer density rock in the slab correction. Both of these will give positive corrections to the observed gravity.

Thus for the calculation of these terrain corrections recourse to a detailed elevation map is needed.

In the manual calculations of these corrections the area around the station is divided into suitable compartments and the gravitational effects estimated by overlaying the transparent graticule on the contoured elevation map and using the appropriate tables – Hammer method. The estimate of the inner circle elevation is aided by visual estimation by the operator using a clinometer, or in recent times with ground reflecting laser angle and distance measurements.

The terrain corrections can also be calculated on the computer from the digital gridded terrain model using the prism approach of Nagy and Kane. The near stations prism elevations can also be aided by operator observation as above. In this way effects of topography of up to 20 kilometres away can be calculated.

DISCUSSION OF RESULTS cont'd

Regional – Residual Separation.

The terrain corrected Bouguer gravity – often known as the extended Bouguer gravity – consists of long and short wavelength features. The long wavelength features reflect large geological features – the regional – whereas the shorter represent anomalies due to salt domes, local structures, ore bodies, etc. the object of the gravity search – the residual.

Manual methods of regional – residual separation are done by drawing smooth profiles through the data, and removing this datum from the data. It is very subjective but can be adjusted to reflect local geology.

In the objective polynomical fitting method of separation the observed data are used to compute by least squares the mathematically described surface giving the closest fit to the gravity field. This surface is considered to be the regional gravity, and the residual is the difference between the mapped field and the regional as determined. In practice the surface is expressed as a two-dimensional polynomical of order dependent on the complexity of the regional geology.

Mel Claims

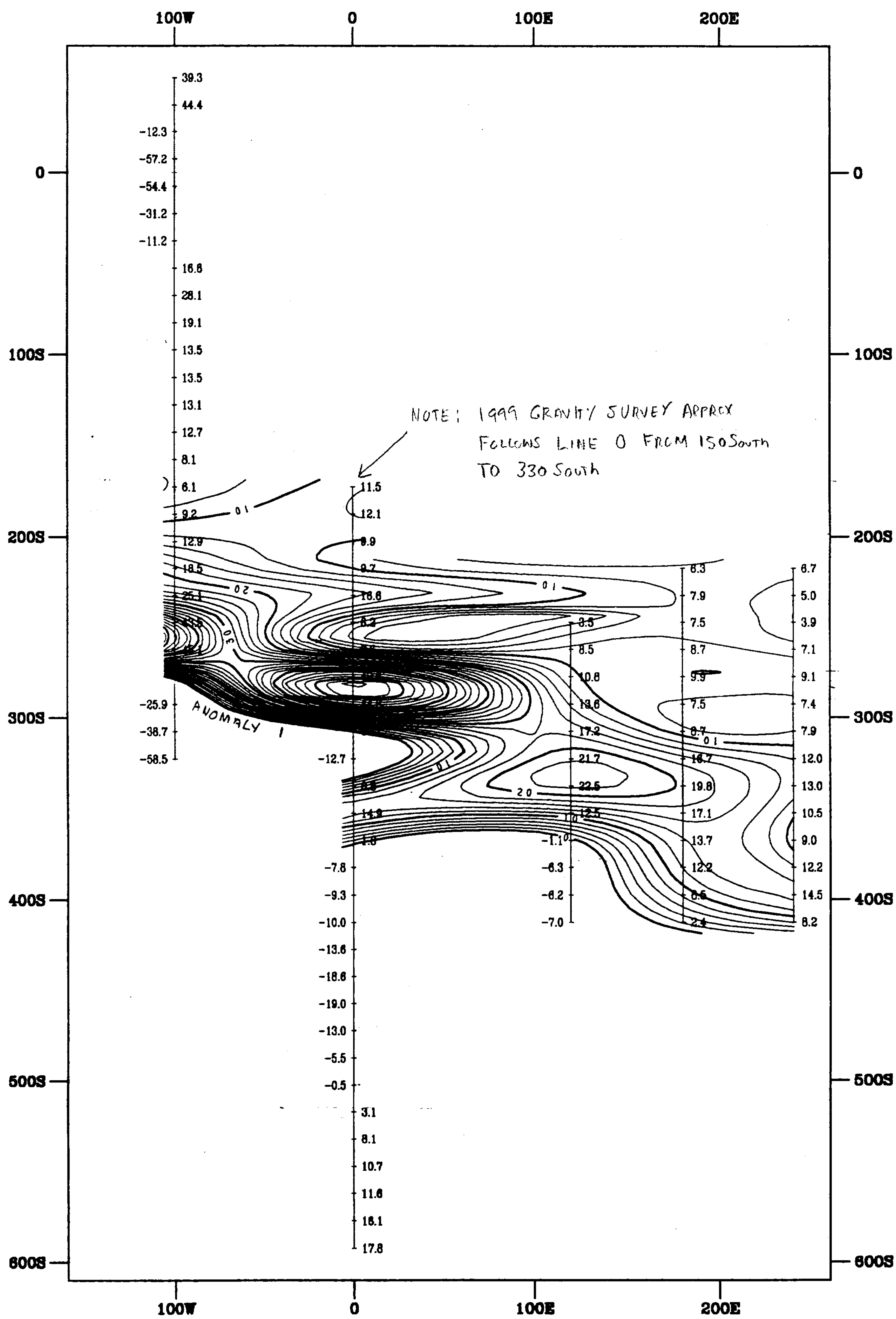
A 300 metre gravity traverse was conducted over L 300N (L-3) over an anomalous gold and zinc soil anomaly which trends across the line.

As can be seen from the gravity profile no anomalous response was observed indicating the absence of any denser mineralized body of reasonable at relatively shallow depth size beneath the portion surveyed.

Gus Claims

A 210-metre gravity traverse was conducted along L 0 to see if any mineralization of significant size might be the cause of a shallow VLF E.M. conductor previously located at the edge of the swamp.

The gravity profile exhibited no anomalous response of any sizeable excess mass – i.e. suggesting that heavier sulphide mineralization is not the causative source of the conductor. The slight drop off on the Bouguer gravity profile on the east end is due to terrain effects associated with the steep hill just to the east of the line.



Scale 1:2500

100 0 100 200

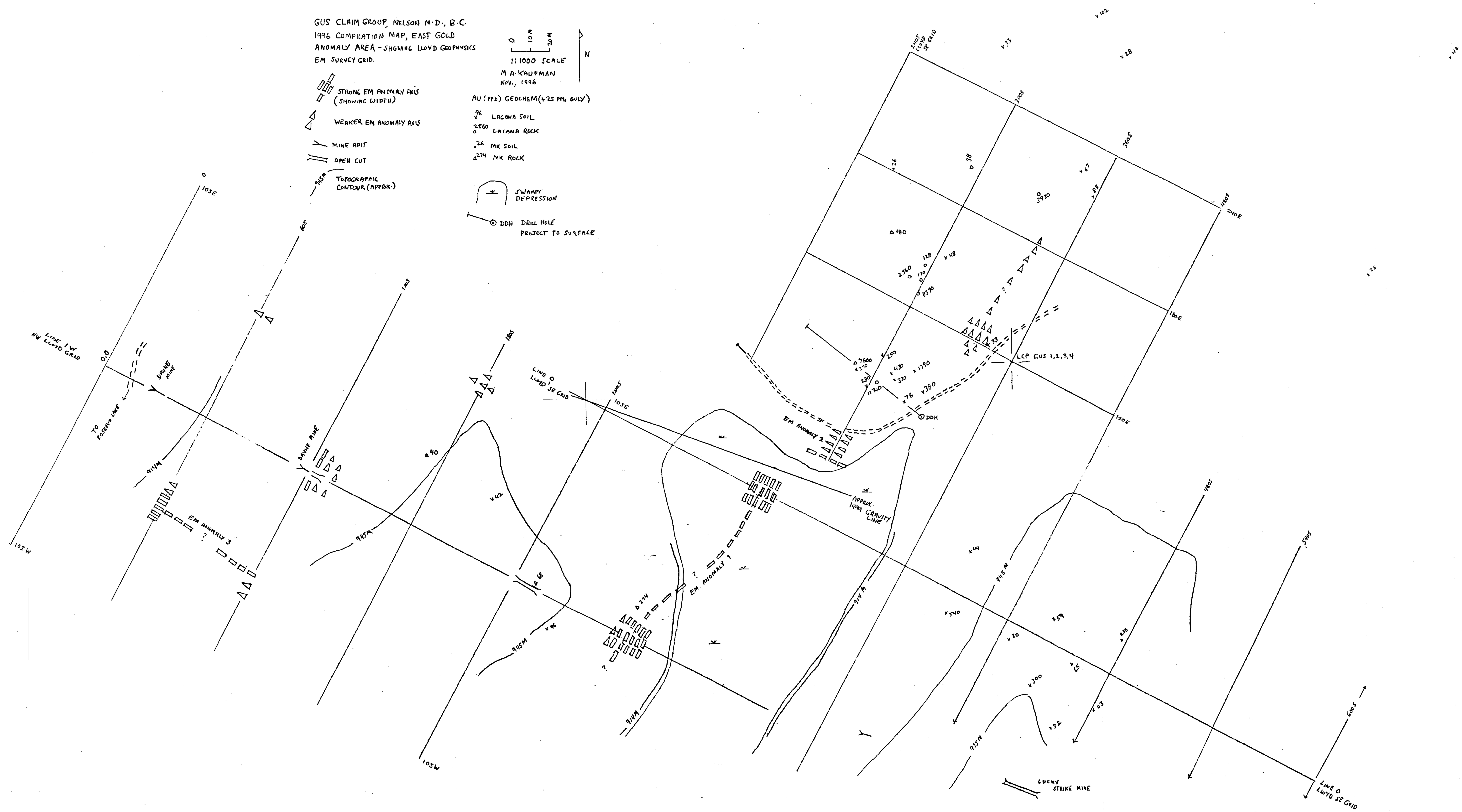
(feet)

M. A. KAUFMAN

GUS CLAIMS
Salmo, British Columbia

FRASER FILTER
NORTH–SOUTH LINES
Scale 1:2500 Drawing No: 5

LLOYD GEOPHYSICS INC.


GUS CLAIM GROUP, NELSON M.D., B.C.
1996 COMPILATION MAP, EAST GOLD
ANOMALY AREA - SHOWING LLOYD GEOPHYSICS
EM SURVEY GRID.
0 10 M 20 M
1:1000 SCALE
N
M.A. KAUFMAN
NOV., 1996
STRONG EM ANOMALY AXIS
(SHOWING WIDTH)
WEAKER EM ANOMALY AXIS
MINE ADIT
OPEN CUT
945M
TOPOGRAPHIC
CONTOUR (APPROX.)
AU (ppb) GEOCHEM (+25 ppb ONLY)
96 LACANA SOIL
2560 LACANA ROCK
26 MK SOIL
274 MK ROCK
SWAMPY
DEPRESSION
DDH DRILL HOLE
PROJECT TO SURFACE
LINE 1W
NW LLOYD GRID
DAYNE MINE
TO KOOTENAY LAKE
EM ANOMALY 3
EM ANOMALY 1
EM ANOMALY 2
LINE 0
LLOYD SE GRID
LCP GUS 1,2,3,4
APPROX. 1993 GRAVITY LINE
LUCKY STRIKE MINE

GUS CLAIMS, NELSON M.D.
PRELIM. GEOLOGIC MAP

AFTER GSC MAP 1148 A

9 ACTIVE FM., ARGILLITE, SLATE, LIMESTONE

8a NELWAY FM., LIMESTONE, CALCAREOUS ARGILLITE

7C LAIB FM., PHYLLITE & SCHIST SOME LIMEY

THRUST FAULT, DIP SE

POSTULATED THRUST FAULT

MAK MAPPING & COMPILATION

8aL NELWAY FM., MOSTLY DARK GRAY CARBONACEOUS LIMESTONE, LIGHT GRAY-GREEN LIMEY SILTSTONE AT EASTERN PART OF AU ANOMALY NE OF SWAMP

STRIKE & DIP, AIR PHOTO INTERP.

STRIKE & DIP MAPPED

FAULT OR FRACTURE ZONE MAPPED SHOWING DIP DIRECTION

FAULT OR FRACTURE ZONE, AIR PHOTO INTERP.

GOLD SOILS ANOMALY

Zn SOILS ANOMALY

SMALL PITS, MINERALIZED ROCK.

OPEN CUT

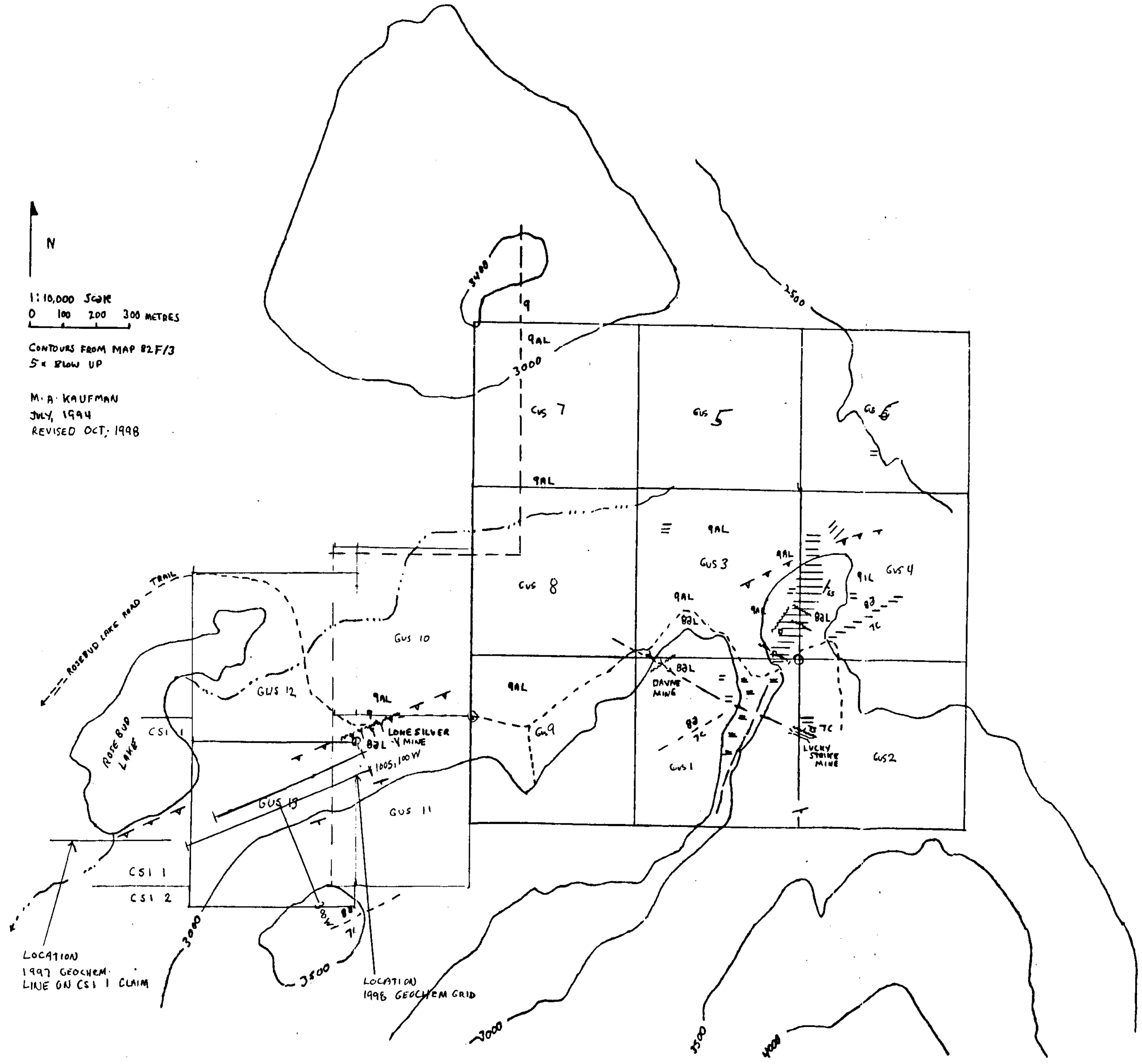
ADIT

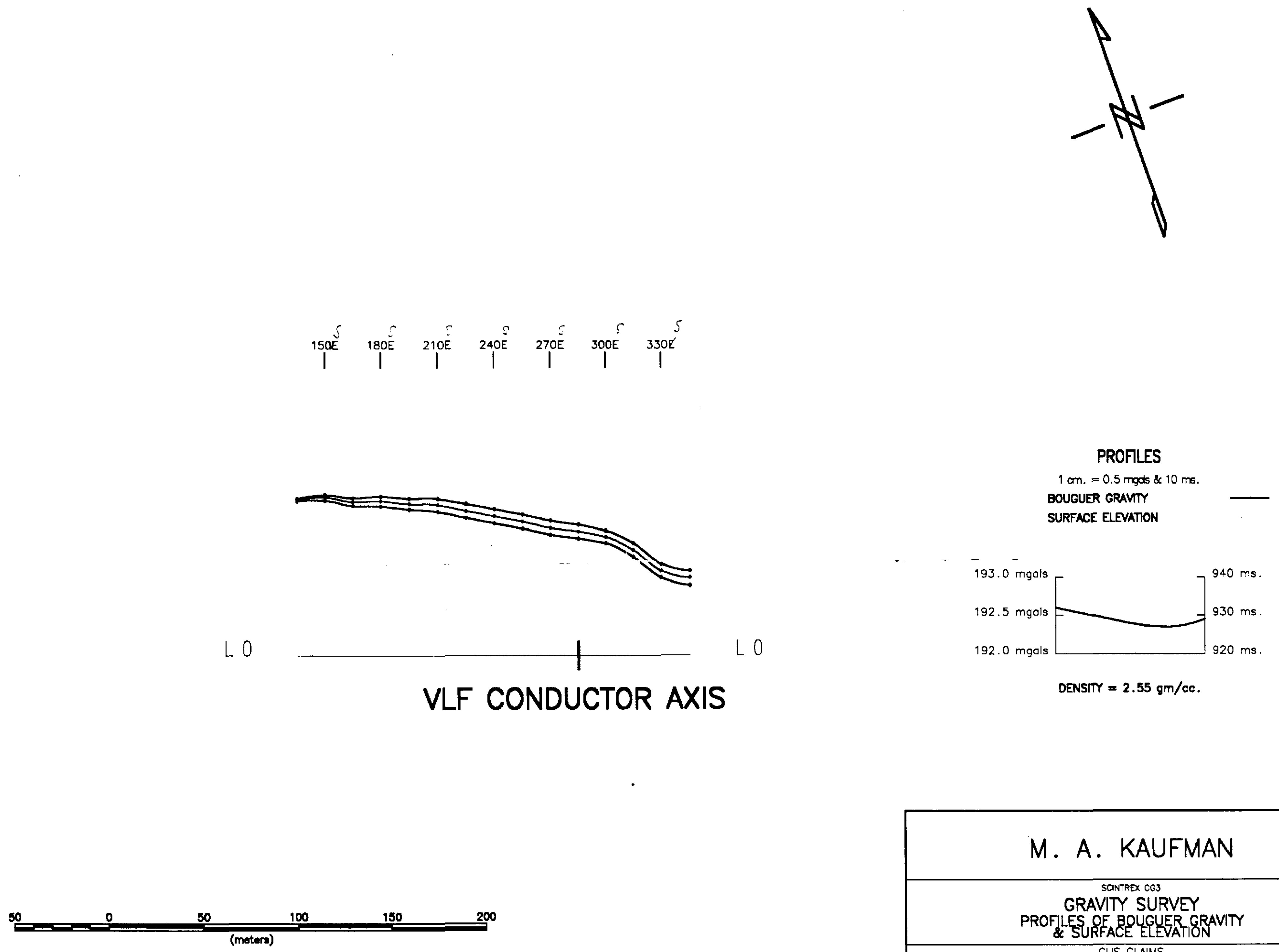
N

1:10,000 SCALE
0 100 200 300 METRES

CONTOURS FROM MAP 82F/3
5x BLOW UP

M. A. KAUFMAN
JULY, 1994
REVISED OCT. 1998



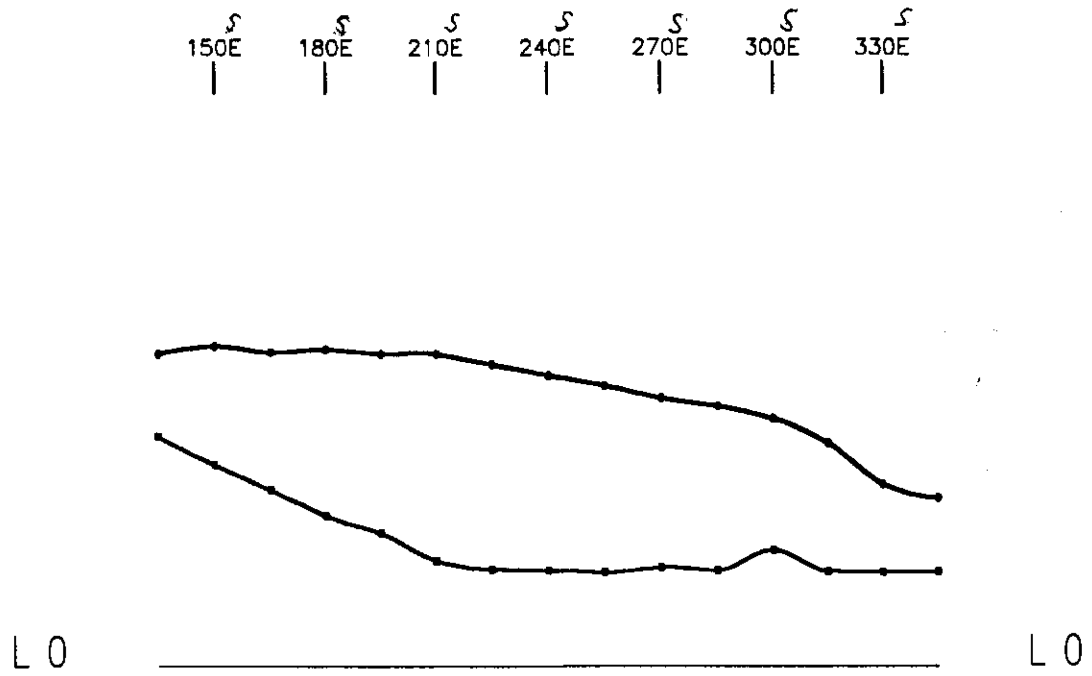


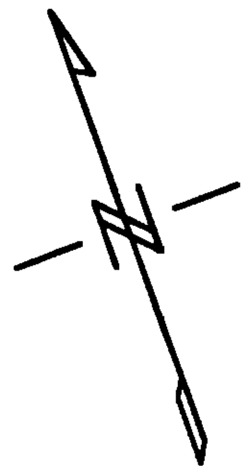
M. A. KAUFMAN

SCINTREX CG3
GRAVITY SURVEY
PROFILES OF BOUGUER GRAVITY
& SURFACE ELEVATION

GUS CLAIMS
ROSEBUD LAKE PROJECT, SALMO AREA, B.C.
AUGUST 1999

Map No. W570-2 Processed: August 1999
PETER E. WALCOTT & ASSOC. LTD.





PROFILES

1 cm. = 0.5 mgals & 25 ms.

BOUGUER GRAVITY

SURFACE ELEVATION

DENSITY = 2.55 gm/cc.

50 0 50 100 150 200

(meters)

M. A. KAUFMAN

SCINTREX CG3

GRAVITY SURVEY

PROFILES OF BOUGUER GRAVITY & SURFACE ELEVATION

GUS CLAIMS

ROSEBUD LAKE PROJECT, SALMO AREA, B.C.

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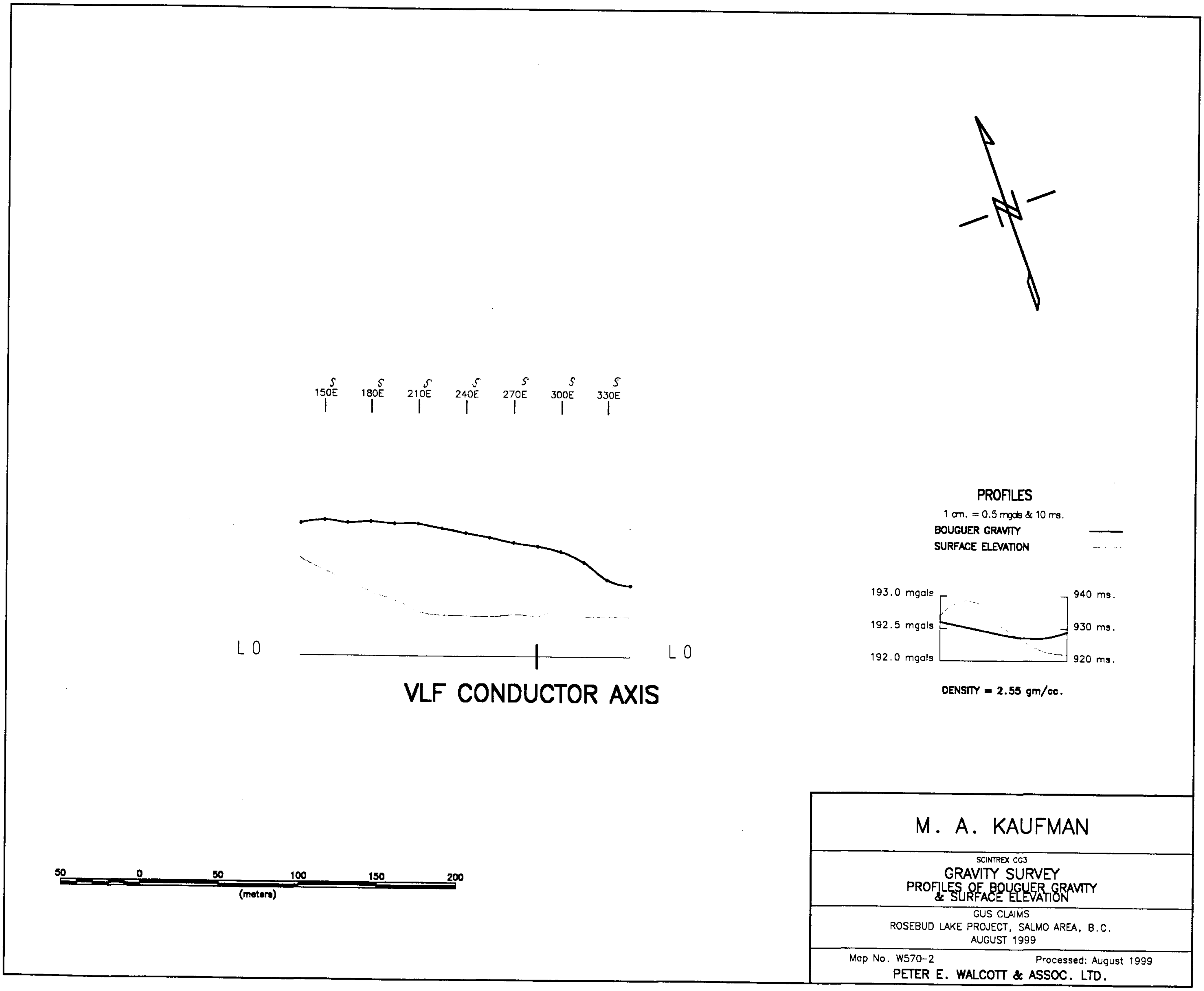
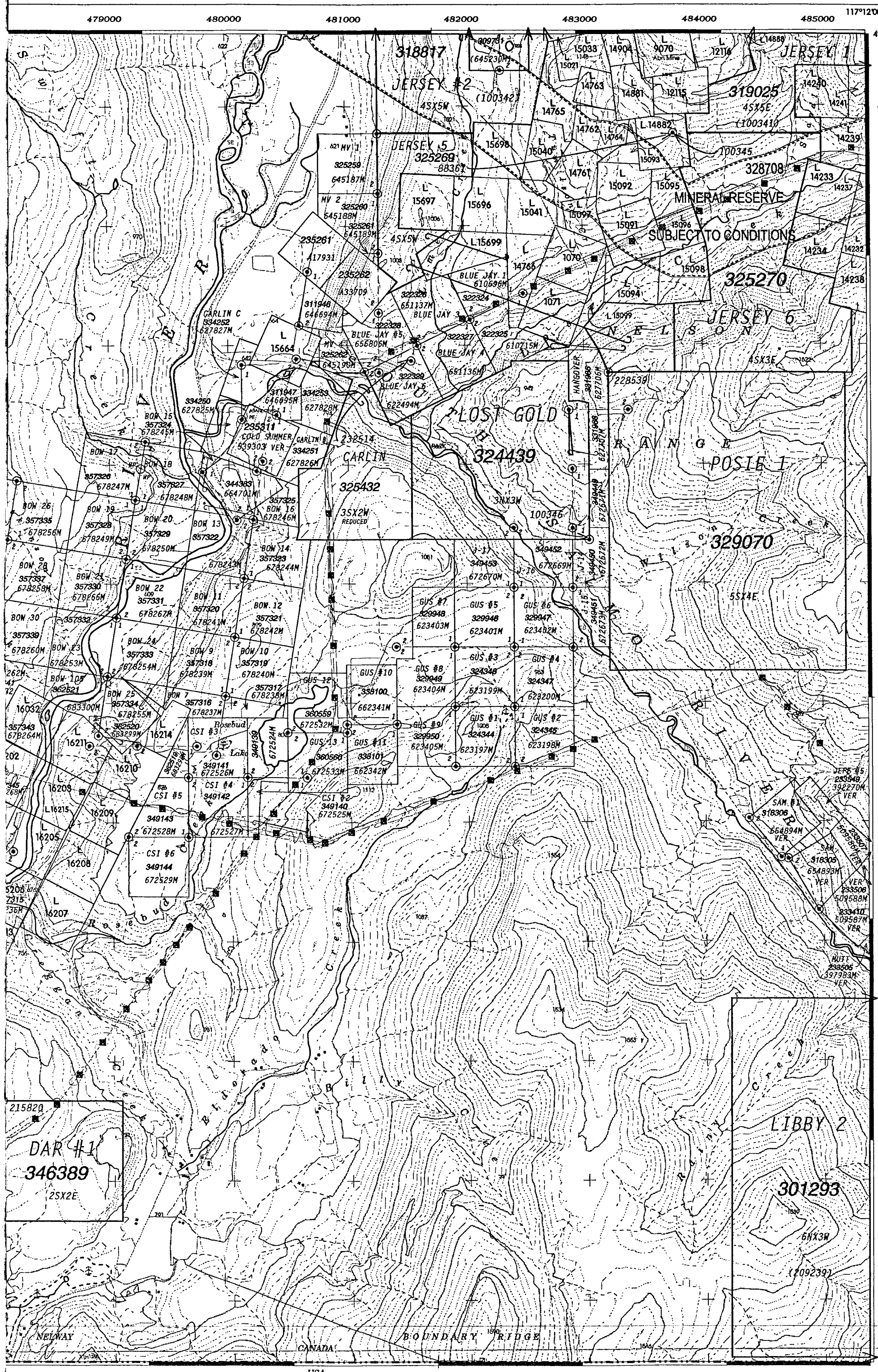

150E
180E
210E
240E
270E
300E
330E
L 0
L 0
VLF CONDUCTOR AXIS
PROFILES
1 cm. = 0.5 mgals & 10 ms.
BOUGUER GRAVITY
SURFACE ELEVATION
193.0 mgals
192.5 mgals
192.0 mgals
940 ms.
930 ms.
920 ms.
DENSITY = 2.55 gm/cc.
50 0 50 100 150 200
(meters)
M. A. KAUFMAN
SCINTREX CG3
GRAVITY SURVEY
PROFILES OF BOUGUER GRAVITY
& SURFACE ELEVATION
GUS CLAIMS
ROSEBUD LAKE PROJECT, SALMO AREA, B.C.
AUGUST 1999
Map No. W570-2
Processed: August 1999
PETER E. WALCOTT & ASSOC. LTD.

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

26,049



M082F004

MINERAL LEGEND

ADMINISTRATIVE AREAS

MINING DIVISIONS: NELSON

LAND DISTRICTS: KOOTENAY

ADMINISTRATIVE BOUNDARIES

MINING DIVISIONS

LAND DISTRICTS

PROVINCIAL BOUNDARY

INTERNATIONAL BOUNDARY

NO STAKING RESERVES

ECOLOGICAL RESERVES, PARKS, AND RECREATION AREAS

INDIAN RESERVES (SEE NOTES 1) I.R. 11

CONDITIONAL AREAS

SUBJECT TO CONDITION RESERVES, RELEASE REQUIRED RESERVES, SECTION 23 RECREATION AREAS, (SEE NOTES 2) AND URANIUM / THORIUM REGULATIONS (SEE NOTES 3)

MINERAL TENURE

MINERAL CLAIMS	
MINING LEASES	
INDUSTRIAL MINERAL TITLES	
MINING LEASE	ML
INDUSTRIAL MINERAL	IM
CLAIM NAME	EXAMPLE
TENURE NUMBER	234567
TAG NUMBER	243765
CLAIM SIZE (UNITS)	4NX3W
LEGAL POST	
WITNESS POST	WP
TENURE HOOK	
VERIFIED	VER
SURVEYED	SUR
CROWN GRANTED LOTS	CG

REVERTED C.G. MINERAL CLAIMS

OPEN FOR STAKING	OFS
NOT OPEN FOR STAKING	RCG
BID LOTS	BID
F LOTS	F

PLANIMETRIC LEGEND

DRAINAGE AND RELATED FEATURES

COASTLINE, DEFINITE / INDEFINITE

RIVER / STREAM, DEFINITE / INDEFINITE

LAKE, DEFINITE

LAKE, INDEFINITE

DAM

DYKE

SAND / GRAVEL BAR

FLOODED LAND

SWAMP / MARSH

FALLS / RAPIDS — Falls, Rapids

ICE FIELD / GLACIER

RESERVOIR, DEFINITE — Reservoir

RESERVOIR, INDEFINITE — Reservoir

CLIFF / SCARP

ESKER

SLIDE

LANDMARK FEATURE

MINE

PIER / WHARF

PIPELINE

QUARRY

TRANSMISSION LINE

TRANSPORTATION FEATURES

AIRFIELD

CUTLINE / SEISMIC LINE

RAIL LINE

ROAD, SURFACE PAVED

ROAD, SURFACE LOOSE

ROAD, SURFACE ROUGH / TRAIL

BRIDGE

CONTROL DATA

HORIZONTAL CONTROL POINT, MARKED

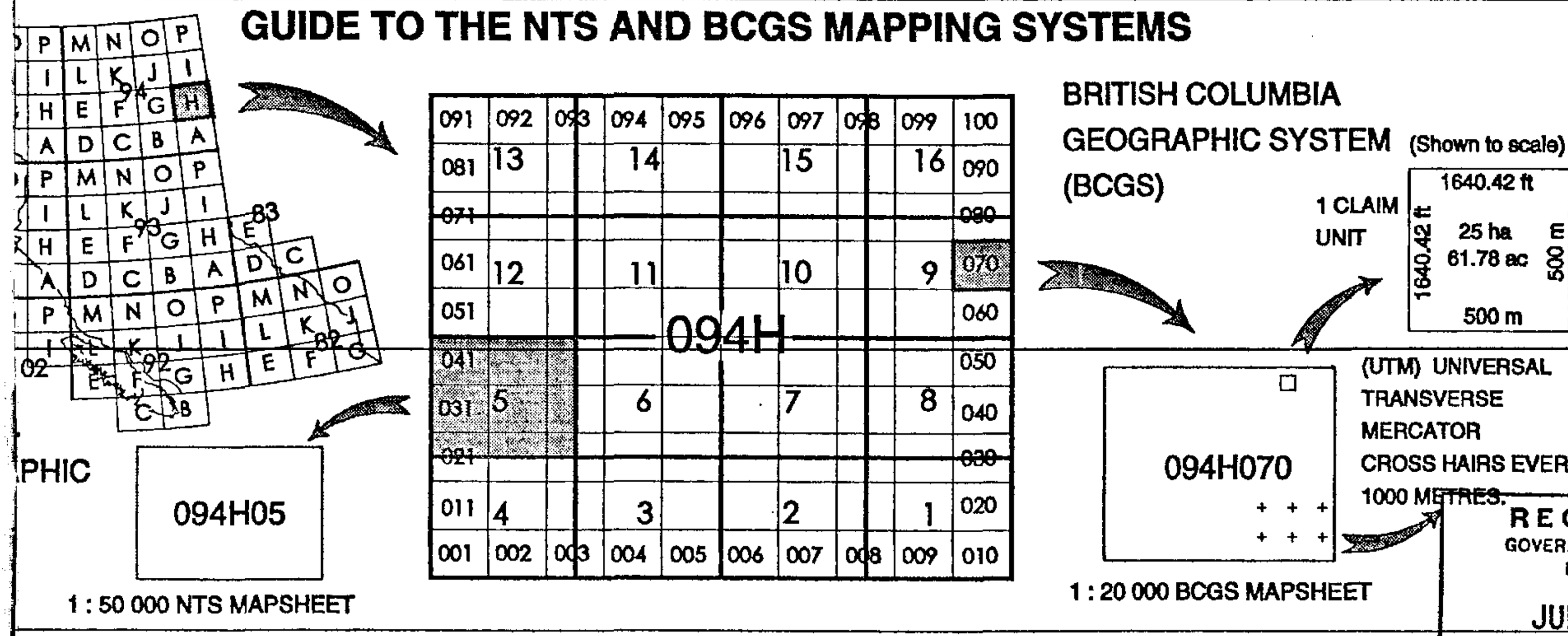
VERTICAL CONTROL POINT, MARKED

MAJOR CONTOUR

MINOR CONTOUR

CONTOUR INTERVAL - 20 METRES

GUIDE TO THE NTS AND BCGS MAPPING SYSTEMS



1 : 50 000 NTS MAPSHEET

BRITISH COLUMBIA GEOGRAPHIC SYSTEM (BCGS) (Shown to scale)

1 CLAIM UNIT — 1640.42 ft, 25 ha, 61.78 ac, 500 m

(UTM) UNIVERSAL TRANSVERSE MERCATOR CROSS HAIRS EVERY 1000 METRES.

1 : 20 000 BCGS MAPSHEET

T.N. 18° 40' Magnetic North

MAGNETIC DECLINATION AS OF 1995 DECEASING 7.6 ANNUALLY

082F013	082F014	082F015
082F003	082F004	082F005
USA	USA	USA

INDEX TO ADJOINING MAPS

1000 m 0 1 km

ORIGINAL PRODUCED AT 1: 20 000

LAST MAP UPDATE: 1999 FEB 01

Map Version: 0001

RECEIVED GOVERNMENT AGENT NELSON JUL 7 1999 NOT AN OFFICIAL RECEIPT TRANS #

BRITISH COLUMBIA

MINISTRY OF ENERGY AND MINES

ENERGY AND MINERALS DIVISION
MINERAL TITLES BRANCH

~~MINERAL TITLES REFERENCE MAP~~

M082F004

1983 North American Datum

U.T.M. Coordinate System - Zone 11

Compilation Date: 1998 JUL 15

F/3