



42B01SE0011 63.5551 PENHORWOOD

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63.5551
Volume 1 of 2
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omip 89-15

REPORT TO
ONTARIO MINERAL INCENTIVE PROGRAM
ON THE EXPLORATION PROJECT OF
HIGH-QUALITY QUARTZ VEINS
IN PENHORWOOD TOWNSHIP

DESIGNATED PROJECT OM89-015

VOLUME 1

BY ROSEVAL SILICA INC

February 12th, 1990



42B015E0011 63.5551 PENHORWOOD

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1 - INTRODUCTION

Roseval Silica Inc submitted its "Application for Designation, dated July 3rd 1989", to the Ontario Mineral Incentive program by Priority Post on the 8th of November 1989.

The Ontario Mineral Incentive Program on November 28th, 1989, issued to Roseval Silica Inc the "Designated Program Certificate Number OM89-015", copy attached.



Ministry of
Northern Development
and Mines

Ontario

Ministère du
Développement du Nord
et des Mines

The Ontario
Mineral Incentive
Program

Programme ontarien
d'encouragement à
l'exploration minière

Designated Program Certificate

Designation Number/
N° d'enregistrement

OM89-015

Certificat d'enregistrement à titre de programme désigné

Applicant - Name/Nom du demandeur

ROSEVAL SILICA INC.

Street Name and Number/Adresse (rue et numéro)

2008 LA SALLE BLVD.

City, Town, Village/Localité

SUDBURY

Province

ONTARIO

Postal Code/Code postal

P3A 2A5

The above named applicant's proposed mineral exploration program submitted on an OMIP Application for Designation form, and having met the requirements of the Ontario Mineral Incentive Program, has been approved and herewith certified and duly registered as a Designated Program.

Le présent certificat atteste que le projet de programme d'exploration minière, proposé par le demandeur au moyen d'une formule de demande d'enregistrement en vertu du POEEM, satisfait aux exigences du Programme ontarien d'encouragement à l'exploration minière et est approuvé et dûment enregistré à titre de programme désigné.

Period of designation is from

Year année	Month mois	Day jour		Year année	Month mois	Day jour
89	07	13	to	89	12	31

L'agrément porte sur la période du

Budgeted Total Expense

\$ 351,250.00

Montant total des dépenses prévues

Eligible Expenses

\$ 351,250.00

Dépenses admissibles

Maximum Grant (30% of Eligible Expenses)

\$ 105,375.00

Montant maximum de la subvention
(30% des dépenses admissibles)

Manager, Mineral Development Section/Directeur, Section du développement minéralogique

M. Zelford

Date

28/11/89

Note:

Applicants must notify the Minister within 30 days if the exploration work is discontinued before the proposed work is completed. Any applicant who fails to notify the Minister shall be ineligible to apply for further incentives under the OMEP Act, 1989 for a period of three years from the expiry of the designated project.

Remarque :

les demandeurs doivent informer le ministre dans un délai de 30 jours de toute suspension des travaux d'exploration survenant avant l'exécution au complet du programme proposé. Tout demandeur qui omet d'informer le ministre en cas de suspension des travaux perd pour une période de trois ans, à compter de l'expiration de la période d'enregistrement du projet, le droit de demander d'autres subventions en vertu de la Loi de 1989 sur le Programme d'exploration minière de l'Ontario.

Original - Applicant/demandeur

Part 2 - File
Partie 2 - Archives

2.0 - APPLICATION FOR GRANT

The OMIP Application for Grant, Form 0147 (10/89), duly filled and signed by Gaetan Lavallee, president, is included in the following pages 6, 7, 8 and 9.

2.1 Funding for the project:

Gaetan Lavallee and his wife Rita Lavallee, both of 150 de Brullon, Boucherville, Quebec, J4B 2J2, provided the Imperial Bank of Commerce with suitable guarantees for the CIBC to provide Roseval Silica Inc the line of credit which permitted funding of the project.

2.2 Material ownership changes:

August 17th 1989, La Societe de Consultants Maskan Inc, wholly owned by La Societe de Consultants Maskours Inc, purchased the minority shareholders of Roseval Silica Inc.

Two previous shareholders resigned as directors and officers of Roseval Silica Inc.

Gaetan Lavallee was re-elected director, president and secretary of Roseval Silica Inc.

Rita Lavallee was, at a later date, appointed treasurer of Roseval Silica Inc.

3.0 LIST OF EXPENDITURES CLAIMED

The list of expenditures claimed, tabulated by the date of the invoices submitted by the contractors, suppliers and consultants, is included in the pages 12, 13 and 14.

Copy of expenditures claimed and tabulated by the name of the recipient contractor, supplier or consultant, are included in Annex 2.

All expenditures claimed have been incurred within the designated period of July 13, 1989 to February 15, 1990.

ROSEVAL SILICA INC

LIST OF EXPENDITURES CLAIMED

INVOICE DATE	RECIPIENT	NATURE OF EXPENSE	AMOUNT
Jul 14 89	PUROLATOR COURIER	Sample delivery	\$ 24.10
Jul 21 89	BEDROCK CONSULTING	Reserves, geology	\$ 391.65
Jul 21 89	PUROLATOR COURIER	Sample delivery	\$ 26.73
Jul 23 89	GAETAN LAVALLEE	Strip & trench	\$ 1,404.67
Jul 28 89	WOODGREEN HOMES	Field office rental	\$ 706.86
Jul 31 89	CARON TRUCKING	Stripping & Trenching	\$ 670.00
Aug 01 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Aug 04 89	DENIS CARON	Reserves, geology	\$ 1,750.00
Aug 07 89	GAETAN LAVALLEE	Strip & trench	\$ 2,231.87
Aug 08 89	CARON TRUCKING	Stripping & Trenching	\$ 330.00
Aug 08 89	DENIS CARON	Reserves, geology	\$ 2,750.00
Aug 09 89	CARON TRUCKING	Stripping & Trenching	\$ 210.00
Aug 14 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Aug 15 89	LOUIS POULIOT	Strip & trench	\$ 3,225.00
Aug 15 89	SUPERIOR PROPANE	Field office heating	\$ 478.08
Aug 18 89	GAETAN LAVALLEE	Reserves	\$ 1,695.16
Aug 18 89	LOUIS POULIOT	Strip & trench	\$ 6,250.00
Aug 28 89	WOODGREEN HOMES	Field office rental	\$ 572.40
Aug 31 89	DENIS CARON	Surface geology	\$ 2,000.00
Sep 03 89	GAETAN LAVALLEE	Review cores	\$ 897.01
Sep 05 89	LOUIS POULIOT	Surface ass. costs	\$ 6,250.00
Sep 09 89	CARON TRUCKING	Stripping & Trenching	\$ 720.00
Sep 10 89	CARON TRUCKING	Stripping & Trenching	\$ 660.00
Sep 11 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 12 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 13 89	CARON TRUCKING	Stripping & Trenching	\$ 480.00
Sep 14 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 14 89	GAETAN LAVALLEE	Review cores	\$ 1,579.94
Sep 15 89	CARON TRUCKING	Stripping & Trenching	\$ 480.00
Sep 15 89	DENIS CARON	Surface geology	\$ 3,000.00
Sep 17 89	BEDROCK CONSULTING	Reserves, geology	\$ 720.00
Sep 18 89	LOUIS POULIOT	Surface ass. costs	\$ 6,250.00
Sep 19 89	NATURAL RESOURCES	Stripping, crown charges	\$ 377.75
Sep 20 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 21 89	CARON TRUCKING	Stripping & Trenching	\$ 480.00
Sep 22 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 22 89	COLBERT DRILLING	Diamond drilling	\$ 31,433.00
Sep 25 89	CARON TRUCKING	Stripping & Trenching	\$ 180.00
Sep 25 89	GAETAN LAVALLEE	Surface ass. costs	\$ 888.04
Sep 26 89	BEDROCK CONSULTING	Reserves, geology	\$ 1,500.00
Sep 26 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 27 89	CARON TRUCKING	Stripping & Trenching	\$ 480.00
Sep 28 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 28 89	WOODGREEN HOMES	Field office rental	\$ 572.40
Sep 29 89	LEO ALARIE AND SONS	Stripping & Trenching	\$ 42,554.69
Sep 29 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 29 89	PUROLATOR COURIER	Sample delivery	\$ 69.27
Sep 30 89	BEDROCK CONSULTING	Reserves, geology	\$ 3,000.00

ROSEVAL SILICA INC

Oct	02	89	CARON TRUCKING	Stripping & Trenching	\$	600.00
Oct	02	89	DENIS CARON	Surface geology	\$	2,750.00
Oct	03	89	CARON TRUCKING	Stripping & Trenching	\$	600.00
Oct	04	89	CARON TRUCKING	Stripping & Trenching	\$	600.00
Oct	05	89	CARON TRUCKING	Stripping & Trenching	\$	600.00
Oct	06	89	CARON TRUCKING	Stripping & Trenching	\$	300.00
Oct	07	89	GAETAN LAVALLEE	Strip & trench	\$	1,008.56
Oct	10	89	CARON TRUCKING	Stripping & Trenching	\$	600.00
Oct	11	89	CARON TRUCKING	Stripping & Trenching	\$	600.00
Oct	12	89	CARON TRUCKING	Stripping & Trenching	\$	600.00
Oct	13	89	LEO ALARIE AND SONS	Stripping & Trenching	\$	60,491.37
Oct	13	89	LEO ALARIE AND SONS	Stripping & Trenching	\$	28,708.02
Oct	13	89	BEDROCK CONSULTING	Reserves, geology	\$	2,700.00
Oct	13	89	CARON TRUCKING	Stripping & Trenching	\$	600.00
Oct	15	89	DENIS CARON	Reserves, samples & maps	\$	2,750.00
Oct	16	89	CARON TRUCKING	Stripping & Trenching	\$	600.00
Oct	17	89	CARON TRUCKING	Stripping & Trenching	\$	600.00
Oct	18	89	CARON TRUCKING	Stripping & Trenching	\$	600.00
Oct	19	89	CARON TRUCKING	Stripping & Trenching	\$	600.00
Oct	19	89	GAETAN LAVALLEE	Strip & trench	\$	1,626.15
Oct	20	89	CARON TRUCKING	Stripping & Trenching	\$	600.00
Oct	23	89	CARON TRUCKING	Stripping & Trenching	\$	600.00
Oct	24	89	CARON TRUCKING	Stripping & Trenching	\$	300.00
Oct	26	89	SUPERIOR PROPANE	Field office heating	\$	10.00
Oct	28	89	GAETAN LAVALLEE	Surface ass. costs	\$	189.81
Oct	28	89	WOODGREEN HOMES	Field office rental	\$	572.40
Oct	29	89	KIAN A. JENSEN	Geophysical surveys	\$	600.00
Oct	31	89	LEO ALARIE AND SONS	Stripping & Trenching	\$	3,462.81
Oct	31	89	BEDROCK CONSULTING	Reserves, geology	\$	3,600.00
Oct	31	89	B.J. McKAY	Surface, mapping	\$	449.22
Nov	02	89	LOUIS POULIOT	Strip & trench	\$	6,250.00
Nov	07	89	DENIS CARON	Reserves, samples & maps	\$	3,879.34
Nov	07	89	GAETAN LAVALLEE	Reserves	\$	1,008.56
Nov	09	89	B.J. McKAY	Surface, mapping	\$	447.50
Nov	09	89	WOODGREEN HOMES	Field office rental	\$	-429.30
Nov	09	89	WOODGREEN HOMES	Field office rental	\$	329.94
Nov	13	89	LEO ALARIE AND SONS	Stripping & Trenching	\$	2,584.36
Nov	13	89	LEO ALARIE AND SONS	Stripping & Trenching	\$	1,274.75
Nov	15	89	BEDROCK CONSULTING	Reserves, geology	\$	3,300.00
Nov	15	89	DENIS CARON	Reserves, samples & maps	\$	1,812.29
Nov	16	89	LOUIS POULIOT	Strip & trench	\$	6,250.00
Nov	17	89	PURULATOR COURIER	Sample delivery	\$	322.82
Dec	01	89	PURULATOR COURIER	Sample delivery	\$	53.99
Dec	08	89	PURULATOR COURIER	Sample delivery	\$	21.22
Dec	15	89	LOUIS POULIOT	Strip & trench	\$	3,409.09
Dec	15	89	PURULATOR COURIER	Sample delivery	\$	120.36
Jan	04	90	NATURAL RESOURCES	Stripping, crown charges	\$	315.98
Jan	05	90	PURULATOR COURIER	Sample delivery	\$	51.35
Jan	11	90	MVW WHITE	Surface, mapping	\$	75.00
Jan	12	90	PURULATOR COURIER	Sample delivery	\$	192.50
Jan	15	90	KIAN A. JENSEN	Geophysical line-cutting	\$	7,000.00
Jan	18	90	BEDROCK CONSULTING	Reserves, report	\$	8,229.73
Jan	19	90	PURULATOR COURIER	Sample delivery	\$	16.74

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Jan	25	90	REPROTECH .	Strip & Trench, report	\$	147.82
Jan	26	90	PURULATOR COURIER	Sample delivery	\$	66.04
Jan	30	90	LEO ALARIE AND SONS	Geophysics ass. costs	\$	1,500.00
Jan	30	90	BEDROCK CONSULTING	Reserves, report	\$	1,135.95
Feb	01	90	REPROTECH .	Reserves, report	\$	51.47
Feb	01	90	E.H. VAN HEES	Surface ass. costs	\$	3,898.55
Feb	01	90	E.H. VAN HEES	Stripping, washing	\$	10,349.86
Feb	01	90	E.H. VAN HEES	Report preparation	\$	1,000.00
Feb	01	90	E.H. VAN HEES	Report preparation	\$	3,000.00
Feb	05	90	LOUIS POULIOT	Reserve ass. costs	\$	6,000.00
Feb	06	90	KIAN A. JENSEN	Geophysics surveys	\$	7,000.00
Feb	06	90	REPROTECH .	Reserves, report	\$	98.38
Feb	12	90	REPROTECH .	Strip & Trench, report	\$	175.00
Total						\$329,446.25

4.0 DAILY LOG

Gaetan Lavalles log of activities on the Penhorwood exploration project is included in the pages 16 to 27.

The days worked and claimed are indicated by an " * ".

The total number of days claimed by Gaetan Lavalles on the Penhorwood exploration project is:

July	1989	18 days
August	1989	25 days
September	1989	23 days
October	1989	23 days
November	1989	10 days
December	1989	5 days
January	1990	11 days
February	1990	2 days

Total days claimed: 117 days

DAILY LOG OF GAETAN LAVALLEE

JULY 1989

DATE	ACTIVITIES
July 13 1989	* Informed that the Ontario Mineral Exploration Program, 1989, could be applicable to the Penhorwood exploration project of the quartz veins; outline project to shareholders.
July 14 1989	* Receive Alarie proposal for exploration project of the quartz veins; draft Alarie contract with lawyers.
July 15 1989	* Saturday, interview and make offer to Louis Pouliot, mining engineer, as Site Manager.
July 16 1989	* Sunday, travel to Timmins.
July 17 1989	* Visit sites; meet MNR. Pouliot accepts offer.
July 18 1989	* Work at sites; discuss contract with Alarie; meet directors. Dr Veldhuyzen, geologist, report received.
July 19 1989	* Receive and visit sites with potential investors. Visit positive but lack of geological data non-convincing.
July 20 1989	* Meet Mallette Inc; re-usage of Penhorwood access road.
July 21 1989	* Visit sites with Alarie; discuss revised scope; receive revised proposal.
July 22 1989	* Saturday, travel to Montreal. Study Veldhuyzen report and conclude that exploration work needed to interest investors.
July 23 1989	* Sunday, finalize scope of work and draft project budget. Sign Pouliot's contract.
July 24 1989	* Review draft Alarie contract, include Pouliot authority. Pouliot starts work immediately planning work and his location in Timmins.
July 25 1989	* Meet drilling contractor.
July 26 1989	* Travel to Timmins; visit sites with potential financial investors. Alarie confirm his readiness to mobilize as soon he receives proper guarantees that funds are in place.
July 27 1989	* Meet geological technician, Denis Caron; inspect road with MTO; visit sites with Pouliot and Denis Caron and review with them the scope of work and quality requirements of Direct Shipping High Quality quartz.
July 28 1989	* Meet Mallette Inc; finalize project scope of work at sites with Pouliot; sign contract with Denis Caron who reports to work immediately; approve cost of rental of trailer for site office.
July 29 1989	* Saturday, tour sites with Denis C, review standards of Direct Shipping High Quality quartz, explain his limit of responsibility and authority. Visit site 3 with Caron Trucking, authorize shovel and bulldozer to move in and start stripping at Site 3.
July 30 1989	* Sunday, travel to Sudbury.
July 31 1989	* Meet shareholders, present: scope of work, budget, bank guarantees required by Alarie, etc.; return Timmins. Caron Trucking moved in to site Site 3 and started

stripping.

Number of days worked and claimed "*" in July: 18 days

AUGUST 1989

DATE	ACTIVITIES
Aug 1 1989	* Alarie starts stripping Site 3; as work progresses continue the transfer of technology of Direct Shipping High Quality quartz to Denis C.
Aug 2 1989	* Stripping Site 3 continue; monitor supervision of quality done by Caron D.
Aug 3 1989	* At sites with Pouliot and Denis C. Brief them on sampling method and their reading. Authorize drilling of five holes and approve location selected by Caron D.
Aug 4 1989	* Travel to Montreal.
Aug 5 1989	Saturday.
Aug 6 1989	Sunday.
Aug 7 1989	* Finalize Alarie contract with lawyer.
Aug 8 1989	* Caron Trucking starts stripping Site 3.
Aug 9 1989	* Drill move on Site 3 and drill holes 89-01 to 89-05.
Aug 10 1989	* Travel to Timmins. Blast # 1 at cross-cut.
Aug 11 1989	* Examine samples of drill holes 89-01 to 89-05. Authorize samples to be shipped to SKW laboratory. Verbally confirm to Alarie that G.Lavallee will pay Alarie if Roseval cannot meet its obligations for the exploration work. Meet Van Hees discuss the property and approach to reserves.
Aug 12 1989	* Saturday, train Denis C in judging percussion drill samples potential as Direct Shipping High Quality or not. Request Caron Trucking to continue stripping site 3.
Aug 13 1989	* Sunday, travel to Sudbury; meet investor.
Aug 14 1989	* Meet Directors; agreement reached for Maskan to purchase minority shareholders. Sign letter of agreement with Alarie and G. Lavallee give Alarie written commitment of payment for exploration project. Caron Trucking stripping at site 3.
Aug 15 1989	* Travel to Timmins; finalize contract with Alarie; receive SKW results of analysis of drill samples.
Aug 16 1989	* Review results of assays with Denis C and revise work at sites; travel Sudbury.
Aug 17 1989	* Minority shares transferred to Maskan; travel to Montreal.
Aug 18 1989	* Review finances of Roseval with Clarkson, Gordon. Van Hees recommend diamond drilling and submit preliminary estimate.
Aug 19 1989	Saturday
Aug 20 1989	Sunday
Aug 21 1989	* Meet Canadian Imperial Bank of Commerce regarding their requirements for line of credit for Roseval with Maskan being shareholder.
Aug 22 1989	* Travel to Toronto & return Montreal; meet potential investor.
Aug 23 1989	* Meet Bank of Montreal, as alternate source for line of credit and also review with Bank of Commerce their requirements. Van Hees visit sites and recommend

- drilling program to better define reserves and assure investors.
- Aug 24 1989 * Inform Van Hees that Pouliot will plan with him the diamond drilling program. Meeting held and Pouliot reports.
- Aug 25 1989 * Discuss and authorize Van Hees drilling program and gives decision to mobilize.
- Aug 26 1989 Saturday
- Aug 27 1989 Sunday
- Aug 28 1989 * Diamond drill arrive on site 2 and starts drilling; Caron D. report on progress of drilling and following negative results on first hole to move to the second hole planned at Site 2A.
- Aug 29 1989 * Travel to Timmins and sites, review progress of cleaning and diamond drilling; air-cleaning is not satisfactory, alternate solution must be found.
- Aug 30 1989 * Sign contract with Alarie; negotiate High Pressure water cleaning with Van Hees; review progress of diamond drilling and read cores.
- Aug 31 1989 * Sign contract with Alarie; approve contract for high pressure water cleaning by Van Hees; travel to Montreal.

Number of days worked and claimed "*" in August: 25 days

SEPTEMBER 1989

DATE	ACTIVITIES
Sep 1 1989	* B of M refuses line of credit for Roseval. Meet CIBC and deposit personal guarantees of G. Lavallee and Rita Lavallee to put in place for Roseval necessary line of credit; meet investor. Van Hees report on diamond drilling and core reading. He recommend assaying for potential mineralization, expenses authorized.
Sep 2 1989	* Saturday, high-pressure water cleaning starts, high quality quartz veins cleans properly. Discuss results with Pouliot and authorize to accelerate such cleaning operations.
Sep 3 1989	Sunday
Sep 4 1989	Labor Day
Sep 5 1989	* Meet three potential investors; review finances with Clarkson & Gordon.
Sep 6 1989	* Travel to Timmins. Review progress of diamond drilling and Van Hees water cleaning.
Sep 7 1989	* Review operations, inspect surface of high quality quartz veins.
Sep 8 1989	* Visit sites; review drilling and cleaning progress and conclude that shovel should work ahead of Van Hees high pressure water cleaning.
Sep 9 1989	* Saturday, site meeting with Van Hees, review diamond drilling progress and high costs. Agree that Caron Trucking shovel would clean ahead of the high pressure water cleaning. Travel to Sudbury. Alarie strip the quartz veins. Meet and hire Bedrock Consulting to supervise work at Site 2 and 2A and prepare report on Geological surveys (Reserves)
Sep 10 1989	* Sunday, visit sites, satisfy with shovel-water cleaning operations. Review diamond drill cores.
Sep 11 1989	* Witness stripping and water cleaning operations at sites. Bedrock report for work, review scope of work, responsibility and authority of Pouliot.
Sep 12 1989	* Approve Bedrock proposal to carry out an E.M. Beep Mat survey at site 2A; meet Alarie at sites; review progress of work of water cleaning with stripping.
Sep 13 1989	* Sign authorization to Alarie for the exploration work at Site 2. Travel to Montreal.
Sep 14 1989	* Meet CIBC, line of credit in place; study results of diamond drilling. Deliver to SKW diamond drill core sample DDH6,181-183 for analysis.
Sep 15 1989	* Meet Toronto investor. Pouliot and Denis C recommend that further shovel stripping at Site 3 be done.
Sep 16 1989	Saturday, diamond drill moves to Site 2; Bedrock starts EM survey at site 2A.
Sep 17 1989	Sunday; Bedrock complete the E.M. Beep Mat survey.
Sep 18 1989	* Bedrock report on the EM survey. Decide not to pursue further since the overburden too thick for sensitivity

- of instrument used.
- Sep 19 1989 * Review progress, budget and schedule against plans and objectives.
 - Sep 20 1989 * Travel to Timmins; progress meeting with consultants; review detailed scope of work for ramp and stripping at Site 2 and 3.
 - Sep 21 1989 * Meet MMNA; inspect sites; review diamond drill cores; approve stripping at Site 2.
 - Sep 22 1989 * Inspect stripping progress at site 2; travel to Sudbury.
 - Sep 23 1989 * Saturday. Travel to Montreal.
 - Sep 24 1989 * Sunday. Pouliot reports on satisfactory stripping progress at Site 2, authorizes to continue.
 - Sep 25 1989 * Caron Trucking stripping with good progress at site 2.
 - Sep 26 1989 Stripping site 2
 - Sep 27 1989 Stripping site 2
 - Sep 28 1989 * Travel to Toronto; meet Investors; meet MNDM. Stripping site 2
 - Sep 29 1989 Stripping site 2
 - Sep 30 1989 * Saturday; read diamond drill core samples received.

Number of days worked and claimed "*" in September: 23 days

OCTOBER 1989

DATE	ACTIVITIES
Oct 1 1989	Sunday. Van Hees proceeding to wash Site 2.
Oct 2 1989	* Deliver drilling core sample to SKW laboratory. Receive progress report on washing and stripping at Site 2.
Oct 3 1989	* Travel to Timmins; progress meetings with consultant on washing and stripping and on ramp at Site 2.
Oct 4 1989	* Visit sites with MNM. Request additional stripping at Site 3. Bedrock report that ramp at site 2 reached a 20 foot face.
Oct 5 1989	* Inspect washing-stripping done at site 2 and stripping at Site 3. Inspect ramp and accept face at Site 2.
Oct 6 1989	* Travel Montreal via Sudbury; report progress to MNM.
Oct 7 1989	Saturday
Oct 8 1989	Sunday
Oct 9 1989	Thanksgiving day.
Oct 10 1989	* Review costs and schedule against budget.
Oct 11 1989	* Travel to Timmins. Visit sites with quartz consultant, report encouraging.
Oct 12 1989	* Visit sites with quartz expert.
Oct 13 1989	* Inspect quality of stripping and cleaning at Site 2 and 3; progress meeting with Alarie.
Oct 14 1989	* Saturday, inspect progress at sites.
Oct 15 1989	* Sunday, travel to Sudbury.
Oct 16 1989	* Travel to sites and Timmins. Hold meeting with consultant. Accept Jensen proposal for preliminary geophysics on quartz veins.
Oct 17 1989	* Meet MTO and inspect access road. Inspect stripping operations.
Oct 18 1989	* Travel to Montreal.
Oct 19 1989	Office work.
Oct 20 1989	* Review quality standards and quantity of samples with SKW.
Oct 21 1989	Saturday
Oct 22 1989	Sunday
Oct 23 1989	* Review and approve drill program to outline reserves for sites 3, 2 and 2A.
Oct 24 1989	* Receive excellent report from SKW analysis of DDH6, review diamond drill core logs.
Oct 25 1989	* Read diamond drill core samples. Jensen at site 3 doing preliminary geophysics to correlate readings between surface quartz veins and results of diamond drilling.
Oct 26 1989	* Deliver diamond drill core samples to SKW laboratory. Jensen continue at Site 3 and 2A.
Oct 27 1989	* Read second lot of diamond drill core samples.
Oct 28 1989	* Saturday; deliver second lot of diamond drill core samples to SKW laboratory.
Oct 29 1989	Sunday
Oct 30 1989	* Travel to Timmins; progress meeting with consultants; study Jensen report which establish correlation between diamond drilling and quartz veins.

● t 31 1989 * Inspect sites; meet with consultants; discuss Jensen report.

Number of days worked and claimed "*" in October: 23 days

NOVEMBER 1989

DATE	ACTIVITIES
Nov 1 1989	* Travel to Sudbury; meet consultant and investor.
Nov 2 1989	* Travel to Montreal.
Nov 3 1989	* Investor satisfied with progress.
Nov 4 1989	Saturday
Nov 5 1989	Sunday
Nov 6 1989	* Complete "Application for Designation".
Nov 7 1989	* Meet with MNDM, report on work progress, informed of customer's potential. Meet investor.
Nov 8 1989	* Receive Jensen proposed geophysics program; cannot proceed until Project designated. Mail: Application for Designation to OMIP.
Nov 9 1989	* Review and comments on Geophysics proposal and confirm to Pouliot that we must hold until project "designed".
Nov 10 1989	Prepare documents for Clarkson.
Nov 11 1989	Saturday
Nov 12 1989	Sunday
Nov 13 1989	* Examine plans and sections of Caron D. Make comments and requests revision to meet standards.
Nov 14 1989	Office work.
Nov 15 1989	* Caron D. finishes work; report on activities; discuss results. Pouliot reports on big snowstorm in Timmins, access road slippery and dangerous.
Nov 16 1989	* Travel to Toronto, meet investors.
Nov 17 1989	Office work.
Nov 18 1989	Saturday
Nov 19 1989	Sunday
Nov 20 1989	Penhorwood road closed by snowstorm.
Nov 21 1989	Office work.
Nov 22 1989	Office work.
Nov 23 1989	Office work.
Nov 24 1989	Office work, complete cost against budget.
Nov 25 1989	Saturday
Nov 26 1989	Sunday
Nov 27 1989	Office work.
Nov 28 1989	Office work.
Nov 29 1989	Office work.
Nov 30 1989	Office work.

Number of days worked and claimed "*" in November: 10 days

DECEMBER 1989

DATE	ACTIVITIES
Dec 1 1989	Office work.
Dec 2 1989	Saturday
Dec 3 1989	Sunday
Dec 4 1989	Office work.
Dec 5 1989	Meet with Clarkson, Gordon and review financial statements.
Dec 6 1989	OM 89-115, Certificate for Designation issued.
Dec 7 1989	Office work.
Dec 8 1989	Office work.
Dec 9 1989	Saturday
Dec 10 1989	Sunday
Dec 11 1989	Office work.
Dec 12 1989	Office work.
Dec 13 1989	Anxious about not receiving Certificate for Designation.
Dec 14 1989	* Informed that Mallette plowed partly the Penhorwood road. Discuss with Bedrock access to sites and review Jensen's proposal and prepare to approve geophysics contract.
Dec 15 1989	* Review objectives of geophysics program with geologist and mining investors.
Dec 16 1989	Saturday
Dec 17 1989	Sunday
Dec 18 1989	* Present results of Exploration Project to investors.
Dec 19 1989	* Discuss with Jensen the feasibility of assays on all diamond drill cores which showed mineralization. Discuss with and receive proposal from McKay to manage such program.
Dec 20 1989	OM 89-115 received with great joy. Might be enough time possible to complete geophysics program.
Dec 21 1989	Office work.
Dec 22 1989	* Revised OM 89-115 received. Geophysics program reviewed and decide to proceed with geophysics immediately after New Year.
Dec 23 1989	Saturday
Dec 24 1989	Sunday
Dec 25 1989	Christmas
Dec 26 1989	Office closed.
Dec 27 1989	Office closed.
Dec 28 1989	Office closed.
Dec 29 1989	Office closed.
Dec 30 1989	Saturday
Dec 31 1989	Sunday

Number of days worked and claimed "*" in December: 5 days

JANUARY 1990

DATE	ACTIVITIES
Jan 1 1990	New Year's day.
Jan 2 1990	Office closed.
Jan 3 1990	Office closed.
Jan 4 1990	Office closed.
Jan 5 1990	* Review draft reserves report, check calculations, inquire about Penhorwood access road.
Jan 6 1990	Saturday
Jan 7 1990	Sunday
Jan 8 1990	* Accept with comments the reserves report.
Jan 9 1990	* Review, fund and authorize geophysics to proceed immediately.
Jan 10 1990	* Review & comment on Shipping & Cleaning report.
Jan 11 1990	* Meet consultant re-conclusions of Exploration program; line cutting & geophysics will start as soon as road is snowplowed to sites.
Jan 12 1990	* Review & comment consultant Trenching report.
Jan 13 1990	Saturday
Jan 14 1990	Sunday
Jan 15 1990	* Finally able to arrange with Alarie to plow road to sites starting to-morrow.
Jan 16 1990	* Snowplowing done with line cutter following to sites.
Jan 17 1990	Office work.
Jan 18 1990	Office work.
Jan 19 1990	Office work.
Jan 20 1990	Saturday
Jan 21 1990	Sunday
Jan 22 1990	Draft OMIP report.
Jan 23 1990	* Receive reserves report, make second review of data and approve contents and final issue.
Jan 24 1990	Continue draft of OMIP report.
Jan 25 1990	* Expedite progress of geology report with Van Hees.
Jan 26 1990	Another big snowstorm in Timmins halts progress of line cutters.
Jan 27 1990	Saturday, snowstorm continue in Timmins, access road blocked again.
Jan 28 1990	Sunday
Jan 29 1990	* Review progress with Jensen and related geophysics problems, authorize to proceed in spite of problems.
Jan 30 1990	Office work.
Jan 31 1990	Update OMIP report.

Number of days worked and claimed "*" in January: 11 days

FEBRUARY 1990

DATE

ACTIVITIES

Feb 1 1990	Continue update OMIP report.
Feb 2 1990 *	Review all reports with Consultant.
Feb 3 1990	Saturday
Feb 4 1990	Sunday
Feb 5 1990	Expedite Geophysics and Surface drilling report.
Feb 6 1990 *	Final review of all reports with Consultant.
Feb 7 1990	Office work.
Feb 8 1990	Continue update OMIP report.
Feb 9 1990	Complete OMIP report.
Feb 10 1990	Saturday
Feb 11 1990	Sunday
Feb 12 1990	Printing and binding of OMIP report.
Feb 13 1990	Travel to Toronto: deliver report to OMIP
Feb 14 1990	
Feb 15 1990	

Number of days worked and claimed "*" in February: 2 days

5.0 MAIN TARGET OF THE PROJECT

The main target of the project as defined in item 1 of the Application for Designation was:

"The purpose and objective of the project is to explore for high quality QUARTZ veins which could yield DIRECT SHIPPING quartz (99.8 % SiO₂).

DIRECT SHIPPING meaning, crushing, screening, sizing, washing and inspecting prior to shipping."

The scope of work of the project as defined in item 8 of the Application for Designation was:

" the recommended exploration work project is to define if DIRECT SHIPPING high quality quartz can be located in either Site 2, 2A, 3. The work was carried as follows:"

" 8.1 - Stripping and cleaning of Site 2, 2A and 3 to explore the high-quality quartz veins and prepare a professional report on work done and conclusions to be arrived, complete with data and maps."

The report of Louis Pouliot, mining engineer, who directed the work is included in section 6.0 of this report to DMIP.

We believe that OMIP will find the report of Louis Pouliot on the stripping and cleaning of Site 2, 2A and 3: professional, complete with conclusions, data and maps.

" 8.2 - Trenching to reach a 30 foot high vein face of high quality quartz at both Site 2 and Site 3 and prepare a professional report on work done and conclusions to be arrived, complete with data and maps."

The report of Louis Pouliot, mining engineer, who directed the work is included in section 7.0 of this report to OMIP.

We believe that OMIP will find the report of Louis Pouliot on trenching: professional, complete with conclusions, data and maps.

" 8.3 - Limited Diamond drilling of Site 2, 2A and 3 to obtain information on structures and reserves below the 60 foot level and prepare a professional report on work done and conclusions to be arrived, complete with data and maps."

The report of E. H. Van Hees, Geological Services Inc, whom directed the diamond drilling program is issued as Volume 4 of this report to OMIP.

We believe that OMIP will find the report of E. H. Van Hees on the limited diamond drilling program: professional, complete with conclusions, data and maps.

" 8.4 - Geophysics along the axis of Site 2 and 2A, and along the axis of Site 3 to follow the high quality veins and their contacts and prepare a professional report on work done and conclusions to be arrived, complete with data and maps."

The report of Kian A. Jensen, Exploration and Consulting Services, whom contracted the geophysics work is issued as Volume 3 of this report of OMIP.

We believe that OMIP will find the report of Kian A. Jensen on the geophysics work done: professional, complete with conclusions, data and maps.

"8.5 - Percussion drilling to find and to outline and to prove reserves of DIRECT SHIPPING high quality quartz and prepare a professional report on work done and conclusions to be arrived, complete with data and maps."

The report of Bedrock Consulting whom supervised the percussion work is issued as Volume 2 of this report to OMIP.

We believe that OMIP will find the report of Bedrock Consulting on the reserves: professional, complete with conclusions, data and maps.

SECTION 6.0

STRIPPING AND CLEANING REPORT

by LOUIS POULIOT, CONSULTANT

REPORT ON
STRIPPING and CLEANING OF
HIGH-QUALITY QUARTZ VEINS
FOR ROSEVAL SILICA INC
IN PENHORWOOD TOWNSHIP

Prepared by:

LOUIS POULIOT CONSULTANT

February 9th, 1990

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2.0 WORK PROJECT	page 4
3.0 THE WORK	page 6
4.0 WORK SCHEDULE	page 8
5.0 WORKERS	page 9
6.0 CONCLUSIONS	page 10
APPENDIX 1, Map Site 2	page 12
APPENDIX 2, Map Site 2A	page 13
APPENDIX 3, Map Site 3	page 14

1 - LOCATION

Roseval Silica Inc has a property constituted of 66 mining claims and of three quarry permits in the Penhorwood Township, mining division of Sudbury, Ontario. (see page 5)

The access to the property is by the Kenogaming-Penhorwood access road which branches off from Highway 101, about 48 km west of Timmins, Ontario.

2 - WORK PROJECT

Roseval Silica objective was to explore the high-quality quartz veins previously indicated on sites 2, 2a and 3 (see page 5).

High-quality quartz veins which could yield DIRECT SHIPPING quartz (99.8 % SiO₂).

Roseval Silica retained Louis Pouliot, Consultant, to direct and supervise the exploration operations.

3 - THE WORK

3-1 SCOPE OF WORK

- Strip the overburden and the glacial debris laying on top of the High-Quality quartz veins at Sites 2 and 3, see map of sites 2 and 3, appendix 1 and 3.
- Clean the stripped High-Quality quartz veins at Sites 2 and 3.
- Clear of brushes and trees, the area of Site 2A and dig exploration trenches where high-quality quartz veins outcropped at site 2A, see map of site 2A, appendix 2.

3.2 EQUIPMENT USED

The stripping, clearing and trenching was done with:

- a mechanical shovel backhoe "John Deere - Model 490D" equipped with a 5/8 cubic yard bucket, and
- a mechanical shovel backhoe "FMC Link-Belt - Model LS 3400" equipped with a 1 cubic yard bucket, and
- a mechanical shovel backhoe "Caterpillar Model 245" equipped with a 2.75 cubic yard bucket, and
- a bulldozer "
- a bulldozer "Caterpillar - Model D-8".

The cleaning of the high-quality quartz veins was done:

- at the beginning with a blow pipe connected to an 850 cfm "JOY" portable air compressor, and
- afterwards with a high pressure water jet nozzle and a Wajax Mark 111 fire pump.

3.3 CONTRACTORS

The work was contracted to:

Shovels : - Claude Caron Trucking
Timmins, Ontario
- Leo Alarie and Sons
Timmins, Ontario

Bulldozer: - Claude Caron Trucking
Timmins, Ontario
- Leo Alarie and Sons
Timmins, Ontario

Blow pipe: - Leo Alarie and Sons
Timmins, Ontario

Water jet: - E.H.Van Hees, Geological Services
Timmins, Ontario.

4 - WORK SCHEDULE

The work was done:

At the Sites:

Site 2, from July 13 to November 3, 1989

Site 2a, from July 13 to November 15, 1989

Site 3, from July 13 to November 15, 1989

At the office, from July 13 to February 09, 1990

5 - WORKERS

The workers were for:

CLAUDE CARON TRUCKING

Claude Caron, backhoe operator

Marc Caron, backhoe operator

DENIS CARON, geological consultant

Denis Caron, geological technician

LEO ALARIE & SONS

Norbert Lacroix, backhoe operator

Doug Bryant, bulldozer operator

LOUIS POULIOT, CONSULTANT

Louis Pouliot, mining engineer

E.H. VAN HEES

R. Arbic

R. Blais

T. Corbett

7- CONCLUSIONS

7.1 QUANTITIES

CLEARING

Site 2	:	1,450	square meters
Site 2A	:	4,700	square meters
Site 3	:	6,800	square meters
Total	:	12,950	square meters cleared

TRENCHING

Site 2A	:	600	square meters of trenches dug.
---------	---	-----	--------------------------------

STRIPPING

Site 2	:	1,800	cubic meters
Site 2A	:	800	cubic meters
Site 3	:	5,700	cubic meters
Total	:	8,300	cubic meters of overburden removed

CLEANING	:	3,650	square meters cleaned
----------	---	-------	-----------------------

7.2 QUALITY

The High-Quality quartz veins were available for geological exploration and mapping at the three Sites, 2, 2A and 3.

The High-Quality quartz veins were well defined to proceed with trenching to reach a 30 foot high vein face of high quality quartz at both Site 2 and Site 3.

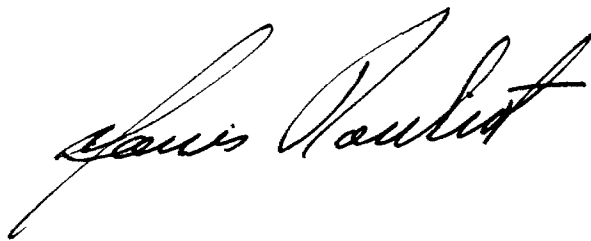
Sufficient information on the High-Quality quartz veins at sites 2A and 3 were available to justify further explorations on those sites.

The method of stripping with the combination of backhoe and bulldozer followed by high pressure water jet was most efficient to clean the high-quality quartz veins for surface geological evaluation.

7.3 OBJECTIVES

The objectives of the Stripping and Cleaning program have been fully met:

- The high quality quartz veins were stripped, and
- The high quality quartz veins were cleaned for further exploration work.



LOUIS POULIOT, consultant

APPENDIX 1
MAP SITE 2

SECTION 7.0

TRENCHING REPORT

by LOUIS POULIOT, CONSULTANT

REPORT ON
TRENCHING to REACH
HIGH-QUALITY QUARTZ VEINS
FOR ROSEVAL SILICA INC
IN PENHORWOOD TOWNSHIP

Prepared by:

LOUIS POULIOT CONSULTANT

February 9th, 1990

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6.0 CONCLUSIONS	page 10
APPENDIX 1, Map Site 2	page 12
APPENDIX 2, Map Site 3	page 13
APPENDIX 3, Sections 12, 13, 14, 15, 16,	page 14

1 - LOCATION

Roseval Silica Inc has a property constituted of 66 mining claims and of three quarry permits in the Penhorwood Township, mining division of Sudbury, Ontario. (see page 5)

The access to the property is by the Kenogaming-Penhorwood access road which branches off from Highway 101, about 48 km west of Timmins, Ontario.

2 - WORK PROJECT

Roseval Silica objective was to explore the high-quality quartz veins previously indicated on sites 2, 2a and 3 (see page 5).

High-quality quartz veins which could yield DIRECT SHIPPING quartz (99.8 % SiO₂).

Roseval Silica retained Louis Pouliot, Consultant, to direct and supervise the exploration operations.

3 - THE WORK

3-1 SCOPE OF WORK

- Remove the surface waste at site 2,
- Mine a 15% ramp to reach the face at site 2,
see Map Site 2, Appendix 1.
- Build an access road to site 3, see Map Site 3, Appendix 2.
- Mine a cross-cut through the wall veins at site 3,
see Map Site 3, Appendix 2.
- Drive a cross-cut to open a 30 foot high face at site 3,
see Map Site 3, Appendix 2, and sections 16, 15, Appendix 3.
- Mine low and medium quality quartz, at site 3, to establish
the 30 foot high face of direct shipping high quality quartz,
see sections 14, 13, 12, Annex 3.

- 3.2 EQUIPMENT USED

The trenching was done with:

- an autonomous rock drill "Gardner-Denver, Model 350006V"
equipped with 1-7/8" diameter rods for 3" diameter boring, and
- a mechanical shovel backhoe "FMC Link-Belt - Model LS 3400"
equipped with a 1 cubic yard bucket, and
- a mechanical shovel backhoe "Caterpillar Model 245" equipped
with a 2.75 cubic yard bucket, and
- a bulldozer "Caterpillar - Model D-8", and
- four haulage trucks of 25 tons capacity, and

4 - WORK SCHEDULE

The work was done:

At the sites :

Site 2, from September 12 to September 30, 1989

Site 3, from August 1 to September 15, 1989

In the Office: from July 13 to February 9, 1990

5 - WORKERS

The workers were for:

DENIS CARON, geological consultant

Denis Caron, geological technician

LEO ALARIE & SONS

Brian	Alarie
Pierre	Belanger
Ray	Boissonneault
Alain	Boucher
Marc	Bouvier
Doug	Bryant
J	Bryant
Roger	Charbonneau
Don	Delarosbil
John	Doey
Paul	Dupras
Philippe	Grzela
Yvon	Guillemette
Don	Hardy
Carl	Hoover
Don	Kruzick
Normand	Lamarche
Norbert	Lacroix
Ken	Lejeune
Wayne	Pattison
Michael	Plouffe
Henry	Recko
Martin	Rowe
Ray	St-Onge
Luc	Soucy
Carson	Stewart
Dave	Underwood

LOUIS POULIOT, CONSULTANT

Louis Pouliot, mining engineer

7- CONCLUSIONS

7.1 QUANTITIES

ACCESS ROAD

Site 3 : A 10 meters by 175 meters access road built.

CLEANING

Site 2 : 1,450 tonnes of material removed

CROSS CUT

Site 3 : A 10 meters by 55 meters cross cut built.

FACE

Site 2 : 20 foot high face into high quality quartz.

Site 3 : 30 foot high face into high quality quartz.

TRENCHING

Site 2 : 4,850 tonnes of material removed

Site 3 : 23,850 tonnes of material removed

Total : 28,700 tonnes of material removed

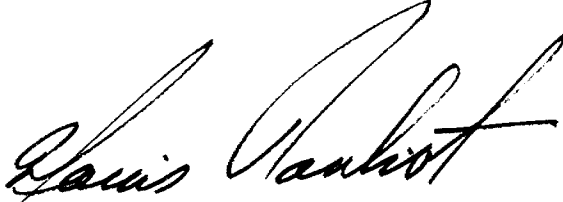
7.2 QUALITY

The face mined at both sites 2 and 3 reached direct shipping high quality quartz veins.

7.3 OBJECTIVES

The objectives of the Trenching program were fully met:

- Trenching reached veins of direct shipping high quality quartz veins at both sites 2 and 3.

A handwritten signature in cursive script, reading "Louis Pouliot". The signature is written in black ink and is positioned above the typed name.

LOUIS POULIOT, consultant

APPENDIX 1

MAP SITE 2

8.0 RECOMMENDATIONS

OMIP suggested that comments be made about the effectiveness of this program or suggestions for future improvements.

Our first comment is to gratefully thanks the Ministry of Northern Development and Mines for such a program. We prepared this report to OMIP as a note of thanks for the OMIP program.

Whithout the promise of such a program, work on the exploration of the quartz veins at Penhorwood would probably not have been initiated as done in 1989.

Our second comment is to recommend that such program be continued and enlarged if feasible.

Our third comment is to recommend that the confidentiality of the data and reports be maintained for a minimum period of at least two years.

9.0 - CONCLUSIONS

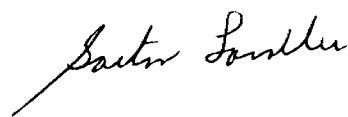
- The quartz veins at Site 2, 2A and 3 were explored.
- High quality quartz veins of Direct Shipping quality were defined at Site 3 with 274,855 tonnes either drill indicated or inferred.
- More geological work will be required to further define reserves at Site 2 and Site 3.

This will be the target of the following years.

- Large quantity of quartz has been outlined at Site 2A and 3 and in general on the Penhorwood property.

Plans will be made to target Site 2A and 3 and the other most suitable areas.

- Mineralization has been outlined at Site 2A. Plans will be prepared to identify the area with the best potential.



GAETAN LAVALLEE

10.0 ACKNOWLEDGEMENTS

Roseval Silica Inc wishes to express its appreciation and thanks to people which have made the OMIP program available and to those people of the Ministry of Northern Development and Mines which have given Roseval Silica Inc and ourselves in particular, advice, support and guidance.

Honorable Hugh P. O'Neil, Minister,
Ministry of Northern Development
and Mines

Mr Edward R. Solonyka,	acting supervisor incentives
Mr J.A. Mc Intosh,	regional director
Mr D. Geoffrey Mines,	development advisor
Dr P.E. Giblin,	manager Sudbury region
Mr James C. Ireland,	staff geologist

ANNEX 1
E.M. BEEP MAT REPORT

ANNEX 2

LIST AND COPY OF EXPENDITURES CLAIMED

ROSEVAL SILICA INC

LIST OF EXPENDITURES

LEO ALARIE AND SONS

INVOICE DATE	RECIPIENT	NATURE OF EXPENSE	AMOUNT
Sep 29 89	LEO ALARIE AND SONS	Stripping & Trenching	\$ 42,554.69
Oct 13 89	LEO ALARIE AND SONS	Stripping & Trenching	\$ 60,491.37
Oct 13 89	LEO ALARIE AND SONS	Stripping & Trenching	\$ 28,708.02
Oct 31 89	LEO ALARIE AND SONS	Stripping & Trenching	\$ 3,462.81
Nov 13 89	LEO ALARIE AND SONS	Stripping & Trenching	\$ 2,584.36
Nov 13 89	LEO ALARIE AND SONS	Stripping & Trenching	\$ 1,274.75
Jan 30 90	LEO ALARIE AND SONS	Geophysics ass. costs	\$ 1,500.00
Total			\$ 140,576.00



LEO ALARIE AND SONS LTD.
GENERAL CONTRACTORS
 P.O. BOX 912
 HIGHWAY 101 WEST
 TIMMINS, ONTARIO
 P4N 7H1

PHONE: 705-268-2106
 FAX: 705-268-3571

INVOICED TO:

Roseval Silica
 150 DE BRULLON
 Boucherville, P.Q.
 J4B-2J2

DATE: September 29, 1989

YOUR ORDER NO.:

INVOICE NO.: T89-09- 65

TERMS: NET 1½% PER MONTH AFTER 30 DAYS

DATE	DESCRIPTION	REFERENCE	QTY UNIT	PRICE	EXTENSION
	RE: CERTIFICATE #1				
	Phase 1 site 3 Pre-Production program				
	PROGRESS CERTIFICATE #1		1 LS	\$42554.69	\$42554.69
	LESS 10% HOLDBACK		-1 LS	\$4255.47	(\$4255.47)
	AS PER ATTACHED				
<p><i>Program degen 203 ds Remise de 13 Oct 89</i></p>					
<p><i>Cheque received 89-10-13 M. L...</i></p>					
JOB NO.:	A-8939	COMMENTS:	<p><i>COP 09/29/89 Jean Beaudet</i></p>		TOTAL: \$38,299.22



LEO ALARIE AND SONS LTD.
GENERAL CONTRACTORS
 P.O. BOX 912
 HIGHWAY 101 WEST
 TIMMINS, ONTARIO
 P4N 7H1

PHONE: 705-268-2106
 FAX: 705-268-3571

VOICED TO:

Roseval Silica
 150 DE BRULLON
 Boucherville, P.Q.
 J4B-2J2
ATTN: GATAEN LAYALEE

DATE: October 13, 1989

YOUR ORDER NO.:

INVOICE NO.: T89-10- 19

TERMS: NET 1½% PER MONTH AFTER 30 DAYS

DATE	DESCRIPTION	REFERENCE	QTY. UNIT	PRICE	EXTENSION
	RE: CERTIFICAT NO. 2R				
	FOR WORK DONE TO SEPT.15/89				
	PHASE 1 SITE 3 PRE-PRODUCTION PROGRAM				
	PROGRESS CERTIFICATE NO. 2R		1 LS	\$60491.37	\$60491.37
	LESS 10% HOLDBACK		-1 LS	\$6049.14	(\$6049.14)
	<p><i>Program de phase 2/10 de Phase 1 du 27 octobre 1989</i></p>				
				<p><i>paid by check 89-10-27 Denis Alarie</i></p>	
OB NO.:	A-8939	COMMENTS:	<p><i>COP [Signature] 13 Oct 89</i></p>		TOTAL: \$54,442.23



LEO ALARIE AND SONS LTD.
GENERAL CONTRACTORS
 P.O. BOX 912
 HIGHWAY 101 WEST
 TIMMINS, ONTARIO
 P4N 7H1

PHONE: 705-268-2106
 FAX: 705-268-3571

VOICED TO:

Roseval Silica
 150 DE BRULLON
 Boucherville, P.Q.
 J4B-2J2
 GEATAN LAYALLEE

DATE: October 13, 1989

YOUR ORDER NO.:

INVOICE NO.: T89-10- 24

TERMS: NET 1½% PER MONTH AFTER 30 DAYS

DATE	DESCRIPTION	REFERENCE	QTY. UNIT	PRICE	EXTENSION
	RE: SITE 2 PRE PRODUCTION PROGRAM				
	SITE 2 PRE PRODUCTION PROGRAM				
	PROGRESS CERTIFICATE #1		1 LS	\$28708.02	\$28708.02
	LESS 10% HOLDBACK		-1 LS	\$2870.80	(\$2870.80)
<p><i>Partly charged #1 cost engaged at Term 3/10/89</i></p> <p><i>Paid November 3/89</i> <i>Jean C. Guenette</i></p>					
JOB NO.:	J-8918	COMMENTS:	COP. <i>[Signature]</i> 13 Oct 89		TOTAL: \$25,837.22



LEO ALARIE AND SONS LTD.
GENERAL CONTRACTORS
 P.O. BOX 912
 HIGHWAY 101 WEST
 TIMMINS, ONTARIO
 P4N 7H1

PHONE: 705-268-2106
 FAX: 705-268-3571

INVOICED TO:

Roseval Silica
 150 DE BRULLON
 Bouchervill, P.Q.
 J4B-2J2
 Louis Pouliot

DATE: October 31, 1989

YOUR ORDER NO.:

INVOICE NO.: T89-10- 114

TERMS: NET 1½% PER MONTH AFTER 30 DAYS

DATE	DESCRIPTION	REFERENCE	QTY. UNIT	PRICE	EXTENSION
	RE: PHASE1 SITE 3 PRE PRODUCTION PROGRAM				
	FOR PERIOD AUG 23 TO SEPT 15, 1989				
	PROGRESS CERTIFICATE #2		1 LS	\$3462.81	\$3462.81
	LESS 10% HOLDBACK		-1 LS	\$346.28	(\$346.28)
	AS PER ATTACHED				
<i>Paid by check 241 P de 1- Dec 89</i>					
JOB NO.:	A-8939	COMMENTS:	COP 9/11/89		TOTAL: \$3,116.53

ROSEVAL SILICA INC

LIST OF EXPENDITURES

BEDROCK CONSULTING

INVOICE DATE	RECIPIENT	NATURE OF EXPENSES	AMOUNT
Jul 21 89	BEDROCK CONSULTING	Reserves, geology	\$ 391.65
Sep 17 89	BEDROCK CONSULTING	Reserves, geology	\$ 720.00
Sep 26 89	BEDROCK CONSULTING	Reserves, geology	\$ 1,500.00
Sep 30 89	BEDROCK CONSULTING	Reserves, geology	\$ 3,000.00
Oct 13 89	BEDROCK CONSULTING	Reserves, geology	\$ 2,700.00
Oct 31 89	BEDROCK CONSULTING	Reserves, geology	\$ 3,600.00
Nov 15 89	BEDROCK CONSULTING	Reserves, geology	\$ 3,300.00
Jan 18 90	BEDROCK CONSULTING	Reserves, report	\$ 8,229.73
Jan 30 90	BEDROCK CONSULTING	Reserves, report	\$ 1,135.95
Total			\$ 21,877.33

BEDROCK CONSULTING
 SUITE #1, 398 EVA AVE.
 SUDBURY, ONT. P3C 4N3

OUR NO. RA	000479
DATE	JULY 21 1989
CUSTOMER'S ORDER	
GEOLOGIST SALESMAN	B. KOMARECHKO.
TERMS	PAYABLE ON
F. O. B.	RECEIPT OF BILLING

ROSEVAL SILICA INC

SOLD TO ~~W. Komarechko & Geology Associates Inc~~

SHIP TO TIONAGA QUARTZ

ADDRESS PENHORWOOD TWP. VIA

INVOICE

	STAMPED NOTE ON DETERMINATION				
	OF QUARTZ DENSITY - 1/2 HR	10	00		
	ROSEVAL'S CALLS FOR MAY ^{ADD'L} BILLING	90	14		
	" " " JUNE	291	51		
	TOTAL			391	65
	Partly chkd rtr d. trnd dr 21 July 89				

P. 208 200 209

BEDROCK CONSULTING

Suite #1, 396 Eva Ave.
Sudbury, Ont. P3C 4N3
(705) 673-0873

RBK

CLIENT ROSEVAL SILICA INC
ADDRESS 150 de Brullon, Boucherville Quebec J4B2J2
PROJECT TIONAGA QUARTZ
LOCATION PEN HORWOOD TWP. ONTARIO

3
DATE: <u>NOV 15, 1989</u>
CONTRACT
PREPARED BY: <u>B. KOMARECHKA</u>
TERMS: PAYABLE WITHIN 2 WEEKS OR 2% MONTHLY COMPOUNDED INTEREST WILL BE CHARGED.

INVOICE

NOV 1	GEOLOGICAL CONSULTING FOR SUPERVISION OF				
NOV 15	DRILL PROGRAM & RESERVE REPORT				
	11 DAYS X 300. ⁰⁰ /DAY INCLUDING	3	300		
	APPROX 3 DAYS SPENT LOADING & CLEANING				
	RAILCARS				
	1, 2, 3, 6, 7, 8, 9, 10, 13, 14, 15				
	TOTAL			3	300
	NOTE: EXPENDITURES & PHONE BILLS TO FOLLOW.				

*pay forward
2/25
de Komarechka
12/20/1989*

BEDROCK CONSULTING

Suite #1, 396 Eva Ave.
Sudbury, Ont. P3C 4N3
(705) 673-0873

No 000028

DATE: JAN 18, 1989

CONTRACT

PREPARED BY
Robert G. Komarek

TERMS: PAYABLE WITHIN 2 WEEKS
OR 2% MONTHLY COMPOUNDED
INTEREST WILL BE CHARGED.

CLIENT ROSEVAL SILICA INC
ADDRESS 150 de Brullon, Boucherville, Quebec J4B2J2
PROJECT TIONAGA QUARTZ
LOCATION PENHORWOOD TOWNSHIP

INVOICE

NOV. 16 / 89	FEE FOR CONSULTING SERVICES				
^{to} JAN. 18 / 90	; RELATED EXPENDITURES	8229	93		
	TOTAL			8229	93

BEDROCK CONSULTING

Suite #1, 396 Eva Ave.
Sudbury, Ont. P3C 4N3
(705) 673-0873

No 000030

DATE: JAN 30, 1990

CONTRACT

PREPARED BY
Robert G. Komarek

TERMS: PAYABLE WITHIN 2 WEEKS
OR 2% MONTHLY COMPOUNDED
INTEREST WILL BE CHARGED.

CLIENT ROSEVAL SILICA INC
ADDRESS 150 de Brullon, Boucherville, Quebec, J4B2J2
PROJECT TIONAGA QUARTZ
LOCATION PENHORWOOD TOWNSHIP

INVOICE

JAN 17 to	Consulting Services as requested.				
JAN 30 1990					
	TOTAL			1,135	95

ROSEVAL SILICA INC

LIST OF EXPENDITURES

CLAUDE CARON TRUCKING AND EQUIPMENT RENTALS

INVOICE DATE	RECIPIENT	NATURE OF EXPENSES	AMOUNT
Jul 31 89	CARON TRUCKING	Stripping & Trenching	\$ 670.00
Aug 01 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Aug 08 89	CARON TRUCKING	Stripping & Trenching	\$ 330.00
Aug 09 89	CARON TRUCKING	Stripping & Trenching	\$ 210.00
Aug 14 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 09 89	CARON TRUCKING	Stripping & Trenching	\$ 720.00
Sep 10 89	CARON TRUCKING	Stripping & Trenching	\$ 660.00
Sep 11 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 12 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 13 89	CARON TRUCKING	Stripping & Trenching	\$ 480.00
Sep 14 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 15 89	CARON TRUCKING	Stripping & Trenching	\$ 480.00
Sep 20 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 21 89	CARON TRUCKING	Stripping & Trenching	\$ 480.00
Sep 22 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 25 89	CARON TRUCKING	Stripping & Trenching	\$ 180.00
Sep 26 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 27 89	CARON TRUCKING	Stripping & Trenching	\$ 480.00
Sep 28 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 29 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 02 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 03 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 04 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 05 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 06 89	CARON TRUCKING	Stripping & Trenching	\$ 300.00
Oct 10 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 11 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 12 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 13 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 16 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 17 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 18 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 19 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 20 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 23 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 24 89	CARON TRUCKING	Stripping & Trenching	\$ 300.00
Total			\$ 19,690.00

ONTARIO INC. 757203
 CLAUDE RON TRUCK
 AND EQUIPMENT RENT
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

0.00
 833.14 +
 1075.91 +
 424.48 +
 897.9 +
 850.54 =
 4081.97

OUR NUMBER	078955
DATE	
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	31 July 85

SOLD TO ROSEVAL
150 DEBRU
 SHIPPED TO BOUCHERVILLE QUEBEC J4B2S2
 ADDRESS _____ VIA _____

INVOICE

LOADING OF 217.52 TONS OF MINUS 5"	163.14		
FLOAT SERVICE 100 AND OUT 400.00		400.00	
RENTAL OF SHOVEL 4.5 HR @ 60.00	270.00		
<i>More Profit</i> TOTAL		833.14	

1/08/89

*Port on down 100
 163.14
 400.00
 270.00
 833.14*

BROWNLIN B32

ONTARIO INC. 757203
 CLAUDE C/ IN TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

OUR NUMBER	078957
DATE	Aug 1/89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEVAL SIKICH
150 DEBRULLOIN
 SHIPPED TO BOUCHERVILLE QUEBEC J4B2S2
 ADDRESS _____ VIA _____

INVOICE

LOADING OF MINUS 5" FOR KIDD CREEK 634.54 TON @ 75¢ per TON			475.91
RENTAL OF SHOVEL 10 HRS @ 60.00			600.00
<i>More Profit</i> TOTAL			1075.91

BROWNLIN B32

CLAUDE CARON TRUCKING
 TIMMINS, ONT. PAN 4C3

OUR NUMBER	078959
DATE	Aug 8 / 89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO: ROSEVAL SILICA
 150 DEBRULLON
 SHIPPED TO: BOUCHERVILLE QUEBEC
 (Kidd creek)
 ADDRESS: VIA 54B 252

INVOICE

LOADING OF MINUS 5" FOR KIDD CREEK				
757.22 TONS @ 75¢			567	90
RENTAL OF SHOVEL 5 1/2 HRS @ 60.00			530	00
<i>Total</i>			897	90
<i>Yves Pouliot</i>				

BROWNLIN 832

CLAUDE CARON TRUCKING
 TIMMINS PAN 4C3

OUR NUMBER	078960
DATE	August 9 / 89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO: ROSEVAL SILICA
 150 DEBRULLON
 SHIPPED TO: BOUCHERVILLE QUEBEC (54B 252)
 ADDRESS: VIA

INVOICE

LOADING OF MINUS 5" FOR KIDD CREEK				
854.09 TONS @ 75¢ PER TON			\$ 640	57
RENTAL OF SHOVEL 3 1/2 HRS @ 60.00 PER HRS			210	00
<i>Total</i>			850	57
<i>Yves Pouliot</i>				

BROWNLIN 832

Claude Caron Trucking & Equipment
Timmins Ont. P4N4C3

OUR NUMBER	078961
DATE	August 14 / 89
CUSTOMER ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO Roseval Silica
150 De Brulion
SHIPPED TO Boucherville Québec
ADDRESS _____ VIA _____

INVOICE

RENTLE OF JD 490D Excavator				
For 10 hrs at 60\$ per hrs				
For Exploration Program				
12 th de 172 de 30 de 189 à Preston				
<i>Louis Paul</i> Total			\$ 600 ⁰⁰	
14/08/89				

BROWNLIN B32

ONTARIO INC. 757203
 CLAUDE ARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4G3
 267-1280

OUR NUMBER	078981
DATE	SEPT 11/89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEVALE SILICA
150 DEBRAYLON
 SHIPPED TO BOUCHERVILLE QUEBEC
 ADDRESS _____ VIA _____

INVOICE

RENTAL OF SHOVEL				
STRIPPING OF SITE #9				
10 hrs @ 60.00				
<i>Hours Total</i>				
<i>13 Sept 89</i>				
				600.00

BROWNLINE B32

ONTARIO INC. 757203
 CLAUDE ARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4G3
 267-1280

OUR NUMBER	078983
DATE	SEPT 12/89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEVAL SILICA
150 DEBRAYLON
 SHIPPED TO BOUCHERVILLE QUEBEC
 ADDRESS _____ VIA _____

INVOICE

RENTAL OF SHOVEL				
STRIPPING OF SITE #3				
10 hrs @ 60.00				
<i>Hours Total</i>				
<i>13 Sept 89</i>				
				600.00

BROWNLINE B32

ONTAR INC. 757203
 CLAUDE CARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

OUR NUMBER	078985
DATE	SEPT 13/89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEVAL SILICA
150 DEBRULLON
 SHIPPED TO BOUCHERVILLE QUEBEC
 ADDRESS _____ VIA _____

INVOICE

RENTAL OF SHOVEL				
Stripping of site #3				
8 Hrs @ 60. ⁰⁰ per Hr.				
<i>Yves Landry</i> Total				480. ⁰⁰
14 Sept 89				

BROWNLIN B32

ONTAR INC. 757203
 CLAUDE CARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

OUR NUMBER	078987
DATE	SEPT 14/89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEVAL SILICA
150 DEBRULLON
 SHIPPED TO BOUCHERVILLE QUEBEC
 ADDRESS _____ VIA _____

INVOICE

RENTAL OF SHOVEL				
Stripping of site #3				
10 Hrs @ 60. ⁰⁰				
<i>Yves Landry</i> Total				600. ⁰⁰
15 Sept 89				

BROWNLIN B32

ONTARIO INC. 757203
 CLAUDE UNION TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

OUR NUMBER	078989
DATE	SEPT 15 / 89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO: ROSEVALE SILICA
150 DEBRULLON
 SHIPPED TO: BOUCHERVILLE QUEBEC
 ADDRESS _____ VIA _____

INVOICE

RENTAL OF SHOVEL				
STRIPPING OF SITE #3				
8 Hrs @ 60.00				
<i>Jean Pouliot</i> Total				480.00
15 Sept 89				

BROWLINE B32

ONTARIO INC. 757203
 CLAUDE CARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

500. +
 480. =
 1080.

078993
 Sept 20 / 89
 CUSTOMER'S ORDER
 SALESMAN
 TERMS
 F.O.B.

SOLD TO ROSEVALE SIBICA
150 DEBRULLON
 SHIPPED TO BOUCHERVILLE QUEBEC
 ADDRESS _____ VIA _____

INVOICE

RENTAL OF SHOVEL			
10 hrs @ 60.00			
Stripping at SITE #3			
<i>Paul Paulin</i>			
<i>21 Sept 89</i>			
			600.00

BROWNLIN B32

ONTARIO INC. 757203
 CLAUDE CARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

078995
 DATE SEPT 21 189
 CUSTOMER'S ORDER
 SALESMAN
 TERMS
 F.O.B.

SOLD TO ROSEVALE SIBICA
150 DEBRULLON
 SHIPPED TO BOUCHERVILLE QUEBEC
 ADDRESS _____ VIA _____

INVOICE

RENTAL OF SHOVEL			
8 hrs @ 60.00			
Stripping at SITE #2			
<i>Paul Paulin</i>			
<i>21 Sept 89</i>			
			480.00

BROWNLIN B32

ONTARIO INC. 757203
 CLAUDE CARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

OUR NUMBER	076709
DATE	Oct. 2 / 89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEVALE SILICA INC.
150 DEBRULLOU
 SHIPPED TO BOUCHERVILLE QUEBEC
 ADDRESS _____ VIA _____

INVOICE

RENTAL OF SHOVEL					
Stripping of size # 2					
10 Hrs @ 60.00 per Hr					
<i>St. At</i> <i>Renault</i> <i>3/10/89</i>					600 00

BROWNLIN B32

ONTARIO INC. 757203
 CLAUDE CARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

OUR NUMBER	076711
DATE	Oct 3 / 89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEVALE SILICA
150 DEBRULLOU
 SHIPPED TO BOUCHERVILLE QUEBEC
 ADDRESS _____ VIA _____

INVOICE

RENTAL OF SHOVEL					
Stripping of size # 2					
<i>St. At</i> <i>Renault</i> <i>3/10/89</i>					600 00

BROWNLIN B32

500. +
 400. +
 300. +
 200. +
 100. =
 2700.

ONTARIO INC. 757203
 AUDE CARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

OUR NUMBER	076713
DATE	Oct. 4/89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO SILICA Inc
150 DEBRULON
 SHIPPED TO Beauherville Quebec
 ADDRESS _____ VIA _____

INVOICE

RENTAL OF CHANNEL				
STRIPPING OF SIZE #2				
10 km @ 60.00 Hr.				
<i>per order 20th from 27 July 89</i>				
<i>602</i>				
<i>12/10/89</i>				

BROWNLINE B32

ONTARIO INC. 757203
 CLAUDE CARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

OUR NUMBER	076715
DATE	Oct 5, 89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEVALE SILICA Inc.
150 DEBRULON
 SHIPPED TO Beauherville Quebec
 ADDRESS _____ VIA _____

INVOICE

RENTAL OF CHANNEL				
STRIPPING OF SIZE #3				
10 Hr @ 60.00				
<i>per order 20th from 27 July 89</i>				
<i>602</i>				
<i>12/10/89</i>				
<i>Total</i>				

BROWNLINE B32

ONTARIO INC: 757203
 CLAUDE CARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 867-1280

OUR NUMBER	076725
DATE	Oct. 11/89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEVAL SILICA INC.
150 DEBRULON
 SHIPPED TO BOUCHERVILLE QUEBEC
 ADDRESS _____ VIA _____

INVOICE

RENTAL OF SHOVEL			
STRIPPING OF SITE #2			
10 hrs. @ 60.00 per hr.			
Subtotal TOTAL			600.00
12/10/89			

*Per invoice 2222
 Amount due 27 Oct 89*

ONTARIO INC. 757203
 CLAUDE CARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 237-1280

OUR NUMBER	076746
DATE	Oct 24 / 89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO: ROSEVAL SILICA Inc
150 DEBRAYLOW
 SHIPPED TO: BOUCHERVILLE QUEBEC
 ADDRESS _____ VIA _____

INVOICE

RENTAL OF SHOVEL			
stripping of site #2			
5 HRS @ 60.00 per Hr.	300.00		Per chg 221 10/24/89
CHAWING OF RAIL CARS AT siding 5 HRS @ 60.00 per Hr.	300.00		Per chg 221 10/24/89
Abandoned TOTAL 10 HRS @ 60.00 per Hr.			
			600.00

BROWNLINE B32

ROSEVAL SILICA INC

LIST OF EXPENDITURES

CLAUDE CARON TRUCKING AND EQUIPMENT RENTALS

INVOICE DATE	RECIPIENT	NATURE OF EXPENSES	AMOUNT
Jul 31 89	CARON TRUCKING	Stripping & Trenching	\$ 670.00
Aug 01 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Aug 08 89	CARON TRUCKING	Stripping & Trenching	\$ 330.00
Aug 09 89	CARON TRUCKING	Stripping & Trenching	\$ 210.00
Aug 14 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 09 89	CARON TRUCKING	Stripping & Trenching	\$ 720.00
Sep 10 89	CARON TRUCKING	Stripping & Trenching	\$ 660.00
Sep 11 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 12 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 13 89	CARON TRUCKING	Stripping & Trenching	\$ 480.00
Sep 14 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 15 89	CARON TRUCKING	Stripping & Trenching	\$ 480.00
Sep 20 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 21 89	CARON TRUCKING	Stripping & Trenching	\$ 480.00
Sep 22 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 25 89	CARON TRUCKING	Stripping & Trenching	\$ 180.00
Sep 26 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 27 89	CARON TRUCKING	Stripping & Trenching	\$ 480.00
Sep 28 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Sep 29 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 02 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 03 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 04 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 05 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 06 89	CARON TRUCKING	Stripping & Trenching	\$ 300.00
Oct 10 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 11 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 12 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 13 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 16 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 17 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 18 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 19 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 20 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 23 89	CARON TRUCKING	Stripping & Trenching	\$ 600.00
Oct 24 89	CARON TRUCKING	Stripping & Trenching	\$ 300.00
Total			\$ 19,690.00

ONTARIO INC. 757203
 CLAUDE RON TRUCK
 AND EQUIPMENT RENT
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

0.00
 833.14 +
 1075.91 +
 424.48 +
 897.9 +
 850.54 =
 4081.97

OUR NUMBER	078955
DATE	
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	31 July 85

SOLD TO ROSEVAL S
150 DEBRU
 SHIPPED TO BOUCHERVILLE QUEBEC J4B2S2
 ADDRESS _____ VIA _____

INVOICE

LOADING OF 217.52 TONS OF MINUS 5"	163.14		
FLOAT SERVICE in and out 400.00		400.00	
RENTAL OF SHOVEL 4.5 HR @ 60.00	270.00		270.00
<i>Denis Roulet</i> TOTAL		833.14	

11/08/89

BROWNLIN B32

ONTARIO INC. 757203
 CLAUDE C/ IN TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

OUR NUMBER	078957
DATE	Aug 1/89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEVAL SIKICH
150 DEBRULLON
 SHIPPED TO BOUCHERVILLE QUEBEC J4B2S2
 ADDRESS _____ VIA _____

INVOICE

LOADING OF MINUS 5" FOR RIDD CREEK 634.54 TONS @ 75¢ per TON		475.91	
RENTAL OF SHOVEL 10 HRS @ 60.00		600.00	
<i>Denis Roulet</i> Total		1075.91	

Denis Roulet

BROWNLIN B32

CLAUDE CARON TRUCKING
 TIMMINS, ONT. PAN 4C3

OUR NUMBER	078959
DATE	Aug 8 / 89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO: ROSEVAL SILICA
 150 DEBRULLON
 SHIPPED TO: BOUCHERVILLE QUEBEC
 (Kidd Creek)
 ADDRESS: VIA 54B 252

INVOICE

LOADING OF MINUS 5" FOR KIDD CREEK				
757.22 TONS @ 75¢			567	90
RENTAL OF SHOVEL 5 1/2 HRS @ 60.00			530	00
<i>Total</i> <i>Claude Caron</i>			897	90

BROWNLIN 832

CLAUDE CARON TRUCKING
 TIMMINS PAN 4C3

OUR NUMBER	078960
DATE	August 9 / 89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO: ROSEVAL SILICA
 150 DEBRULLON
 SHIPPED TO: BOUCHERVILLE QUEBEC (54B 252)
 ADDRESS: VIA

INVOICE

LOADING OF MINUS 5" FOR KIDD CREEK				
854.09 TONS @ 75¢ PER TON			\$ 640	57
RENTAL OF SHOVEL 3 1/2 HRS @ 60.00 PER HR			210	00
<i>Total</i> <i>Claude Caron</i>			850	57

BROWNLIN 832

Claude Caron Trucking & Equipment
Timmins Ont. P4N4C3

OUR NUMBER	078961
DATE	August 14 / 89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO Roseval Silica
150 De Brulion
SHIPPED TO Boucherville Québec
ADDRESS _____ VIA _____

INVOICE

RENTLE	of JD 490D Excavator				
For 10 hrs	at 60\$ per hr				
For Exploration Program					
12 th Aug 1989					
at 30 th Aug 1989					
by					
Master					
<i>[Signature]</i>	Total			\$ 600 ⁰⁰	
14 / 08 / 89					

BROWLINE B32

ONTARIO INC. 757203
 CLAUDE ARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

OUR NUMBER	078981
DATE	SEPT 11/89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEVALE SILICA
150 DEBRULLON
 SHIPPED TO BOUCHERVILLE QUEBEC
 ADDRESS _____ VIA _____

INVOICE

RENTAL OF SHOVEL				
STRIPPING OF SITE #9				
10 hrs @ 60.00				
Hours Total 13 Sept 89				
				600.00

BROWNLIN B32

ONTARIO INC. 757203
 CLAUDE ARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

OUR NUMBER	078983
DATE	SEPT 12/89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEVAL SILICA
150 DEBRULLON
 SHIPPED TO BOUCHERVILLE QUEBEC
 ADDRESS _____ VIA _____

INVOICE

RENTAL OF SHOVEL				
STRIPPING OF SITE #3				
10 hrs @ 60.00				
Hours Total 13 Sept 89				
				600.00

BROWNLIN B32

ONTARIO INC. 757203
 CLAUDE L. LAMON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

OUR NUMBER	078989
DATE	SEPT 15 / 89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEVALE SILICA
150 DEBRILLON
 SHIPPED TO BOUCHERVILLE QUEBEC
 ADDRESS _____ VIA _____

INVOICE

RENTAL OF SHOVEL				
STRIPPING OF SITE #3				
8 Hrs @ 60.00				
<i>Plus Prolot Total</i>				480 00
<i>15 Sept 89</i>				

BROWNLINER B32

ONTARIO INC. 757203
 CLAUDE CARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

600 +
 480 =
 1080

078993
 Sept. 20 / 89
 CUSTOMER'S ORDER
 SALESMAN
 TERMS
 F.O.B.

SOLD TO: ROSEVALE SIBICA
 150 DEBRULLON
 SHIPPED TO: BOUCHERVILLE QUEBEC
 ADDRESS: _____ VIA _____

INVOICE

RENTAL OF SHOVEL				
10 hrs @ 60.00				
Stripping at SITE #3				
<i>Grand Total</i>			600.00	
<i>21 Sept 89</i>				

BROWLINE B32

ONTARIO INC. 757203
 CLAUDE CARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

078995
 DATE: SEPT 21 / 89
 CUSTOMER'S ORDER
 SALESMAN
 TERMS
 F.O.B.

SOLD TO: ROSEVALE SIBICA
 150 DEBRULLON
 SHIPPED TO: BOUCHERVILLE QUEBEC
 ADDRESS: _____ VIA _____

INVOICE

RENTAL OF SHOVEL				
8 hrs @ 60.00				
Stripping at SITE #2				
<i>Grand Total</i>			480.00	
<i>21 Sept 89</i>				

BROWLINE B32

ONTARIO INC. 757203
 CLAUDE CARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

600. +
 180. +
 600. +
 480. +
 600. +
 600. =
 3060.

ROSEVALE SILICA Inc.
 150 DEBRULOU
 BOUCHERVILLE QUEBEC

OUR NUMBER	078998
DATE	Sept 22/89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

INVOICE

RENTAL OF SHOVEL					
Stripping of size #2					
10 Hrs @ 60.00					
<i>paid by</i>					
<i>paid by</i>					
Total					600.00
<i>27 Sept 89</i>					

BROWNLIN B32

ONTARIO INC. 757203
 CLAUDE CARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

SOLD TO ROSEVALE SILICA Inc
 150 DEBRULOU
 SHIPPED TO BOUCHERVILLE QUEBEC
 ADDRESS _____ VIA _____

OUR NUMBER	079000
DATE	SEPT 25/89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

INVOICE

RENTAL OF SHOVEL					
Stripping of size #2					
3 Hrs @ 60.00					
<i>paid by</i>					
<i>paid by</i>					
Total					180.00
<i>27 Sept 89</i>					

ONTARIO INC. 757203
 CLAUDE CARON TRUCK
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

OUR NUMBER	076709
DATE	Oct. 2 / 89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEDALE SILICA INC.
150 DEBRULLAN
 SHIPPED TO BOUCHERVILLE Québec
 ADDRESS _____ VIA _____

INVOICE

RENTAL OF SHOVEL					
Stripping of size # 2					
10 Hrs @ 60.00 per Hr					
<i>John Paulist</i> 3/10/89					600.00

BROWNLIN 832

ONTARIO INC. 757203
 CLAUDE CARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

OUR NUMBER	076711
DATE	Oct. 3 / 89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEDALE SILICA
150 DEBRULLAN
 SHIPPED TO BOUCHERVILLE Québec
 ADDRESS _____ VIA _____

INVOICE

RENTAL OF SHOVEL					
Stripping of size # 2					
<i>John Paulist</i> 9/10/89					600.00

BROWNLIN 832

500. +
 400. +
 300. +
 200. +
 100. =
 2700.

ONTARIO INC. 757203
 AUDE CARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

OUR NUMBER	076713
DATE	Oct. 4/89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLI

SHIPPED TO

ADDRESS

VIA

SILICA Inc
 150 DEBRULOW
 Boucherville QUEBEC

INVOICE

RENTAL OF CHANNEL					
STRIPPING OF SITE #2					
10 hrs @ 60.00					
<i>Louis Pouliot</i>					
12/10/89					

BROWNLINER 832

ONTARIO INC. 757203
 CLAUDE CARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

OUR NUMBER	076715
DATE	Oct 5/89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO

SHIPPED TO

ADDRESS

VIA

ROSEVALE SILICA Inc.
 150 DEBRULOW
 Boucherville QUEBEC

INVOICE

RENTAL OF CHANNEL					
STRIPPING OF SITE #3					
10 Hrs @ 60.00					
<i>Louis Pouliot</i>					
12/10/89					
Total					600.00

BROWNLINER 832

ONTARIO INC: 757203
 CLAUDE CARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

OUR NUMBER	076725
DATE	Oct. 11/89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEVAL SILICA INC.
150 DEBRULON
 SHIPPED TO BOUCHERVILLE QUEBEC
 ADDRESS _____ VIA _____

INVOICE

RENTAL OF SHOVEL				
STRIPPING OF SITE #2				
10 HRS @ 60.00 PER HR.				
Subtotal Total				600.00
12/10/89				

*Payment received
 amount due on Oct 19*

ONT INC. 75
 CLAUDE CARON TR
 AND EQUIPMENT I
 441 CENTER ST
 TIMMINS, ONT. P4I
 267-1280

0.00
 600.00
 600.00
 600.00
 300.00
 2100.00

OUR NUMBER	076739
DATE	Oct. 19 / 89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEVAL S
150 DEBRUL
 SHIPPED TO BOUCHERVILLE
 ADDRESS _____

INVOICE

RENTAL OF SHOVEL				
STRIPPING OF SIZE #3				
10 hrs @ 60.00 per Hr				
<i>Amount Total</i>				600.00
<i>21/10/89</i>				

BROWNLIN B32

TARIO INC. 757203
 CLAUDE CARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 267-1280

OUR NUMBER	076741
DATE	Oct. 20 / 89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEVAL Silica Fruc
150 DEBRUL ON
 SHIPPED TO BOUCHERVILLE QUEBEC
 ADDRESS _____ VIA _____

INVOICE

RENTAL OF SHOVEL				
STRIPPING OF SITE #2				
10 HRS @ 60.00 per Hr.				
<i>Amount Total</i>				600.00
<i>21/10/89</i>				

BROWNLIN B32

ONTARIO INC. 757203
 CLAUDE CARON TRUCKING
 AND EQUIPMENT RENTAL
 441 CENTER ST.
 TIMMINS, ONT. P4N 4C3
 297-1280

OUR NUMBER	076746
DATE	Oct. 24 1989
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEVAL SILICA Inc.
150 DEBRUILLON
 SHIPPED TO BOUCHERVILLE QUEBEC
 ADDRESS _____ VIA _____

INVOICE

RENTAL OF SHOVEL			
TRIPPING OF SITE #2			
5 HRS @ 60.00 HR.	300.00		
CLEANING OF RAIL CARS AT SIDING	5 HRS @ 60.00 HR.	300.00	
RENTAL			
TOTAL 10 HRS @ 60.00 HR.			600.00

BROWNLIN B32

LIST OF EXPENDITURES

DENIS CARON

INVOICE DATE	RECIPIENT	NATURE OF EXPENSE	AMOUNT
Aug 04 89	DENIS CARON	Reserves, geology	\$ 1,750.00
Aug 08 89	DENIS CARON	Reserves, geology	\$ 2,750.00
Aug 31 89	DENIS CARON	Surface geology	\$ 2,000.00
Sep 15 89	DENIS CARON	Surface geology	\$ 3,000.00
Oct 02 89	DENIS CARON	Surface geology	\$ 2,750.00
Oct 15 89	DENIS CARON	Reserves, samples & maps	\$ 2,750.00
Nov 07 89	DENIS CARON	Reserves, samples & maps	\$ 3,879.34
Nov 15 89	DENIS CARON	Reserves, samples & maps	\$ 1,812.29
Total			\$ 20,691.63

DENIS CARON
RR#2, COOKS LAKE,
TIMMINS, ONT P4N 7C3

OUR NUMBER	062903
DATE	Aug 4/89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEVAL Silica Inc.
150 DE BRULLON
SHIPPED TO BOUCHERVILLE Québec
ADDRESS J4B 2J2 VIA _____

INVOICE

FEES FOR SERVICES			
7 Day's @ 250.00		\$	1750.00
12. July 28, - 29, 31			
August 1, 2, 3, 4			
<div style="border: 1px solid black; border-radius: 50%; padding: 10px; display: inline-block;"> Proforma 151 x Proforma 12/24/89 </div>			
Caron. Approved for payment in Louis Caron Aug 8/89			

DENIS CARON

OUR NUMBER	062904
DATE	18/08/89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEVAL SILICA INC
150 DE BRULLON
SHIPPED TO BOUCHERVILLE QUÉBEC
ADDRESS JAB 2J2 VIA _____

INVOICE

FEES FOR SERVICES					
11	DAYS @ \$ 250.00				2750.00
i.e.	AUG 8, 9, 10, 11, 12, 13				
	14, 15, 16, 17, 18				
<i>Louis Leclercq</i> Aug 18/89		<i>Payé par 17/ de Parent le 30/08/89</i>			

DENIS C. BON

OUR NUMBER	062905
DATE	August 31/89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEVAL SILICA INC
150 DE BRULLON
SHIPPED TO BOUCHERVILLE QUÉBEC
ADDRESS J4B 2J2 VIA _____

FEEs FOR SERVICES

8 DAYS @ 250.00

\$ 2000.00

August 21, 22, 23, 24, 25

28, 29, - 31

Denis Bonnet
Sept 1/89

*Pay per August 1989
de Bonnet du 08/31/1989*

INVOICE

DENIS CARON

OUR NUMBER	062906
DATE	SEPT 15/89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEVAL SILICA INC.
150 DE BRULLON
SHIPPED TO BOUCHERVILLE QUEBEC
ADDRESS J4B 2J2 VIA _____

INVOICE

FEES FOR SERVICES					
12 DAYS @ \$250.00				3000.00	
September 1, 5, 6, 7, 8, 9,					
10, 11, 12, 13,					
14, 15					
<i>Denis Caron</i>					
15 Sept 89					

paid by ISA
Sept 15/89

u/j 413

DENIS D. CARON

OUR NUMBER	062907
DATE	Sept 29/89
CUSTOMER ORDER DATE	OCT. 2/89
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEVAL SILICA INC
150 DE BRULLON
 SHIPPED TO BOUCHERVILLE QUEBEC
 ADDRESS J4B 2J2 VIA _____

INVOICE

FEES FOR SERVICES			
11 DAY'S AT \$ 250.00			\$ 2750.00
SEPT. 18, 19, 20, 21, 22,			
25, 26, 27, 28, 29,			
30,			

part done
 15th
 13 Oct 89

Denis Caron
 Oct 2/89

Payroll 629

Denis D. Carm

OUR NUMBER	062909
DATE	15/10/89
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO ROSEVAL SILICA INC
150 DE BRULLON

SHIPPED TO BOUCHERVILLE QUEBEC
ADDRESS JB4 2J2 VIA

INVOICE

FEES FOR SERVICES			
11 DAY'S @ \$250.00		#	2750.00
OCTOBER 2, 3, 4, 5, 6,			
10, 11, 12, 13, 14, 15			
<i>Approved</i>			
<i>18/10/89</i>			

Payroll 629
15/10/89

Denis Caron. Expense

To Roseval Silica Inc.

Nov 7/89

Sample Bags	K-mart:	29.34
Air Express	to Mr. Lavallée:	16.50
Ontario Northland	to Mr. Rose:	13.75
Explora Blue Printing		<u>54.00</u>


113.59

15 Boxes For Sample shipping.

15.75

129.34

2360B

	BLUELINE	DATE <u>Nov. 6</u> 19 <u>89</u>
RECEIVED FROM REÇU DE	<u>Denis Caron</u>	
	<u>Fifteen</u>	<u>75</u> DOLLARS
FOR POUR	<u>15 boxes</u>	
FROM DE	TO	
<u>\$ 15.75</u>	BY PAR	<u>D. Michénel</u>

Ask about: U.S. & International door to door services Renseignez-vous sur l'expansion de nos services porte à porte International et sur les États-Unis

Jimmies Montreal

FROM SHIPPER EXPÉDITEUR
MR. D. CARON
RR 2 Box 9.

TO CONSIGNEE DESTINATAIRE
Jimmies ONT
MR. G. LAVALLEE
150 DE BRULLON.
BOUCHERVILLE PQ.
252

EXPRESS

NON NEGOTIABLE AIR WAYBILL SUBJECT TO TERMS & CONDITIONS SET FORTH ON REVERSE OF SHIPPER'S & CONSIGNEE'S COPIES
 LETTRE DE TRANSPORT AÉRIEN NON NÉGOCIABLE SOUMISE AUX CONDITIONS ÉNONCÉES AU VERSO DES EXEMPLAIRES EXPÉDITEUR ET DESTINATAIRE

SPECIFIC FLIGHTS & DATES
 NOUS ENVOYER LES DATES DES VOLS SI VOUS LE DEMANDEZ

OVERNIGHT LENDemain
 A.M. avant-midi P.M. après-midi SECOND DAY SURLENDemain

FAILURE TO INDICATE TYPE OF SERVICE WILL RESULT IN FORWARDING BY THE MOST ECONOMICAL MEANS.
 EN L'ABSENCE D'INDICATION DU TYPE DE SERVICE L'EXPÉDITION SE FERA PAR LE MOYEN LE PLUS ÉCONOMIQUE

PREPARE TO COLLECT / FORM OF PAYMENT / MODE DE PAIEMENT
 CASH / COMPTANT BANK ACCOUNT / COMPTE CHEQUE CREDIT CARD / CARTE CREDIT GBL / GBL WSL / WSL PCC / PCC

NO. OF PIECES / Nbre DE COLIS: 1
 GROSS WEIGHT / POIDS BRUT: 1.0
 NATURE AND QUANTITY OF GOODS (INCL. DIMENSIONS OR VOLUME) / NATURE ET QUANTITÉ DES MARCHANDISES (AVEC DIMENSIONS OU VOLUME): 1.0. MAFI. PRINTED MATTER

Shipper certifies that the particulars on the face hereof are correct and that insofar as any part of the consignment contains dangerous goods, such part is properly described by name and is in proper condition for carriage by air according to the applicable Dangerous Goods Regulation.
 L'expéditeur certifie que les indications portées sur le présent document sont exactes et que dans la mesure où une partie quelconque de l'expédition contient des marchandises dangereuses, cette partie d'expédition est correctement désignée et bien préparée pour le transport aérien conformément à la Réglementation pour le transport des marchandises dangereuses applicable.

Signature of Shipper or his Agent: *[Signature]*
 Signature of Issuing Carrier or its Agent: *[Signature]*



AIR CANADA CARGO
 PLACE AIR CANADA, MONTRÉAL (QUÉ.), CANADA H2Z 1X5

CHARGES - FRAIS	AMOUNT / MONTANT
TRANSPORTATION / TRANSPORT	71.50
VALUATION / VALEUR	5.00
INSURANCE / ASSURANCE	16.50
TOTAL	93.00

PAID CASH

SHIPPER EXPÉDITEUR

DATE DATE: 7 NOV 89
 TIME HEURE: 0630

Roseval silica pu
Dépenses Remboursables
à Denis Savon
15 Nov 1989

Films & Reproduction

\$ 62.29

Page for chp 244
de l'annuaire de
1989

Louis Pauleot
15 Nov 89
\$ 62.29

1750.
62.29

1812.29

Deer Cam.

Nov 15 - 89

Expense.

Develop film -	\$ 18.40
" "	<u>19.89</u>
Explora Blue Printing .	24.00
Total	62.29

Harom

EXPLORA BLUE PRINTING SERVICES
 P.O. Box 1411, Suite 23 HOLLINGER BLD
 THOMINS, ONTARIO R4N 7N2
 268-7555

ORDER NO. _____ DATE Nov 15 19 89
 SOLD TO Denis Caron
 ADDRESS Rosevatt Selesca Project
 SHIP TO _____
 ADDRESS _____

THANK YOU FOR BUYING AT BLACKS

WHEN SHIP	HOW SHIP	TERMS	BUYER	SALESMAN
<i>Prints Duplicates Rosevatt Project</i>				
<i>13 prints done</i>				<i>24.00</i>
<i>Paid by cash.</i>				
<i>Thank you Irene! (Manager)</i>				
SIGNATURE				

125001 10 7270 31-10-89 8643

3	MDS 1	17.04	T
	SUBTOTAL	17.04	
0001	TAX	1.36	
10	CASH 1 TOTAL 1	18.40	
1	AMOUNT TENDERED	20.00	
	CHANGE	1.60	

THANK YOU FOR BUYING AT BLACKS

125001 10 4486 16-09-89 3432

3	MDS 1	18.42	T
	SUBTOTAL	18.42	
0001	TAX	1.47	
10	CASH 1 TOTAL 1	19.89	
1	AMOUNT TENDERED	20.00	
	CHANGE	.11	

14819

ROSEVAL SILICA INC

LIST OF EXPENDITURES

COLBERT DRILLING and EXPLORATIONS Co

INVOICE DATE	RECIPIENT	NATURE OF EXPENSES	AMOUNT
Sep 22 89	COLBERT DRILLING	Diamond drilling	\$ 31,433.00

Colbert Drilling and Exploration Co.
A Division of 574395 Ontario Inc.

167 Lakeshore Lane - Timmins, Ontario - P4N 7A1 - Telephone: (705) 264-7529

September 22 1989

La Societe de Gestion Maskours Inc.,
150 de Brullon,
Boucherville,
Quebec.
J4B 2J2

Dear Sirs;

Re; BQ Wireline Drilling - Penhorwood Township
Roseval Property August 28 to Sept, 17 1989

Hole # RS 89-1	✓ 198 feet of drilling @ \$17.00 per foot	\$ 3,366.00
Hole # RS 89-3	✓ 248 feet of drilling @ \$17.00 per foot	4,216.00
Hole # RS 89-4	✓ 198 feet of drilling @ \$17.00 per foot	3,366.00
Hole # RS 89-5	✓ 198 feet of drilling @ \$17.00 per foot	3,366.00
Hole # RS 89-6	✓ 288 feet of drilling @ \$17.00 per foot	4,896.00
Hole # RS 89-7	✓ 288 feet of drilling @ \$17.00 per foot	4,896.00
Hole # RS 89-8	✓ 223 feet of drilling @ \$17.00 per foot	3,791.00
Hole # RS 89-9	✓ <u>208 feet</u> of drilling @ \$17.00 per foot	<u>3,536.00</u>
Total footage	1,849 feet @ \$17.00 per foot	\$31,433.00

Trusting everything is satisfactory and we look forward to working with you and your staff in the future, I remain

Yours truly

Edward A. Colbert

Edward A. Colbert

ROSEVAL SILICA INC

LIST OF EXPENDITURES

KIAN A. JENSEN

INVOICE DATE	RECIPIENT	NATURE OF EXPENSES	AMOUNT
Oct 29 89	KIAN A. JENSEN	Geophysical surveys	\$ 600.00
Jan 15 90	KIAN A. JENSEN	Geophysical line-cutting	\$ 7,000.00
Feb 06 90	KIAN A. JENSEN	Geophysics surveys	\$ 7,000.00
Total			\$ 14,600.00



Kian A. Jensen

Exploration and Consulting Services

P.O. BOX 37, SOUTH PORCUPINE, ONTARIO, PON 1H0

TELEPHONE: OFFICE (705) 268-0111, RESIDENCE (705) 235-2301

October 29, 1989

Mr. Louis Pouliot
c/o Mr. Gaetan Lavallee,
Roseval Silica Incorporated,
150 de brullon,
Boucherville, Quebec,
J4B 2J2

Re: Geophysical Testing of Penhorwood Township
Silica Deposits

Geophysical Testing	\$ 600.00
	=====
Total Amount Due	\$ 600.00

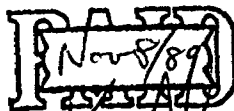
Respectfully submitted,

Kian A. Jensen

Payment to: Kian A. Jensen
P.O. Box 37,
South Porcupine
Ontario
PON 1H0

Payé par Chèque # 0225
du 4 NOV 89

\$600.00 6 nov 89





Kian A. Jensen

Exploration and Consulting Services

P.O. BOX 37, SOUTH PORCUPINE, ONTARIO, P0N 1H0

TELEPHONE: OFFICE (705) 268-0111, RESIDENCE (705) 235-2301

January 15, 1990

Mr. Gaetan Lavallee,
Roseval Silica Inc.,
150 de Brullon,
Boucherville, Quebec,
J4B 2J2

Re: Line Cutting and Geophysical Surveying
Penhorwood Township

INVOICE 90-002 (1)

Dear Mr. Lavallee:

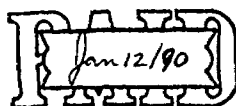
This is your receipt for the advance on the above project in
Penhorwood Township.

Advance Received January 12, 1990

\$ 7,000.00

Respectfully submitted,

Kian A. Jensen



Cheque # 0012

Payment to: Kian A. Jensen,
P.O. Box 37,
South Porcupine, Ontario,
P0N 1H0



Kian A. Jensen

Exploration and Consulting Services

P.O. BOX 37, SOUTH PORCUPINE, ONTARIO, PON 1H0

TELEPHONE: OFFICE (705) 268-0111, RESIDENCE (705) 235-2301

February 6, 1990

Mr. Gaetan Lavallee,
Roseval Silica Inc.,
150 de Brullon,
Boucherville, Quebec,
J4B 2J2

Re: Line Cutting and Geophysical Surveying
Penhorwood Township

INVOICE 90-002 (2)

Dear Mr. Lavallee:

Request for second advance

\$ 7,000.00

Total Amount of Invoice

=====
\$ 7,000.00

Respectfully submitted,

Kian A. Jensen

Payment to: Kian A. Jensen,
P.O. Box 37,
South Porcupine, Ontario,
PON 1H0

ROSEVAL SILICA INC

LIST OF EXPENDITURES

GAETAN LAVALLEE

INVOICE DATE	RECIPIENT	NATURE OF EXPENSES	AMOUNT
Jul 23 89	GAETAN LAVALLEE	Strip & trench	\$ 1,404.67
Aug 07 89	GAETAN LAVALLEE	Strip & trench	\$ 2,231.87
Aug 18 89	GAETAN LAVALLEE	Reserves	\$ 1,695.16
Sep 03 89	GAETAN LAVALLEE	Review cores	\$ 897.01
Sep 14 89	GAETAN LAVALLEE	Review cores	\$ 1,579.94
Sep 25 89	GAETAN LAVALLEE	Surface ass. costs	\$ 888.04
Oct 07 89	GAETAN LAVALLEE	Strip & trench	\$ 1,008.56
Oct 19 89	GAETAN LAVALLEE	Strip & trench	\$ 1,626.15
Oct 28 89	GAETAN LAVALLEE	Surface ass. costs	\$ 189.81
Nov 07 89	GAETAN LAVALLEE	Reserves	\$ 1,008.56
Total			\$ 12,529.77

GAETAN LAVALLEE

INVOICE: 51

Date: 23 July 1989

To: Roseval Silica Inc
2008 Lasalle Blvd
Sudbury, Ontario
P3A 2P5

Travel and living expenses from July 16 to July 22, 1989

TRAVEL:

Boucherville-Timmins-Tionaga(*)-Sudbury-Timmins-Boucherville:

3411 km at \$ 0.27/km - \$ 920.97

LIVING:

Hotel Ramada or equal, 6 days at \$51.45/day - \$ 308.70

Meal allowance, 7 days at \$25.00/day - \$ 175.00

Total - \$1,404.67

* - Include daily or more frequent travel Timmins-Tionaga-Timmins

GAETAN LAVALLEE

INVOICE: 52

Date: 7 August 1989

To: Roseval Silica Inc
2008 Lasalle Blvd
Sudbury, Ontario
P3A 2P5

Travel and living expenses from July 26 to August 5, 1989

TRAVEL:

Boucherville-Timmins-Tionaga(*)-Sudbury-Timmins-Boucherville:

4246 km at \$ 0.27/km - \$1,146.42

LIIVING:

Hotel Ramada or equal, 10 days at \$51.45/day - \$ 541.45

Meal allowance, 11 days at \$25.00/day - \$ 275.00

MISCELLANEOUS:

Geological report - \$ 13.00

Field office supplies - \$ 256.00

Total - \$2,231.87

* : Include daily or more frequent travel Timmins-Tionaga-Timmins

GAETAN LAVALLEE

INVOICE: 53

Date: 18 August 1989

To: Roseval Silica Inc
2008 Lasalle Blvd
Sudbury, Ontario
P3A 2P5

Travel and living expenses from August 10 to August 17, 1989

TRAVEL:

Boucherville-Timmins-Tionaga(*)-Sudbury-Timmins-Boucherville:

3463 km at \$ 0.27/km - \$ 935.01

LIVING:

Hotel Ramada or equal, 7 days at \$51.45/day - \$ 360.15

Meal allowance, 8 days at \$25.00/day - \$ 200.00

MISCELLANEOUS:

Field office supplies - \$ 200.00

Total - \$1,695.16

* : Include daily or more frequent travel Timmins-Tionaga-Timmins

GAETAN LAVALLEE

INVOICE: 54

Date: 3 september 1989

To: Roseval Silica Inc
2008 Lasalle Blvd
Sudbury, Ontario
P3A 2P5

Travel and living expenses from August 29 to August 31, 1989

TRAVEL:

Boucherville-Timmins-Tionaga(*)-Boucherville:

2293 km at \$ 0.27/km - \$ 619.11

LIVING:

Hotel Ramada or equal, 2 days at \$51.45/day - \$ 102.90

Meal allowance, 3 days at \$25.00/day - \$ 75.00

MISCELLANEOUS

Field office supplies - \$ 100.00

Total - \$ 897.01

* : Include daily or more frequent travel Timmins-Tionaga-Timmins

GAETAN LAVALLEE

INVOICE: 55

Date: 14 September 1989

To: Roseval Silica Inc.
2008 Lasalle Blvd
Sudbury, Ontario
P3A 2P5

Travel and living expenses from September 6 to September 13, 1989

TRAVEL:

Boucherville-Timmins-Tionaga(*)-Sudbury-Timmins-Boucherville:

3777 km at \$ 0.27/km - \$1,019.79

LIVING:

Hotel Ramada or equal, 7 days at \$51.45/day - \$ 360.15

Meal allowance, 8 days at \$25.00/day - \$ 200.00

Total - \$1,579.94

* : Include daily or more frequent travel Timmins-Tionaga-Timmins

GAETAN LAVALLEE

INVOICE: 56

Date: 25 September 1989

To: Roseval Silica Inc
2008 Lasalle Blvd
Sudbury, Ontario
P3A 2P5

Travel and living expenses from September 20 to September 23, 1989

TRAVEL:

Boucherville-Timmins-Tionaga(*)-Sudbury-Timmins-Boucherville:

2347 km at \$ 0.27/km - \$ 633.69

LIVING:

Hotel Ramada or equal, 3 days at \$51.45/day - \$ 154.35

Meal allowance, 4 days at \$25.00/day - \$ 100.00

Total - \$ 888.04

* : Include daily or more frequent travel Timmins-Tionaga-Timmins

GAETAN LAVALLEE

INVOICE: 57

Date: 7 October 1989

To: Roseval Silica Inc
2008 Lasalle Blvd
Sudbury, Ontario
P3A 2P5

Travel and living expenses from October 3 to October 6, 1989

TRAVEL:

Boucherville-Timmins-Tionaga(*)-Sudbury-Timmins-Boucherville:

2423 km at \$ 0.27/km - \$ 654.21

LIVING:

Hotel Ramada or equal, 3 days at \$51.45/day - \$ 154.35

Meal allowance, 4 days at \$25.00/day - \$ 100.00

MISCELLANEOUS

Field office supplies - \$ 100.00

Total - \$1,008.56

* : Include daily or more frequent travel Timmins-Tionaga-Timmins

GAETAN LAVALLEE

INVOICE: 58

Date: 19 October 1989

To: Roseval Silica Inc
2008 Lasalle Blvd
Sudbury, Ontario
P3A 2P5

Travel and living expenses from October 11 to October 18, 1989

TRAVEL:

Boucherville-Timmins-Tionaga(*)-Sudbury-Timmins-Boucherville:

3665 km at \$ 0.27/km - \$ 989.55

LIVING:

Hotel Ramada or equal, 8 days at \$51.45/day - \$ 411.60

Meal allowance, 9 days at \$25.00/day - \$ 225.00

Total - \$1,626.15

* : Include daily or more frequent travel Timmins-Tionaga-Timmins

GAETAN LAVALLEE

INVOICE: 60

Date: 28 October 1989

To: Roseval Silica Inc
2008 Lasalle Blvd
Sudbury, Ontario
P3A 2P5

Travel to SKW to deliver samples

October 26, 356 km at \$ 0.27/km	- \$	96.12
October 28, 347 km at \$ 0.27/km	- \$	93.69
Total	- \$	189.81

GAETAN LAVALLEE

INVOICE: 59

Date: 7 November 1989

To: Roseval Silica Inc
2008 Lasalle Blvd
Sudbury, Ontario
P3A 2P5

Travel and living expenses from October 30 to November 2, 1989

TRAVEL:

Boucherville-Timmins-Tionaga(*)-Sudbury-Timmins-Boucherville:

2248 km at \$ 0.27/km - \$ 606.96

LIVING:

Hotel Ramada or equal, 3 days at \$51.45/day - \$ 154.35

Meal allowance, 4 days at \$25.00/day - \$ 100.00

Total - \$1,008.56

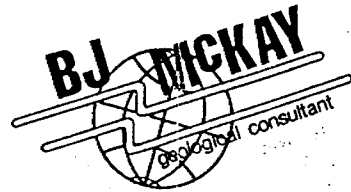
* : Include daily or more frequent travel Timmins-Tionaga-Timmins

ROSEVAL SILICA INC

LIST OF EXPENDITURES

B. J. McKAY GEOLOGICAL CONSULTANT

INVOICE DATE	RECIPIENT	NATURE OF EXPENSES	AMOUNT
Oct 31 89	B.J. McKAY	Surface, mapping	\$ 449.22
Nov 09 89	B.J. McKAY	Surface, mapping	\$ 447.50
Jan 11 90	MUW WHITE	Surface, mapping	\$ 75.00
Total			\$ 971.72



B. J. MCKAY GEOLOGICAL CONSULTANT

P.O. Box 219
Porcupine, Ontario P0N 1C0

(705) 235-3142

To: Ed Van Hees Geological Services
40 Brian Jones

Date: 31 Oct 89

124-3rd Ave, Timmins, Ontario, P4N 1C5

Project: Reserve Silica

INVOICE 0020

Jan.		Feb.		March		April		May		June		July		August		Sept.		Oct.		Nov.		Dec.								
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Description																Item		Rate		Total										
re-editing: Geology map AS-site 3																2 days		200.00		400.00										
plotting: site 3 - colored																		32.20		32.20										
" - Xerox copy																		17.02		17.02										
																				449.22										



B. J. MCKAY GEOLOGICAL CONSULTANT

P.O. Box 219
Porcupine, Ontario PON 1C0

(705) 235-3142

To: Ed Van Hees Geological Services
To Brian Jones
124-3rd Ave, Timmins, Ontario, P4W 1C5
Project: Roseval Silica

Date: 9 Nov 1989

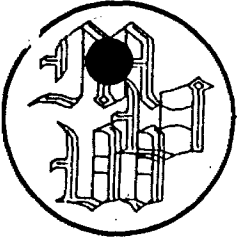
INVOICE 0022

Jan.		Feb.		March		April		May		June		July		August		Sept.		Oct.		Nov.		Dec.	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15									
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31								
Description											Item		Rate		Total								
re-drafting: Geology map Site 2a											2 days		200 ⁰⁰		400 ⁰⁰								
plotting: colored maps													32 ²⁰		32 ²⁰								
Xerox copies													15 ³⁰		15 ³⁰								
(second of two invoices at client's request)																							
															447.50								

Telephone (705) 264-4709
Fax (705) 267-7648

M. V. W. WHITE & Associates Ltd.

Hollinger Office Building
P.O. Box 1430
Timmins, Ontario P4N 7N2



January 11, 1990

B. J. McKay Geological Consultant
P.O. Box 219
Porcupine, Ontario
P0N 1C0

INVOICE #S90-0003

*Per invoice 11 d
Paid to 14 Jan 99*

RE: ROSEVAL PROJECT

PLOTTING

2 maps

1.5 hours @ \$50.00/hr

\$ 75.00

TOTAL

\$ 75.00

INVOICE DUE WHEN RENDERED - 2% PER MONTH ON OVERDUE ACCOUNTS

ROSEVAL SILICA INC

LIST OF EXPENDITURES

MINISTRY OF NATURAL RESOURCES

INVOICE DATE	RECIPIENT	NATURE OF EXPENSES	AMOUNT
Sep 19 89	NATURAL RESOURCES	Stripping, crown charges	\$ 377.75
Jan 04 90	NATURAL RESOURCES	Stripping, crown charges	\$ 315.98
Total			\$ 693.73



To

Roseval Silica Inc.

2008 Lasalle Blvd.

Sudbury, Ontario P3A 2A5

*Pay for chgs 19/89
Remit to
1302/1989*

Statement of Account for District Cutting Licence # A 01588. Payment due on or before October 27, 1989.

<u>SPECIES</u>	<u>CUBIC METRES</u>	<u>BONUS</u>	<u>CROWN CHARGES</u>	<u>STUMPAGE CHARGES</u>
spruce	52.525 m ³	0.18	3.80	\$ 199.60
white pine	16.060 m ³	0.18	3.80	61.03
jack pine	1.223 m ³	0.18	3.80	4.65
cedar	5.430 m ³	0.18	3.80	20.63
balsam fir	2.109 m ³	0.18	3.80	8.01
white birch	15.919 m ³	0.17	1.30	20.69
poplar	6.045 m ³	0.17	1.30	7.86

TOTAL

\$ 322.47

Area Charges 47.00

Scaling Charges 107.78

Less Deposit (99.50)

TOTAL CROWN CHARGES \$ 377.75

cc: Jack Russell
Administration & Engineering Supervisor

Make cheque or money order payable to "Treasurer of Ontario" and send to the above Issuing Office.



Ministry of
Natural
Resources

Statement of Account

Date

January 4, 1990

To

Roseval Silica Inc.

2008 Lasalle Blvd.

Sudbury, Ontario P3A 2A5

Statement of Account for District Cutting Licence # A 01588. Payment due on or before February 23, 1990.

<u>SPECIES</u>	<u>CUBIC METRES</u>	<u>BONUS</u>	<u>CROWN CHARGES</u>	<u>STUMPAGE CHARGE</u>
white pine	40.700 m ³	0.18	3.62	\$ 154.66
spruce	116.680 m ³	0.18	3.62	443.38
poplar	7.480 m ³	0.17	1.13	9.72
white birch	23.760 m ³	0.17	1.13	30.89

TOTAL

	\$ 638.65
Area Charges	47.00
Scaling Charges	107.78
Less Deposit	<u>(477.45)</u>
TOTAL CROWN CHARGES	\$ <u>315.98</u>

cc: Jack Russell
Administration & Engineering Supervisor

Make cheque or money order payable to "Treasurer of Ontario" and send to the above Issuing Office.

471 (10/77)

FM. 171

LIST OF EXPENDITURES

LOUIS POULIOT, CONSULTANT

INVOICE DATE	RECIPIENT	NATURE OF EXPENSES	AMOUNT
Aug 15 89	LOUIS POULIOT	Strip & trench	\$ 3,225.00
Aug 18 89	LOUIS POULIOT	Strip & trench	\$ 6,250.00
Sep 05 89	LOUIS POULIOT	Surface ass. costs	\$ 6,250.00
Sep 18 89	LOUIS POULIOT	Surface ass. costs	\$ 6,250.00
Nov 02 89	LOUIS POULIOT	Strip & trench	\$ 6,250.00
Nov 16 89	LOUIS POULIOT	Strip & trench	\$ 6,250.00
Dec 15 89	LOUIS POULIOT	Strip & trench	\$ 3,409.09
Feb 05 90	LOUIS POULIOT	Reserve ass. costs	\$ 6,000.00
Total			\$ 43,884.09

FACTURE

No.....¹.....

Louis Pouliot, ing.
747 Marie Victorin
Boucherville, Qué.
J4B 1X6

le ..15 août 1989.....

A: Roseval Silica Inc.
150 De Brullon
Boucherville, Qué.
J4B 2J2

Pour services professionnels rendus selon les termes
de l'Entente du 23 juillet 1989;

Période du ...²⁴..... au
31.. juillet.....1989:

\$..3225.00.....

*Payé par chq #150
de Roseval Silica Inc.
le 1 août 1989*

FACTURE

No...2.....

Louis Pouliot, ing.
747 Marie Victorin
Boucherville, Qué.
J4B 1X6

le 18 août 1989.....

A: Roseval Silica Inc.
150 De Brullon
Boucherville, Qué.
J4B 2J2

Pour services professionnels rendus selon les termes
de l'Entente du 23 juillet 1989;

*Payé en chèque 170 \$
Reçu le 25 août 1989*

Période du 1^{er}..... au

.....15 août.....1989:

\$. 6250.00.....

FACTURE

No.....³.....

Louis Pouliot, ing.
747 Marie Victorin
Boucherville, Qué.
J4B 1X6

le 05-09-89

A: Roseval Silica Inc.
150 De Brullon
Boucherville, Qué.
J4B 2J2

Pour services professionnels rendus selon les termes
de l'Entente du 23 juillet 1989;

Période du ...16..... au

.....31 août.....1989:

\$.6250.00.....

*Payé par chèque #82 du
Rosaire le 12 sept 1989*

FACTURE

No...4.....

Louis Pouliot, ing.
747 Marie Victorin
Boucherville, Qué.
J4B 1X6

le .18 septembre 1989

A: Roseval Silica Inc.
150 De Brullon
Boucherville, Qué.
J4B 2J2

Payé le 19 Sept 89

Pour services professionnels rendus selon les termes
de l'Entente du 23 juillet 1989;

*Payé par cheque 189
de Roseval du
29 Sept 1989*

Période du ...1^{er}..... au
...15 septembre.....1989:

\$. 6250.00.....

FACTURE

No. ⁷.....

Louis Pouliot, ing.
747 Marie Victorin
Boucherville, Qué.
J4B 1X6

le 02-11-89.....

A: Roseval Silica Inc.
150 De Brullon
Boucherville, Qué.
J4B 2J2

Pour services professionnels rendus selon les termes
de l'Entente du 23 juillet 1989;

*Pay for cheque 231
du 17-10-1989*

Période du ¹⁶..... au

...31. octobre.....1989:

\$. 6250.00.....

FACTURE

No. 8.....

Louis Pouliot, ing.
747 Marie Victorin
Boucherville, Qué.
J4B 1X6

le 16 novembre 1989

A: Roseval Silica Inc.
150 De Brullon
Boucherville, Qué.
J4B 2J2

Pour services professionnels rendus selon les termes
de l'Entente du 23 juillet 1989;

Période du 1^{er}..... au
au 15 novembre.....1989:

\$ 6250.00.....

*Payé par
chèque 243
de Roseval
du
1^{er} Nov 1989*

FACTURE

No...9.....

Louis Pouliot, ing.
747 Marie Victorin
Boucherville, Qué.
J4B 1X6

15 décembre 1989
le

A: Roseval Silica Inc.
150 De Brullon
Boucherville, Qué.
J4B 2J2

Pour services professionnels rendus selon les termes
de l'Entente du 23 juillet 1989;

Période du ...16..... au
...30 novembre.....1989:

\$...3,409.09....

6 jours

i.e. 16,17,20,21,27,28 novembre

*Prix par jour 15
de novembre
16 novembre 1989*

ROSEVAL SILICA INC

LIST OF EXPENDITURES

PUROLATOR COURIER LTD

INVOICE DATE	RECIPIENT	NATURE OF EXPENSES	AMOUNT
Jul 14 89	PUROLATOR COURIER	Sample delivery	\$ 24.10
Jul 21 89	PUROLATOR COURIER	Sample delivery	\$ 26.73
Sep 29 89	PUROLATOR COURIER	Sample delivery	\$ 69.27
Nov 17 89	PUROLATOR COURIER	Sample delivery	\$ 322.82
Dec 01 89	PUROLATOR COURIER	Sample delivery	\$ 53.99
Dec 08 89	PUROLATOR COURIER	Sample delivery	\$ 21.22
Dec 15 89	PUROLATOR COURIER	Sample delivery	\$ 120.36
Jan 05 90	PUROLATOR COURIER	Sample delivery	\$ 51.35
Jan 12 90	PUROLATOR COURIER	Sample delivery	\$ 192.50
Jan 19 90	PUROLATOR COURIER	Sample delivery	\$ 16.74
Jan 26 90	PUROLATOR COURIER	Sample delivery	\$ 66.04
Total			\$ 965.12



Purolator Courier Ltd.
Courrier Purolator Ltée

CANADA'S LARGEST COURIER SERVICE
LE SERVICE DE COURRIER LE PLUS IMPORTANT AU CANADA

INVOICE / FACTURE

WHEN IT'S JUST GOT TO GET THERE!
QUAND IL FAUT, IL FAUT!

MONTH / MOIS	DAY / JOUR	YEAR / ANNÉE	ACCOUNT NUMBER / NUMÉRO DU COMPTE	INVOICE NUMBER / N° DE LA FACTURE	AMOUNT DUE / MONTANT À PAYER	AMOUNT PAID / MONTANT PAYÉ
07	14	89	1-5952450	0986792 0	24.10	

PLEASE DO NOT USE STAPLES. PRIÈRE DE NE PAS AGRAFER.

SERVICE OUTRE MER PUROLATOR
1 APPEL VOUS LIVRE LE MONDE
INFORMATION: (514) 641-2430

5952450 09867920 00002410

FACTURE A

ROSEVAL SILICA INC
150 DE BRULLON
BOUCHERVILLE
J4P 2J2

P.Q.

REMYTTE A

C.P. 1100
STN. LASALLE
LASALLE QUE.
H8R 4B2

(521)

07/14/89 5952450 0986792 0 AREA # / REGION # 521 PAGE 1

REF. / B/L NO. RÉF. / NO DE CONN	SERVICE DATE DATE DE SERVICE	DESCRIPTION	PIECES NBR DE COLIS	WEIGHT POIDS	CHARGES / FRAIS		TOTAL CHARGES FRAIS TOTAUX
					CODE	\$	
957989833	07/04/89	ORIG BOUCHERVILLE DEST BECANCOUR	1	40LB	G	23.40	24.10
					F	0.70	

*Prix par charge 147 \$
Remise de 21 \$ le 21/04/89*



BILL OF LADING
CONNAISSEMENT

NOT NEGOTIABLE
NON NÉGOCIABLE

957989833 00

CANADA'S LARGEST COURIER SERVICE - LE SERVICE DE COURRIER LE PLUS IMPORTANT AU CANADA

ACCOUNT NO. / NO DE COMPTE 5952450	TYPE OF SERVICE / MODE DE TRANSPORT VIA GROUND / VOIE TERRESTRE <input checked="" type="checkbox"/> 1 VIA AIR / VOIE AÉRIENNE <input type="checkbox"/> 2	MO. / DY. / JR. / YR. / AN 7 / 4 / 89	CHECK ONE COCHER PREPAID PORT PAYÉ <input checked="" type="checkbox"/> 7 DOLL. PORT \$0
CONSIGNOR (FROM) / EXPÉDITEUR (DE) ROSEVAL SILICA INC STREET ADDRESS / ADRESSE (NO ET RUE) 150 de Brullon CITY / VILLE PROV. POSTAL CODE / CODE POSTAL BOUCHERVILLE QUEBEC J4B 2J2	CONSIGNEE (TO) / DESTINATAIRE (A) SKW CANADA INC STREET ADDRESS / ADRESSE (NO ET RUE) 1ère avenue, parc Industriel du Québec CITY / VILLE PROV. POSTAL CODE / CODE POSTAL Becancour Quebec J2G 1B0	DECLARED VALUE / VALEUR DÉCLARÉE \$ —	
SHIPPER SIGNATURE / SIGNATURE DE L'EXPÉDITEUR R S Komorekka	CARRIER SIGNATURE / SIGNATURE DU TRANSPORTEUR R S Komorekka	DATE 7/5/89	TIME / HEURE 3:50

LIMITATION OF LIABILITY IMPORTANT, PLEASE READ		NO. OF PIECES NO DE COLIS	DESCRIPTION	WEIGHT/POIDS
<p>The amount of any loss or damage for which the carrier may be liable, shall not exceed \$2.00 per pound (or \$4.41 per kilogram) computed on the total weight of the shipment unless a higher value is declared on the face of the bill of lading by the consignor, and it is further agreed as a special agreement, and notwithstanding any disclosure of the nature or extraordinary value of the goods, the amount of any loss or damage, including without limitation consequential, incidental or indirect damages including loss of orders or profits in any manner resulting, whether or not from negligence or gross negligence, from loss of or damage to the goods and/or misdelivery, failure to deliver or delay in delivery, of the goods, for which carrier may be liable to the consignor, owner, consignee and/or any third party whether in contract, tort or otherwise, shall in no event exceed (a) in the case of fundamental breach by carrier, the greater of an amount equal to carrier's maximum liability aforesaid and the amount of all freight and other charges paid hereunder, and (b) in any other case, an amount equal to carrier's maximum liability aforesaid.</p> <p>N.B. NOTE CAREFULLY CONDITIONS ON BACK HEREOF INCLUDING LIMITATIONS AND EXCLUSIONS OF CARRIER'S LIABILITY, WHICH ARE HEREBY ACCEPTED.</p>		1	BOX OF ROCKS	4
<p>Le montant de toute perte ou dommage dont le transporteur pourrait être responsable ne doit pas excéder \$2,00 le livre (ou \$4,41 le kilogramme) calculé sur le poids total de l'expédition, à moins qu'une valeur supérieure n'ait été déclarée sur le recto du connaissement par l'expéditeur. Il est de plus convenu à titre d'entente spéciale que, malgré toute divulgation de la nature ou de la valeur extraordinaire des marchandises, le montant de toute perte ou dommage, y compris les dommages indirects, accessoires ou incidents comprenant la perte de revenus ou de profits, provenant de la perte ou d'un dommage aux marchandises, d'une erreur de livraison, du défaut ou d'un retard dans la livraison des marchandises ou encore une autre source, par suite d'une négligence ou d'une faute lourde, dont le transporteur pourrait être tenu responsable, contractuellement ou autrement, envers l'expéditeur, propriétaire, le destinataire ou un tiers, ne doit en aucun cas excéder (i) dans le cas de violation fondamentale du contrat par le transporteur, soit un montant égal à la responsabilité maximale précitée du transporteur, soit le montant de tous les frais de transport et autres frais payés en vertu des présentes, selon le plus élevé des deux, et (ii) dans les autres cas, un montant égal à la responsabilité maximale précitée du transporteur.</p> <p>À VEUILLEZ PRENDRE CONNAISSANCE DES CONDITIONS AU VERSO, Y COMPRIS LES LIMITATIONS ET EXCLUSIONS DE RESPONSABILITÉ DU TRANSPORTEUR, QUI SONT ACCEPTÉES PAR LES PRÉSENTES.</p>		TOTAL	SPECIAL AGREEMENT / DISPOSITIONS PARTICULIÈRES	TOTAL WEIGHT / POIDS TOTAL
<p>RECEIVED IN GOOD ORDER EXCEPT AS NOTED. REÇU EN BON ÉTAT APPARENT SAUF MENTIONS CI-DESSOUS.</p>		PER: PAR:	DATE	TIME / HEURE

95798983 1:

WHEN IT'S JUST GOT TO GET THERE!
QUAND IL FAUT, IL FAUT!

MONTH MOIS	DAY JOUR	YEAR ANNÉE	ACCOUNT NUMBER NUMÉRO DU COMPTE	INVOICE NUMBER N° DE LA FACTURE	AMOUNT DUE MONTANT À PAYER	AMOUNT PAID MONTANT PAYÉ
07	21	89	1-5952450	1096527 5	26.73	

PLEASE DO NOT USE STAPLES. PRIÈRE DE NE PAS AGRAFER.

SERVICE OUTRE MER PUROLATOR
1 APPEL VOUS LIVRE LE MONDE
INFORMATION: (514) 641-2430

5952450 10965275 00002673

ROSEVAL SILICA INC
150 DE BRULLON
BOUCHERVILLE
J4B 2J2

P.Q.

C.P. 1100
STN. LASALLE
LASALLE QUE.
H8R 4B2

(521)

07/21/89 5952450 1096527 5 AREA # / REGION # 521 PAGE 1

REF. / B/L NO. RÉF. / NO DE CONN	SERVICE DATE DATE DE SERVICE	DESCRIPTION	PIECES NBRE DE COLIS	WEIGHT POIDS	CHARGES / FRAIS		TOTAL CHARGES FRAIS TOTAUX
					CODE	\$	
957989841	07/02/89	ORIG BOUCHERVILLE DEST BECANCOUR	1	48LB	G	25.95	26.73
					F	0.78	

*Prez fr de 154h
Remis le 2 avril 1989*



BILL OF LADING
CONNAISSEMENT

NOT NEGOTIABLE
NON NÉGOCIABLE

957989841 521

CANADA'S LARGEST COURIER SERVICE - LE SERVICE DE COURRIER LE PLUS IMPORTANT AU CANADA

ACCOUNT NO. / NO DE COMPTE 5952450	TYPE OF SERVICE / MODE DE TRANSPORT VIA GROUND / VOIE TERRESTRE <input checked="" type="checkbox"/> 1 VIA AIR / VOIE AÉRIENNE <input type="checkbox"/> 2	7 2 89 MO. DY./JR. YR./AN	CHECK ONE COCHER PREPAID PORT PAYÉ <input checked="" type="checkbox"/> 7 COLLECT PORT DÙ <input type="checkbox"/>
CONSIGNOR (FROM) / EXPÉDITEUR (DE) ROSEVAL SILICA INC 150 de Brullon Boucherville Quebec J4B 2J2	CONSIGNEE (TO) / DESTINATAIRE (À) SKW CANADA INC. 1ère avenue, par Industriel du Quebec Béancour Quebec CP G0X 1B0	DECLARED VALUE VALEUR DÉCLARÉE \$	
SHIPPER SIGNATURE / SIGNATURE DE L'EXPÉDITEUR <i>R. Komar</i>	CARRIER SIGNATURE / SIGNATURE DU TRANSPORTEUR <i>R. 187 04/27/89</i>		

LIMITATION OF LIABILITY IMPORTANT, PLEASE READ
The amount of any loss or damage for which the carrier may be liable, shall not exceed \$2.00 per pound for \$4.41 per kilogram computed on the total weight of the shipment unless a higher value is declared on the face of the bill of lading by the consignor, and it is further agreed as a special agreement, and notwithstanding any disclosure of the nature or extraordinary value of the goods, the amount of any loss or damage, including without limitation consequential, incidental or indirect damages including loss of earnings or profits, in any manner resulting, whether or not from negligence or gross negligence, from loss of or damage to the goods and/or misdelivery, failure to deliver or delay in delivery of the goods, for which carrier may be liable to the consignor, owner, consignee and/or any third party whether in contract, tort or otherwise, shall in no event exceed, (a) in the case of fundamental breach by carrier, the greater of an amount equal to carrier's maximum liability aforesaid and the amount of all freight and other charges paid hereunder; and (b) in any other case, an amount equal to carrier's maximum liability aforesaid.

LIMITATION DE RESPONSABILITÉ IMPORTANT, LISEZ S.V.P.
Le montant de toute perte ou dommage dont le transporteur pourrait être responsable ne doit pas excéder \$2,00 la livre (ou \$4,41 le kilogramme) calculé sur le poids total de l'expédition, à moins qu'une valeur supérieure n'ait été déclarée sur le recto du connaissement par l'expéditeur. Il est de plus convenu à titre d'entente spéciale que, malgré toute divulgation de la nature ou de la valeur extraordinaire des marchandises, le montant de toute perte ou dommage, y compris les dommages indirects, accessoires ou incidents comprenant la perte de revenus ou de profits, provenant de la perte ou d'un dommage aux marchandises, d'une erreur de livraison, du défaut ou d'un retard dans la livraison des marchandises ou encore d'une autre source, par suite d'une négligence ou d'une faute lourde, dont le transporteur pourrait être tenu responsable, contractuellement, délictuellement ou autrement, envers l'expéditeur, le propriétaire, le destinataire ou un tiers, ne doit en aucun cas excéder (a) dans le cas de violation fondamentale du contrat par le transporteur, soit un montant égal à la responsabilité maximale précitée du transporteur, soit le montant de tous les frais de transport et autres frais payés en vertu des présentes, selon le plus élevé des deux, et (b) dans les autres cas, un montant égal à la responsabilité maximale précitée du transporteur.

N.B. VEUILLEZ PRENDRE CONNAISSANCE DES CONDITIONS AU VERSO, Y COMPRIS LES LIMITATIONS ET EXCLUSIONS DE RESPONSABILITÉ DU TRANSPORTEUR, QUI SONT ACCEPTÉES PAR LES PRÉSENTES.

NO. / PIECES NO DE COLIS	DESCRIPTION	WEIGHT/POIDS lb.
1	BOX OF ROCKS	4
TOTAL	SPECIAL AGREEMENT / DISPOSITIONS PARTICULIÈRES	TOTAL WEIGHT POIDS TOTAL

RECEIVED IN GOOD ORDER EXCEPT AS NOTED.
REÇU EN BON ÉTAT APPARENT SAUF MENTIONS
CI-DESSOUS
CONSIGNEUR / DESTINATAIRE

DATE
TIME / HEURE

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95798984 1:

WHEN IT'S JUST GOT TO GET THERE!
QUAND IL FAUT, IL FAUT!

MONTH MOIS	DAY JOUR	YEAR ANNÉE	ACCOUNT NUMBER NUMÉRO DU COMPTE	INVOICE NUMBER DE LA FACTURE	AMOUNT DUE MONTANT À PAYER	AMOUNT PAID MONTANT PAYÉ
09	29	89	1-5952450	2088296 5	69.27	

PLEASE DO NOT USE STAPLES. PRIÈRE DE NE PAS AGRAFER.

SERVICE OUTRE MER PUROLATOR
1 APPEL VOUS LIVRE LE MONDE
INFORMATION: (514) 641-2430

[X] 5952450 20882965 30006927

ROSEVAL SILICA INC
150 DE BRULLON
BOUCHERVILLE
J4R 2J2

P.Q.

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C.P. 1100
STN. LASALLE
LASALLE QUE.
H8R 4B2

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09/29/89 5952450 2088296 5 AREA # / REGION # 521 PAGE 1

REF. / B/L NO. / NO DE CONN.	SERVICE DATE DATE DE SERVICE	DESCRIPTION	PIECES NBR DE COLIS	WEIGHT POIDS	CHARGES / FRAIS		TOTAL CHARGES FRAIS TOTAUX
					CODE	\$	
259426609	08/11/89	ORIG BOUCHERVILLE DEST BECANCOUR	P.Q. P.Q.	3 100LB	G F	32.95 0.99	33.94
259426583	08/21/89	ORIG BOUCHERVILLE DEST BOUCHERVILLE	P.Q. P.Q.	1 90LB	G F C	31.55 1.03 2.75	35.33

Pay for delay 213 du 27/01/89

QUICKER STICKER / SERVICE RAPID-0 X DANGEROUS GOODS / PRODUITS DANGEREUX
 AIR / PAR AVION D. DESTINATION H. HOLIDAY / JOUR FÉRIÉ P/L - PUROLETTER
 BEYOND / AU DELÀ F. FUEL/CARBURANT I. VALUATION CHARGES / VALEUR DE CHARGE P/L - PUROLETTER PLUS
 COLLECT / PORT DU G. GROUND / EN SURFACE
 THIS ACCOUNT MUST BE PAID WITHIN 7 DAYS INTEREST CHARGED ON OVERDUE ACCOUNTS CE COMPTE DOIT ÊTRE ACQUITTÉ DANS LES 7 JOURS INTÉRÊT IMPUTÉ AUX COMPTES EN SOUFFRANCE



BILL OF LADING CONNAISSEMENT NOT NEGOTIABLE NON NÉGOCIABLE

259426609

CANADA'S LARGEST COURIER SERVICE LE SERVICE DE COURRIER LE PLUS IMPORTANT AU CANADA

ACCOUNT NO. / NO DE COMPTE 5952450	TYPE OF SERVICE / MODE DE TRANSPORT VIA GROUND / VOIE TERRESTRE <input checked="" type="checkbox"/> 1 VIA AIR / VOIE AÉRIENNE <input type="checkbox"/> 2	MO. 08 DY./JR. 11 YR./AN. 89	CHECK ONE COCHER FRENCH PORT PAYÉ <input checked="" type="checkbox"/> 7 BILL PORT DU <input type="checkbox"/>
CONSIGNOR (FROM) / EXPÉDITEUR (DE) ROSEVAL SILICA INC	CONSIGNEE (TO) / DESTINATAIRE (À) SKW INC	DECLARED VALUE / VALEUR DÉCLARÉE \$	DECLARED VALUE / VALEUR DÉCLARÉE 6
STREET ADDRESS / ADRESSE (NO ET RUE) 150 DE BRULLON 3	STREET ADDRESS / ADRESSE (NO ET RUE) PARC INDUSTRIEL DU CENTRAL DU QUÉBEC		
CITY / VILLE BOUCHERVILLE QUE	CITY / VILLE BECANCOUR QUE		
PROV. QUE	PROV. QUE		
POSTAL CODE / CODE POSTAL J4R 2J2	POSTAL CODE / CODE POSTAL G0X 1B0		

LIMITATION OF LIABILITY IMPORTANT, PLEASE READ
 The amount of any loss or damage for which the carrier may be liable, shall not exceed \$2.00 per pound (or \$4.41 per kilogram) computed on the total weight of the shipment...
LIMITATION DE RESPONSABILITÉ IMPORTANT, LIREZ S.V.P.
 Le montant de toute perte ou dommage dont le transporteur pourrait être responsable ne doit pas excéder \$2.00 la livre (ou \$4.41 le kilogramme) calculé sur le poids total de l'expédition...
 RECEIVED IN GOOD ORDER EXCEPT AS NOTED. / REÇU EN BON ÉTAT APPARENANT SAUF MENTIONS
 CONSIGNEUR / DESTINATAIRE
 Purolator Courier Ltd. / Courrier Purolator Ltée

25942660 1:



Purolator Courier Ltd.
Courrier Purolator Ltée

CANADA'S LARGEST COURIER SERVICE
LE SERVICE DE COURRIER LE PLUS IMPORTANT AU CANADA

INVOICE / FACTURE

WHEN IT'S JUST GOT TO GET THERE!
QUAND IL FAUT, IL FAUT!

MONTH MOIS	DAY JOUR	YEAR ANNÉE	ACCOUNT NUMBER NUMÉRO DU COMPTE	INVOICE NUMBER NUMÉRO LA FACTURE	AMOUNT DUE MONTANT À PAYER	AMOUNT PAID MONTANT PAYÉ
11	17	89	1-5952450	2819049 4	322.82	

PLEASE DO NOT USE STAPLES. PRIÈRE DE NE PAS AGRAFER.

SERVICE OUTRE MER PUROLATOR
APPEL VOUS LIVRE LE MONDE
INFORMATION: (514) 641-2430



5952450 28190494 00032282

FACTURE

ROSEVAL SILICA INC
150 DE BRULLON
BOUCHERVILLE
J4B 2J2

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C.P. 1100
STN. LASALLE
LASALLE QUE.
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11/17/89 5952450 2819049 4 AREA # / REGION # 521 PAGE 1

REF. / B/L NO. RÉF. / NO DE CONN.	SERVICE DATE DATE DE SERVICE	DESCRIPTION	PIECES NBR DE COLIS	WEIGHT POIDS	CHARGES / FRAIS		TOTAL CHARGES FRAIS TOTAUX
					CODE	\$	
003415486	09/14/89	ORIG BOUCHERVILLE DEST LAKEWOOD	3	140LB	G	291.50	306.08
					F	14.58	
259426567	10/20/89	ORIG TIMMINS DEST BOUCHERVILLE	21	1LB	G	10.99	16.74
					F	0.80	
					C	2.75	
					D	2.20	

*Pro package 305
de Piquet de
8 Dec 89*

QUICKER SLICKER / SERVICE RAPID-0 X DANGEROUS GOODS / PRODUITS DANGEREUX
 B - BEYOND / AU DELA F - FUEL / CARBURANT I - VALUATION CHARGES / VALEUR DE CHARGE P/L - PUROLETTER PLUS
 C - COLLECT / PORT DU G - GROUND / EN SURFACE
 2 B/L'S

THIS ACCOUNT MUST BE PAID WITHIN 7 DAYS. INTEREST CHARGED ON OVERDUE ACCOUNTS. CE COMPTE DOIT ÊTRE ACQUITTÉ DANS LES 7 JOURS. INTÉRÊT IMPUTÉ AUX COMPTES EN SOUFFRANCE



Purolator Courier Ltd.
 Courrier Purolator 1*4e

LE SERVICE DE COURRIER LE PLUS IMPORTANT AU CANADA

INVOICE / FACTURE

WHEN IT'S JUST GOT TO GET THERE!
 QUAND IL FAUT, IL FAUT!

MONTH MOIS	DAY JOUR	YEAR ANNÉE	ACCOUNT NUMBER NUMÉRO DU COMRTE	INVOICE NUMBER NUM DE LA FACTURE	AMOUNT DUE MONTANT À PAYER	AMOUNT PAID MONTANT PAYÉ
12	01	89	1-5952450	3038695 7	53.99	

PLEASE DO NOT USE STAPLES. PRIÈRE DE NE PAS AGRAFER.

SERVICE OUTRE MER PUROLATOR
 1 APPEL VOUS LIVRE LE MONDE
 INFORMATION: (514) 641-2430

X 5952450 30386957 00005399

ROSEVAL SILICA INC
 150 DE BRULLON
 BOUCHERVILLE
 J4B 2J2

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12/01/89 5952450 3038695 7 AREA # / REGION # 521 PAGE 1

REF. / B/L NO. RÉF. / NO DE CONN	SERVICE DATE DATE DE SERVICE	DESCRIPTION	PIECES NBRE DE COLIS	WEIGHT POIDS	CHARGES / FRAIS		TOTAL CHARGES FRAIS TOTAUX	
					CODE	\$.		
003415494	09/11/89	ORIG BOUCHERVILLE DEST PETERBOROUGH	P.Q. ONT.	2	68LB	G F	28.47 1.42 29.89	
003415502	09/11/89	ORIG BOUCHERVILLE DEST BECANCOUR	P.Q. P.Q.	1	32LB	G F	23.40 0.70 24.10	
<i>Pay for charge Payment 249 du 22 dec 1989</i>								
Q - QUICKER STICKER / SERVICE RAPID-O X - DANGEROUS GOODS / PRODUITS DANGEREUX					2 B/L'S →		AMOUNT DUE MONTANT À PAYER	53.99

THIS ACCOUNT MUST BE PAID WITHIN 7 DAYS. INTEREST CHARGED ON OVERDUE ACCOUNTS. CE COMPTE DOIT ÊTRE ACQUITTÉ DANS LES 7 JOURS. INTÉRÊT IMPUTÉ AUX COMPTES EN SOUFFRANCE.

WHEN IT'S JUST GOT TO GET THERE!
QUAND IL FAUT, IL FAUT!

MONTH MOIS	DAY JOUR	YEAR ANNEE	ACCOUNT NUMBER NUMERO DU COMPTE	INVOICE NUMBER NUMERO DE LA FACTURE	AMOUNT DUE MONTANT A PAYER	AMOUNT PAID MONTANT PAYE
12	08	89	1-5952450	3145995 1	21.22	

PLEASE DO NOT USE STAPLES. PRIERE DE NE PAS AGRAFER.

SERVICE OUTRE MER PUROLATOR
1 APPEL VOUS LIVRE LE MONDE
INFORMATION: (514) 641-2430

5952450 31459951 00002122

ROSEVAL SILICA INC
150 DE BRULLON
BOUCHERVILLE
J4B 2J2

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12/08/89 5952450 3145995 1 AREA # / REGION # 521 PAGE 1

REF. / B/L NO. REF. / NO DE CONN.	SERVICE DATE DATE DE SERVICE	DESCRIPTION	PIECES NOMBRE DE COPIES	WEIGHT POIDS	CHARGES / FRAIS CODE	TOTAL CHARGES FRAIS TOTAUX
003415395	10/19/89	CRIG BOUCHERVILLE DEST MONTREALH1H	1	30LB	G F	20.60 0.62 21.22
<p><i>Pos pour charge 251 de Montreal 27 Dec 1989</i></p>						
<p>QUICKER STICKER / SERVICE RAPID-O X DANGEROUS GOODS / PRODUITS DANGEREUX</p>					<p>AMOUNT DUE MONTANT A PAYER 21.22</p>	

THIS ACCOUNT MUST BE PAID WITHIN 7 DAYS. INTEREST CHARGED ON OVERDUE ACCOUNTS. CE COMPTE DOIT ETRE ACQUITTE DANS LES 7 JOURS. INTERET IMPUTE AUX COMPTES EN SOUFFRANCE.



Puroiator Courier Ltd.
 Courrier Puroiator Ltée

LE SERVICE DE COURRIER LE PLUS IMPORTANT AU CANADA

INVOICE / FACTURE

MONTH MOIS	DAY JOUR	YEAR ANNÉE	ACCOUNT NUMBER NUMÉRO DU COMPTE	INVOICE NUMBER NUMÉRO DE LA FACTURE	AMOUNT DUE MONTANT À PAYER	AMOUNT PAID MONTANT PAYÉ
12	15	89	1-5952450	3254835 6	120.36	

PLEASE DO NOT USE STAPLES. PRIÈRE DE NE PAS AGRAFER.

SERVICE OUTRE MER PUROLATOR
 1 APPEL VOUS LIVRE LE MONDE
 INFORMATION: (514) 641-2430

5952450 32548356 00012036

ROSEVAL SILICA INC
 150 DE BRULLON
 BOUCHERVILLE
 J4B 2J2

P.Q.

*Pay for this def. in
 de Puroiator le
 9 jan 1990*

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 STN. LASALLE
 LASALLE QUE.
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12/15/89 5952450 3254835 6 AREA # / REGION # 521 PAGE 1

REF. / B/L NO. ÉF. / NO DE CONN	SERVICE DATE DATE DE SERVICE	DESCRIPTION	PIECES NBR DE COLIS	WEIGHT POIDS	CHARGES / FRAIS		TOTAL CHARGES FRAIS TOTAUX	
					CODE	\$		
003415403	09/21/89	ORIG BOUCHERVILLE	P.Q.	1	30LB	G	20.60	21.22
		DEST BECANCOUR	P.Q.			F	0.62	
003415411	09/21/89	ORIG BOUCHERVILLE	P.Q.	1	35LB	G	23.40	24.10
		DEST BECANCOUR	P.Q.			F	0.70	
003415445	09/30/89	ORIG BOUCHERVILLE	P.Q.	1	25LB	G	20.60	21.22
		DEST BECANCOUR	P.Q.			F	0.62	
003415429	10/06/89	ORIG BOUCHERVILLE	P.Q.	1	49LB	G	25.95	26.73
		DEST BECANCOUR	P.Q.			F	0.78	
003415452	10/06/89	ORIG BOUCHERVILLE	P.Q.	1	10LB	G	15.10	15.55
		DEST BECANCOUR	P.Q.			F	0.45	
724789482	12/11/89	ORIG BOUCHERVILLE	P.Q.	1	4LB	G	10.99	11.54
		DEST TORONTOM1G	ONT.			F	0.55	

QUICKER STICKER / SERVICE RAPID-O X - DANGEROUS GOODS / PRODUITS DANGEREUX

A - AIR / PAR AVION	D - DESTINATION	H - HOLIDAY / JOUR FÉRIÉ	P/L - PUROLETTER	6 B/L'S	AMOUNT DUE MONTANT À PAYER	120.36
B - BEYOND / AU DELÀ	F - FUEL / CARBURANT	I - VALUATION CHARGES / VALEUR DE CHARGE	P/L+ - PUROLETTER PLUS			

THIS ACCOUNT MUST BE PAID WITHIN 7 DAYS. INTEREST CHARGED ON OVERDUE ACCOUNTS. CE COMPTE DOIT ÊTRE ACQUITTÉ DANS LES 7 JOURS. INTÉRÊT IMPUTÉ AUX COMPTES EN SOUFFRANCE.



Purolator Courier Ltd.
 Courrier Purolator Ltée

LE SERVICE DE COURRIER LE PLUS IMPORANT AU CANADA

INVOICE / FACTURE

WHEN IT'S JUST GOT TO GET THERE!
 QUAND IL FAUT, IL FAUT!

MONTH MOIS	DAY JOUR	YEAR ANNEE	ACCOUNT NUMBER NUMERO DU COMPTE	INVOICE NUMBER NUMERO DE LA FACTURE	AMOUNT DUE MONTANT A PAYER	AMOUNT PAID MONTANT PAYE
01	05	90	1-5952450	3561519 4	51.35	

PLEASE DO NOT USE STAPLES. PRIERE DE NE PAS AGRAFER.

SERVICE OUTRE MER PUROLATOR
 1 APPEL VOUS LIVRE LE MONDE
 INFORMATION: (514) 641-2430

5952450 35615194 00005135

FACTURE A

ROSEVAL SILICA INC
 150 DE BRULLON
 BOUCHERVILLE
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 STN. LASALLE
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01/05/90 5952450 3561519 4 AREA # / REGION # 521 PAGE 1

REF. / B/L NO. REF. / NO DE CONN.	SERVICE DATE DATE DE SERVICE	DESCRIPTION	PIECES NBR DE COUS	WEIGHT POIDS	CHARGES / FRAIS CODE	TOTAL CHARGES FRAIS TOTAUX
724789508	11/15/89	ORIG TIMMINS DEST BOUCHERVILLE	5	200LB	G 43.95 F 2.45 C 2.75 D 2.20	51.35

AIR / PAR AVION
 DESTINATION / R
 SERVICE RAPID / O
 DANGEROUS GOODS
 DANGEREUX
 BEYOND / AU DELA
 FUEL / CARBURANT
 VALIATION CHARGES / VALEUR DE CHARGES
 MONTANT A PAYER 51.35
 COLLECT / PORT DU
 GROUND / EN SURFACE

THIS ACCOUNT MUST BE PAID WITHIN 7 DAYS. INTEREST CHARGED ON OVERDUE ACCOUNTS. CE COMPTE DOIT ÊTRE ACQUITTÉ DANS LES 7 JOURS. INTERÊT IMPUTÉ AUX COMPTES EN SOUFFRANCE.



Purolator Courier Ltd.
Courrier Purolator Ltée

LE SERVICE DE COURRIER LE PLUS IMPORTANT AU CANADA

INVOICE / FACTURE

WHEN IT'S JUST GOT TO GET THERE!
QUAND IL FAUT, IL FAUT!

MONTH MOIS	DAY JOUR	YEAR ANNEE	ACCOUNT NUMBER NUMERO DU COMPTE	INVOICE NUMBER NUMERO DE LA FACTURE	AMOUNT DUE MONTANT A PAYER	AMOUNT PAID MONTANT PAYE
01	12	90	1-5952450	3664857 4	192.50	

PLEASE DO NOT USE STAPLES. PRIERE DE NE PAS AGRAFER.

SERVICE OUTRE MER PUROLATOR
1 APPEL VOUS LIVRE LE MONDE
INFORMATION: (514) 641-2430

5952450 36648574 00019250

BILL TO

ROSEVAL SILICA INC
150 DE BRULLON
BOUCHERVILLE
J4B 2J2

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C.P. 1100
STN. LASALLE
LASALLE QUE.
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01/12/90 5952450 3664857 4 AREA # / REGION # 521 PAGE 1

REF. / B/L NO REF. / NO DE CONN.	SERVICE DATE DATE DE SERVICE	DESCRIPTION	PIECES NOMBRE DE COUS	WEIGHT POIDS	CHARGES / FRAIS		TOTAL CHARGES FRAIS TOTAUX
					CODE	\$	
003415338	08/21/89	ORIG BOUCHERVILLE DEST WOODBRIDGE	1	3LB	G	10.99	11.54
003415460	09/26/89	ORIG BOUCHERVILLE DEST BECANCOUR	1	35LB	G	23.40	24.10
003415387	10/24/89	ORIG BOUCHERVILLE DEST BECANCOUR	1	8LB	G	15.10	15.55
003415379	10/29/89	ORIG BOUCHERVILLE DEST BECANCOUR	1	35LB	G	23.40	24.10
003415361	11/01/89	ORIG BOUCHERVILLE DEST BECANCOUR	1	30LB	G	20.60	21.22
003415353	11/05/89	ORIG BOUCHERVILLE DEST QUEBEC	1	50LB	G	25.95	26.73
003415346	11/11/89	ORIG BOUCHERVILLE DEST GOX	2	9LB	G	15.10	15.55
740161294	11/14/89	ORIG BOUCHERVILLE DEST BECANCOUR	2	70LB	G	28.75	29.61
003415312	11/15/89	ORIG BOUCHERVILLE DEST QUEBEC	1	40LB	G	23.40	24.10
QUICKER STICKER / SERVICE RAPID-O-X					DANGEROUS GOODS /		PRODUITS DANGEREUX
9 B/L'S					AMOUNT DUE		192.50

THIS ACCOUNT MUST BE PAID WITHIN 7 DAYS. INTEREST CHARGED ON OVERDUE ACCOUNTS. CE COMPTE DOIT ETRE ACQUITTE DANS LES 7 JOURS. INTERET IMPUTE AUX COMPTES EN SOUFFRANCE.



Purolator Courier Ltd.
Courrier Purolator Ltée

CANADA'S LARGEST COURIER SERVICE
LE SERVICE DE COURRIER LE PLUS IMPORTANT AU CANADA

INVOICE / FACTURE

WHEN IT'S JUST NOT TO GET THERE!
AND IL FAUT, IL FAUT!

MONTH / MOIS	DAY / JOUR	YEAR / ANNEE	ACCOUNT NUMBER / NUMERO DU COMPTE	INVOICE NUMBER / NUMERO DE LA FACTURE	AMOUNT DUE / MONTANT A PAYER	AMOUNT PAID / MONTANT PAYE
01	19	90	1-5952450	3775318 3	16.74	

PLEASE DO NOT USE STAPLES. PRIERE DE NE PAS AGRAFER.

SERVICE OUTRE MER PUROLATOR
APPEL VOUS LIVRE LE MONDE
INFORMATION: (514) 641-2430

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ROSEVAL SILICA INC
150 DE BRULLON
BOUCHERVILLE
J4R 2J2

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LASALLE QUE.
H8R 4E2

(521)

01/19/90 5952450 3775318 3 AREA # / REGION # 521 PAGE 1

REF. / S/L NO. REF. / NO DE COM.	SERVICE DATE DATE DE SERVICE	DESCRIPTION	ORIG.	DEST.	WEIGHT POIDS	CHARGES / FRAIS CODE	TOTAL CHARGES FRAIS TOTAUX
59426559	10/23/89	ORIG TIMMINS DEST ROUCHERVILLE	ONT.	P.O.	2 2LB	G 10.99 F 0.80 C 2.75 D 2.20	16.74
<i>Payé par chèque B-20 le 23/10/89</i>							
QUICKER STICKER / SERVICE RAPID 0 Y DANGEROUS GOODS / PRODUITS DANGEREUX AMOUNT DUE / MONTANT A PAYER							16.74

THIS ACCOUNT MUST BE PAID WITHIN 7 DAYS. INTEREST CHARGED ON OVERDUE ACCOUNTS. CE COMPTE DOIT ÊTRE ACQUITTÉ DANS LES 7 JOURS. INTÉRÊT IMPUTÉ AUX COMPTES EN SOUFFRANCE.



Purolator Courier Ltd.
Courrier Purolator Ltée

LE SERVICE DE COURRIER LE PLUS IMPORTANT AU CANADA

INVOICE / FACTURE

WHEN IT'S JUST GOT TO GET THERE!
QUAND IL FAUT, IL FAUT!

MONTH MOIS	DAY JOUR	YEAR ANNEE	ACCOUNT NUMBER NUMERO DU COMPTE	INVOICE NUMBER NUMERO DE LA FACTURE	AMOUNT DUE MONTANT A PAYER	AMOUNT PAID MONTANT PAYE
01	26	90	1-5952450	3881156 8	66.04	

PLEASE DO NOT USE STAPLES. PRIERE DE NE PAS AGRAFER.

SERVICE OUTRE MER PUROLATOR
1 APPEL VOUS LIVRE LE MONDE
INFORMATION: (514) 641-2430

5952450 38811568 00006604

ROSEVAL SILICA INC
150 DE BRULLON
BOUCHERVILLE
J4B 2J2

P.Q.

C.P. 1100
STN. LASALLE
LASALLE QUE.
H8R 4B2

(521)

01/26/90 5952450 3881156 8 AREA # / REGION # 521 PAGE 1

REF. / B/L NO. REF. / NO DE COM.	SERVICE DATE DATE DE SERVICE	DESCRIPTION	PECS NRE DE COUS	WEIGHT POIDS	CHARGES / FRAIS CODE	TOTAL CHARGES FRAIS TOTAUX
259426534	11/06/89	ORIG TIMMINS DEST BOUCHERVILLE	1	1LB	G 10.99 F 0.80 C 2.75 D 2.20	16.74
259426526	11/07/89	ORIG BOUCHERVILLE DEST BECANCOUR	2	70LB	G 28.75 F 0.86	29.61
259426542	11/16/89	ORIG BOUCHERVILLE DEST HAMILTON	1	20LB	G 18.75 F 0.94	19.69

*Pay for charge 21 de
Amont de 9 for 90*

QUICKER STICKER / SERVICE RAPID-O-X / DANGEROUS GOODS / PRODUITS DANGEREUX

AMOUNT DUE / MONTANT A PAYER **66.04**

THIS ACCOUNT MUST BE PAID WITHIN 7 DAYS. INTEREST CHARGED ON OVERDUE ACCOUNTS. CE COMPTE DOIT ETRE ACQUITTE DANS LES 7 JOURS. INTERET IMPUTE AUX COMPTES EN SOUFFRANCE.

ROSEVAL SILICA INC

LIST OF EXPENDITURES

REPROTECH

INVOICE DATE	RECIPIENT	NATURE OF EXPENSES	AMOUNT
Jan 25 90	REPROTECH	Strip & Trench, report	\$ 147.82
Feb 01 90	REPROTECH	Reserves, report	\$ 51.47
Feb 06 90	REPROTECH	Reserves, report	\$ 98.38
Feb 12 90	REPROTECH	Strip & Trench, report	\$ 175.00
Total			\$ 472.67

Référence du client
Customer purchase order

Comptant / Cash
 Chèque / Cheque
 Visa
 Master Card

FACTURE INVOICE
11393

N° de contrôle
Audit control No.

Dossier
Docket

Nom du client
Customer *Gaetan Lavallee*
Adresse
Address *150 De Brullen*
Ville
City *Montréal*
Code postal
Postal code
Téléphone
Telephone *655-0157*

Rep. en blanc
White print
 Photocopie
Photocopy
 Microfilm
 Offset
 Composition
Typesetting
 Reliure
Binding
Requis par
Requested by
(en lettres moulées / block letters) *X Gaetan Lavallee*

Quantité d'originaux Quantity of originals	Quantité requise Required quantity	Description	Quantité totale Total quantity	Prix Price	Montant Amount
5	8	11 x 17. plier KRYPT			7.20
3	1	reliure 100%			43.00
3	8	copie du reliure plus plac <i>Pochette</i>			24.08
PAYÉ					
25 JAN. 1990					
REPROTECH LTÉE					
					Sous-total Sub-total 74.28
					T.V. Féd. Fed. S.T. 13.5% 10.03
					T.V. Prov. Prov. S.T. 9% 7.59
					TOTAL 91.90
					Moins acompte Less part. paym.

* Format: U: unité
M: mille
P: pieds carrés

Recu par / Received by

Date exp. / Delivery date

**Montant à payer
Pay this amount**

R-103-C-01/84

COPIE VERTE: ORIGINAL COPIE JAUNE: COMPTABILITÉ COPIE ROSE: CLIENT COPIE BLEUE: REPROTECH

Référence du client
Customer purchase order

Comptant / Cash
 Chèque / Cheque
 Visa
 Master Card

FACTURE INVOICE
11400

N° de contrôle
Audit control No.

Dossier
Docket

Nom du client
Customer *Gaetan Lavallee*
Adresse
Address *150 De Brullen*
Ville
City *Montréal*
Code postal
Postal code
Téléphone
Telephone *655-0157*

Rep. en blanc
White print
 Photocopie
Photocopy
 Microfilm
 Offset
 Composition
Typesetting
 Reliure
Binding
Requis par
Requested by
(en lettres moulées / block letters)

Quantité d'originaux Quantity of originals	Quantité requise Required quantity	Description	Quantité totale Total quantity	Prix Price	Montant Amount
1		volume à relier Acotale Couvert Bordure			3.50
					4.00
					2.50
					1.00
		50 Pochettes	50	80c	40.00
PAYÉ					
25 JAN 1990					
REPROTECH LTÉE					
					Sous-total Sub-total 45.20
					T.V. Féd. Fed. S.T. 13.5% 6.10
					T.V. Prov. Prov. S.T. 9% 4.00
					TOTAL 55.30
					Moins acompte Less part. paym.

* Format: U: unité
M: mille
P: pieds carrés

Recu par / Received by

Date exp. / Delivery date

**Montant à payer
Pay this amount**

R-103-C-01/84

COPIE VERTE: ORIGINAL COPIE JAUNE: COMPTABILITÉ COPIE ROSE: CLIENT COPIE BLEUE: REPROTECH

Référence du client
Customer purchase order

Comptant / Cash
 Chèque / Cheque
 Visa
 Master Card

FACTURE INVOICE
11416

N° de contrôle
Audit control No.

Dossier
Docket

Nom du client
Customer *Javallee G.*

Adresse
Address

Ville
City

Code postal
Postal code

Téléphone
Telephone *655-0157*

Date *1-2-90*

Rep. en blanc
White print

Photocopie
Photocopy

Microfilm

Offset

Composition
Typesetting

Reliure
Binding

Requis par
Requested by
(en lettres moulées / block letters) *Javallee G.*

Init.

D e p t.	Quantité d'originaux Quantity of originals	Quantité requisse Required quantity	Description	Quantité totale Total quantity	Prix Price	F*	Montant Amount
	3	1	vetlum 100% text				
	3	5	black line du vetlum				

PAYÉ
07 FEB. 1990

Sous-total Sub-total	41 60
T.V. Féd Fed. S.T. 13.5%	5 62
T.V. Prov. Prov. S.T. 9%	4 25
TOTAL	51 47
Moins acompte Less part. paym.	
Montant à payer Pay this amount	51 47

* Format: U: unité
M: mille
P: pieds carrés

Reçu par / Received by

Date exp. / Delivery date

R-103-C-01/84

COPIE VERTE: ORIGINAL COPIE JAUNE: COMPTABILITÉ COPIE ROSE: CLIENT COPIE BLEUE: REPROTECH

Référence du client
Customer purchase order

Comptant / Cash
 Chèque / Cheque
 Visa
 Master Card

FACTURE INVOICE
11427

N° de contrôle
Audit control No.

Dossier
Docket

Nom du client
Customer *G. Javallee*

Adresse
Address

Ville
City

Code postal
Postal code

Téléphone
Telephone *655-0157*

Date *6-2-90*

Rep. en blanc
White print

Photocopie
Photocopy

Microfilm

Offset

Composition
Typesetting

Reliure
Binding

Requis par
Requested by
(en lettres moulées / block letters) *Javallee G.*

Init.

D e p t.	Quantité d'originaux Quantity of originals	Quantité requisse Required quantity	Description	Quantité totale Total quantity	Prix Price	F*	Montant Amount
			Petite 10 volume. v. 2				
			Jouille à changer. et mettre à jour. changer couverture.				

PAYÉ
07 FEB. 1990
REPROTECH LTÉE

Sous-total Sub-total	99 50
T.V. Féd Fed. S.T. 13.5%	10 73
T.V. Prov. Prov. S.T. 9%	8 12
TOTAL	98 35
Moins acompte Less part. paym.	
Montant à payer Pay this amount	98 35

* Format: U: unité
M: mille
P: pieds carrés

Reçu par / Received by

Date exp. / Delivery date

ROSEVAL SILICA INC

LIST OF EXPENDITURES

SUPERIOR PROPANE INC

INVOICE DATE	RECIPIENT	NATURE OF EXPENSES	AMOUNT
Aug 15 89	SUPERIOR PROPANE	Field office heating	\$ 478.08
Oct 26 89	SUPERIOR PROPANE	Field office heating	\$ 10.00
Total			\$ 488.08

Superior Propane Inc. - SERVICE ORDER INVOICE

CUSTOMER NAME & ADDRESS
Roseval Silica Inc.
150 De Brukan
Boucherville Quebec **J4B 2J2**

DELIVER TO
TIONAGA QUARTZ MINES

DATE
AUG 15 19 **89**
 PROV. TAX LIC. NO.

INVOICE NUMBER
307399

FED. SALES TAX LIC. NO. TERMS

CUSTOMER REQUISITION NO. CUSTOMER ORDER NO.

ORDERED BY TELEPHONE NO. TAKEN BY

MATERIAL AND EQUIPMENT SOLD				
QTY.	PART NUMBER	DESCRIPTION	PRICE	AMOUNT
1		DOUBLE TANK COND. (TEE BLOCK + PISTON)	4000	4000
Rental of 8 x 100 at 1.25 ea/month				
From Aug 16/89 To				
Sept 30/89				
Pay for change in bill Received on 23/8/89				

JOB DESCRIPTION
Hook up 2 x 100 LB Cyl. TO TRAILER
INSTANT CUSTOMER ON OPERATION

Del. 8 x 100 LB Cyl TOTAL.
on Rent

MAKE AND MODEL OF APPLIANCE

DATE OF PURCHASE 19 _____ PURCHASED FROM

DATE SERVICE REQUIRED 19 _____ WARRANTY YES NO

SERVICE PERFORMED
Del and hooked up 8 x 100#
LP Gas cyl.
Aug 22/89

TOTAL MATERIAL & EQUIPMENT SOLD **40 00**

TOTAL NUMBER OF CYLINDERS DELIVERED **8** TOTAL NUMBER OF CYLINDERS RETURNED **0**

"It is agreed that the cylinders recorded hereon shall remain at all times the property of the Company and that the consumer will use reasonable care to avoid damage or loss thereto, and will pay the Company the cost of repairing or replacing any of the cylinders in case of damage or loss."

DOM. CYL. UNDER 100 LBS. 01	DOM. 100 LB. CYLINDERS 02	COMMERCIAL CYLINDERS 04	ROOFING CYLINDERS 06	CONSTRUCTION HTG. CYLINDERS 08	AGENT CYLINDERS 07	CARBURETION CYLINDERS 09
ENTER BULK CUSTOMER CATEGORY CODE				CATEGORY		CODE

ENTIRE PROPANE SYSTEM PROVEN LEAK FREE BY TEST GAUGE

DATE **Aug 16** 19 **89** SERVICEMAN'S SIGNATURE **P. Bernier**

LABOUR **3** HOURS @ **42.00** \$ **126.00**

DISTANCE _____ MI/KM @ _____ \$ _____

PROPANE **8 x 100 LIT @ 36.00** \$ **288.00**

MATERIAL & EQUIPMENT SOLD \$ **40.00**

CONTAINER SERVICE CHARGE FOR _____ MONTHS \$ _____

RENTAL AS PER CONTRACT \$ **10.00**

PROVINCIAL TAX **8** % \$ **14.08**

VISA
 MasterCard

A CHARGE OF 2% PER MONTH (24% PER ANNUM) IS CHARGED ON OVERDUE ACCOUNTS (MINIMUM CHARGE \$2.00).

PLEASE PAY THIS AMOUNT **478 08**

DATE COMPLETED **Aug 16** 19 **89** SERVICEMAN **Paul** PAYMENT RECEIVED BY _____ CUSTOMER'S ACCEPTANCE **X**

PLEASE REMIT TO: Superior Propane Inc.
 P.O. BOX 10
 PORCUPINE, ONTARIO P0N 1C0
 TEL: (705) 235-3321

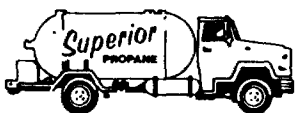
LIQUIFIED PETROLEUM GAS
 PROPANE CLASS 2.1 UN 1075
166.00

Superior Propane Inc.

RENTAL INVOICE PAGE: 1

PLEASE REFER TO THIS NUMBER WHEN MAKING PAYMENT OR INQUIRIES

INVOICE NO. 030-E910001	DATE 89/10/26	SALES TAX LIC. NO.	CUSTOMER ORDER NO.	TERMS NET 30	DRIVER	TRUCK NO. CLASS NO.
CUSTOMER NO. 2764355				COT	QTY	EXTENSION
				RENTAL	NO. OF	
				RATE	MONTHS	



PLEASE PAY DIRECTLY FROM THIS INVOICE AS NO STATEMENT WILL BE ISSUED.

EQUIPMENT ID: T00100-2764355 100 LBS CYL ON RENT SRCU 8 1.25 1 10.00

Pay for charge 240 & from the 2740 10/29

CHARGE ON OVERDUE ACCOUNTS IS 2.0% PER MONTH DUE 89/11/25
 (24.0% PER YEAR NOMINAL) COMPOUNDED MONTHLY (MIN. CHG. \$2.00) PAY THIS AMOUNT 10.00

SOLD TO
ROSEVAL SILICA INC.
 150 DE BRULLON
 BOUCHERVILLE, PQ J4B 2J2

DELIVERED TO
ROSEVAL SILICA INC.
 150 DE BRULLON
 BOUCHERVILLE, PQ J4B 2J2



THIS ACCOUNT CAN BE PAID BY TELEPHONE. CALL OUR OFFICE AND USE YOUR CREDIT CARD

02200E (01/89)

PLEASE REMIT TO:

SUPERIOR PROPANE INC.
 RAILWAY STREET, BOX 10
 PORCUPINE, ON P0N 1C0
 TEL: (705) 235-3321

DELIVERY RECEIVED BY

PAYMENT RECEIVED BY

LIST OF EXPENDITURES

E. H. VAN HEES GEOLOGICAL SERVICES INC

INVOICE DATE	RECIPIENT	NATURE OF EXPENSES	AMOUNT
Feb 01 90	E.H. VAN HEES	Surface ass. costs	\$ 3,898.55
Feb 01 90	E.H. VAN HEES	Stripping, washing	\$ 10,349.86
Feb 01 90	E.H. VAN HEES	Report preparation	\$ 1,000.00
Feb 01 90	E.H. VAN HEES	Report preparation	\$ 3,000.00
Total			\$ 18,248.41

INVOICENo. 90-24
Feb. 1/90Mr. G. Lavallee
La Societe de Gestion Maskours Inc.
150 Brullon
Boucherville, Quebec.
CANADA J4B 2J2

Re: Roseval project - Penhorwood Township, Ontario

CONSULTING

1.5 days diamond drill supervision by E. van Hees @ \$275/day	\$ 412.50
2.0 days diamond drill supervision by J. Walmsley @ \$225/day	\$ 550.00

CORE LOGGING

by J. Walmsley, E. van Hees, and K. Jensen as per quote to project manager	\$ 1,000.00
---	-------------

CORE SPLITTING

by R. Arbic and B. Blais as per quote to project manager	\$ 1,000.00
---	-------------

COURIER

as per attached invoice	\$ 84.25
-------------------------	----------

TRANSPORT

5 days vehicle rental to supervise drilling @ \$25/day (fuel invoiced on Inv. 90-25)	\$ 125.00
---	-----------

ASSAYING

as per attached invoices	\$ 235.00
	141.00
	256.00
15% handling charge (supervision)	94.80

<u>TOTAL</u>	\$ 3,898.55
--------------	-------------

INVOICE

No. 90-25
Feb. 1/90

Mr. G. Lavallee
La Societe de Gestion Maskours Inc.
150 Brullon
Boucherville, Quebec.
CANADA J4B 2J2

Re: Roseval project - Penhorwood Township, Ontario

OUTCROP WASHING

190 hours by R. Arbic @ \$15/hour (\$120/8hr. day)	\$ 2850.00
190 hours by R. Blais @ \$15/hour	\$ 2850.00
60 hours by T. Corbett @ \$15/hour	\$ 900.00

RENTALS

Bulldozer for 2.5 hours building roads to water and pulling out equipment at \$55/hour.	\$ 137.50
Water truck (for 4 days)	no charge
Gord's Rental as per attached invoices	\$ 78.84 21.60
Wajax Mark III fire pump for 18 days @ \$ 40/day	\$ 720.00
1500 feet of firehose for 12 days @ \$3/100'/day	\$ 540.00
3500 feet of firehose for 6 days @ \$3/100'/day	\$ 630.00
truck rental to demob as per attached invoice	\$ 87.14

SUPPLIES

as per attached invoices (Timmins Building Sup.)	\$ 57.39 29.75
--	-------------------

TRANSPORT

17 days truck rental @ \$25/day	\$ 425.00
Fuel for truck as well as fire pump	\$1,022.64

TOTAL

\$10,349.86

Geological Services

INVOICE

No. 90-26
Feb. 1/90

Mr. G. Lavallee
La Societe de Gestion Maskours Inc.
150 Brullon
Boucherville, Quebec.
CANADA J4B 2J2

Re: Roseval project - Penhorwood Township, Ontario

GEOLOGICAL MAPPING

- as per quote to project manager	\$ 1,000.00
	<hr/>
<u>TOTAL</u>	\$ 1,000.00

INVOICENo. 90-27
Feb. 1/90Mr. G. Lavallee
La Societe de Gestion Maskours Inc.
150 Brullon
Boucherville, Quebec.
CANADA J4B 2J2

Re: Roseval project - Penhorwood Township, Ontario

SUMMARY REPORT

- as per quote to project manager	\$ 3,000.00
	<hr/>
<u>TOTAL</u>	\$ 3,000.00

ROSEVAL SILICA INC

LIST OF EXPENDITURES

WOODGREEN HOMES & TRAILER SALES

INVOICE DATE	RECIPIENT	NATURE OF EXPENSES	AMOUNT
Jul 28 89	WOODGREEN HOMES	Field office rental	\$ 706.86
Aug 28 89	WOODGREEN HOMES	Field office rental	\$ 572.40
Sep 28 89	WOODGREEN HOMES	Field office rental	\$ 572.40
Oct 28 89	WOODGREEN HOMES	Field office rental	\$ 572.40
Nov 09 89	WOODGREEN HOMES	Field office rental	\$ -429.30
Nov 09 89	WOODGREEN HOMES	Field office rental	\$ 329.94
Total			\$ 2,324.70

INVOICE**INVOICE NO.**N^o 1562**Woodgreen Homes & Trailer Sales**

Division of Pedskalny Timber Co. Limited

705/235-5565 — Highway 101 East

PORCUPINE, ONTARIO

PON 1CO

Date **July 28, 89** Your Order No.TERMS **2% INTEREST PER MONTH ON ALL ACCOUNTS OVER THIRTY (30) DAYS.**

SHIPPING DAMAGES: Merchandise covered by this invoice left our plant in good condition, in approved cartons. Claims for damaged shipment must be filed by you with the carrier making delivery.

SOLD TO

ROSEVAL SILICA INC.
150 De Brullon
Boucherville, Quebec
J4B 2J2

SHIP TO

QUANTITY		DESCRIPTION	AMOUNT	PRICE
ORDERED	SHIPPED			

10' x 32' s/n 331281756

Rental of unit for the period from July 28 to August 27, 1989

\$ 530.00

Transportation 83 km @ \$ 1.50

124.50

654.50

P.S.T.

52.36

AMOUNT DUE

\$ 706.86*Partly paid 157
de Rosval Inc
9 août 1989**Thank You*

PLEASE PAY FROM THIS INVOICE

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Mascoutah, Illinois 62258

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ORIGINAL

USE LOWER PORTION FOR REPLY

REPLY FROM

DATE

INVOICE

INVOICE NO.

Nº 1670

Woodgreen Homes & Trailer Sales

Division of Pedskalny Timber Co. Limited

705/235-5565 — Highway 101 East

PORCUPINE, ONTARIO

PON 1CO

Date **Aug. 28, 89** Your Order No.

TERMS 2% INTEREST PER MONTH ON ALL ACCOUNTS OVER THIRTY (30) DAYS.

SHIPPING DAMAGES: Merchandise covered by this invoice left our plant in good condition, in approved cartons. Claims for damaged shipment must be filed by you with the carrier making delivery.

SOLD TO **ROSEVAL SILICA INC.**
150 De Brullon
Boucherville, Quebec
J4B 2J2

SHIP TO

QUANTITY		DESCRIPTION	AMOUNT	PRICE
ORDERED	SHIPPED			
		10' x 32' s/n 331281756		
		Rental of unit for the period from Aug. 28 to Sept. 27, 1989	\$ 530.00	
		P.S.T.	42.40	
		AMOUNT DUE		<u>\$ 572.40</u>

*Pay for change 137 de
forward de 24/09/1989*

PLEASE PAY FROM THIS INVOICE

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Mascoutah, Illinois 62258

PRINTED IN U.S.A.

ORIGINAL

MENT

IS
TED

PLEASE PAY
LAST AMOUNT
IN THIS
COLUMN

572.40

*Roseval
1 Sept 89*

INVOICE

INVOICE NO.

Nº 1819

Woodgreen Homes & Traller Sales

Division of Pedskalny Timber Co. Limited

705/235-5565 — Highway 101 East

PORCUPINE, ONTARIO

PON 1CO

Date **Sept. 28, 89** Your Order No.

TERMS 2% INTEREST PER MONTH ON ALL ACCOUNTS OVER THIRTY (30) DAYS.

SHIPPING DAMAGES: Merchandise covered by this invoice left our plant in good condition, in approved cartons. Claims for damaged shipment must be filed by you with the carrier making delivery.

SOLD TO ROSEVAL SILICA INC.
150 De Brullon
Boucherville, Quebec
J4B 2J2

SHIP TO

QUANTITY		DESCRIPTION	AMOUNT	PRICE
ORDERED	SHIPPED			
		10' x 32' s/n 331281756		
		Rental of unit for the period from Sept. 28 to Oct. 27, 1989	\$ 530.00	
		P.S.T.	42.40	
		AMOUNT DUE		<u><u>\$ 572.40</u></u>

*Part by chert 2154
Amount of 27 Oct 1989*

Thank You

PLEASE PAY FROM THIS INVOICE

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Mascoutah, Illinois 62258

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ORIGINAL

INVOICE

INVOICE NO.

Nº 1983

Woodgreen Homes & Trailer Sales
 Division of Pedskalny Timber Co. Limited
 705/235-5565 — Highway 101 East
 PORCUPINE, ONTARIO
 PON 1CO

Date **Oct. 028, 89** Your Order No.

TERMS **2% INTEREST PER MONTH ON ALL ACCOUNTS OVER THIRTY (30) DAYS.**

SHIPPING DAMAGES: Merchandise covered by this invoice left our plant in good condition, in approved cartons. Claims for damaged shipment must be filed by you with the carrier making delivery.

SOLD TO **ROSEVAL SILICA INC.**
 150 De Brullon
 Boucherville, Quebec
 J4B 2J2

SHIP TO

QUANTITY		DESCRIPTION	AMOUNT	PRICE
ORDERED	SHIPPED			
		10' x 32' s/n 331281756		
		Rental of unit for the period from Oct. 28 to Nov. 27, 1989	\$530.00	
		P.S.T.	42.40	
		AMOUNT DUE		<u>\$ 572.40</u>
			2081. Cash	- 429.30
			2084	+ 329.94
				<u>\$473.04</u>
			Paid for charge 232 du 24/10/89	
		PLEASE PAY FROM THIS INVOICE		

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ORIGINAL

INVOICE

CREDIT NOTE

INVOICE NO.

CREDIT NOTE
N^o 2081

Woodgreen Homes & Trailer Sales
Division of Pedskalny Timber Co. Limited
705/235-5565 — Highway 101 East
PORCUPINE, ONTARIO
PON 1CO

Date **Nov. 09, 89** Your Order No.

TERMS **2% INTEREST PER MONTH ON ALL
ACCOUNTS OVER THIRTY (30) DAYS.**

SHIPPING DAMAGES: Merchandise covered by this invoice left our plant in good condition, in approved cartons. Claims for damaged shipment must be filed by you with the carrier making delivery.

SOLD TO
ROSEVAL SILICA INC.
150 De Brullon
Boucherville, Quebec
J4B 2J2

SHIP TO

QUANTITY		DESCRIPTION	AMOUNT	PRICE
ORDERED	SHIPPED			
		10' x 32' s/n 331281756		
		TO CREDIT PART OF INVOICE # 1983 - UNIT RETURNED	\$ 397.50	
		P.S.T.	31.80	
		CREDIT AMOUNT DUE		<u>\$ 429.30</u>
				CREDIT

*Post
credit chq 232 de
24/11/89*

PLEASE PAY FROM THIS INVOICE

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Mascoutah, Illinois 62258

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ORIGINAL

INVOICE**INVOICE NO.**

N° 2084

Woodgreen Homes & Trailer Sales

Division of Pedskalny Timber Co. Limited

705/235-5565 — Highway 101 East

PORCUPINE, ONTARIO

PON 1CO

Date **Nov. 9, 89** Your Order No.**TERMS 2% INTEREST PER MONTH ON ALL ACCOUNTS OVER THIRTY (30) DAYS.**

SHIPPING DAMAGES: Merchandise covered by this invoice left our plant in good condition, in approved cartons. Claims for damaged shipment must be filed by you with the carrier making delivery.

SOLD TO ROSEVAL SILICA INC.
150 De Brullon
Boucherville, Quebec
J4B 2j2

SHIP TO

QUANTITY		DESCRIPTION	AMOUNT	PRICE
ORDERED	SHIPPED			
		10' X 32' s/n 331281756		
		Transportation 83 km X \$ 1.50	\$124.50	
		Cleaning	75.00	
		4 broken windows @ \$ 26.50 each	106.00	
			<u>305.50</u>	
		P.S.T.	24.44	
		AMOUNT DUE		<u><u>\$ 329.94</u></u>
		PLEASE PAY FROM THIS INVOICE		

*credit on day 232
due 2 APR 89*

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Mascoutah, Illinois 62258

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ORIGINAL

63.5551
Volume 1 of 2.

ROSEVAL SILICA INC



42B01SE0011 63.5551 PENHORWOOD

020

OMIP 89-15

REPORT TO

ONTARIO MINERAL INCENTIVE PROGRAM

ON THE EXPLORATION PROJECT OF

HIGH-QUALITY QUARTZ VEINS

IN PENHORWOOD TOWNSHIP

DESIGNATED PROJECT OM89-015

VOLUME 2 - RESERVES

February 12th 1990

- REPORT ON -

ROSEVAL SILICA INC. - TIONAGA QUARTZ

- 1989 QUARTZ IN SITU RESERVES -

Prepared by:

**BEDROCK CONSULTING
January 30, 1990**

for:

ROSEVAL SILICA INC.



42B01SE0011 63.5551 PENHORWOOD

020C

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- Map # 1 - Site 2 - showing drill holes & sections**
- Map # 2 - Site 2a - showing drill holes & sections**
- Map # 3 - Site 1 - showing drill hole locations**
- Map # 4 - Site 3 - showing drill holes & sections**

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- Figure #1 - Tionaga Quartz Deposit Location Map....4(a)**
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SUMMARY

ROSEVAL SILICA INC. QUARTZ IN SITU

LOCATION	DRILL INDICATED		DRILL INFERRED	
	SKW	KIDD	SKW	KIDD
SITE 1	23,230	40,000	n.a.	n.a.
SITE 2	NIL	16,562	NIL	NIL
SITE 2a	NIL	51,890	NIL	51,254
SITE 3	153,642	77,473	121,213	113,562
TOTALS	<u>176,872</u>	<u>185,925</u>	<u>121,213</u>	<u>164,816</u>

INTRODUCTION

During the 1989 field season Bedrock Consulting was requested by Roseval Silica Inc. to undertake a study of the Tionaga Site to determine the quantity and quality of quartz in situ.

This report is based on recently acquired data obtained over this season's mining operations, stripping, detailed surface mappings, diamond drilling and a later percussion drill program. Previous reports have also been reviewed and some of their conclusions are incorporated in this report.

The study area of this report consists of the immediate area surrounding sites 2, 2a, and 3. Results of previous work on site 1 is also included. Although other quartz occurrences are known on the surrounding claims these have not been included in this study.

LOCATION

The Roseval quartz deposits are found in Penhorwood Township in the Porcupine District of Ontario. Geographically they are located at a latitude of 48° 05' N and a longitude of 82° 9' 30" W. or in reference to the N.T.S system, the southeast corner of 42B/1. Figure #1 shows the location with respect to major centres in northern Ontario. Site 1 is also located on the Ontario Department of Mines map # 2231 (Milne V.G., 1972).

QUARTZ RESERVES GENERAL NOTES

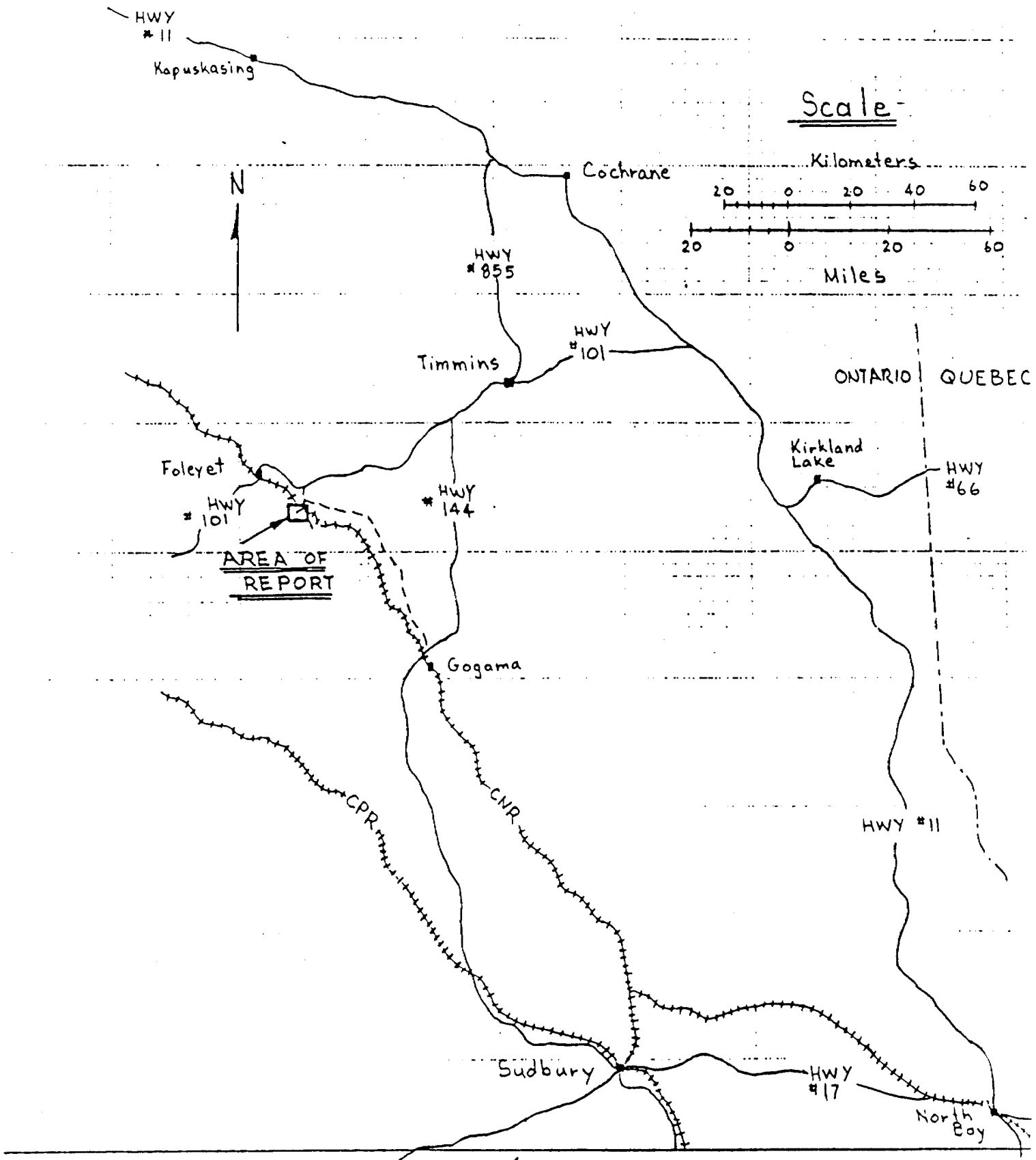
STRIPPING PROGRAM

An ongoing stripping program was performed on both site 2, 2a and site 3. This work was performed by Claude Caron Trucking and Equipment Rental of Timmins throughout the 1989 field season. Mapping of the stripped area of site 2a was performed by B. J. McKay Geological Consultants while mapping of the stripped area of site 3 was performed by Denis Caron and Bedrock Consulting.

Observations on the quartz quality of these outcrop exposures were utilized to compliment the information gathered by the drill programs.

FIGURE #1

INDEX MAP



DIAMOND DRILL PROGRAM

An eight hole 1,801 ft. diamond drill program was undertaken by Ed Colbert Diamond Drilling and Exploration Limited during August and September of 1989. Core was logged and intervals of significant quartz were sent to SKW assay labs for analysis. This work was supervised by E. H van Hees Geological Services Inc. of Timmins (see appendix #1).

PERCUSSION DRILL PROGRAM

A 2,627 foot percussion drill program involving 51 holes was completed by Leo Alarie and Sons Limited from August to Nov. 3, 1989. This work was performed with both airtrack and hydratrack equipment.

Five holes, of 60 ft. each, were drilled at site 3 during August. Twenty two holes totaling 1,327 ft. were drilled from late October to Nov. 3, 1989 on site 3. Both of these programs were supervised by Denis Caron of Timmins (see appendix #3). Percussion holes drilled in 1988¹ were also utilized for interpretation.

Twenty four holes totaling 1000' were drilled from October 31, 1989 to November 3, 1989. This program was supervised by Bedrock Consulting of Sudbury (see appendix #2).

From these 51 holes 526 representative composite chip samples over each 5 ft. interval were collected, as drilling progressed, at the drill collar (preferably at the hole collar prior to entry into the dust collection equipment). Each of the samples collected were bagged, labelled and later described by the geological supervisor. Those samples appearing to contain significant quartz were shipped to SKW laboratories for analysis (see appendix #4).

¹ Komarechka, Robert, July 1989

ANALYSIS OF ASSAY RESULTS

Quartz in situ, in this study, has been calculated using a % residual SiO₂. This is the material remaining after the subtraction of the analysis of the oxides listed on the assay reports (see appendix #4). Sample analysis were undertaken by Pierre Mineau of S.K.W. Canada Inc. using X-ray Spectroscopy (see appendix #8).

Listed below are descriptions of the various grades used in this report:

S.K.W. GRADE +95% residual SiO₂. This grade was chosen since beneficiation by shovel and hand sorting is possible at this grade (see 1987 Nor Dev. Report by Roseval Silica Inc.).

Lower grades could be included if automatic sorting techniques were used (personal communication with Gaetan Lavallee, president of Roseval Silica Inc. and D. Geoffry Minnes Development Advisor of the Ministry of Northern Development and Mines).

KIDD FLUX GRADE

+90% residual SiO₂ - This grade was chosen because material consistently below this level cannot be upgraded to flux grade even with shovel sorting of waste.

CALCULATION OF RESERVES

Note reserves here shall refer to quartz in situ, either as drill indicated or drill inferred. Drill indicated reserves are calculated based on the section technique using the give and take method. This consists of calculating the cross sectional area of quartz zones on sections more or less perpendicular to the strike, then multiplying this area by a length equal to half the distances between adjacent sections (in some cases this technique has been slightly adjusted to conform to field observation of non linear trends).

Percussion chip and drill core assays of nearby holes are projected on these sections to obtain cut off grades. In some cases anomalous high values over short areas are rejected as reserves, while in other areas, minor erratic inclusions of waste are included in reserves. When available, data from surface mining, mapping, geophysical data and previous reports have been included in this report and noted accordingly.

Drill inferred reserves are postulated based on continuation of drill indicated trends. When a more or less consistent trend of drill indicated reserves exists from surface to a particular depth, then drill inferred reserves of no more than that additional depth have been calculated (see appendices #5-7).

SITE 1 RESERVES

SUMMARY OF DRILL INDICATED QUARTZ IN SITU

SITE 1 TONNES	23,230 +95% SiO₂
	40,000 +90% to 95% SiO₂
	63,230 TOTAL

The data above is based primarily on the 43 hole percussion drill program carried out during the 1987 field season¹. Data on these drill locations can be found in map #3.

DESCRIPTION OF SITE #1

This vein system appears to be a strike continuation of the large previously quarried outcrop observed from the CNR tracks near the southeast shore of a large pond across the tracks from the Extender Minerals Minesite.

As a result of geological mapping, stripping and drilling programs it appears that this site consists of either one long vein that pinches and swells along its length or that it consists of a series of discrete possibly en echelon quartz veins. If a saddle reef hypothesis is correct, then from the observations of the large outcrop by the pond, we could assume that the quartz was emplaced, possibly between beds, in the apex of an anticlinal fold striking at 40° and plunging (at least locally) at about 30° N.

¹ Komarechka, Robert, November 1987

Although outcrop is scarce along most of its strike, from initial observations, the quartz appeared to have a length of at least 550 meters (1,800 feet) long and a possible width in excess of 7 meters (23 feet) and less than 20 meters (65 feet). From drilling results the average width appears to be about 15 feet over a length of 2,479 feet.

The west contact of this vein plunges to the west in deeply overburdened terrain at a dip ranging from 70 - 80°. The east side of this vein has a somewhat irregular contact with the adjacent sheared mafic volcanics and appears to dip more or less vertically. The strike of the vein varies from 15° - 40°.

In some areas large fragments of the adjacent mafic volcanics are occasionally found within the quartz and minor (<5%) medium crystalline disseminated pyrite was noted in the sheared volcanics associated with talc ankerite - magnesite along minor embayments of the quartz vein. Generally, the observed quartz was a milky white massive variety with no visible crystalline or intercrystalline inclusions. Megascopic examination of the quarried outcrop revealed two varieties of impurities composing less than 10% of the quartz. These were undulate chloritic shear zones, striking about 10° west of the vein strike and dipping near vertical (with a width 1" to a couple feet wide) and irregular calcitic vugs up to a couple feet across. As the vein structure was followed to its southern extremity it appeared to become clearer and no vugs were observed. Analysis for carbonates in drill cuttings confirmed this reduction in carbonates to the south. Perhaps the southern end of this vein contained less volatiles.

The quartz contained, for the most part, innumerable fine apparently irregular, as well as conjugate, hairline fractures and may have contributed to problems incurred while drilling as the core was frequently broken. The southernmost portion of the vein appeared to exhibit less of a tendency to fracture.

A typically cross sectional topography of the vein as it extends to the southwest is shown below.

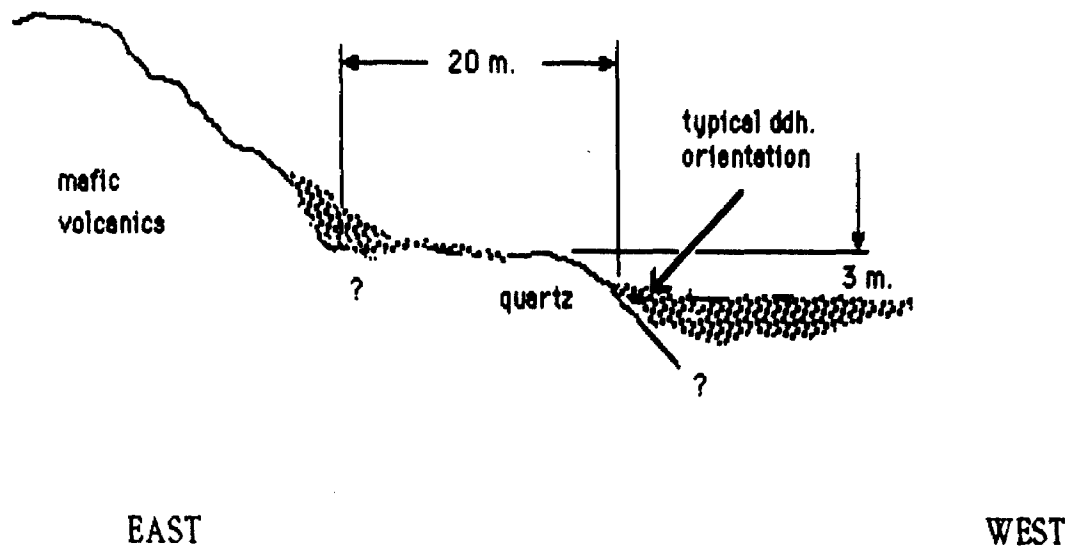


Figure 2

The height of the 3 meter high quartz 'ledge' above the flat lying overburdened terrain to the west gradually diminishes as the old road is approached from the north. Heading south beyond the road, the flat lying overburdened area drops and the quartz ledge may be as high as 7 meters or more especially about 60-100 meters past the road. The near vertical face presented here is quartz of high quality - the same as that of the outcrop by the tracks.

POTENTIAL FOR ADDITIONAL RESERVES

Four potential targets exist for further tonnage in the area of site 1. These are: further reserves at depth, strike extensions beyond the mapped area of known quartz outcrop, development of parallel vein structures to the west of site 1 in overburdened areas and an area about 200 m. to the south of the southernmost outcrop of site 1.

Evidence from some sections¹ reveal a potential continuity with depth beyond drill intersected quartz. Further drilling at depth in these areas could confirm additional tonnages of quartz.

The northern strike extension of site 1 is known to plunge below the overburden north of the old quarry site. This area has not been drilled or included in tonnage calculations. The potential for further reserves in this area is very good.

In regard to the south termination, it is suggested that either:

- (1) the quartz vein pinched out at 130 meters
- (2) it is displaced 'elsewhere' by faulting
- (3) it plunges under the flat lying overburdened area to the west or
- (4) it continues along the base of the ridge but is hidden by overburden material sliding down from the steep slopes.

A more detailed examination of this southern 'termination' area would be required to confirm which of the above conditions exist.

The possibility of parallel vein structures along the known strike of site 1 should be examined, as site 3 appears to be a parallel vein system to site 2.

Some angular boulders of high quality float were found almost 200 m. beyond the south termination of the vein system and these may suggest additional as yet undiscovered quartz bodies. Later mapping² has confirmed alteration associated with quartz veins in this area and at least one quartz outcrop to the west. This area requires further investigation.

¹ Komarechka, Robert, November 1987

² Be'ard, Jean, 1988

SITE 2 RESERVES

SITE 2 - SUMMARY OF RESERVES

SECTION	DRILL INDICATED KIDD QTZ IN SITU			
	QUARRY EAST WALL	QUARRY FLOOR	QUARRY WEST WALL	TOTAL
11 - 12	811	1114	0	1925
27 - 21	2228	2194	2094	6516
26 - RS-89-09	0	5072	0	5072
24 - 25	0	3049	0	3049
TOTALS	3039	11429	2094	<u>16562</u>

DESCRIPTION OF SITE 2

During the course of a cursory examination of quartz along the Extender mine access road in 1987, a large vein of high quality quartz was found about midway between the minesite and the Penhorwood road. Since its discovery, quarrying has been undertaken at this site during the field seasons of 1987, 1988 and 1989.

This large quartz body strikes at about 60° into a high 'uplifted' area of predominantly mafic volcanics paralleling the south side of the road. Several other smaller quartz bodies, recessively weathered lineaments and fingers of granite also tend to be found along this 'uplifted' edge. Their strikes varies from 40° to 70°.

In the central interior of this quartz vein, exists approximately 6 inches wide alternate bands of light grey and bright white milky quartz. These bands strike at 60°, parallel to the strike of the vein and have an arcuate dip from 50° E near the centre of the vein to 30° E towards the east and 30 feet below near the base of the face. From the examination of these bands it appears that the quartz was emplaced in three phases. The first phase is a minor grey coloured somewhat translucent quartz then a later associated more abundant waxy milky quartz variety which occasionally forms parallel milky banding within. This was followed by a structural event which caused an emplacement of chlorite along various fracture zones and finally another third minor quartz emplacement. This later quartz is a bright milky white and cross cuts all previous quartz in parallel 4 - 6 inch bands. It has the same strike as previous injections but has a shallower dip to the east.

The contact of this quartz vein on the east is with mafic volcanics and on the west with granite. The character of the volcanic contact is sharp irregular and undulate with a near vertical to 60° dip to the east. Abundant shearing, slickensides and chlorite emplacement along fractures occasionally result in discrete pods of quartz found along this contact. Also, along this contact, minor pyrite mineralization was noted primarily in the sheared chlorite.

The character of the granite contact to the west is generally brecciated with pinkish orange planar fragments of microcrystalline feldspar. These fragments appear have their planar surfaces oriented along the contact and may be a result of a stoping effect. The granite immediately adjacent to the quartz appears to have been recrystallized from the normal medium crystalline matrix of feldspar quartz and muscovite to a dense massive orange pinkish microcrystalline feldspar matrix. This material proved harder to percussion drill than the more brittle quartz. About three quarters along the length of the vein, south from the road, a 40° striking, 75° east dipping recessively weathered lineament occurs along the western contact of vein. Beyond this lineament the west contact with the quartz is with mafic volcanics and the character of the contact assumes more of the nature of the east contact. Subsequently narrowing and later termination of the vein occurs beyond this lineament.

The northern termination of the quartz vein along the south of the Barite access road has been quarried out to allow access to the body of the quartz vein. The nature of this contact was comparable with the brecciated west contact with granite. It appears that the quartz vein ended here or perhaps plunges steeply under the road into a low lying overburdened area to the north of the road. Hole #224 was drilled across the road from site 2 along the anticipated strike in overburden to determine further reserves. Results of this drilling indicated only unaltered mafic volcanics with no trace of quartz or quartz type alterations. This might suggest a structural break at the north of the vein along the Extender minesite road.

From the results of a recent and an earlier¹ percussion drill program on this quartz body and analysis of the collected samples, it was found that an arcuate contact exists along the west side of the quarry floor and about 10 -15 feet below part of the east side of the quarry floor. Extensions of this contact exists along the walls and back of the quarry. Beneath this contact any quartz present was of poorer quality due to abundant impurities of both chlorite and feldspar fragments.

Brecciation of granitic fragments found in the back of site 2 and along the west side of the quarry as well as the proximity to vein contacts in other areas preclude the designation of this material as SKW grade.

POTENTIAL ADDITIONAL RESERVES

Although extensively drilled, there are possibilities for further reserves at this site. These consist of: locating a possible northern extension, probably offset, on the north side of the Extender minesite road to the east of site 3 and the possibility of finding a parallel vein system, especially along late granite - volcanic contacts. Unfortunately, lack of outcrop and extensive overburden limit observation of these possibilities.

The discovery of several large irregular blocks of high quality quartz have been found near site 2 to the south in thick bush. Unfortunately no outcrops existed in this area. Stripping and or trenching is recommended in this area.

¹ Komarechka, Robert, March 1989

SITE 2a RESERVES

KIDD QUARTZ IN SITU - SITE 2a

SECTION	DRILL INDICATED TONNES	DRILL INFERRED TONNES	TOTAL
RS89-3 - 223	33,741	0	33,741
T7 - RS89-4	8,149	14,368	22,517
RS89-5	0	0	0
215 - 210	0	21,403	21,403
218 - 217	0	15,483	15,483
TOTALS	51,890	51,254	<u>103,144</u>

DESCRIPTION OF SITE 2a

Site 2a lies on strike and beyond the apparent southwest termination of Site 2. This particular occurrence has only been partially exposed along trenches perpendicular to its strike and most information has been determined from diamond and percussion drilling. It appears that the quartz trend has a general strike of 45°. Dips of 65° west along the east contact and variable near vertical dips along the west contact give an apparent pinch out trend with depth. Contacts on the east appear to be with mafic volcanics while to the west late granite has been encountered.

As a result of the exploration carried on at this site it is apparent that there is a degree of variability in quality along strike of this quartz trend. At the north end of the strike extension of site 2a there appears to be a significant tonnage of quartz present. Extensive overburden prevents interpretation of surface exposure. As a result, both the northern strike termination and the western termination of this area are speculative.

Southwestward, toward the middle of the cleared quartz strike extension, the quartz becomes highly banded with mafic volcanics to the point of rendering any quartz present as uneconomical for extraction. This contamination was apparent from observations of both surface trenches and core (hole RS89-5).

Further southwestward to the end of the stripped area the quality of the quartz appears to improve. Since overburden is extensive, most information on this area was acquired through percussion drilling. This revealed significant quartz being present to the west of the stripped area. This quartz was present right up to the furthest southwestern area cleared along strike.

POTENTIAL ADDITIONAL RESERVES

At least two possibilities exist in this area for additional reserves these are: strike trend continuations and parallel vein systems.

Strike trend continuation to the southwest could offer an extensive area for additional reserves. Unfortunately, since most of this area is covered with bush, overburden stripping, trenching and percussion drilling would be needed to confirm potential reserves.

Strike trend continuation to the northeast, although limited, may also reveal more reserves. This area is known to have deep overburden cover and extensive material would be required to be removed before extraction could occur.

Parallel vein structures are also another possible source of increased reserves. The location of these however may be difficult to determine due to the extensive overburden in the area. Overburden covered late granite intrusions to the west offer an intriguing area of study.

SITE 3 RESERVES

SUMMARY OF RESERVES

SECTION #	DRILL INDICATED				ADDITIONAL DRILL INFERRED			
	NORTH SKW	VEIN KIDD	MAIN SKW	VEIN KIDD	NORTH SKW	VEIN KIDD	MAIN SKW	VEIN KIDD
Section # 3	0	3073	0	0	0	3073	0	0
Section # 5	0	0	0	0	0	5378	0	0
Section # 6	0	3073	7887	11831	0	3073	7887	11831
Section # 8	0	0	8048	4024	0	6658	0	12072
Section #9	0	6829	3056	6114	0	6829	3056	6114
Section #10	0	7317	19205	6402	0	7317	12803	12803
Section #12	0	?	41915	8385	0	0	25146	16769
Section #13	0	0	4024	0	0	0	25556	0
Section #14	0	0	23169	0	0	0	23169	0
Section #15	0	0	33534	16767	0	0	16767	16767
Section #16	0	0	12804	3658	0	0	6829	4878
TOTALS	0	20292	153642	57181	0	32328	121213	81234

Kidd Qtz In Situ: Drill Indicated - 77,473 MT. Drill Inferred - 113,562 MT.

SKW Qtz In Situ: Drill Indicated - 153,642 MT. Drill Inferred - 121,213 MT.

DESCRIPTION OF SITE 3

Site 3 is found to the north of site 2 across the Extender mine access road. A recently built road allows access to the site.

Site 3 is located on the crest of a high ridge of mafic volcanics trending at 45°. The vein system also strikes at about 45° and has a varying dip from 65° N. to vertical. In the east end of the vein the contacts of the vein appear to diverge at 65°N and 65°S suggesting greater reserves at depth in this area. There may also be some tentative evidence (jointing patterns, curvature of adjacent volcanic beds and overall form of the quartz body) to suggest the possibility of an eastward plunging antiform. Southwestward from section 10 of map 4, the width of the main vein decreases and an additional parallel vein appears to the north

The quality of the quartz from this deposit has been of very high quality. Occasional included clasts of mafic volcanics are found in some areas of this deposit and form the most common contaminant. Generally these clasts have an altered rind composed of talc and ankerite altered to iron oxides. As these are relatively soft and unconsolidated minerals, their presence eases the removal of the clasts as discrete chunks. Associated with this, is the tendency of a dusting of iron oxides coating the quartz and giving it a slight brown colouration. This colouration is easily removed in a water wash. Slightly more stubborn to remove, were iron stained films found along the heavily fractured surface exposures.

POTENTIAL ADDITIONAL RESERVES

There is very good potential for additional reserves at site 3. Some possibilities for additional reserves include: depth extensions of the existing reserves, a northeast strike extension, and a west extension of the parallel vein structure to the north of the main vein. Additional quartz should also be searched for along the westward extension of the mafic ridge as several quartz outcrops and angular quartz float have been found in this area.

Depth extension is open in most areas of this deposit, but perhaps the greatest potential for increased reserves is in the area of section 14-16 (see map 4). In this area the quartz appears to become wider at depth.

In the northeast area of the quartz vein near section 15 & 16 (map 4) there appears to be a good indication of a strike extension of quartz. Further drilling in this area would delineate such an extension.

At the southwestern most end of the main quartz body the main vein appears to break up and another vein to the north begins to widen as shown in section 3. This vein should be explored along its strike and depth extension for further reserves.

Along the southwestern extension of the mafic volcanic ridge, there are several outcrops of quartz and abundant overburdened areas which could overlay significant reserves of quartz. Interestingly, about 1/4 mile to the southwest there exists another quartz occurrence (the airport occurrence) which continues under overburden toward site 3.

CONCLUSIONS AND RECOMMENDATIONS

A total of **298,085 tonnes of +95% SiO₂** in situ have been delineated by this program. Of this amount, 176,872 tonnes are categorized as drill indicated and 121,213 tonnes are categorized as drill inferred.

An additional **350,741 tonnes of +90% to -95% SiO₂** (flux grade quartz) in situ have also been delineated. Of this amount, 185,925 tonnes are classified as drill indicated and 164,816 tonnes are classified as drill inferred.

Prospects for further delineated reserves are very promising and suggestions for exploration targets in the immediate study areas have been indicated.

Four areas of high potential are:

- 1) at site 3, depth extension in the vicinity of section 14-16 (see map 4),
- 2) at site 3, potential northeast strike extension beyond the quarry area,
- 3) at site 3, a follow up of the strike extension of the northern vein to the southwest of section 3 (see map 4) and
- 4) at site 2a to the northwest of section 218-217 both percussion drilling and a Beep Mat E. M. survey suggest the possibility of a further quartz extension.

Further drilling and stripping in these areas would be required to confirm these potential additional reserves.

Other less studied areas within the claim group have also also been indicated by previous reports as having good potential for additional reserves.


SELECTED REFERENCES

1. **B. J. Mc Kay Geological Consultants**, Geological map of Site 2a, September, 1989.
2. **Berard, Jean**, Geological Maps of the Horwood Quartz Veins Claims, 1988.
3. **Caron, Denis**, Percussion Sample Descriptions For Site 3, Aug.- Nov. 1989.
4. **Caron, Denis**, Geological Base Map For Site 3, August 28, 1989.
5. **E. H. van Hees Geological Services Inc.**, Diamond Drill Core Logs, Sept. - Oct. 1989.
6. **Jensen, Kian A.**, of Kian A. Jensen Exploration and Consulting Services, Report on the Geophysical Testing and Proposed Program, October 1989.
7. **Komarechka, Robert**, of Bedrock Consulting, Geological Report of the Penhorwood Quartz Veins, Nordev Report, November 1987.
8. **Komarechka, Robert**, of Bedrock Consulting, Report on Roseval Silica Inc. Tionaga Quartz Reserves, March 1989.
9. **Komarechka, Robert**, of Bedrock Consulting, Addendum To Report On Roseval Silica Inc. Tionaga Quartz Reserves, July 1989.
10. **Komarechka, Robert**, of Bedrock Consulting, E.M. Beep Mat Study of Site 2a, September, 1989.
11. **Milne, V. G.**, Geology of the Kukatush - Sewell Lake Area, District of Sudbury, Ontario, Ontario Division of Mines Geological Report 97, Toronto 1972, with col. maps 2230 & 2231.

CERTIFICATE

I, Robert G. Komarechka, of the City of Sudbury, in the Province of Ontario hereby certify as follows:

1. That I am a consulting geologist currently residing in Sudbury.
2. That I am a graduate, BSc. Geology major, of Laurentian University of Sudbury, Ontario, a registered professional geologist in the Province of Alberta affiliated with the Canadian Council of Professional Engineers, and that I have been practicing my profession for eight years.
3. That I have no interest direct or indirect, and do not expect to receive any interest in the properties, or in the security of anyone or company involved with this property.
4. That this report is based on a personal management of exploration undertaken over the spring, summer and fall of 1989 and interpretation of assay values from both percussion and diamond drill programs.



Robert G. Komarechka P. Geol.

Dated at Sudbury, Ontario, this 30th day of January, 1990.

APPENDICES

APPENDIX 1

**DIAMOND DRILL CORE
LOGS WITH ASSAY INTERVALS**

BEDROCK CONSULTING

1989 Quartz In Situ Reserves Report

GENERAL FIELD NOTES

Hole 1

- 0-33' casing
- 33-133 Volcanics w/ some qtz (minor)
- 133-138 Volc + 50% qtz
- 138-145 Qtz vein w/ volc vic. (minor)
- 145-167 Volcanics w/ some qtz (minor)
- 167-198 Qtz vein w/ volc vic (minor)

Hole 3

- 0-15' casing.
- 15-37 Bedded? volc. sed's
- 37-53 bleached volc. (beige) w/ pyrite
- 53-71 Quartz - some grey streaks +
volc. in ch.
- 71-83 Volc w/ 1-3' qtz veins.
- 83-99 Qtz vein - smoky colored in places
- 99-116 Bleached volc (beige) w/ pyrite
- 116-151 Volcanics.
- 151-158 Qtz vein w/ 10-20% volc frags
+ calcite 1-2" sections.
- 158-166 Volc.
- 166-228 Qtz vein - minor chl + fuchsite 1-2%
- 228-248 Granite - silicified to 30-40% qtz
veins + pyrite

Hole 6

- 0-2 Casing
- 2-59 Granite - silicified w/ ~30% qtz
veins plus pyrite.
- 59-64 Qtz vein - minor chlorite 2-3% in one pl
- 64-73 Chloritized volc.
- 73-115.5 Qtz
- 115.5-120 Chloritized Vol.
- 120-124 1/2 qtz 1/2 volc

GENERAL FIELD NOTES

Hole 6

124 - 184.5 Qtz vein.
 184.5 - 187 Volc
 187 - 206 Qtz
 206 - 208 50/50 qtz/volc
 208 - 222 Qtz
 222 - 238 Volc + qtz (20%)
 238 - 251 Qtz - mica (<1%) inclusions
 251 - 288 Chloritized Volc w 10-25%
 qtz inclusions

Hole 7

0 - 5 Casing
 5 - 64 Granite - silicified w 25-30% qtz
 veins + pyrite
 64 - 68 Quartz veins.
 68 - 82 Volc
 82 - 91 Quartz
 91 - 95.5 Volc
 95.5 - 100 Quartz
 100 - 102 Volc
 102 - 107 Dirty qtz
 107 - 109 qtz
 109 - 109.5 volc
 109.5 - 114 qtz
 114 - 115 qtz/volc 50/50
 115 - 117 Quartz
 117 - 152 Volc. - with mica qtz veinlets
 152 - 168 Quartz
 168 - 169.5 Volcanic

Hole 7

168.5 - 172 Quartz
 172 - 174 Volcanic
 174 - 193 Quartz
 193 - 203 50/50 qtz/volc
 203 - 207 Qtz + 20% volc
 207 - 213 Volc
 213 - 218.5 Qtz
 218.5 - 220.5 Volc
 220.5 - 223 Qtz
 223 - 288 Volc - First 20' or more
 - ~~that~~ ^{qtz} part chloritized

Hole 8

0 - 11 casing
 11 - 39 Granite - silicified w/ 10-20%
 qtz
 - 37-38' chalc 2-3%
 39 - 62.5 Volcanic
 62.5 - 67.5 Quartz
 67.5 - 89 Volc.
 69 - 70 Qtz
 70 - 73 Dyke - very dark.
 73 - 78 50/50 qtz/volc
 78 - 91.5 Qtz w/ some granite + volc incl.
 < 5%
 91.5 - 97 Volc
 97 - 99 Qtz
 99 - 100.5 Granite
 100.5 - 101.5 Volc

Hole 8

101.5 - 103.5	Qtz
103.5 - 107	Volc
107 - 108	Qtz/Albite? vein in Py
108 - 117.5	Volc
117.5 - 119.5	Qtz w 20% Volc
119.5 - 121	Volc
121 - 122.5	Qtz
122.5 - 125.5	Volc
125.5 - 127	Qtz
127 - 136.5	Volc
136.5 - 138	Qtz.
138 - 145	Volc
145 - 147	Qtz
147 - 153.5	Volc
153.5 - 156	Qtz
156 - 157	Volc
157 - 158	Qtz
158 - 169	Volc
169 - 203	Qtz w ~25% Volc
203 - 208	Volc + 20% Qtz
208 - 211.5	Qtz
211.5 - 212.5	Vol
212.5 - 215	Qtz
215 - 238	Chloritized Volc + minor Qtz ($\leq 25\%$)

Hole 9

0-3 Caswig

3-223? Granite - no veins of sign.

Hole 4

0-19 Caswig.

19-52.5 Granite - silicified - 5-15% qtz veins

52.5-53 Volcanic

53-57.5 Qtz

57.5-63 Qtz w 20-25% chlorite

63-67.5 Vol.

67.5-69 Qtz

69-70 Volc

70-103 Qtz - very pure only occ chlorite

103-109 Dirty Qtz - ^{seam} 5-10% Chlorite + Sphelite??

109-113.5 Granite silicified + qtz veinlets

113.5-168 Volcanics. - altered w 10% qtz veins

168-200 Volcanics.

Hole 5.

0-11	Casing
11-53.5	Granite - silicified w 5-10% qtz vein
53.5-56	50/50 - qtz / volc
56-58	Qtz
58-64	50/50 qtz / vol
64-65.5	Qtz
65.5-75	50/50 qtz / vol
75-86	Qtz
86-87	Volc
87-95	Qtz - avg 5% chlorite content is concentrated in 2-1' sect.
95-111	Volc - silicified
111-119.5	Qtz w 10-15% chlorite
119.5-124	Volc
124-138	Felsic dike? w epidote alt. + minor qtz veining
138-139	Qtz vein
139-168	Volcanic w minor alt.
168-198	Volc

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP - 45° ON SURFACE
 ELEV. _____ DIP - 40.5° @ 198'
 AZ. 330° DIP _____

E.H. van Hees
Geological Services Inc.

HOLE NO. RS-89-01
 SHEET 1 OF 2

LOGGED BY: _____
 DATE _____

CORE SIZE BQ.

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	AU O.P.T.	% SO ₂
0.0	32.5	CASING						
32.5	166.0	MAFIC TO ULTRAMAFIC METAVOLCANICS						
		- moderate to strongly sheared CA=50°						
		- strong chloritic alteration, moderate to strong pervasive carbonate alteration						
		- 20% quartz and quartz-carbonate stringers and veinlets < 1", predominate concord. to foliation, minor pink carbonate						
		- < 1% to 1% disseminate pyrite, patches throughout						
		- 79.2' to 80.3' - 60% quartz, 40% carbonate and host inclusion						
		- carbonate @ LC, U.C. = LC CA=50°						
		- quartz-carbonate veining becomes sub-parallel to CA						
		- shearing becomes irregular to lower contact (LC) and weaker						
		- 137.7' to 142.5' - quartz-carbonate vein 80%, 20% silicified	137.7	142.5	15483			
		sericitic inclusions, 5% chrome mica (fuschite)						
		no visible mineralization						

L-7

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP _____
 ELEV. _____ DIP _____
 AZ. _____ DIP _____

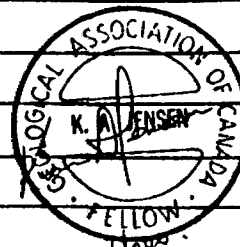
E.H. van Hees
 Geological Services Inc.

HOLE NO. RS-89-01

SHEET 2 OF 2

LOGGED BY: _____
 DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	Au O.P.T.	%
166.0	198.0	SILICIFIED GRANITE OR VOLCANICS						
		- 30% strongly silicified granite or volcanics, 30% chloritic altered volcanics, 40% quartz veining, minor carbonate along fractures	173.0	178.0	15484			40%
		- granite locally hematite staining	178.0	180.2	15485			14%
		- <1% disseminated, medium grained to coarse grained euhedral to subhedral pyrite usually in volcanics						
		- upper contact (UC) broken						
		- 188.0' to 192.7' - 60% quartz, 40% inclusions	188.0	192.7	15486			42%
		- upper contact CA=40°						
198.0		END OF HOLE						



per Ed van Hees

I-8

LOCATION ROSEVAL
 N. _____ FOOTAGE/ANG. _____
 E. _____ DIP 45° ON SURFACE
 ELEV. _____ DIP 42.5° @ 243'
 AZ. 333° DIP _____

 E.H. van Hees
 Geological Services Inc.
HOLE NO. RS-89-03SHEET 1 OF 3
 LOGGED BY: _____
 DATE _____
CORE SIZE BQ

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	Au O.P.T.		
0.0	15.0	CASING							
15.0	164.5	SILICIFIED TUFF							
		- laminated CA=10', weakly silicified grading to strongly silicified	44.0	49.0	15451				
		with increased carbonate and sericite alteration below 38.0'	49.0	54.0	15452				
		- 38.0' to 71.1' strongly silicified, sericite, carbonate and pyritization	54.0	59.0	15453				
		- 3% very fine disseminated pyrite and pyrite stringers often	59.0	63.0	15454				
		concordant to lamination, pyrite locally up to 5%	63.0	67.0	15455				
		- 58.5' to 78.2' - 40% quartz and sericite veins	67.0	71.0	15456				
		- laminations less apparent below 58.0'	71.0	76.0	15457				
		- 87.1' to 97.8' - 80% quartz with carbonate along fractures	76.0	81.0	15458				
		- 5% host inclusions, 10% graphite along fractures	81.0	84.5	15459				
		- 98.0' to 115.0' - granitic alteration as 38' to 71.1', 1% pyrite, 5%	84.5	88.5	15460				
		quartz, lapilli size tuff fragments at 118.0' 122.0'	88.5	93.5	15461				
		- 127.5' to 156.0' - same as 98' to 115', 40% quartz	93.5	98.0	15462				
		- Lower Contact (LC) marked by fault and 1.5' quartz vein	98.0	103.0	15463				
			103.0	108.0	15464				

I-
b-

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP _____
 ELEV. _____ DIP _____
 AZ. _____ DIP _____

E.H. van Hees
 Geological Services Inc.

HOLE NO. RS-89-03

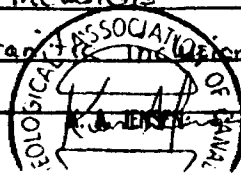
SHEET 3 OF 3

LOGGED BY: _____
 DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	Au O.P.T.	REMANANT %S.O.
169.5	227.5	QUARTZ VEIN	171.0	175.0	15487			99.05
		- 5% chloritic host inclusions, minor green carbonate	175.0	180.0	15488			97.11
		- inclusions grade to <1% by 183.5' then to 3% over bottom	180.0	185.0	15489			96.49
		4 feet, very minor pyrite with inclusions	185.0	188.0	15490			97.76
		- very minor carbonate alteration along fractures in quartz	188.0	193.0	15491			98.74
		- milky white quartz, low contact CA=25°	193.0	198.0	15492			
			198.0	203.0	15493			99.65
227.5	248.0	GRANITE	203.0	208.0	15494			99.55
		- fine grained, silicified, with overall 2%-3% fine grained pyrite,	208.0	213.0	15495			99.64
		locally up to 5%-7%, quartz stringers and veining barren of	213.0	218.0	15496			98.98
		sulphides with inclusions containing pyrite, minor sericitic	218.0	223.0	15497			99.47
		alteration,	223.0	228.0	15498			95.88
		- 233.35' to 235.0' - white quartz vein with granitic inclusions	228.0	233.0	15499			
		- 236.5' to 237.75' - white quartz vein with granitic inclusions	233.0	238.0	15480			
		- 238.0' to 239.2' - white quartz vein with granitic inclusions	238.0	243.0	15481			
		- 241.4' to 242.4' - whitish orange quartz vein with granitic inclusions	243.0	248.0	15482			
248.0		END OF HOLE						

11-11

per Ed van Hees



LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP 50° @ collar
 ELEV. _____ DIP 43.0° @ 200'
 AZ. 153° DIP _____

E.H. van Hees
 Geological Services Inc.

HOLE NO. RS-89-04

SHEET 1 OF 4

LOGGED BY: KIAN JENSEN
 DATE Oct 2/89

CORE SIZE BQ

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	AU O.P.T.		
0.0	19.0	CASING							
	5.8								
19.0	32.0	GRANITE							
	9.7	-fine grained, mottled pinkish pale brown, overall 1% to 2% fine grained pyrite with odd patches or blebs.							
		-26.0' to 27.0' - milky white quartz vein with pinkish granitic inclusions							
		-contacts CA=40°							
32.0	52.5	SILICIFIED GRANITE OR METAVOLCANICS							
	16.0	-fine grained, buff pink to greyish green buff, sections aphaneritic massive uniform, scattered to 1% to 2% very fine pyrite							
		-possible silicified massive altered tuff							
		-scattered quartz stringers and veinlets <5% of core							
52.5	53.0	MAFIC METAVOLCANIC							
		-fine grained, chloritic, blackish to black green, contorted schistosity,							

I-12

LOCATION ROSEVAL
 N. _____ FOOTAGE/ANG. _____
 E. _____ DIP _____
 ELEV. _____ DIP _____
 AZ. _____ DIP _____
E.H. van HeesGeological Services Inc.HOLE NO. RS-89-04SHEET 2 OF 4LOGGED BY: KIRN JENSEN
DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	Au O.P.T.	RESIDUAL
53.0	57.4	QUARTZ VEIN	53.0	57.4	14410			85.0 99.34
16.1		- milky white, <1% chloritic metavolcanic inclusions - contact at 53° CA=60°						
57.4	62.0	QUARTZ VEIN	57.4	62.0	14411			94.03
18.9		- whitish to pinkish brown white with chloritic metavolcanic inclusions and chlorite about 30% of core, - 62.0' - contact CA=50°						
62.0	70.0	MAFIC METAVOLCANICS	62.0	68.0	14412			85.52
21.3		- fine grained, chloritic, massive, uniform, contorted schistosity - 2% to 3% 1/8" euhedral pyrite locally up to 10% 3/16" euhedral pyrite - 68.0' to 69.0' - quartz vein with chloritic inclusions, CA=61° contacts						
70.0	103.6	QUARTZ VEIN	70.0	75.0	14413			98.57
21.3	31.5	- milky white, barren of sulphides - 70.0' to 71.0' - quartz vein with 20% chlorite inclusions	75.0	80.0	14414			99.81
			75.0	85.0	14415			99.06

I-13

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP _____
 ELEV. _____ DIP _____
 AZ. _____ DIP _____

E.H. van Hoos
Geological Services Inc.

HOLE NO. RS-89-04

SHEET 3 OF 4

LOGGED BY: KIRN JENSEN
 DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	AU O.P.T.	REMARKS
		-71.0' to 103.6' - accessions / wisp of chlorite <0.5% / 5 feet	85.0	88.0	14416			94.87
		- 82.8' - chrome mica patch	88.0	93.0	14417			94.85
			93.0	98.0	14418			94.88
103.6	110.0	QUARTZ VEIN	98.0	103.6	14419			99.90
	33.5	- whitish to greyish white, barren	103.6	110.0	14420			93.97
		-107.6' to 104.2' - granitic inclusions						
		-104.2' to 104.9' - volcanic inclusions						
		-105.4' to 105.7' - volcanic inclusions						
		-106.4' to 110.0' - chlorite fracture filling about 40% of core						
110.0		SILICIFIED METAVOLCANIC TUFF						
		-aphanitic, silicified, hard to brittle, local sections of laminated tuff with massive sections; banding brownish dark grey to blackish dark green, pinkish buff, grey to greyish brown, quartz fracture filling						
		- 110.0' to 110.6' - trace sulphides with local 1% to 2% fine grained pyrite						
		- 110.6' to 112.3' - pink buff						
		- 112.3' to 140.5' - grey to greyish brown, prominent laminated tuff 1/2 to 1'						

I-14

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____

E. _____ DIP _____

ELEV. _____ DIP _____

AZ. _____ DIP _____

E.H. van Hees
Geological Services Inc.

HOLE NO. RS-89-04

SHEET 4 OF 4

LOGGED BY: KIAN JENSEN
DATE _____

I-15

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	Au O.P.T.
		-138.8' to 140.5' - silicified with 80% with quartz stringers					
		-140.5' to 148.0 - laminated, brownish dark grey and blackish, 1/2" to 1"					
		-146.8' - bedding CA=70°					
		-163.5' - bedding CA=62°					
		-167.7' - bedding CA=60°					
		-168.0' to 200.0' - gradual decrease in silicification, laminated tuff brownish black to black and blackish grey band 1/4" to 1"					
		-187.5' - bedding CA=75°					
200.0		END OF HOLE.					
60.9							



LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP 45° @ collar
 ELEV. _____ DIP 37.75° @ 198' 60.3
 AZ. 230° DIP _____
161°

E.H. van Hees
Geological Services Inc.

HOLE NO. RS-89-05
 SHEET 1 OF 5

LOGGED BY: KIAN JENSEN
 DATE Oct 2/89

CORE SIZE BQ

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	Au O.P.T.
0.0	10.0	CASING - bedrock at 6.5 feet					
6.5	53.75	SILICIFIED GRANITE OR METAVOLCANICS					
1.9	16.4	- fine grained, salmon pink to greyish pink, massive, trace to scattered very fine grained pyrite,					
		- 9.2' to 9.7' - quartz vein, contacts ground					
		- 12.2' to 12.7' - blackish to greyish black					
		- 18.3' - 1/2" quartz stringer CA = 55°					
		- 18.8' - 1" quartz stringer CA = 40°					
		- 21.4' to 21.55' - quartz stringer CA = 23°, 2% to 3% fine grained euhedral pyrite					
		- 33.0' to 46.0' - pale greenish grey					
		- 46.0' to 53.75' - pinkish buff					
53.75	75.3	QUARTZ VEIN AND CHLORITIC MAFIC METAVOLCANICS					
	22.8	- milky white to glass white quartz veining in fine grained, chloritic black green to black, massive to contorted metavolcanics					

I-16

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____

E. _____ DIP _____

ELEV. _____ DIP _____

AZ. _____ DIP _____

E.H. van Hoos
Geological Services Inc.

HOLE NO. RS-89-05

SHEET 2 OF 5

LOGGED BY: KIAN JENSEN

DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	AU O.P.T.	REMARKS
		-53.75' to 56.3' - 50% veining						
		-55.7' to 56.1' - pinkish buff granitic inclusion						
		-56.3' to 58.2' - glass white quartz vein						
		-58.2' to 63.0' - 50% veining grading to 40% veining						
		-63.0' to 64.3' - mafic metavolcanics, scattered pyrite						
		-64.3' to 65.4' - milky white quartz vein, contact CA = irregular and 60°						
		-69.1' to 69.8' - milky white quartz vein, contacts CA = 70° in opposite direction						
		-70.4' to 71.8' - 60% quartz veining						
		-71.8' to 75.3' - mafic to buff brown metavolcanics with minor quartz stringers						
75.3	94.0	QUARTZ VEIN	75.3	80.0	14421			99.27
22.9	28.6	-75.3' to 85.0' - glassy white, brittle, 35% chloritic inclusions 83.0' to 83.2'	80.0	85.0	14422			99.14
			85.0	88.7	14423			88.37
		-85.0' to 86.3' - metavolcanics, black green, inclusion	88.7	94.0	14424			97.53
		-86.3' to 88.7' - milky white with 20% chloritic inclusions						
		-87.9' to 88.0' - granitic inclusions						
		-88.7' to 94.0' - white, 3% fracture filling chlorite, and rusty staining						

LI-17

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP _____
 ELEV. _____ DIP _____
 AZ. _____ DIP _____

E.H. van Hees
Geological Services Inc.

HOLE NO. RS-89-05

SHEET 3 OF 5

LOGGED BY: KIRN JENSEN
 DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	Au O.P.T.	REMARKS
94.0	112.0	SILICIFIED ALTERED MAFIC METAVOLCANICS						
28.6	34.1	- fine grained, dark green to brownish, silicified, massive, local sections of pinkish hard felsic dikelets. 20% to 25% quartz stringers						
		- scattered to trace pyrite						
		- 102.95' - 1/8" seam of euhedral pyrite						
		- 111.0' to 112.0' - increasing to 60% quartz veining greyish.						
112.0	119.4	QUARTZ VEIN	112.0	114.9	14425			98.02
34.1	36.4	112.0' to 114.9' - whitish with <2% pale green chlorite staining	114.9	119.0	14426			15.91
		- 114.9' to 119.4' - whitish with 40% to 60% chlorite fracture filling/inclusions						
119.4	123.6	ALTERED METAVOLCANICS						
36.4	37.7	- fine grained, pale greenish grey to grey, massive, poor to no schistosity, occasional quartz and pinkish calcite stringers						
123.6	129.0	FELSIC DIKE						
	31.3	- aphaneritic, salmon pink, hard, minor epidote alteration						

31-H

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP _____
 ELEV. _____ DIP _____
 AZ. _____ DIP _____

E.H. van Hees
 Geological Services Inc.

HOLE NO. RS-89-05

SHEET 4 OF 5

LOGGED BY: KIAN JENSEN
 DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	Au O.P.T.		
		-126.7' to 127.2' - altered metavolcanic inclusion							
		-126.9' - locally 3% fine grained pyrite							
129.0	137.0	SILICIFIED SERICITIC METAVOLCANICS							
	41.7	-fine grained, pale green to pale pinkish green, sericitic alteration, massive, poor schistosity, trace sulphides							
		-130.6' to 131.0' - salmon pink felsic dike							
137.0	198.0	WEAKLY ALTERED METAVOLCANICS							
	60.3	-fine grained, decreasing alteration and silicification, pale brownish grey to blackish green, trace to scattered sulphides.							
		-138.0' to 138.7' - milky white quartz vein, contacts CA=50°+60°							
		-158.9' to 161.5' - pale greenish sericite alteration							
		-161.5' - contact CA=63°							
		-161.5' to 168.0' - pale grey							
		-166.0' - bedding CA=65°							

b1-19

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP -45° ON SURFACE.
 ELEV. _____ DIP -39.0° @ 288'
 AZ. 140° DIP _____

E.H. van Hoos
Geological Services Inc.

HOLE NO. RS-89-06
 SHEET 1 OF 6

LOGGED BY: KIAN JENSEN
 DATE Sept 30/89

CORE SIZE BQ

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	AU O.P.T.
0.0	2.0	CASING					
2.0	59.0	SILICIFIED GRANITE OR METAVOLCANICS					
		- fine grained, pinkish brown with minor sections of pale greenish buff grading to pale greenish buff at 38.0 feet, sericitic alteration					
		- cut by narrow quartz veinlets 1/4" to 2.3 feet, occasionally veinlets have minor pyrite mineralization, minor granitic inclusion					
		- sulphides 1% to 2% overall, locally up to 5% very fine grained to fine grained pyrite; 18.0' to 59.0' up to 2% to 3% fine pyrite					
		- significant quartz veining at 3.6' to 4.2' CA=70°; 11.4' to 12.9' CA=55° and 85°; 13.5' to 15.9' CA=50° and broken; 16.5' to 17.8'	16.5	18.0	14427		
		CA=65° and irregular (with granitic inclusions and wispy pyrite in vein ~2%); 19.7' to 20.4' CA=irregular and 80° (1% to 2% pyrite);	18.0	23.0	14428		
		23.3' to 24.4' CA=40° to 45°; 25.5' to 28.5' numerous 2" to 6" quartz veinlets.	43.0	48.0	14429		
			45.0	53.0	14430		
			53.0	59.0	14431		

I-21

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP _____
 ELEV. _____ DIP _____
 AZ. _____ DIP _____

E.H. van Hees
 Geological Services Inc.

HOLE NO. RS-89-06

SHEET 2 OF 6

LOGGED BY: KIAN JENSEN
 DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	Au O.P.T.	Fe %
59.0	63.6	QUARTZ VEIN - milky white quartz, minor chloritic mafic to ultramafic metavolcanic inclusions from 62.0' to 63.2' with 1% to 2% fine grained pyrite and blebs associated with the metavolcanics - 62.7' - local splashes of <u>chalcopyrite</u> in quartz vein.	59.0	63.6	15499			94.4
63.6	73.3	TALCOSE CHLORITIC SCHIST - fine grained, blackish to blackish darkgreen, mafic to ultramafic, extremely schistose, wispy carbonate stringers parallel to schistosity, with minor wispy to kinkled quartz carbonate veinlets at 63.95' and 69.9' to 70.05'. - scattered to <1% fine grained euhedral pyrite - 67.4' - shearing CA=52°						
73.3	114.6	QUARTZ VEIN - milky white quartz with scattered chlorite on fractures <1%, - minor black green talcose chloritic schist inclusions at 81.0';	73.3	78.0	15500			11.0
			78.0	83.0	14351			48.0
			83.0	89.0	14352			19.0

I-22

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP _____
 ELEV. _____ DIP _____
 AZ. _____ DIP _____

E.H. van Hoos
 Geological Services Inc.

HOLE NO. RS-89-06
 SHEET 3 OF 6

LOGGED BY: KIAN JENSEN
 DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	AU O.P.T.	REMARKS
		81.7' to 81.9' ; 82.35' to 82.5' , 83.0'	88.0	93.0	14353			45.52
		- 86.6' to 87.5' - quartz sample to G.L.	93.0	98.0	14354			17.80
		- 87.75' to 93.0' - chloritic inclusions 10% to 15%	98.0	103.0	14355			19.78
		- 90.0' to 90.15' - granitic inclusions	103.0	108.0	14356			44.87
		- 90.75' to 91.25' - talcose chloritic schist inclusion	108.0	114.6	14357			44.07
		- 93.1' to 93.5' - talcose chloritic schist inclusion						
		- 93.5' to 95.3' - granitic inclusion with 1% to 2% fine grained pyrite						
		- 95.3' - contact kinkled CA ~ 45°						
		- 95.3' to 103.0' - <0.5% chloritic inclusions						
		- 103.0' to 114.6' - milky white quartz, no inclusion, barren of sulphides						
		- 112.2' to 113.5' - sample to G.L.						
114.6	122.6	CHLORITIC TALCOSE SCHIST						
		- as above, no carbonatization, trace to <1% fine grained pyrite	119.5	123.0	14358			84.10
		- 118.5' - schistosity CA = 63°						
		- 119.5' to 121.1' - quartz vein with chloritic inclusions at 120.7' to 120.8'						
		- 119.5' to 123.0' - 50% quartz 50% C.T.S.						

I-23

LOCATION ROSEVALN. _____ FOOTAGE/ANG. _____
E. _____ DIP _____
ELEV. _____ DIP _____
AZ. _____ DIP _____E.H. van Hoos
Geological Services Inc.HOLE NO. RS-89-06
SHEET 4 OF 6LOGGED BY: KIAN JENSEN
DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	Au O.P.T.	REMARKS
		- 122.6' - contact CA = 35° irregular	123.0	128.0	14359			9206
			128.0	133.0	14360			9517
122.6	221.7	QUARTZ VEIN	133.0	138.0	14361			99.42
		- milky white quartz with chloritic talcose schist inclusions at	138.0	143.0	14362			97.85
		124.0' to 124.55'; 124.6' to 125.4'; 127.7' to 129.3'; 129.1' to 129.8' (with	143.0	148.0	14363			99.82
		granitic inclusions at 129.6' to 129.75'); 130.7' to 131.0'; 132.7'; 137.1' to	148.0	153.0	14364			99.82
		137.3'; 140.5' to 141.0' (with 1% to 2% fine grained pyrite); 158.2' to	153.0	158.0	14365			99.85
		158.4' (carbonate chloritic talcose schist);	158.0	163.0	14366			99.86
		- 165.4' to 167.2' - sample to G.L. pure milky white quartz	163.0	168.0	14367			99.93
		- 181.5' to 183.5' - sample to G.L. pure milky white quartz	168.0	173.0	14368			99.82
		- 184.2' - pale green mica inclusion	173.0	178.0	14369			99.86
		- 184.7' to 186.4' - medium grey, fine grained volcanic tuff CA = 80° and 40°	178.0	184.7	14370			99.09
		- 186.4' to 187.2' - medium grey tuff inclusions and wispy chloritic inclusions	187.0	193.0	14371			96.97
		- 187.2' to 187.6' - emerald green chrome mica flecks.	193.0	198.0	14372			99.89
		- 191.7' to 191.85' - chloritic volcanic inclusions	198.0	203.0	14373			97.66
		- 192.6' to 192.85' - chloritic volcanic inclusion with green chrome mica	203.0	208.0	14374			91.26 99.81
		- 196.15' to 196.3' - patches and wisps of chrome mica						

I-24

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP _____
 ELEV. _____ DIP _____
 AZ. _____ DIP _____

E.H. van Hoos
Geological Services Inc.

HOLE NO. RS-89-06

SHEET 5 OF 6

LOGGED BY: KIAN JENSEN
 DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	AU O.P.T.	RES DUPL
		-205.1' - carbonate mass with chrome mica	208.0	213.0	14375			8501 99.24
		-205.4' to 207.7' - fine to medium grained, greyish green metavolcanic inclusion with white carbonate patches on contacts and minor chrome mica flecks,	213.0	218.0	14376			99.92
		- quartz veinlets at 205.9' to 206.4' 1" wide, low angle to CA;	218.0	221.7	14377			99.02
		206.9' to 207.3' irregular quartz veinlet; 1" at 207.5' CA=50°						
221.7	238.0	MAFIC METAVOLCANICS TO CHLORITIC SCHIST						
		- fine grained, black to greyish black green, with greyish to grey buff stretched fragments, scattered fine grained pyrite						
		- 223.0' - schistosity CA=74° to 75°						
		- 223.6' to 224.0' - quartz veinlet with minor carbonate						
		- 229.0' to 238.0' - grading into chloritic schist						
		- 227.0' to 227.3' - quartz veinlet CA=53°						
		- 230.2' to 230.7' - quartz veinlet with chloritic wisps CA=58°						
		- 235.55 to 235.75' - quartz veinlet CA=70°						

I-25

LOCATION ROSEVAL

HOLE NO. RS-89-06

N. _____ FOOTAGE/ANG. _____

SHEET 6 OF 6

E. _____ DIP _____

E.H. van Hees

LOGGED BY: KIAN JENSEN

ELEV. _____ DIP _____

Geological Services Inc.

DATE _____

AZ. _____ DIP _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	Au O.P.T.	RESERVE
238.0	251.8	QUARTZ VEIN	238.0	243.0	14432			78.50
		- whitish with orange to orange-red carbonate, 10% to 20% ;	243.0	248.0	14433			18.71
		- chloritic inclusions about 1%,	248.0	251.8	14434			16.85
		- quartz whitish to greyish white						
251.8	288.0	CHLORITIC SCHIST						
		- fine grained, black green, carbonated wisps and patches, minor						
		2" to 4" irregular quartz carbonate veinlets, scattered to trace						
		pyrite, fine grained,						
		- 272.0' - 1" mud seam						
		- 272.9' - 1" mud seam						
		- 273.7' to 277.45' - LOST CORE						
		- 287.5' - 1" mud seam						
288.0		END OF HOLE						

I-26



LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____

E. _____ DIP -45° ON SURFACE

ELEV. _____ DIP 31.5° @ 288'

AZ. 140° DIP _____

E.H. van Hees

Geological Services Inc.

CORE SIZE BQ

HOLE NO. RS-89-07

SHEET 1 OF 8

LOGGED BY: KIAN JENSEN
DATE Sept 30/89

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	Au OP.T.
0.0	5.0	CASING					
5.0	63.9	SILICIFIED GRANITE OR METAVOLCANICS					
		- fine grained, pinkish brown with sections of pale greenish buff (sericitic alteration), pale green fine grained to aphanitic from 24.0' to 63.9'; overall 1% to 2% pyrite very fine grained to fine grained with local sections up to 3% to 5%					
		- 4.5' to 5.6' - quartz vein with pink granitic inclusions					
		- 7.0' to 8.6' - quartz vein with brownish to rusty brown staining on fractures CA = irregular and 50° at 8.6'					
		- 20.5' to 21.0' - quartz vein breccia with granite fragments angular					
		- 21.0' - crumbly core, possible shearing					
		- 21.4' to 22.3' - greyish quartz vein with pink granitic inclusions					
		- 22.4' to 23.0' - quartz vein breccia with pink granitic inclusions					
		- 24.6' to 25.1' - quartz vein					
		- 26.2' to 27.8' - quartz vein with numerous granitic inclusions					
		- 37.9' to 39.3' - quartz vein minor inclusions granitic					

I-27

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP _____
 ELEV. _____ DIP _____
 AZ. _____ DIP _____

E.H. van Hees
 Geological Services Inc.

HOLE NO. RS-89-07
 SHEET 2 OF 8

LOGGED BY: KIAN JENSEN
 DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	AU O.P.T.	RES. %
		-41.3' to 42.6' - quartz vein with minor inclusions	48.0	53.0	14435			87.23
		-43.9' - CONTACT irregular CA ~ 72°	53.0	58.0	14436			86.60
			58.0	63.9	14437			88.87
63.9	63.0	QUARTZ VEIN	63.9	68.0	14378			89.74
		-white with about 5% chloritic meta-volcanic inclusions						
		-68.0' - contact irregular						
68.0	82.5	CHLORITIC SCHIST						
		-fine grained, black to black green, schistose to contorted						
		schistosity, wispy carbonate parallel to schistosity, trace pyrite						
		-68.0' to 71.7' - carbonated, contorted schistosity						
		-69.3' to 71.2' - numerous 1" to 2" quartz and/or quartz						
		carbonate contorted stringers						
		-71.7' to 82.5' - black green, chloritic schist with contorted						
		to kinked schistosity, locally uncentorted.						
		-81.5' schistosity CA = 50°						

I-28

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____

E. _____ DIP _____

ELEV. _____ DIP _____

AZ. _____ DIP _____

E.H. van Hees

Geological Services Inc.

HOLE NO. RS-89-07

SHEET 3 OF 8

LOGGED BY: KIAN JENSEN

DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	Au O.P.T.	REMARKS S.G. %
82.5	117.0	QUARTZ VEIN	82.5	86.5	14379			98.90
		- whitish to greyish quartz vein with chloritic schist metavolcanic inclusions, generally barren of sulphides	86.5	90.5	14380			98.10
			93.5	100.5	14381			98.23
		- 82.5' to 90.5' - 2% to 3% chloritic schist inclusions about 1/4" in vein	102.3	106.9	14382			96.31
		- 90.5' - contact CA = 80° to 85°	108.0	113.3	14383			97.69
		- 90.5' to 95.5' - carbonated chloritic schist	114.5	117.0	14384			98.67
		- 95.5' - contact irregular CA ~ 80°						
		- 95.5' to 100.5' - Quartz vein with 2% to 3% chloritic schist inclusions						
		- 98.3' to 99.2' - chloritic volcanic inclusion						
		- 100.5' to 102.3' - contorted chloritic schist, both contacts irregular						
		- 102.3' to 106.9' - greyish quartz vein with 5% chloritic schist inclusions						
		- 104.5' to 106.15' - pinkish granitic inclusions with chlorite about 30% to 35% of core						
		- 106.9' - contact irregular						
		- 106.9' to 108.0' - chloritic schist with 1% to 2% 1mm euhedral pyrite						

I-29

LOCATION ROSE VAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP _____
 ELEV. _____ DIP _____
 AZ. _____ DIP _____

E.H. van Hees
 Geological Services Inc.

HOLE NO. RS-89-07

SHEET 4 OF 8

LOGGED BY: KIAN JENSEN
 DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	AU O.P.T.		
		-108.0' to 113.3' - quartz vein with chloritic inclusion at 109.0' to 109.5'							
		-113.3' to 114.5' - chloritic schist with irregular 1" quartz stringer and 1% fine grained pyrite (50% quartz / 50% volcanics)							
		-114.5' to 117.0' - quartz vein							
		-117.0' - contact CA=40°							
117.0	152.1	CHLORITIC SCHIST							
		- fine grained, greyish black green to black green, carbonated, contorted and wrinkled schistosity, overall scattered to <1% fine grained pyrite locally 1/8" blebs and up to 1% to 2% fine grained pyrite.							
		- <1% quartz veinlets and stringers from 3/4" to 3" wide, some wrinkled, CA range from 25° to 80°							
152.1	144.8	QUARTZ VEIN							
		- milky white with chloritic schist inclusions to greyish green to greyish black green meta-volcanic inclusions, barren of sulphides							

I-30

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____

E. _____ DIP _____

ELEV. _____ DIP _____

AZ. _____ DIP _____

E.H. van Hees

Geological Services Inc.

HOLE NO. RS-89-07

SHEET 5 OF 8

LOGGED BY: KIAN JENSEN

DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	Au O.P.T.	REMAIN %S.O.
		-152.1' - contact irregular CA = 45° to 50°	152.1	157.0	14385			98.40
		-152.1' to 157.0' - <1% chloritic inclusions at 152.1' to 152.8'	157.0	162.0	14386			99.99
		-157.0' to 162.0' - quartz vein with chloritic schist and carbonated inclusions at 159.8' to 160.3'	162.0	167.7	14387			98.76
		-163.0' to 163.1' - chloritic schist band	169.0	171.4	14388			95.00
		-167.6' to 168.9' - carbonated chloritic schist, both contacts CA = 40°	173.7	178.0	14389			99.70
		-169.1' - 1/2" chloritic volcanic inclusion	178.0	183.0	14390			99.91
		-170.8' to 171.1' - chloritic volcanic inclusion	183.0	188.0	14391			99.97
		-171.4' to 173.7' - carbonated chloritic tuffaceous metavolcanic inclusion	188.0	191.8	14392			97.99
		-173.7' - quartz vein contact CA = 45°	191.8	194.8	14393			96.30
		-173.7' to 187.6' - Quartz vein - milky white, no inclusions						
		-187.6' to 187.7' - chloritic inclusion						
		-188.0' to 191.8' - quartz vein with inclusions ~20% of core						
		-190.3' to 191.2' and 191.6' to 191.8' volcanic inclusions						
		-191.8' to 194.8' - quartz vein with 25% to 30% inclusions						
		-194.8' - contact CA ~25°						

I-31

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____

E. _____ DIP _____

ELEV. _____ DIP _____

AZ. _____ DIP _____

E.H. van Hoos

Geological Services Inc.

HOLE NO. RS-89-07

SHEET 6 OF 8

LOGGED BY: KIAN JENSEN

DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	Au OP.T.	REMARKS %S.O ₂
194.8	198.9	MASSIVE MAFIC METAVOLCANICS						
		- fine grained, massive, greyish green to greyish black green, slightly carbonated, poorly developed schistosity, trace sulphides						
198.9	206.7	QUARTZ VEIN	199.0	202.3	14394			93.75
		- white with mafic volcanic inclusions	202.3	206.7	14395			95.54
		- 198.9' - contact irregular CA = 20°						
		- 198.9' to 200.1' - about 40% mafic volcanic inclusions						
		- 201.8' to 202.3' - mafic volcanic inclusion						
		- 204.1' to 204.3' - mafic volcanic inclusion						
		- 205.5' to 206.7' - low angle mafic volcanic inclusion with about 20% chloritic inclusions						
		- 206.7' - contact CA = 25°						
206.7	212.3	MASSIVE MAFIC METAVOLCANICS						
		- as above, 3% of total 1' quartz stringers, trace pyrite						

I-32

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP _____
 ELEV. _____ DIP _____
 AZ. _____ DIP _____

E.H. van Hees
 Geological Services Inc.

HOLE NO. RS-89-07

SHEET 7 OF 8

LOGGED BY: KIAN JENSEN
 DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	Au O.P.T.	Recovery % \pm O ₂
212.3	222.7	QUARTZ VEIN	212.3	218.5	14356			98.51
		- milky white	220.2	222.7	14357			98.06
		- 215.6' to 216.8' - sample to G.L.						
		- 218.5' to 220.2' - mafic metavolcanic tuff inclusion						
		- 222.7' - contact CA = 85°						
222.7	249.0	MAFIC METAVOLCANIC						
		- as above, possibly tuff to fine lapilli tuffaceous fragmental, gradual increase in chlorite content with depth, trace pyrite,						
		- 223.4' to 224.1' - quartz carbonate veinlet with pinkish tint						
		- 224.5' - 1/8" euhedral pyrite						
		- 228.2' to 229.1' - quartz veinlet, CA = 47° at 229.1'						
		- 229.0' to 233.0' - gradual increase in chlorite						
		- 234.8' to 235.2' - quartz veinlet CA ~ 80°						
		- 247.8' to 248.5' - quartz carbonate veinlet CA ~ 75°						
		- 249.0' - broken core, extreme increase in chlorite						

I-33

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP _____
 ELEV. _____ DIP _____
 AZ. _____ DIP _____

E.H. van Hoos
Geological Services Inc.

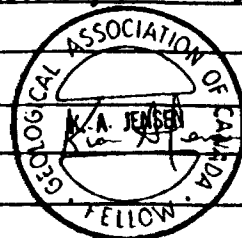
HOLE NO. RS-89-07

SHEET 8 OF 8

LOGGED BY: KIAN JENSEN
 DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	AU O.P.T.
249.0	288.0	TALCOSE CHLORITIC SCHIST					
		- fine grained, talcose, black green, wispy carbonate parallel to straight and contorted schistosity, very soft, locally crumbly possibly representing fault zone					
		- 258.4' to 258.8' - mud seam					
		- 258.8' to 267.2' - LOST CORE					
		- 267.2' to 271.3' - mud seam and broken crumbly core					
		- 274.0' to 275.5' - LOST CORE					
		- 275.5' to 276.0' - mud seam					
		- 276.4' to 276.9' - low angle, fine grained, blood purple felsic intrusive and at 277.8'					
		- 279.5' to 280.0' - blood purple felsic intrusive, contacts ground					
288.0		END OF HOLE					

I-34



LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP -45° @ SURFACE
 ELEV. _____ DIP -39.0° @ 238'
 AZ. 135° DIP _____

E.H. van Hees
Geological Services Inc.

CORE SIZE BQ

HOLE NO. RS-89-08

SHEET 1 OF 8

LOGGED BY: KIAN JENSEN
 DATE OCT 2/89

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	Au O.P.T.
0.0	11.0	CASING					
11.0	38.8	SILICIFIED GRANITE OR VOLCANICS					
		- fine grained, pale greenish buff pink to buff pink, minor sections of sericitic alteration, 2% to 3% fine grained pyrite, occasional quartz stringer and veinlets about 10% of total unit					
		- 26.3' to 27.5' - about 50% quartz stringers and veinlets					
		- 28.3' to 29.95' - quartz vein with buff green inclusions 30%					
		- 31.5' - 1/2" quartz stringer CA=20'					
		- 34.0' to 34.7' - fine grained to aphanitic, pinkish					
		- 34.7' to 35.3' - rusty yellow, crumbly core					
		- 36.0' to 38.8' - fine grained pinkish	36.0	38.0	14V38	51.4	
		- 37.1' to 37.5' - irregular quartz stringer with chlorite, 1% to 2% fine grained pyrite, ~1% chalcopyrite					
		- 37.5' to 38.0' - chlorite seams with <1% pyrite					

I-35

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____

E. _____ DIP _____

ELEV. _____ DIP _____

AZ. _____ DIP _____

E.H. van Hees
Geological Services Inc.

HOLE NO. RS-89-08

SHEET 2 OF 8

LOGGED BY: KIAN JENSEN
DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	AU O.P.T.		
38.8	62.3	MAFIC TUFFACEOUS METAVOLCANICS							
		-fine grained, chloritic black green to carbonated medium brown, massive, uniform, occasional fine lapilli size fragments, trace to scattered fine grained pyrite, poorly developed schistosity							
		-38.8' to 42.0' - blackish green							
		-48.4' to 52.0' - blackish green to dark grey							
		-56.3' to 60.2' - blackish green to blackish grey							
		-47.0' - schistosity CA=67°							
62.3	67.5	QUARTZ VEIN	62.3	67.5	14398	1' 00"			
		-milky white, barren of sulphides							
		-62.3' - contact CA=50°							
		-63.2' to 63.5' - mafic metavolcanic inclusion							
		-67.5' - contact CA=36°							
67.5	69.1	MAFIC METAVOLCANICS							
		-fine grained, contorted schistosity, medium brown to pale green							

I-36

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP _____
 ELEV. _____ DIP _____
 AZ. _____ DIP _____

E.H. van Hees
Geological Services Inc.

HOLE NO. RS-89-08

SHEET 3 OF 8

LOGGED BY: KIAN JENSEN
 DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	Au O.P.T.		
		with minor sericitic alteration, trace sulphides							
69.1	70.1	QUARTZ VEIN - greyish white, barren of sulphides and inclusions - 69.1' - contact CA = 70° - 70.1' - contact CA = 25°							
70.1	70.2	MAFIC METAVOLCANICS - fine grained, dark green, contorted schistosity							
70.2	72.9	DIABASE DIKE - aphaneritic, black, trace very fine sulphides, magnetic - contacts CA = 40° at 70.2', CA = broken at 72.9'							
72.9	73.3	MAFIC METAVOLCANICS - as above, contorted							

I-37

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP _____
 ELEV. _____ DIP _____
 AZ. _____ DIP _____

E.H. van Hoos
Geological Services Inc.

HOLE NO. RS-89-08

SHEET 4 OF 8

LOGGED BY: KIAN JENSEN
 DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	AU O.P.T.		
73.3	92.0	QUARTZ VEIN							
		-73.3' to 78.8' - greyish white to whitish, barren of sulphides							
		-73.3' - contact CA = 35° contorted							
		-73.3' to 74.7' - greyish white							
		-75.2' to 75.8' - black green, chloritic schist inclusion							
		-76.25' to 76.9' - chloritic schist inclusion							
		-77.3' to 78.8' - chloritic schist inclusion							
		-78.8' to 92.0' - white, barren	78.8	84.0	14399				
		-78.8' - contact CA = 60°	84.0	88.0	14400				
		-83.9' to 84.2' - chloritic metavolcanic inclusion	88.0	92.0	14401				
		-84.5' to 90.2' - chlorite on fractures and small granitic inclusions							
		- total about 70% quartz							
		- 92.0' - contact CA = 40°							
92.0	97.1	MAFIC CHLORITIC METAVOLCANIC							
		- fine grained, chloritic massive uniform, 2% to 3% fine grained pyrite							
		occasional pyrite blebs - up to 15%							

I-38

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP _____
 ELEV. _____ DIP _____
 AZ. _____ DIP _____

E.H. van Hees
 Geological Services Inc.

HOLE NO. RS-89-08
 SHEET 5 OF 8

LOGGED BY: KIAN JENSEN
 DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	Au O.P.T.		
		-93.0' - schistosity CA = 58°							
97.1	103.7	QUARTZ VEIN							
		- whitish, barren of sulphides							
		- 97.1' to 99.0' - veining with granitic inclusions at 97.6' to 97.7'							
		- 99.0' to 100.5' - granitic intrusive or fragment CA ~ 60°							
		- 100.5' to 101.5' - chloritic, contorted metavolcanics							
		- 101.5' - contact CA = 64° to 65°							
		- 101.5' to 103.7' - veining, white							
		- 103.7' - contact CA = 45°							
103.7	168.6	MAFIC METAVOLCANIC							
		- fine grained, massive, chloritic, medium to dark green							
		- scattered pyrite < 1%, locally 1% to 2% 1/8" euhedral pyrite							
		- 104.5' - schistosity CA = 70°							
		- 107.0' to 108.0' - quartz veinlet with pinkish staining, 2% patchy							
		bleb pyrite, contacts CA = 40° irregular and 50°, pyritic graphitic							

I-39

LOCATION ROSEYAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP _____
 ELEV. _____ DIP _____
 AZ. _____ DIP _____

E.H. van Hees
 Geological Services Inc.

HOLE NO. RS-89-08
 SHEET 6 OF 8

LOGGED BY: KIRN JENSEN
 DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	AU OP.T.
		-116.0' - schistosity CA=40°					
		-117.5' to 119.35' - quartz vein, white					
		-117.5' - contact CA=57°					
		-118.6' to 118.8' - mafic metavolcanic inclusion					
		-119.35' - contact CA=33°					
		-120.6' to 122.6' - white quartz vein, barren					
		-120.6' - contact CA=50°					
		-122.6' - contact CA=60°					
		-123.8' - pyrite bleb					
		-123.0' to 138.0' - contorted, carbonated,					
		-125.7' to 126.85' - white quartz vein, contacts CA=60°+50°					
		-136.6' to 138.0' - white quartz vein, contacts irregular CA=70°+85°					
		-145.5' to 147.3' - white quartz vein, barren					
		-146.3' to 147.3' - sample to G.L.					
		-153.6' to 154.6' - pinkish white quartz vein, contacts CA=irregular+60°					
		-154.6' to 156.0' - white quartz vein, contact CA=55° at 156.0'					
		-156.15' to 156.45' - whitish quartz veinlet, contacts CA=80°+40°					

I-40

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP _____
 ELEV. _____ DIP _____
 AZ. _____ DIP _____

E.H. van Hees
Geological Services Inc.

HOLE NO. RS-89-08

SHEET 7 OF 8

LOGGED BY: KIAN JENSEN
 DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	Au O.P.T.		
		-157.55' to 158.4' - quartz vein, contacts CA = 40° and 65°, whitish							
168.6	202.7	QUARTZ VEIN	170.0	175.6	14402	45.24			
		-milky white, barren of sulphides	175.6	178.6	14403	94.90			
		-168.6' to 170.0' - irregular quartz stringers and veinlets with 50%	178.6	184.5	14404	88.97			
		to 55% mafic metavolcanic inclusions	184.5	189.0	14405	97.90			
		- quartz vein with mafic metavolcanic inclusions as follows	189.0	194.0	14406	45.10			
		- 170.0' to 175.6' - 35% with chlorite	194.0	198.0	14407	17.18			
		- 175.6' to 178.6' - 2%	198.0	202.7	14408	44.03			
		- 178.6' to 184.5' - 50% to 60%							
		- 184.5' to 189.0' - 5% to 10%							
		- 189.0' to 194.0' - 3% to 5%							
		- 194.0' to 198.0' - 2% to 3%, chrome mica patch at 196.5'							
		- 198.0' to 202.7' - 3%							
202.7	208.2	MAFIC METAVOLCANICS, as above							
		- 203.5' - schistosity CA = 70°							

I-41

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP _____
 ELEV. _____ DIP _____
 AZ. _____ DIP _____

E.H. van Hees
 Geological Services Inc.

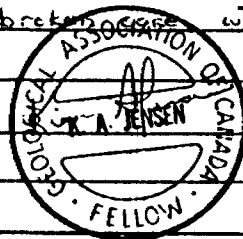
HOLE NO. RS-89-08

SHEET 8 OF 8

LOGGED BY: KIRN JENSEN
 DATE _____

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	Au O.P.T.	ASSAY
		-204.65' to 204.8' - quartz veinlet, CA=55°						
		-205.15' to 205.8' - quartz veinlet, glassy white,						
208.2	214.4	QUARTZ VEIN	208.2	214.4	14469			93.91
		- glassy, white, barren of sulphides						
		- 208.2' - contact CA=50°						
		- 208.7' to 208.8' - chloritic metavolcanic inclusion						
		- 210.8' to 211.9' - metavolcanic inclusion, contacts both CA=75°						
		- 214.4' - contact CA=56°						
214.4	238.0	MAFIC METAVOLCANICS						
		- fine grained, chloritic, black green, as above, brecciated with occasional quartz stringers						
238.0		END OF HOLE.						

I-42



LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP 55° @ collar
 ELEV. _____ DIP 49.5° @ 208'
 AZ. 145° DIP _____

E.H. van Hees
Geological Services Inc.

HOLE NO. RS-89-09

SHEET 1 OF 2

LOGGED BY: KIRN JENSEN
 DATE OCT 2/89

CORE SIZE BQ

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	AU O.P.T.		
0.0	3.0	CASING							
3.0	208.0	GRANITE							
		- fine grained, buff grey to buff to buff brown with minor pinkish brown to orange brown section, local sections medium grained							
		- 1% to 2% fine grained pyrite							
		- 3.0' to 4.8' - white quartz vein, contact CA = 25° at 4.8'							
		- 5.9' to 8.7' - 40% to 45% quartz stringers and veinlets							
		- 8.7' to 11.1' - glassy white to greyish white quartz vein							
		- 11.1' to 11.6' - 5% fine grained pyrite on fractures							
		- 45.5' to 46.9' - pinkish quartz vein with scattered pyrite < 1%							
		- 59.5' to 61.2' - numerous quartz stringers about 25%							
		- 61.2' to 98.0' - medium to coarse grained granite							
		- 89.5' - 1/8" pyrite seam CA = 30°							
		- 98.0' to 103.8' - fine grained buff brown							
		- 103.8' to 107.7' - 1/4" to 1/2" low angle quartz stringer							

I-43

LOCATION ROSEVAL

N. _____ FOOTAGE/ANG. _____
 E. _____ DIP _____
 ELEV. _____ DIP _____
 AZ. _____ DIP _____

E.H. van Hoos

Geological Services Inc.

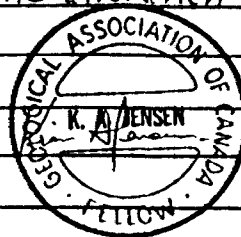
HOLE NO. RS-89-09

SHEET 2 OF 2

LOGGED BY: KIAN JENSEN
 DATE _____

I-44

FROM	TO	DESCRIPTION	FROM	TO	SAMPLE NO.	LENGTH	Au O.P.T.		
		-132.0' to 134.6' - mafic chloritic meta-volcanic inclusion and quartz stringer, contacts CA = 62° and 40'							
		-134.6' - 5% to 7% pyrite on contact.							
		-157.4' to 158.0' - low angle white quartz veinlet or stringer							
		-158.8' to 159.4' - white quartz carbonate veinlet CA = 25°							
		-159.4' to 160.6' - glassy greyish white low angle quartz stringer							
		-162.4' to 163.4' - glassy greyish white low angle quartz stringer							
		-175.0' to 178.0' - 1/4" to 1/2" low angle white quartz stringer							
		-178.1' to 178.4' - quartz veinlet with granitic inclusions, contacts CA = 50°							
		-188.3' to 188.5' - quartz veinlet CA = 25°							
		-201.2' - 1/2" low angle quartz stringer							
		-206.5' to 208.0' - pale pinkish and minor sericitic alteration							
208.0		END OF HOLE.							



APPENDIX 2

**SITE 2 & 2a
PERCUSSION CHIP SAMPLE
DESCRIPTIONS**

BEDROCK CONSULTING

1989 Quartz In Situ Reserves Report

TOTAL FOOTAGE . FOR SITE 2 1/2a

HOLE #	FOOTAGE
21	25
22	25
23	35
24	40
25	35
26	25
27	40
28	50
29	55
210	80
211	30
212	30
213	40
214	30
215	40
216	40
217	60
218	15
219	30
220	30
221	80
222	90
223	30
224	50

TOTAL 1000'

Depth
ft.

HOLE # 21

LOCATION - ON WEST SIDE OF QUARRY NEAR SECTION R-5
NORTH

5	97%	Q72 /	3% GRANITE	✓	}	✓
10	72%	Q72 /	8% GRANITE	✓		
15	87%	Q72 /	13% GRANITE	✓		✓
20	70%	Q72 /	60% GRANITE	✓		✓
25	75%	Q72 /	25% GRANITE	✓		✓
30						
35						
40						
45						
50						
55						
60						
65						
70						
75						
80						
85						
90						
95						
100						

II-2

HOLE # 22

LOCATION: ON NORTH WEST END OF QUARRY NEAR SECTION 1-10

DEPTH

ft. 5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100

99%	Q72	/	1%	WASTE	✓	✓
99%	Q72	/	1%	WASTE	✓	✓
20%	Q72	/	80%	GRANITE	✓	✓
30%	Q72	/	70%	GRANITE		
15%	Q72	/	85%	GRANITE		

II-3

HOLE # 23

LOCATION: ON BANK END OF QUARRY NEAR FATE

DEPTH

ft

(m)

5	88% G72 / 12% GRAN	✓	✓
10	66% G72 / 34% GRAN	✓	✓
15	95% G72 / 5% GRAN	✓	✓
20	70% G72 / 30% GRAN	✓	✓
25	65% G72 / 35% GRAN	✓	✓
30	60 20% G72 / 80% GRAN		
35	20% G72 / 80% GRAN		
40			
45			
50			
55			
60			
65			
70			
75			
80			
85			
90			
95			
100			

II-4

HOLE # 24

LOCATION: ON BACK END OF QUARRY NEAR EDGE OF ~~STRATA~~ ^{STRATA}

DEPTH ft.			
5	16% QTZ / GRANITIC FRAGMENTS.	✓	✓
10	16% QTZ / GRANITIC FRAGMENTS.	✓	✓
15	90% QTZ / 0% GRAN 10% M.V.	✓	✓
20	85% QTZ / 0% GRAN 15% M.V.	✓	✓
25	80% QTZ / 15% GRAN 5% M.V.	✓	✓
30	10% QTZ / 90% GRAN 0% M.V.	✓	✓
35	5% QTZ / 95% GRAN 0% M.V.	✓	✓
END	20% QTZ / 80% GRAN 0% M.V.	✓	✓
40			
45			
50			
55			
60			
65			
70			
75			
80			
85			
90			
95			
100			

HOLE # 25

LOCATION: ON BACK END OF QUARRY NEAR NW CORNER OF 50' X 70' AREA

DEPTH ft.				
5	14%	QTZ	/ SOME DIRT	✓
10	48%	QTZ	/ 2% GRAN	✓
15	70%	QTZ	/ 30% GRAN	✓ P✓
20	48%	QTZ	/ 2% GRAN	✓ P✓
25	20%	QTZ	/ 80% GRAN	✗
30	15%	QTZ	/ 85% GRAN	
END - 35	25%	QTZ	/ 75% GRAN	
40				
45				
50				
55				
60				
65				
70				
75				
80				
85				
90				
95				
100				

II-6

HOLE # 26 - 45° S

LOCATION ON BACK OF QUARRY ON LEFT SIDE

DEPTH FT.					
5	97%	Q72 /	3% GRANITE.	✓	✓
10	98%	Q72 /	2% GRANITE.	✓	✓
15	30%	Q72	70% GRANITE	✓	✓
20	30%	Q72 /	70% GRANITE	✓	✓
25	20%	Q72 /	80% GRANITE		
30					
35					
40					
45					
50					
55					
60					
65					
70					
75					
80					
85					
90					
95					
100					

HOLE # ~~27~~ 27

LOCATION: ON ~~SOUTH~~ (LEFT) SIDE OF QUARRY

DEPTH

ft. 5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100

45% QTZ / ? DIRT
45% QTZ / ? DIRT
45% QTZ / ? DIRT
40% QTZ / 60% M.L.
PRIMARILY M.L.
PRIMARILY M.L.
M.L.
50% QTZ / 50% M.L.

✓ ✓
✓ ✓
✓ ✓
✓ ✓

II-8

HOLE # 2 E

(53614)
LOCATION: DRILLED ON LEFT SIDE OF QUARRY ACROSS ROAD.

DEPTH

5	85%	QTZ	15% M.V.	✓	✓
10	70%	QTZ	30% MAFIC VOLC.	✓	✓
15	98%	QTZ	2% MAFIC VOLC.	✓	✓
20	90-95%	QTZ	-SAMPLE WET.	✓	✓
25	85%	QTZ	15% MAFIC VOLCANICS (wet)	✓	✓
30	40%	QTZ	10% MV SPHERE WET.	✓	✓
35	30% 30%	QTZ	70% MV	✓	✓
40	60%	QTZ	40% MV.	✓	✓
45	20%	QTZ	80% MV		
50	40%	QTZ	60% MV		
55					
60					
65					
70					
75					
80					
85					
90					
95					
100					

II-9

HOLE # 29

DEPTH

H. 5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100

85%	QTZ	/	15%	M.F.	✓	✓
93%	QTZ	/	7%	M.F.	✓	✓
70%	QTZ	/	30%	M.F.		
30%	QTZ	/	70%	M.F.		
15%	QTZ	/	85%	M.F.		
50%	QTZ	/	50%	M.F.		
70%	QTZ	/	30%	M.F.		
42%	QTZ	/	8%	M.F.	✓	✓
50%	QTZ	/	70%	M.F.		
10%	QTZ	/	40%	M.F. ; GRANITE		
20%	QTZ	/	50%	GRANITE ; 30%	M.F.	

HOLE # 210

DEPTH

ft.

5	85%	Q72	/	15%	M.V	✓	
10	85%	Q72	/	15%	M.V	✓	✓
15	85%	Q72	/	15%	M.V	✓	✓
20	42%	Q72	/	8%	M.V	✓	✓
25	80%	Q72	/	20%	M.V	✓	✓
30	85%	Q72	/	15%	M.V	✓	✓
35	20%	Q72	/	40%	M.V	✓	✓
40	85%	Q72	/	15%	M.V	✓	✓
45	42%	Q72	/	8%	M.V	✓	✓
50	90%	Q72	/	10%	M.V	✓	✓
55	78%	Q72	/	22%	M.V	✓	✓
60	80%	Q72	/	20%	M.V	✓	✓
65	80%	Q72	/	20%	M.V	✓	✓
70	80%	Q72	/	20%	M.V	✓	✓
75	50%	Q72	/	50%	M.V	✓	
80	70%	Q72	/	30%	M.V	✓	
85							
90							
95							
100							

HOLE # 211

DEPTH ft.	GRANITE	CHLORITE	OTHER	✓	✓
5	99% Q72	1%	GRANITE	✓	✓
10	94% Q72	1%	CHLORITE	✓	✓
15	99% Q72	1%	GRANITE CHLORITE	✓	✓
20	85% Q72	5%	GRANITE ; 10% M.V	✓	✓
25	85% Q72	15%	GRANITE (WET)	✓	✓
30	40% Q72	10%	GRANITE	✓	✓
35	HIT WATER				
40					
45					
50					
55					
60					

HOLE # 212

DEPTH
ft

5	80%	QTZ	/	20%	GRANITE	✓	✓
10	95%	QTZ	/	5%	GRANITE	✓	✓
15	70%	QTZ	/	30%	GRANITE	✓	✓
20	80%	QTZ	/	20%	GRANITE	✓	✓
25	48%	QTZ	/	2%	GRANITE	✓	✓
30	60%	QTZ	/	40%	GRANITE	✓	✓?
35							
40							
45							
50							
55							
60							
65							
70							
75							
80							
85							
90							
95							
100							

II-13

HOLE # 213

DEPTH FT.						
5	46%	Q72	/	4%	GRANITE.	✓
10	95%	Q72	/	5%	GRANITE	✓
15	85%	Q72	/	15%	GRANITE	✓
20	85%	Q72	/	15%	GRANITE	✓
25	40%	Q72	/	10%	CHLORITE	✓
30	85%	Q72	/	15%	M.V.	✓
35	60%	Q72	/	40%	M.V.	✓
END — 40	60%	Q72	/	40%	M.V.	✓
45						
50						
55						
60						
65						
70						
75						
80						
85						

DEPTH FT.	Q72	GRANITE	MAFIC VOLCANICS	M.V.	✓	✓
5	98%	2%			✓	✓
10	98%	2%			✓	✓
15	20%	80%				
20	90%	5%		5%	✓	✓
25	50%	50%			✓	✓
30	40%	60%			✓	✓
35						
40						
45						
50						
55						
60						
65						
70						
75						
80						
85						
90						
95						
100						

II-15

DEPTH

HOLE # 215

DEPTH (ft)	Material	Notes	✓	✓
5	70% Q72	30% GRANITE	✓	✓
10	90% Q72	10% M.V.	✓	✓
15	96% Q72	4% GRANITE	✓	✓
20	50% Q72	50% M.V.		
25	10% Q72	40% M.V. ; 50% GRANITE		
30	10% Q72	70% M.V. ; 20% GRANITE		
35	20% 10% Q72	70% M.V. ; 20% GRANITE		
40	10% Q72	90% M.V.		
45				
50				
55				
60				
65				
70				
75				
80				
85				
90				
95				
100				

II - 16

DEPTH

HOLE # 216

DEPTH	DESCRIPTION	PERCENTAGE	TYPE	✓	✓
5	4' of OVERBURDEN	20%	DIRT	✓	✓
10	85% Q72 /	15%	M.V.	✓	✓
15	90% Q72 /	10%	M.V.	✓	✓
20	85% Q72 /	15%	M.V.	✓	✓
25	85% Q72 /	15%	M.V.	✓	✓
30	50% Q72 /	50%	M.V.	✓	✓
35	PRIMARYLY		M.V.		
40	PRIMARYLY		M.V.		
45					
50					
55					
60					
65					
70					
75					
80					
85					
90					
95					
100					

II-17

DEPTH

HOLE # 217

5	80%	Q72	/	20%	M.V.	✓	✓
10	80%	Q72	/	20%	M.V.	✓	✓
15	97%	Q72	/	3%	M.V.	✓	✓
20	99%	Q72	/	1%	M.V.	✓	✓
25	90%	Q72	/	10%	M.V.	✓	✓
30	85%	Q72	/	15%	M.V.	✓	✓
35	50%	Q72	/	50%	M.V.		✓
40	70%	Q72	/	30%	M.V.	✓	✓
45	94%	Q72	/	6%	M.V.	✓	✓
50	12%	Q72	/	8%	M.V.	✓	✓
55	85%	Q72	/	15%	M.V.	✓	✓
60	40%	Q72	/	10%	M.V.	✓	✓
65							
70							
75							
80							
85							
90							
95							
100							

END

81-18
II-II

DEPTH

HOLE # 218

~~DATE~~ ~~11/11/71~~ ~~20' 30" 1200' 00"~~ ~~DPH # 2~~

ft 5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100

END

8' OF OVERBURDEN
20% QTZ 80% GRANITE & DIRT ✓✓
10% QTZ 90% GRANITE & DIRT
LOST HOLE DUE TO WATER

II - 19

HOLE " 219

DEPTH

H.

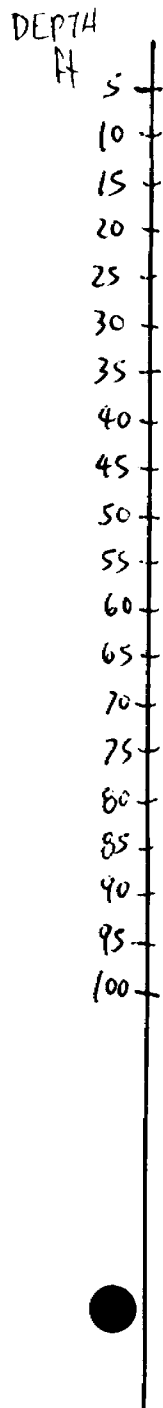
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100

98% Q72 / 2% GRANITE ✓
 85% Q72 / 15% M.V. ✓
 83% Q72 / 15% M.V. ✓
 40% Q72 / 60% M.V. ✓
 PRIMARILY M.V.
 PRIMARILY M.V.

✓
✓
✓
✓

II-20

HOLE # 220



Overburden

10% Q72	/	90% M.U.
30% Q72	/	70% M.U.
15% Q72	/	85% M.U.
70% Q72	/	30% M.U.
20% Q72	/	80% M.U.

HOLE # 221

DEPTH
H.

5	98% Q72	2% M.L	✓	✓
10	85% Q72	15% M.V	✓	✓
15	40% Q72	60% M.V	✓	✓
20	20% Q72	80% M.V	✓	✓
25	95% Q72	5% M.V	✓	✓
30	88% Q72	12% M.V	✓	✓
35	30% Q72	70% M.V	✓	✓
40	95% Q72	5% M.V	✓	✓
45	20% Q72	80% M.V	✓	✓
50	50% Q72	50% M.V	tr pyr	✓
55	85% Q72	15% M.V	✓	✓
60	88% Q72	12% M.L	✓	✓
65	70% Q72	30% M.V	✓	✓
70	88% Q72	12% M.L	✓	✓
75	95% Q72	5% M.V	✓	✓
80	85% Q72	15% M.V	✓	✓
85				
90				
95				
100				

II-22

HOLE # 22 2

DEPTH

ft

overburden

5							
10	18%	QTZ	1	2%	DIRT	✓	✓
15	70%	QTZ	1	30%	M.V.	✓	✓
20	20%	QTZ	1	80%	M.V.	✓	✓
25	50%	QTZ	1	50%	M.V.	✓	✓
25	75%	QTZ	1	25%	M.V.	✓	✓
30	60%	QTZ	1	40%	CHALKITE	✓	✓
35	80%	QTZ	1	20%	CHALKITE	✓	✓
40	18%	QTZ	1	2%	CHALKITE	✓	✓
45	80%	QTZ	1	20%	CHALKITE	✓	✓
50	17%	QTZ	1	3%	CHALKITE	✓	✓
55	98%	QTZ	1	2%	CHALKITE	✓	✓
55					DIRT	✓	✓
60	14%	QTZ	1	1%	DIRT	✓	✓
65	18%	QTZ	1	2%	CHALKITE	✓	✓
70	46%	QTZ	1	4%	CHALKITE	✓	✓
75	96%	QTZ	1	4%	CHALKITE	✓	✓
75					DIRT	✓	✓
80	96%	QTZ	1	4%	CHALKITE	✓	✓
85	98%	QTZ	1	2%	CHALKITE	✓	✓
85					DIRT	✓	✓
90	48%	QTZ	1	2%	CHALKITE	✓	✓
90					DIRT	✓	✓

RAIN OUT OF RODS

?

HOLE # 223

DEPTH
ft.
5
10
15
20
25
END - 30
35
40
45
50
55
60
65
70
75
80
85
90
95
100

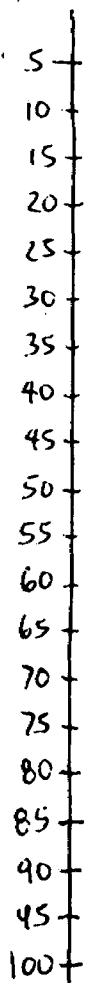
} OVERBURDEN

20% QTZ, 80% GRANITE.
STUCK IN HOLE
LOST 1 STEEL & BIT.

HOLE # 224

DEPTH

H.



~~0% QTZ / 100% M.V.~~ OVERBURDEN
UNTIL
18'

0% QTZ / 100% M.V.
0% QTZ / 100% M.V.
0% QTZ / 100% M.V.
0% QTZ / 100% M.V.
0% QTZ / 100% M.V.
0% QTZ / 100% M.V.
0% QTZ / 100% M.V.

II - 25

APPENDIX 3

**SITE 3
PERCUSSION CHIP SAMPLE
DESCRIPTIONS**

ALARIE TEST HOLES

ROSEVAL SILICA. INC.

SITE 3.

Aug 9-89

TEST 11026

Number 89-01 Surveyed.

Description	Est
0-5 : Brownish Tan Quartz	99+
5-10 : Slightly Green-brown mix.	
10-35 : Light brown tan streaks in Quartz matrix	9
35-40 : Pervasive green throughout section.	98+
40-50 : Slight green and brown tan streaks in Quartz matrix	98.5
50-55 : Minor brown tinge in Quartz matrix	99.
55-60 : Light Tan brown streaks in Quartz matrix	99

Sample # 26201 to 26212 incl.

S. L. ... Date Cont. 12 Aug 1989

RESIDUAL % SiO₂

26201	0-5	96.95% ✓
202	5-10	91.31 ✓
203	10-15	97.08 ✓
204	15-20	95.46 ✓
205	20-25	97.98 ✓
206	25-30	94.24 ✓
207	30-35	94.67 ✓
208	35-40	90.76 ✓
209	40-45	93.09 ✓
210	45-50	97.05 ✓
211	50-55	97.32 ✓
212	55-60	93.74 ✓

ALARIE TEST HOLES

ROSEVAL SILICA INC.

Aug. 10/89.

SITE 3

TEST HOLE 89-02

Description.

0-20: Slight Brownish Tan in Quartz matrix 99.8
 20-25 light green litig. in Quartz 98.5-99.
 25-40: occ. Tan Brown streaks in Quartz matrix
 40-60: white throughout. 99.8

Samples 26213 to 26224 incl. RESIDUAL % SiO₂

Sample No.	Interval					RESIDUAL % SiO ₂
213	0-5					99.78
14	5-10					98.74
15	10-15	.268	.270	.065	.001	99.37
16	15-20					98.22
17	20-25					99.81
18	25-30					95.25
19	30-35	.265	.231	.082	.001	99.42
20	35-40					97.94
21	40-45					99.73
22	45-50					99.59
23	50-55	.074	.073	.046	.006	99.82
24	55-60					99.86

ALARIE TEST HOLES

Roseval Silica Inc.

Aug 10/89

SITE 3

TEST HOLE

89-03 ✓

Description.		Est	55.5%
0-5	white	minor rust specks.	
5-25	Slight tan	brown in quartz matrix	
25-45	white	minor rust specks.	
45-50	Slight tan	brown streaks in quartz matrix	
50-60	white quartz	very minor tan.	

Samples. 26225 to 26236.

RESIDUAL % SiO₂

24225	0-5	-	99.45
226	5-10		99.42
227	10-15		97.99
228	15-20		99.68
229	20-25		99.71
230	25-30		
231	30-35		
232	35-40		
233	40-45		
234	45-50		
235	50-55		
236	55-60		

ALARIE TEST HOLES

ROSEVAL SILICA Inc.

Aug 10/89

SITE 3

TEST HOLE 89-04

Description:

Est: 99.5%

- 0-20: Slight Tan Brown tinge in Quartz matrix
- 20-25: Pervasive Green tinge in Quartz matrix 99%
- 25-30: Slight Tan Brown streaks in Quartz matrix
- 30-60: White quartz very very minor brown specks.

Sample # 26237 to 26248:

- 26237 0-5
- 238 5-10
- 239 10-15
- 240 15-20
- 241 20-25
- 242 25-30
- 243 30-35
- 244 35-40
- 245 40-45
- 246 45-50
- 247 50-55
- 248 55-60
- ~~249~~

ALARIE TEST HOLES

ROSEVAL SILICA Inc.

Aug. 10/89

SITE 3

TEST HOLE 89-05 ✓

Description:

0-15: TAN Brown streaks in Quartz matrix
 15-60: white quartz with very minor slight tan streaks.

Sample # 26249 to 26260 Inc.

Available estimates 55.8% SiO₂

RESIDUAL
% SiO₂

Sample #	Depth (m)	Estimate 1 (%)	Estimate 2 (%)	Estimate 3 (%)	Estimate 4 (%)	Residual (%)
24249	0.5					
250	5.10					
251	10.15	.517	.389	.703	.001	98.38
252	15.20					
253	20.25	.145	.140	.018	.003	99.69
254	25.30	.100	.103	.023	.002	99.77
255	30.35	.099	.104	.034	.001	99.80
256	35.40	.110	.102	.032	.001	99.77
257	40.45					
258	45.50					
259	50.55					99.72 ✓
260	55.60					99.90 ✓
261						

ALARIE TEST HOLES

		F_1	a_1		<u>150.489</u>	<u>9.15814</u>
26253	✓	.045	.140	.018	.003	
255		.099	.049	.034	.005	
206	✓	.110	.092	.032	.001	
242		3.505	2.833	1.932	.090	
254	✓	.100	.100	.023	.002	
219	✓	.255	.230	.012	.001	
251	✓	.517	.389	.703	.008	
223	✓	.084	.083	.049	.006	
215	✓	.248	.270	.086	.001	
224		.084	.033	.022	.000	
220		.594	.397	1.060	.010	

TEST HOLES SITE 3

started.
Oct 30/89

Summary of numbers of holes and sample tag

RS 89: T-9-1	0-30 feet	# 26112 to 26117	inclusive.
RS 89: T-9-2	0-60 feet	# 26118 to 26129	"
RS 89: T-8-1	0-30 feet	# 26130 to 26135	"
RS 89: T-8-2	0-50 feet	# 26136 to 26145	"
RS 89: T-5-1	0-20 feet	overburden lost hole.	
RS 89 T-5-2	0-70 feet	26147 to 26157	inclusive.
RS 89 T-5-3	0-70 feet	26158 to 26169	"
RS 89 T-5-4	0-60 feet	26170 to 26180	"
RS 89 T-5-5	0-50 feet	26181 to 26187	"
RS 89 T-15-1	0-90 feet	26079 to 26096	"
RS 89 T-15-2	0-115 feet	26188 to 26200 - 26001 to 26005	
RS 89 T-15-3	0-100 feet	26010 to 26029	inclusive
RS 89 T-15-4	0-80 feet	26301 to 26316	"
RS 89 T-15-5	0-50 feet	26317 to 26326	"
RS 89 T-15-6	0-70 feet	26327 to 26339	"
RS 89 T-15-7	0-20 feet	overburden lost hole water	
RS 89 T-14-1	0-50 feet	26030 to 26039	inclusive
RS 89 T-14-2	0-67 feet	26040 to 26053	"
RS 89 T-10-1	0-60 feet	26054 to 26065	inclusive
RS 89 T-12-1	0-65 feet	26066 to 26078	inclusive.
RS 89 T-4-1	0-60 feet	26340 to 26351	"
RS 89 T-4-2	0-60 feet	26352 to 26360	inclusive

Total Footage 1,327 feet

Blair Nov 9/89

ROSEVAL SILICA INC.

NOV 9/89

SITE #3 TEST HOLE.

HOLE # R589 T-4-1 : 18.3 metres.

AZM 330

-45°

#26340	0 - 1.5 metres.	+95% quartz
26341	1.5 - 3.0 metres.	+95% quartz
26342	3.0 - 4.5 metres.	± 75% quartz matrix inclusion.
26343	4.5 - 6.1 metres	Poor quartz green matrix.
26344	6.1 - 7.6 metres.	± 80% quartz matrix inclusion
26345	7.6 - 9.1 metres.	± 80% quartz matrix inclusion
26346	9.1 - 10.6 metres.	± 90% quartz matrix inclusion
26347	10.6 - 12.2 metres	± 95% quartz slight green.
26348	12.2 - 13.7 metres	± 90% quartz matrix inclusion
26349	13.7 - 15.2 metres.	± 60% quartz matrix inclusion
26350	15.2 - 16.7 metres.	poor quartz matrix volcanic
26351	16.7 - 18.3 metres.	poor quartz matrix volcanic

End.

Deaton.

ROSEVAL SILICA INC.

NOV. 9/89.

SITE #3 TEST HOLE

HOLE # RS 89 T-4-2 18.3 metres -60° Azml

0 - 4.5 metres overburden.

#26352	4.5-6.1 metres	poor quartz	green mafic.
26353	6.1-7.2 metres	poor quartz	green mafic.
92.56% 26354	7.2-9.1 metres	poor quartz	green mafic.
97.82% 26355	9.1-10.6 metres	± 90% quartz	green mafic.
26356	10.6-12.2 metres	poor quartz	green mafic.
26357	12.2-13.7 metres	poor quartz	green mafic.
26358	13.7-15.2 metres	poor quartz	green mafic.
26359	15.2-16.7 metres	poor quartz	green mafic.
26360	16.7-18.3 metres	poor quartz	green mafic.

End.

Blair.

ROSEVAL SILICA INC
SITE 3 TEST HOLE

NOV 9/89

HOLE # RS 89 T-S-2 : 21.3 metres.

0 - 4.5 overburden.

# 26147	¹⁵ 4.5 - ²⁰ 6.1 metres	poor quartz	light green mafic
# 26148	²⁰ 6.1 - ²⁵ 7.6 "	± 50% quartz	light green mafic.
# 26149	²⁵ 7.6 - ³⁰ 9.1 "	± 50% quartz	light green mafic.
26150	³⁰ 9.1 - ³⁵ 10.6 "	± 75% quartz	light green mafic.
26151	³⁵ 10.6 - ⁴⁰ 12.2 "	± 50% quartz	" " "
18.52 26152	⁴⁰ 12.2 - ⁴⁵ 13.7 "	± 50% quartz	" " "
26153	⁴⁵ 13.7 - ⁵⁰ 15.2 "	poor quartz	green mafic
49.24 26154	⁵⁰ 15.2 - ⁵⁵ 16.7 "	± 75% quartz	light green mafic
49.50 26155	⁵⁵ 16.7 - ⁶⁰ 18.3 "	± 75% quartz	light green mafic
49.11 26156	⁶⁰ 18.3 - ⁶⁵ 19.8 "	poor quartz	green mafic
26157	⁶⁵ 19.8 - ⁷⁰ 21.3 metres.	poor quartz	green mafic.

Alaron.

ROSEVAL SILICA INC
SITE 3 TEST HOLE

NOV. 9/89

HOLE # RS 89: T-5-3 ; 21.3 metres.

	0 - 3.0 metres	over burden.
# 26158	3.0 - 4.5 metres	poor quartz brown oxidized matric
26159	4.5 - 6.1 metres.	±60% quartz matric green inclusion
26160	6.1 - 7.6 metres	±85% quartz light gray.
26161	7.6 - 9.1 metres	±55% quartz light green matric.
26162	9.1 - 10.6 metres	±55% quartz light green matric.
26163	10.6 - 12.2 metres.	±95% quartz
26164	12.2 - 13.7 metres.	±95% quartz
26165	13.7 - 15.2 "	= ±95% quartz
26166	15.2 - 16.7 "	±95% quartz
26167	16.7 - 18.3 metres	poor quartz light green matric
26168	18.3 - 19.8 metres	poor quartz light green matric
# 26169	19.8 - 21.3 metres	poor quartz light green matric

End.

Slam.

ROSEVAL SILICA INC
TEST HOLE SITE #3

NOV. 9/89

HOLE # RS 89-T5-4: 18.3 metres.

0-3.0 overburden.

# 26170	3.0 - 4.5 metres:	no sample.
26171	4.5 - 6.1 metres:	Black Diabase
26172	6.1 - 7.6 metres	Black Diabase
26173	7.6 - 9.1 metres	Black Diabase
26174	9.1 - 10.6 metres	poor quartz gray-green mafic
26175	10.6 - 12.2 metres.	poor quartz gray-green mafic
26176	12.2 - 13.7 metres.	poor quartz gray green mafic
42.87 26177	13.7 - 15.2 metres	± 85% quartz light green i.
44.82 26178	15.2 - 16.7 metres	light green mafic.
26179	16.7 - 18.3 metres	light green mafic.
# 26180		

End.

Dlaron.

SITE #3 TEST HOLE.

HOLE # RS 89 : T-5-5 : 15.2 metres.

0 - 4.5 overburden.

# 26181	4.5 - 6.1	metres	Light green mafic porq.
26182	6.1 - 7.6	"	Light green mafic poor quartz
26183	7.6 - 9.1	"	Light green mafic poor quartz
26184	9.1 - 10.6	"	Light green mafic poor quartz
26185	10.6 - 12.2	"	Light green mafic poor quartz
26186	12.2 - 13.7	"	Light green mafic poor quartz
26187	13.7 - 15.2	metres	Light green mafic poor quartz

End.

Olson.

ROSEVAL SILICA INC.
SITE 3 TEST HOLE.

Nov 9/89

HOLE # RS 89-T-9-2 : 18.3 metres.

94.0 ² # 26118	0 - 1.5 metres	+ 95% Quartz
94.11 # 26119	1.5 - 3.0 "	+ 95% Quartz
94.84 # 26120	3.0 - 4.5 "	+ 95% Quartz
94.47 # 26121	4.5 - 6.1 metres	+ 95% Quartz
94.84 # 26122	6.1 - 7.6 metres	+ 95% Quartz
94.65 # 26123	7.6 - 9.1 metres	+ 95% Quartz
93.20 # 26124	9.1 - 10.6 metres	± 90% Green inclusions.
91.90 # 26125	10.6 - 12.2 metres	± 90% Green inclusions.
43.40 # 26126	12.2 - 13.7 metres	± 90% Qtz with Green inclusion
# 26127	13.7 - 15.2 metre	poor quartz Green matrix.
# 26128	15.2 - 16.7 metres	poor quartz Green matrix.
# 26129	16.7 - 18.3 metres	poor quartz Green matrix.

Alaron.

ROSEVAL SILICA INC
SITE 3 TEST HOLE

Nov 9/89

Hole # RS 89 T-8-2 : 15.2 metres.

99.46 # 26136	0 - 1.5 metres	
99.91 26137	1.5 - 3.0 "	+95% Quartz
99.91 26138	3.0 - 4.5 "	+95% Quartz
99.92 26139	4.5 - 6.1 "	+95% Quartz
99.90 26140	6.1 - 7.6 "	+95% Quartz
99.92 26141	7.6 - 9.1 "	+95% Quartz
99.28 26142	9.1 - 10.6 "	±90% Quartz Brown tan alter
98.07 26143	10.6 - 12.2 metres.	±90% Quartz Brown tan alter
90.85 26144	12.2 - 13.7 metres.	Green mafic volcanics.
99.81 26145	13.7 - 15.2 metres.	Green mafic volcanics.

Blair

ROSEVAL SILICA INC
SITE 3 TEST HOLE.

Nov 9/89

HOLE # RS 89 T-8-1 ; 9.1 metres.

94.6 # 26130	0 - 1.5 metres	Tan brown altered volcanic
# 26131	1.5 - 3.0 "	Tan brown altered volcanic
# 26132	3.0 - 4.5 "	Tan brown altered volcanic
# 26133	4.5 - 6.1 "	Tan brown altered volcanic
# 26134	6.1 - 7.6 "	Green mafic volcanics.
# 26135	7.6 - 9.1 "	Green mafic volcanics.

End.

Olaron.

ROSEVAL SILICA INC.
 SITE 3 TEST HOLES

Nov/9/89

Logs.

Hole: RS89: T9-1 : 9.1 metres.

Qtz +95%	# 26112	0 - 1.5 metres	+95% quartz	89.53%
Qtz	# 26113	1.5 - 3.0 metres.	+95% quartz	99.68%
Qtz +95%	# 26114	3.0 - 4.5 metres	-95% Brown quartz.	98%
Volcanic	# 26115	4.5 - 6.1 metres.	poor quartz brown.	
Volcanic.	# 26116	6.1 - 7.6 metres	Green volcanics -	
	# 26117	7.6 - 9.1 metres	Green volcanics -	
		End.		

Alaron.

ROSEVAL SILICA INC
SITE #3 TEST HOLE.

NOV 9/89

HOLE # R589 T 15-1 : 27.4 metres.

#26079 to 26094 + 95% quartz.

#26095 & 26096 ± 90% quartz slight green matrix
inclusions.

End

Slaron.

ROSEVAL SILICA INC
SITE #3 TEST HOLE.

NOV 9/89.

HOLE # RS 89 T-15-2 : 35.0 metres.

26188 to 26200 : 0 to 21.3 metres + 95% quartz.
26201 to 26207 : 21.3 to 32.0 metres + 95% quartz ~~sl. green~~
26208 to 26209 : 32.0 to 35 metres + 90% quartz sl. green
mafic inclusions

End.

slaron.

26188 (70-75)
26189 (75-80)
26003 (80-85)
26004 (85-90)
26005 (90-95)
26006 (95-100)
26007 (100-105)

ROSEVAL SILICA INC.

NOV. 9/89.

SITE #3 TEST HOLE

HOLE # RS 89 T-5-3 : 30.4 metres.

26010 to 26029 0 - 30.4 metres T 95% quartz

End.

Slaron.

ROSEVAL SILICA INC

NOV. 9/89.

SITE #3 TEST HOLE.

HOLE # RS 89 T-15-4 : 24.4 metres.

26301: 0-1.5 + 90% quartz slight green inclusions
~~# 26302~~ to 26316 + 95% quartz
26302

End.

Slaron.

ROSEVAL SILICA INC
 SITE # 3 TEST HOLE.

NOV. 9/89

HOLE # RS 89-T-15-5 : 15.2 metres

	<u>metres</u>		
# 26317	0 - 1.5	+95%	quartz
26318	1.5 - 3.0	+95%	quartz
26319	3.0 - 4.5	+95%	quartz
26320	4.5 - 6.1	780%	quartz tan brown with ^{mat} green
26321	6.1 - 7.6	±80%	quartz brown with green mafic
26322	7.6 - 9.1	±50%	quartz green mafic inclusions
26323	9.1 - 10.6	±75%	quartz brown with green mafic.
26324	10.6 - 12.2	±75%	quartz brown with green mafic.
26325	12.2 - 13.7	±60%	quartz Green brown mafic.
26326	13.7 - 15.2	±60%	quartz Green brown mafic.

End.

Alaron.

ROSEVAL SILICA INC.

NOV 9/89

SITE # 3 TEST HOLE.

HOLE # RS 89 T-15-6 : 21.3 metres.

26327 to 26338 0 - 18.3 metres + 95% quartz.

26339 18.3 - 21.3 I 90% Slight green
mafic.

End.

Alaron.

ROSEVAL SILICA INC.
SITE #3 TEST HOLE.

NOV. 9/89

RS 89 T-14-1 0 - 15.2 metres.

# 26030	0 - 1.5 metres.	+95% quartz
26031	1.5 - 3.0 "	+95% quartz
26032	3.0 - 4.6 "	+95% quartz
26033	4.6 - 6.1 "	±80% quartz matrix stringer.
26034	6.1 - 7.6 "	+95% quartz
26035	7.6 - 9.2 "	+95% quartz
26036	9.2 - 10.6 "	±90% quartz matrix inclusions.
26037	10.6 - 12.2 "	±95% quartz
26038	12.2 - 13.7	±85% quartz matrix inclusions.
26039	13.7 - 15.2 metres	poor quartz matrix volcanics.

End.

Illarion.

ROSEVAL SILICA INC
SITE #3 TEST HOLE.

NOV 9/89

HOLE RS 89 - T-14-2 0 - 20.4 metres.

# 26040	0 - 1.5 metres.	poor gtz.	tan brown volcanics.
26041	1.5 - 3.0 metres	± 50% gtz	tan brown volcanics.
26042	3.0 - 4.5 metres	+ 95% gtz	
26043	4.5 - 6.1 metres	+ 95% gtz.	
26044	6.1 - 7.6 metres	+ 95% gtz.	
26045	7.6 - 9.1 metres	+ 95% gtz	
26046	9.1 - 10.6 "	+ 95% gtz.	
# 26047	10.6 - 12.2 "	+ 95% gtz	
# 26048	12.2 - 13.7 "	+ 95% gtz	
# 26049	13.7 - 15.2	- 50% gtz	Green mafic volcanics.
# 26050	15.2 - 16.7	poor gtz	Green mafic volcanics.
# 26051	16.7 - 18.3 metres	poor gtz	Green mafic volcanics.
# 26052	18.3 - 19.8 metres	poor gtz	Green mafic volcanics.
# 26053	19.8 - 20.4 metres	poor gtz	Green mafic volcanics.

End.

Olson.

ROSEVAL SILICA INC.
SITE #3 TEST HOLE.

HOLE # RS 89 T-10-1 18.3 metres

# 26054	0 - 1.5 metres	50% quartz	green mafic.
26055	1.5 - 3.0 "	poor quartz	green mafic.
26056	3.0 - 4.5 "	poor quartz	green mafic.
26057	4.5 - 6.1 "	± 75% quartz	tan brown mafic
26058	6.1 - 7.6 "	poor quartz	tan to light green mafic
26059	7.6 - 9.1 "	poor quartz	green mafic.
26060	9.1 - 10.6 "	± 90% quartz	light green inclusion.
26061	10.6 - 12.2 "	± 95% quartz	
26062	12.2 - 13.7 "	± 95% quartz	
26063	13.7 - 15.2 "	poor quartz	tan mafic volcanics
26064	15.2 - 16.7 "		green mafic
26065	16.7 - 18.3 "		green mafic -

End,
Clarion.

ROSEVAL SILICA INC
SITE #3 TEST HOLE.

NOV 9/89.

HOLE # RS 89 T-12-1 ; 19.8 metres.

26066 - 26077 0 - 18.2 + 95% quartz.

26078 18.2 - 19.8 Green matrix volcanics.

End.

Slaron.

APPENDIX 4

SKW ASSAY RESULTS

APPENDIX 4a

DIAMOND DRILL ASSAYS

BEDROCK CONSULTING

1989 Quartz In Situ Reserves Report

IV-1

No LAB	DATE	INIT	QUART	PROVENANCE	DESCRIPTION	%Fe ₂ O ₃	%Al ₂ O ₃	%CaO	%TiO ₂	RESI	vac %	SiO ₂
554	19.10.27	GC	K-74	Timmins	14399	.104	.064	.194	.001		99.64	✓
555	"	"	"	"	14401	.713	.717	.317	.025		98.23	✓
556	"	"	"	"	14402	2.592	1.880	7.753	.041		93.74	✓
557	"	"	"	"	14403	.217	.197	.180	.003		99.40	✓
558	"	"	"	"	14404	5.788	3.003	2.119	0.122		88.97	✓
559	"	"	"	"	14407	.947	.632	.940	.017		97.46	✓
560	"	"	"	"	14419	.137	.356	.095	.009		99.40	✓
561	"	"	"	"	14421	.156	.265	.300	.009		99.27	✓
562	"	"	"	"	14423	4.929	5.970	1.154	.230		88.37	✓
563	"	"	"	"	14425	.213	.238	1.529	.004		98.02	✓
564	"	"	"	"	14392	.937	.517	.959	.023		97.49	✓
565	"	"	"	"	14398	.872	.286	1.205	.008		97.03	✓
566	"	"	"	"	14405	.901	.435	.688	.013		97.96	✓
567	"	"	"	"	14410	.075	.148	.387	.003		99.39	✓
568	"	"	"	"	14411	.959	2.852	2.066	.095		94.03	✓
569	"	"	"	"	14414	.037	.093	.061	.001		99.81	✓
570	"	"	"	"	14415	.110	.219	.604	.004		99.06	✓
571	"	"	"	"	14416	.032	.066	.035	.001		99.87	✓
572	"	"	"	"	14417	.029	.064	.056	.001		99.85	✓
573	"	"	"	"	14422	.156	.236	.454	.016		99.14	✓
574	"	"	"	"	14426	1.621	1.376	1.573	.021		95.41	✓

REMARQUES:

DEC 14 '89 09:29 S.K.M. CHLHOM

**DE MIN
CANADA**

POUR QUARTZ

de U.S.A.
à

No LAB	DATE	INIT	QUART	PROVENANCE	DESCRIPTION	%Fe ₂ O ₃	%Al ₂ O ₃	%CaO	%TiO ₂	RES	DUAL 97	SiO ₂
578	89-10-28	6C	K-24	Timmins	14351	.684	.214	.916	.007		98.18	✓
579	"	"	"	"	14355	.075	.072	.069	.001		99.78	✓
580	"	"	"	"	14357	.645	.050	.034	.001		99.87	✓
581	"	"	"	"	14358	5.790	2.954	2.025	.131		89.10	✓
582	"	"	"	"	14359	3.909	2.038	1.914	.078		92.06	✓
583	"	"	"	"	14360	1.902	1.537	1.447	.048		95.17	✓
584	"	"	"	"	14361	.198	.146	.239	.002		99.42	✓
585	"	"	"	"	14363	.057	.088	.036	.001		99.82	✓
586	"	"	"	"	14364	.041	.043	.100	.001		99.82	✓
587	"	"	"	"	14378	.811	.718	.999	.013		97.66	✓
588	"	"	"	"	14428	1.206	6.914	.632	.128		91.12	✓
589	"	"	"	"	15484	1.173	6.511	1.465	.092		90.76	✓
590	"	"	"	"	15485	.756	4.103	.973	.056		94.31	✓
591	"	"	"	"	15486	1.087	5.929	.861	.080		92.24	✓
592	"	"	"	"	14365	.025	.106	.022	.001		99.85	✓
593	"	"	"	"	15492	.061	.172	.366	.001		99.40	✓
594	"	"	"	"	15488	.973	.811	1.285	.020		97.11	✓
595	"	"	"	"	15489	.692	1.571	1.242	.037		96.49	✓
596	"	"	"	"	15487	.116	.327	.506	.005		99.05	✓

REMARQUES:

DEC 14 '89 09:28 S.M.M. CH.HOH

F.7.12

MASKOURS

TEL No. 514-655-4057

Dec. 27, 89 9:51 P.03

**SKW
CANADA**

**RAPPORT DU LABORATOIRE
POUR QUARTZ Roseval**

Date Oct-Nov 89
de Labo.
à J.P. + P.M. ML

MASKOURS

No LAB	DATE	INIT	QUART	PROVENANCE	DESCRIPTION	%Fe2O3	%Al2O3	%CaO	%TiO2	RESI	DUAL %	SiO2
630	89-10-30	GC	16-24	Mine	14420	1.019	3.671	1.268	.069		93.97	✓
631	"	"	"	"	14424	.129	.237	2.100	.002		97.53	✓
632	"	"	"	"	14369	.027	.064	.044	.001		94.86	✓
633	"	"	"	"	14370	.249	.154	.504	.004		99.09	✓
634	"	"	"	"	14371	1.304	.769	.925	.031		96.97	✓
635	"	"	"	"	14372	.024	.045	.045	.001		99.89	✓
636	"	"	"	"	14374	4.524	2.092	2.072	.108		91.26	✓?
637	"	"	"	"	14379	.379	.273	.439	.007		98.90	✓
638	"	"	"	"	14380	.672	.420	.806	.005		98.10	✓
639	"	"	"	"	14386	.159	.137	.309	.003		94.49	✓
640	"	"	"	"	14387	.409	.289	.537	.009		98.76	✓
641	"	"	"	"	14390	.018	.047	.020	.001		99.91	✓
645	89-10-31	✓	08	"	14352	.055	.060	.080	.001		99.80	✓
646	"	"	"	"	14353	1.899	2.097	.712	.053		95.80	✓
647	"	"	"	"	14354	1.708	4.328	1.078	.107		92.80	✓
648	"	"	"	"	14356	.036	.064	.029	.001		99.87	✓
649	"	"	"	"	14362	.929	.819	.385	.021		97.85	✓
650	"	"	"	"	14366	.048	.059	.028	.001		99.86	✓
651	"	"	"	"	14367	.021	.042	.010	.001		99.93	✓
652	"	"	"	"	14427	.987	6.251	.571	.114		92.07	✓
653	"	"	"	"	14435	1.667	2.827	1.084	.187		87.23	✓
654	"	"	"	"	14436	1.856	10.183	1.176	.184		86.60	✓
655	"	"	"	"	14337	1.453	8.618	.902	.160		88.87	✓
656	"	"	"	"	15483	2.817	4.338	1.928	.137		90.78	✓
657	"	"	"	"	15499	.241	.302	.310	.006		99.14	✓
658	"	"	"	"	15500	.112	.094	.337	.001		99.46	✓
671	"	GC	16-24	"	14314	.445	.273	.606	.007		98.67	✓
672	"	"	"	"	14394	2.920	1.489	1.799	.067		93.75	✓

IV-1-111

TEL. No. 514-655-4057

Dec. 27. 89 9:52 P. 04

RAPPORT DU LABORATOIRE
POUR QUARTZ *Reseval.*

Date Oct. 1, 1987
de Labo.
à J.P., P.M., M.L.

No LAB	DATE	INIT	QUART	PROVENANCE	DESCRIPTION	%Fe2O3	%Al2O3	%CaO	%TiO2	RES	DUAL %	SiO2
674	89-10-31	GC	16-24	Mixe	14396	.142	.128	.215	.002	99.51	✓	
675	"	"	"	"	14397	.726	.404	.791	.013	98.06	✓	
676	"	"	"	"	14408	.300	.175	.492	.005	99.03	✓	
677	"	"	"	"	14409	2.980	1.446	1.595	.065	93.91	✓	
678	"	"	"	"	14413	.533	.738	.130	.023	98.57	✓	
679	"	"	"	"	14418	.019	.067	.031	.001	99.88	✓	
680	"	"	"	"	14429	1.586	9.022	1.042	.175	88.18	✓	
681	"	"	"	"	14430	1.565	9.800	.953	.182	87.50	✓	
682	"	"	"	"	14431	1.479	8.690	1.011	.169	88.65	✓	
683	"	"	"	"	14438	1.109	8.000	.911	.189	89.79	✓	
684	"	"	"	"	14368	.035	.122	.019	.001	99.82	✓	
685	"	"	"	"	14374	.033	.121	.036	.001	99.81	✓	
686	"	"	"	"	14377	.482	.213	.280	.005	99.02	✓	
687	"	"	"	"	14382	.551	2.887	.181	.072	96.31	✓	
688	"	"	"	"	14385	.679	.662	.232	.029	98.40	✓	
689	"	"	"	"	14412	4.985	7.351	1.921	.421	85.32	✓	
690	"	"	"	"	14375	.281	.216	.256	.007	99.24	✓	
693	89-11-30	3A	0-8	"	14376	.048	.041	.023	.001	99.92	✓	
694	"	"	"	"	14381	.558	.311	.872	.010	98.23	✓	
695	"	"	"	"	14383	1.007	.931	.335	.037	97.69	✓	
696	"	"	"	"	14388	2.003	1.001	1.258	.037	95.00	✓	
697	"	"	"	"	14389	1.035	.071	.149	.001	91.70	✓	
698	"	"	"	"	14396	.178	.150	.197	.002	99.47	✓	
699	"	"	"	"	14393	1.753	1.008	1.402	.041	96.30	✓	
700	"	"	"	"	14400	1.434	1.221	.433	.043	96.87	✓	
701	"	"	"	"	14406	2.385	1.053	1.405	.045	95.10	✓	
702	"	"	"	"	14432	.478	.210	.584	.025	98.32	✓	
703	"	"	"	"	14433	.304	.182	.499	.004	98.94	✓	
704	"	"	"	"	14434	.994	.642	1.449	.026	96.85	✓	

MMSK DURS
 TEL No. 514-655-4057
 Dec. 27, 89 9:53 P.05

APPENDIX 4b

PERCUSSION ASSAYS

Dec. 14, 1989 FAX

BEDROCK CONSULTING

1989 Quartz In Situ Reserves Report

IV-2

RAPPORT DU LABORATOIRE POUR QUARTZ Roseval

Date Août 89
de Laboratoire
à

No LAB	DATE	INIT	QU	RT	PROVENANCE	DESCRIPTION	%Fe2O3	%Al2O3	%CaO	%TiO2	SiO2	SiO2
574	89-08-16	FL	8	16	Roseval	fine 26201	1.062	.906	1.058	.024	97.45	✓
575	"	"	"	"	"	" 26202	4.054	2.541	1.991	.102	97.31	✓
576	89-08-16	FL	8	16	"	" 26203	1.076	.817	1.003	.023	97.08	✓
577	"	"	"	"	"	" 26204	1.709	1.127	1.666	.034	95.46	✓
578	"	"	"	"	"	" 26205	.769	.458	.783	.012	97.49	✓
579	"	"	"	"	"	" 26206	2.376	1.458	1.883	.044	97.29	✓
580	"	"	"	"	"	" 26207	2.049	1.389	1.844	.047	97.67	✓
581	"	"	"	"	"	" 26208	4.224	2.928	1.979	.114	96.74	✓
582	"	"	"	"	"	" 26209	3.003	1.949	1.895	.068	93.51	✓
587	"	DB	0	2	"	" 26210	1.11	.784	1.038	.022	97.55	✓
583	"	FL	8	16	"	" 26211	1.061	.718	.866	.021	97.55	✓
584	"	"	"	"	"	" 26212	2.674	1.554	1.903	.051	97.74	✓
561	"	"	"	"	"	" 26213	.103	.091	.025	.002	97.74	✓
554	"	"	"	"	"	" 26214	.510	.477	.261	.011	98.74	✓
542	"	"	"	"	"	" 26215	.268	.270	.085	.006	97.74	✓
558	"	"	"	"	"	" 26216	.546	.651	.573	.012	97.74	✓
585	89-08-16	FL	8	16	"	" 26217	1.809	1.337	1.995	.045	97.74	✓
557	89-08-16	AM	4	2	"	" 26218	1.506	1.412	1.809	.027	95.25	✓
539	"	"	"	"	"	" 26219	.255	.236	.082	.006	99.44	✓
544	"	"	"	"	"	" 26220	.594	.397	1.060	.010	97.74	✓
545	"	"	"	"	"	" 26221	.128	.073	.070	.001	99.55	✓
559	"	"	"	"	"	" 26222	.137	.001	.195	.001	99.59	✓
541	"	"	"	"	"	" 26223	.084	.001	.049	.001	97.74	✓
543	"	"	"	"	"	" 26224	.084	.033	.022	.001	97.74	✓
586	"	FL	8	16	"	" 56225	.162	.230	.157	.003	97.74	✓
587	"	"	"	"	"	" 56226	.246	.210	.116	.004	97.74	✓
588	"	"	"	"	"	" 56227	0.674	.675	.251	.013	97.74	✓
589	"	"	"	"	"	" 56228	.124	.110	.088	.002	97.74	✓

APPENDIX 4c

PERCUSSION ASSAYS

Nov. 25, 1989 MAILING

BEDROCK CONSULTING


1989 Quartz In Situ Reserves Report

IV-3

No LAB	DATE	INIT	QUART	PROVENANCE	DESCRIPTION	%Fe ₂ O ₃	%Al ₂ O ₃	%CaO	%TiO ₂	RESIDUAL	(%SiO ₂)	
145	89-11-18	ym	B. 14	MINE ROSEVAL	221 0-5'	.42	.065	.230	.001		99.06	✓
146	"	"	"	"	221 5-10'	.646	1.838	1.041	.070		96.44	✓
147	"	"	"	"	221 10-15'	3.717	9.140	2.000	.261		85.88	✓
148	"	"	"	"	221 20-25'	.455	.926	.396	.026		98.30	✓
149	"	"	"	"	221 25-30'	.845	6.097	.261	.088		92.71	✓
150	"	"	"	"	221 35-40'	.533	1.066	1.310	.027		97.06	✓
151	"	"	"	"	221 50-55'	1.172	2.795	.158	.057		95.82	✓
152	"	"	"	"	221 55-60'	1.563	2.577	.820	.059		94.98	✓
153	"	"	"	"	221 65-70'	1.834	2.272	.494	.038		95.36	✓
154	"	"	"	"	221 70-75'	.531	.671	.334	.02		98.45	✓
155	"	"	"	"	221 75-80'	3.411	4.819	.356	.094		91.32	✓
156	89-11-18	ym	B. 14	"	210 0-5'	.984	1.063	1.060	.013		96.88	✓

IV-3-1

MARQUES:



CANADA

 RAPPORT DU BUREAU OISE
 POUR QUARTZ ROSEVAL (MINE)

 Date Nov 1964
 de L. H. G. A. 20. 21
 à M. L., P. M., J. P.

No LAB	DATE	INIT	QUART	PROVENANCE	DESCRIPTION	%Fe ₂ O ₃	%Al ₂ O ₃	%CaO	%TiO ₂	RESIDUAL	%SiO ₂
127	89-11-18	ym	Q-16	MINE ROSEVAL	222 5'-10'	.581	1.564	.865	.039		97.25 ✓
128	"	"	"	"	222 10'-15'	1.607	2.862	1.340	.154		94.04 ✓
129	"	"	"	"	222 15'-20'	4.115	8.327	1.994	.328		85.24 ✓
130	"	"	"	"	222 20'-25'	2.221	5.294	1.125	.181		91.11 ✓
131	"	"	"	"	222 25'-30'	1.486	2.667	1.189	.106		94.55 ✓
132	"	"	"	"	222 30'-35'	1.807	3.316	.633	.096		94.15 ✓
133	"	"	"	"	222 35'-40'	.306	.935	.305	.031		98.42 ✓
134	"	"	"	"	222 40'-45'	1.347	3.117	.203	.092		95.21 ✓
135	"	"	"	"	222 45'-50'	.922	2.581	.045	.063		96.35 ✓
136	"	"	"	"	222 50'-55'	.144	.486	1.411	.017		99.16 ✓
137	"	"	"	"	222 55'-60'	.078	.152	.094	.003		99.67 ✓
138	"	"	"	"	222 60'-65'	.167	.312	.170	.014		99.34 ✓
139	"	"	"	"	222 65'-70'	.266	.468	.557	.011		98.70 ✓
140	"	"	"	"	222 70'-75'	.342	.698	.575	.017		98.37 ✓
141	"	"	"	"	222 75'-80'	.422	.683	.345	.012		98.54 ✓
142	"	"	"	"	222 80'-85'	.092	.186	.240	.003		99.48 ✓
143	"	"	"	"	222 85'-90'	.274	.481	.353	.012		98.88 ✓
144	89-11-18	ym	Q-16	"	223 25'-30'	1.757	12.325	1.664	1.72		84.07 ✓

MARQUES:

No LAB	DATE	INIT	QUART	PROVENANCE	DESCRIPTION			%Fe2O3	%Al2O3	%CoO	%TiO2	RESIDUAL	(SiO2)
109	89-11-17	GC	16-24	Mine	26349	95-50	T-4-1	2.348	2.415	1.873	0.5		93.50
110	"	"	"	"	26348	90-45	T-4-1	.317	.254	.496	.004		98.93
111	"	"	"	"	26347	35-40	T-4-1	2.31	1.181	.449	0.4		99.13 ✓
112	"	"	"	"	26340	0-5	T-4-1	.014	.075	.037	0.1		99.84 ✓
113	"	"	"	"	26341	5-10	T-4-1	.052	.051	.041	0.01		99.85 ✓
114	"	"	"	"	26342	10-15	T-4-1	.435	.356	.791	0.10		98.42 ✓
115	"	"	"	"	26346	30-35	T-4-1	1.105	.924	1.066	.024		96.88
116	"	"	"	"	26343	15-20	T-4-1	3.782	4.490	1.977	.131		89.42 ✓
117	"	"	"	"	26344	20-25	T-4-1	1.916	1.576	1.820	0.45		94.56 ✓
118	"	"	"	"	26345	25-30	T-4-1	1.147	.810	1.603	.023		96.34 ✓
119	"	"	"	"	26200	60-65	T-15-2	.279	.182	.338	.005		99.20 ✓
120	"	"	"	"	26199	55-60	T-15-2	.055	.065	.132	0.01		99.71 ✓
121	"	"	"	"	26198	50-55	T-15-2	.132	.081	.144	.002		99.64 ✓
122	"	"	"	"	CN137557-6			.020	.015	.010	0.01		99.95
123	"	"	"	"	CN326141-6			.016	.023	.011	0.01		99.95
124	"	"	"	"	CN135391-6			.038	.021	.011	0.01		99.93
125	"	"	"	"	CN137213-6			.018	.011	.015	0.01		99.96
126	"	"	"	"	CN302534-7			.018	.001	.011	0.01		99.97

REMARQUES:

No LAB	DATE	INIT	QUART	PROVENANCE	DESCRIPTION			%Fe ₂ O ₃	%Al ₂ O ₃	%CoO	%TiO ₂	RFS/DVAC	SIC	
87	89-11-17	FL	8-16	Roseval (Mine)	26152	90-95	T-5-2	.560	.438	.346	.022		98.58	✓
88	"	"	"	"	26154	50-55	T-5-2	.216	.253	.237	.006		99.29	✓
89	"	"	"	"	26155	55-60	T-5-2	.122	.174	.125	.003		99.58	✓
90	"	"	"	"	26156	60-65	T-5-2	2.247	2.070	1.519	.057		99.11	✓
91	"	"	"	"	26160	20-25	T-5-3	.628	.537	.686	.015		98.13	✓
92	"	"	"	"	26163	35-40	T-5-3	1.111	1.117	1.063	.027		96.68	✓
93	"	"	"	"	26164	40-45	T-5-3	1.444	2.423	1.149	0.058		94.43	✓
94	"	"	"	"	26165	45-50	T-5-3	1.017	.871	1.084	.025		97.00	✓
95	"	"	"	"	26177	45-50	T-5-4	2.727	2.414	1.912	.076		92.87	✓
96	"	"	"	"	26178	50-55	T-5-4	2.040	1.516	1.563	.057		94.82	✓
97	"	"	"	"	26188	0-5	T15-2	.054	.028	.055	.001		99.86	✓
98	"	"	"	"	26189	5-10	T15-2	.365	.025	1.032	.001		98.58	✓
99	"	"	"	"	26190	10-15	T15-2	.065	.010	.154	.001		99.77	✓
100	"	"	"	"	26191	15-20	T15-2	.029	.016	.025	.001		99.93	✓
101	"	"	"	"	26192	20-25	T15-2	.114	.053	.183	.001		99.65	✓
102	"	"	"	"	26193	25-30	T15-2	.940	.596	1.151	.017		97.36	✓
103	"	"	"	"	26194	30-35	T15-2	.216	.189	.204	.004		99.39	✓
104	"	"	"	"	26195	35-40	T15-2	.547	.295	.854	.008		98.60	✓
105	"	"	"	"	26196	40-45	T15-2	.961	.526	.812	.016		97.69	✓
106	"	"	"	"	26197	45-50	T15-2	.924	.600	.918	.019		97.54	✓
107	"	GC	K-24	"	26355	30-35	T4-2	.620	.565	.568	.013		97.82	✓
108	"	"	"	"	26354	25-30	T4-2	2.825	2.931	1.603	.086		92.56	✓

MARQUES:

POUR QUARTZ ROSEVAL mine

No LAB	DATE	INIT	QUART	PROVENANCE	DESCRIPTION			%Fe2O3	%Al2O3	%CoO	%TiO2	RES.	PVAL	(S.O.)
991	89-11-16	21	0-8	ROSEVAL	CN-302522.7			.030	.001	.020	.001			99.95
992	"	"	"	"	CN-302140.7			.025	.001	.007	.001			99.97
993	"	"	"	"	CN-302448.7			.038	.002	.029	.004			99.93
994	"	"	"	"	26130	0-5	T-8-1	2.259	1.648	1.881	.053			94.16 ✓
995	"	"	"	"	26134	20-25	T-8-1	4.666	2.822	2.051	.123			90.40 ✓
996	"	"	"	"	26135	25-30	T-8-1	4.897	3.222	2.052	.144			89.69 ✓
997	"	"	"	"	26136	0-5	T-8-2	.236	.126	.179	.004			99.96 ✓
998	"	"	"	"	26137	5-10	T-8-2	.218	.124	.148	.003			99.51 ✓
999	"	"	"	"	26138	10-15	T-8-2	.043	.026	.022	.004			99.91 ✓
001	"	"	"	"	26139	15-20		.044	.014	.017	.001			99.92 ✓
002	"	"	"	"	26140	20-25		.049	.022	.025	.001			99.90 ✓
003	"	"	"	"	26141	25-30		.055	.008	.016	.001			99.92 ✓
004	"	"	"	"	26142	30-35		.401	.290	.018	.010			99.28 ✓
005	"	"	"	"	26143	35-40		.773	.474	.167	.014			98.07 ✓
006	"	"	"	"	26144	40-45		4.007	2.748	2.071	.111			90.05 ✓
007	"	"	"	"	26145	45-50	T-8-2	.077	.041	.062	.001			99.81 ✓
008	"	"	"	"	26112	0-5	T-9-1	4.344	3.519	2.062	.145			89.53 ✓
009	"	"	"	"	26113	5-10	T-9-1	.135	.077	.106	.001			99.68 ✓
010	"	"	"	"	26114	10-15	T-9-1	4.977	2.973	4.220	.007			98.78 ✓
011	"	"	"	"	26118	0-5	T-9-2	.433	.265	.270	.008			99.02 ✓
012	"	"	"	"	26119	5-10	T-9-2	.052	.019	.022	.001			99.91 ✓
013	"	"	"	"	26120	10-15		.076	.041	.043	.001			99.84 ✓
014	"	"	"	"	26121	15-20		.228	.155	.145	.005			99.47 ✓
015	"	"	"	"	26122	20-25		.063	.019	.029	.001			99.89 ✓
016	"	"	"	"	26123	25-30		.132	.056	.155	.002			97.65 ✓
017	"	"	"	"	26124	30-35		3.185	1.718	1.833	.004			93.20 ✓
018	"	"	"	"	26125	35-40	T-9-2	4.071	1.997	1.948	.008			91.90 ✓
019	"	"	"	"	26126	40-45	T-9-2	2.736	1.548	1.767	.000			93.90 ✓

No LAB	DATE	INIT	QUART	PROVENANCE	DESCRIPTION	%Fe ₂ O ₃	%Al ₂ O ₃	%CoO	%TiO ₂	RESIDUUM	%SiO ₂	
865	89-11-13	GC	16-24	Mine	21-05 à 10	.263	4.752	.121	.042		94.82	✓
866	"	"	"	"	21-10 à 15	.616	5.937	.156	.058		93.23	✓
867	"	"	"	"	21-15 à 20	.856	10.713	.263	.105		88.06	✓
868	"	"	"	"	21-20 à 25	1.325	9.860	.219	.128		88.47	✓
869	"	"	"	"	22-0 à 5	.048	.249	.022	.003		99.68	✓
870	"	"	"	"	22-5 à 10	.049	.197	.015	.002		99.68	✓
871	"	"	"	"	22-10 à 15	.889	12.041	1.275	.119		85.68	✓
872	"	"	"	"	23-0 à 5	.244	3.136	.176	.023		96.42	✓
873	"	"	"	"	23-5 à 10	.898	8.325	.855	.092		89.83	✓
874	"	"	"	"	23-10 à 15	.079	.931	.087	.007		98.90	✓
875	"	"	"	"	23-15 à 20	.415	4.399	.449	.042		94.70	✓
876	"	"	"	"	23-20 à 25	.433	6.961	1.110	.071		91.43	✓
877	"	"	"	"	24-0 à 5	.100	1.429	.075	.015		98.38	✓
878	"	"	"	"	24-5 à 10	.081	.838	.043	.008		99.03	✓
879	"	"	"	"	24-10 à 15	1.744	2.496	.102	.089		95.57	✓
880	"	"	"	"	24-15 à 20	2.771	4.422	.200	.143		92.46	✓
881	"	"	"	"	24-20 à 25	1.033	7.675	.265	.093		90.93	✓
882	"	"	"	"	24-25 à 30	1.251	14.475	.738	.161		83.38	✓
883	"	"	"	"	24-30 à 35	1.124	13.501	1.196	.138		84.04	✓
884	"	"	"	"	24-35 à 40	.960	12.100	1.072	.132		85.74	✓
885	"	"	"	"	25-0 à 5	.136	.332	.092	.005		99.44	✓
886	"	"	"	"	25-5 à 10	.094	1.244	.042	.009		98.61	✓

REMARKS:

No LAB	DATE	INIT	QUART	PROVENANCE	DESCRIPTION			%Fe ₂ O ₃	%Al ₂ O ₃	%CaO	%TiO ₂	RESIDU	(SiO ₂)
48	99-11-16	GC	16-24	Mine	26071	25-30	712-1	.022	.002	.014	.001		99.96
49	"	"	"	"	26072	30-35		.031	.003	.009	.001		99.96
50	"	"	"	"	26073	35-40		.020	.011	.008	.001		99.96
54	89-11-17	21	08	"	26074	40-45	712-1	.071	.021	.043	.004		99.86
55	"	"	"	"	26075	45-50		.044	.013	.022	.004		99.92
56	"	"	"	"	26076	50-55		.035	.001	.047	.001		99.92
57	"	"	"	"	26077	55-60		1.158	.907	1.264	.020		96.65
58	"	"	"	"	26078	60-65	712-1	3.813	3.412	2.083	.111		90.55
59	"	"	"	"	26079	0-5	715-1	.192	.118	.173	.004		99.51
60	"	"	"	"	26080	5-10		.101	.067	.075	.001		99.76
61	"	"	"	"	26081	10-15		.025	.001	.005	.001		99.96
62	"	"	"	"	26082	15-20		.020	.001	.012	.001		99.97
63	"	"	"	"	26083	20-25		.020	.001	.011	.001		99.97
64	"	"	"	"	26084	25-30		.017	.001	.008	.001		99.97
65	IV-3-V	"	"	"	26085	30-35		.047	.016	.035	.001		99.90
66	"	"	"	"	26086	35-40		.024	.001	.019	.001		99.96
67	"	"	"	"	26087	40-45		.092	.053	.120	.001		99.73
68	"	"	"	"	26088	45-50		.089	.053	.130	.001		99.73
69	"	"	"	"	26089	50-55		.030	.006	.020	.001		99.93
70	"	"	"	"	26090	55-60		.019	.001	.015	.001		99.96
71	"	"	"	"	26091	60-65		.036	.011	.028	.001		99.92
72	"	"	"	"	26092	65-70		.032	.004	.016	.001		99.92
73	"	"	"	"	26093	70-75		.043	.011	.050	.001		99.90
74	"	"	"	"	26094	75-80		.217	.122	.319	.004		99.34
75	"	"	"	"	26095	80-85		3.228	1.831	1.899	.073		92.97
76	"	"	"	"	26096	85-90	715-1	2.708	1.535	1.807	.050		93.76
77	"	"	"	"	260950			1.655	2.006	1.288	.008		95.01

No LAB	DATE	INIT	QUART	PROVENANCE	DESCRIPTION			%Fe ₂ O ₃	%Al ₂ O ₃	%CoO	%TiO ₂	RES	%S	
26	89-11-16	GC	16-24	Mine	26 001	65-70	T15-2	.039	.024	.056	.001		99.88	✓
27	"	"	"	"	26 008	105-110	T15-2	1.541	.655	1.406	.022		96.38	✓
28	"	"	"	"	26 009	110-115	T15-2	2.141	1.166	1.455	.037		95.20	✓
29	"	"	"	"	26 018		T15-3	.104	.033	.075	.001		99.77	✓
30	"	"	"	"	26 020		T15-3	.099	.073	.093	.001		99.73	✓
31	"	"	"	"	26 021		T15-3	.028	.001	.021	.001		99.95	✓
32	"	"	"	"	26 022		T15-3	.078	.056	.104	.001		99.76	✓
33	"	"	"	"	26 023		T15-3	1.285	1.116	1.459	.030		96.11	✓
34	"	"	"	"	26 024		T15-3	.027	.013	.018	.001		99.94	✓
35	"	"	"	"	26 025		T15-3	.060	.027	.061	.001		99.89	✓
36 F	"	"	"	"	26 026		T15-3	.035	.012	.034	.001		99.92	✓
37 I	"	"	"	"	26 043	15-20	T14-2	.204	.134	.142	.004		99.52	✓
38 W	"	"	"	"	26 044	20-25	T14-2	.092	.061	.067	.001		99.78	✓
39 I	"	"	"	"	26 045	25-30	T14-2	.059	.024	.040	.001		99.88	✓
40 S	"	"	"	"	26 046	30-35	T14-2	.032	.017	.018	.001		99.93	✓
41	"	"	"	"	26 047	35-40	T14-2	.041	.018	.038	.001		99.90	✓
42	"	"	"	"	26 049	45-50	T14-2	3.387	2.200	1.974	.078		92.36	✓
43	"	"	"	"	26 066	0-5	T12-1	.039	.023	.020	.001		99.92	✓
44	"	"	"	"	26 067	5-10	T12-1	.130	.085	.098	.001		99.69	✓
45	"	"	"	"	26 068	10-15	T12-1	.026	.015	.011	.001		99.95	✓
46	"	"	"	"	26 069	15-20	T12-1	.024	.014	.009	.001		99.95	✓
47	"	"	"	"	26 070	20-25	T12-1	.025	.005	.013	.001		99.96	✓

MARQUES:

No LAB	DATE	INIT	QUART	PROVENANCE	DESCRIPTION	%Fe ₂ O ₃	%Al ₂ O ₃	%CoO	%TiO ₂	RESIDUAL %	SiO ₂	✓
887	89-11-13	GC	16-24	<i>Mine</i>	25-10 à 15	.462	8.686	.225	.078		90.55	✓
888	"	"	"	"	25-15 à 20	.211	2.643	.367	.022		96.76	✓
889	"	"	"	"	26-0 à 5	.303	.152	.083	.022		98.74	✓
890	"	"	"	"	26-5 à 10	.224	.606	.076	.004		99.09	✓
891	"	"	"	"	26-10 à 15	1.908	12.125	.718	.191		85.06	✓
892	"	"	"	"	26-15 à 20	1.375	12.793	.652	.149		85.03	✓
893	"	"	"	"	27-0 à 5	1.016	2.032	.467	.039		96.45	
894	"	"	"	"	27-5 à 10	.889	1.430	.601	.025		97.06	
895	"	"	"	"	27-10 à 15	.760	1.501	.789	.040		96.91	
896	"	"	"	"	27-15 à 20	2.214	3.984	1.142	.116		92.54	
952	89-11-15	✓	0-5	"	214-0-5	.631	1.327	.552	.027		97.44	✓
953	"	"	"	"	214-5-10	1.668	3.574	1.337	.140		93.28	✓
954	"	"	"	"	214-15-20	2.148	1.513	2.169	.017		95.77	✓
955	"	"	"	"	214-20-25	2.571	12.682	1.554	.130		84.48	✓
956	"	"	"	"	214-25-30	1.073	12.318	1.614	.135		84.83	✓
957	"	"	"	"	215-0-5	.885	2.006	1.023	.071		91.00	✓
958	"	"	"	"	215-5-10	2.879	1.532	.173	.025		97.96	✓
959	"	"	"	"	215-10-15	2.552	1.162	.113	.013		98.46	✓
960	"	"	"	"	216-0-5	1.878	4.880	1.233	.055		91.78	✓
961	"	"	"	"	216-5-10	1.874	3.575	2.131	.065		92.36	✓
962	"	"	"	"	216-10-15	1.579	3.505	1.878	.077		92.93	✓
963	"	"	"	"	216-15-20	1.443	2.250	2.102	.037		94.11	✓
MARQUES: 964	"	"	"	"	216-20-25	1.091	1.498	2.153	.022		95.21	✓
965	"	"	"	"	216-25-30	3.079	7.140	1.782	.216		87.58	✓

No LAB	DATE	INIT	QUART	PROVENANCE	DESCRIPTION			%Fe ₂ O ₃	%Al ₂ O ₃	%CaO	%TiO ₂	RESIDUUM % S.O.
918	89-11-14	FL	8-16	Mine	210 - 5-10			.908	.932	1.320	.014	96.83
919	"	"	"	"	210 - 10-15			2.099	3.604	1.954	.094	92.25
920	"	"	"	"	210 - 20-25			1.911	2.356	2.081	.052	93.60
921	"	"	"	"	210 - 25-30			1.490	1.802	2.220	.034	94.95
922	"	"	"	"	210 - 35-40			.960	1.160	1.904	.022	95.95
923	"	"	"	"	210 - 40-45			.656	.773	2.061	.013	96.50
924	"	"	"	"	210 - 45-50			.722	1.013	2.212	.020	96.03
925	"	"	"	"	210 - 50-55			1.646	2.046	2.225	.043	94.09
926	"	"	"	"	210 - 55-60			1.474	1.942	2.224	.039	94.32
927	"	"	"	"	210 - 60-65			2.895	4.121	1.551	.089	91.30
928	"	"	"	"	210 - 65-70			1.968	2.895	1.894	.062	93.18
929	"	QC	16-24	"	211 - 0 à 5			.051	.050	.062	.001	99.89 ✓
930	"	"	"	"	211 - 5 à 10			.142	.163	.067	.002	99.63 ✓
931	"	"	"	"	211 - 15 à 20			1.742	9.602	1.403	.167	87.09 ✓
932	"	"	"	"	211 - 10 à 15			.097	.170	.262	.001	99.47 ✓
933	"	"	"	"	211 - 20 à 25			.572	7.004	.915	.075	91.43 ✓
934	"	"	"	"	211 - 25 à 30			.934	12.164	.975	.135	85.79 ✓
935	"	"	"	"	212 - 0 à 5			.488	9.260	.584	.067	90.60 ✓
936	"	"	"	"	212 - 5 à 10			.211	3.461	.232	.021	96.00 ✓
937	"	"	"	"	212 - 10 à 15			.735	10.732	.955	.124	87.45 ✓
938	"	"	"	"	212 - 15 à 20			1.232	12.058	1.512	.145	85.05 ✓
939	"	"	"	"	212 - 20 à 25			.253	2.478	.357	.024	96.89 ✓

REMARQUES:

No LAB	DATE	INIT	QUART	PROVENANCE	DESCRIPTION	%Fe ₂ O ₃	%Al ₂ O ₃	%CaO	%TiO ₂	RESIDUAL %SiO ₂
908	89-11-14	FL	8-16	Mine	29-0-5	1.471	2.222	.284	.048	95.97
909	"	"	"	"	29-5-10	.517	.742	.701	.011	98.03
910	89-11-14	FL	8-16	Mine	29-35-40	.489	.945	.822	.023	97.72
911	89-11-14	FL	8-16	Mine	29 -15-20 210	.749	1.151	1.517	.024	96.56

IV
-3
-XI

EMARQUES:

APPENDIX 4d

PERCUSSION ASSAYS

Nov. 14, 1989 FAX

No LAB	DATE	INIT	QUART	PROVENANCE	DESCRIPTION		HOLL	%Fe2O3	%Al2O3	%CaO	%TiO2	RESIDUAL	%SiO2
				Mine Roseval									
830	89-11-11	Ym	16-24	"	26002	75-80	T-15-2	.081	.009	.025	.001		99.98
831	"	"	"	"	26003	80-85		.067	.008	.018	.001		99.91
832	"	"	"	"	26004	85-90		.104	.019	.061	.001		99.82
770	89-11-09	Ym	4-12	"	26005	90-95		.063	.004	.025	.001		99.91
833	89-11-11	Ym	16-24	"	26006	95-100		.070	.001	.019	.001		99.91
776	89-11-10	FL	0-8	"	26010	0-5	T-15-2	.058	.012	.029	.001		99.90
768	89-11-09	Ym	4-12	"	26011	5-10		.057	.001	.039	.001		99.90
834	89-11-11	Ym	16-24	"	26012	10-15		.124	.024	.134	.001		99.70
835	"	"	"	"	26013	15-20		.058	.001	.021	.001		99.92
777	89-11-10	FL	0-8	"	26014	20-25		.056	.003	.012	.001		99.93
769	89-11-09	Ym	4-12	"	26015	25-30		1.395	.726	.927	.022		96.93
836	89-11-11	Ym	16-24	"	26016	30-35		.075	.001	.061	.001		99.85
837	"	"	"	"	26017	35-40		.180	.081	.105	.001		99.63
						18	40-45						99.84
838	89-11-11	Ym	16-24	"	26019	45-50	T-15-2	.073	.001	.027	.001		99.89
						20	50-55						
						21	55-60						
						22	60-65						
						23	65-70						
						24	70-75						
						25	75-80						
837	89-11-11	Ym	16-24	"	26027	85-90		.059	.001	.011	.001		99.93
771	89-11-09	Ym	4-12	"	26028	90-95		.085	.013	.041	.001		99.86
778	89-11-10	FL	0-8	"	26029	95-100	T-15-2	.067	.012	.021	.001		99.89

N-4-11

NOV 13 '89 08:51 S.K.W. CANADA

TEL NO. 514-655-4052 NOV. 14, 89 18:34 P.05

44SKDURS

INVT
CANADA

POUR QUARTZ Roseval

NOV 14 1989
a ... P.M. ML JP

44SKDURS

No LAB	DATE	INIT	QUART	PROVENANCE	DESCRIPTION			%Fe2O3	%Al2O3	%CaO	%TiO2	RESIDUAL	%SiO2	
840	89-11-11	Ym	16-24	Mine Roseval	26030	0-5	714-1	.064	.013	.016	.001		99.91	✓
779	89-11-10	FL	0-8	" "	26031	5-10	714-1	.088	.025	.076	.001		99.81	✓
780	"	"	"	" "	26032	10-15	714-1	.070	.007	.078	.001		99.84	✓
781	"	"	"	" "	26033	15-20	714-1	4.395	2.691	2.161	.112		90.64	✓
841	89-11-11	Ym	16-24	" "	26034	20-25	714-1	3.78	.178	.260	.005		99.18	✓
842	"	"	"	" "	26035	25-30	714-1	.162	.054	.119	.002		99.50	✓
767	89-11-09	Ym	16-24	" "	26036	30-35	714-1	.276	.123	.545	.002		99.05	✓
843	89-11-11	"	"	" "	26037	35-40	714-1	.122	.044	.113	.001		99.72	✓
782	89-11-10	FL	0-8	" "	26038	40-45	714-1	.510	.369	.660	.008		98.46	✓
783	"	"	"	" "	26039	45-50	714-1	3.233	2.018	2.104	.061		92.58	✓
844	89-11-11	Ym	16-24	" "	26040	0-5	714-2	2.727	1.476	1.873	.053		93.87	✓
784	89-11-10	FL	0-8	" "	26041	5-10	714-2	2.629	1.376	1.874	.047		94.07	✓
845	89-11-11	Ym	16-24	" "	26042	10-15	714-2	.725	.396	.534	.012		98.33	✓
					43	15-20	714-2							✓
					44	20-25	714-2							✓
					45	25-30	714-2							✓
					46	30-35	714-2							✓
					47	35-40	714-2							✓
846	89-11-11	Ym	16-24	" "	26048	45-45	714-2	.066	.008	.036	.001		99.89	✓
						45-50	714-2							✓
785	89-11-10	FL	0-8	" "	26050	50-55	714-2	4.712	3.192	2.216	.142		89.74	✓
786	"	"	"	" "	26051	55-60	714-2	5.056	3.836	2.222	.167		88.72	✓
847	89-11-11	Ym	16-24	" "	26052	60-65	714-2	4.229	2.782	2.143	.117		90.74	✓
787	89-11-10	FL	0-8	" "	26053	65-67	714-2	3.851	2.340	2.074	.102		91.41	✓
788	"	"	"	" "	26054	0-5	712-1	4.043	2.695	2.219	.104		90.94	✓
789	"	"	"	" "	26055	5-10	712-1	3.770	2.648	2.132	.096		91.35	✓
848	89-11-11	Ym	16-24	" "	26056	15-20	710-1	4.235	2.373	2.225	.088		91.14	✓
849	"	"	"	" "	26057	15-20	710-1	3.887	1.879	2.141	.076		92.02	✓
772	89-11-09	Ym	4-12	" "	26058	20-25	712-1	3.962	1.852	2.175	.080		91.93	✓

V-4-11

NOV 14 1989 18:36 P.06

TEL NO. 514-655-405

NOV. 14. 89 18:36 P.06

No LAB	DATE	INIT	QUART	PROVENANCE	DESCRIPTION			%Fe ₂ O ₃	%Al ₂ O ₃	%CoO	%TiO ₂	RES	UAC	%SiO ₂	
791	09-11-10	ym	16-24	MINE ROSEVAL	26301	0-5	715-9	.661	.486	.972	.013			97.87	✓
792	"	"	"	"	26302	5-10	715-4	.376	.248	.903	.007			98.87	✓
793	"	"	"	"	26303	10-15		.197	.128	.286	.003			99.39	✓
794	"	"	"	"	26304	15-20		.071	.015	.054	.001			99.86	✓
795	"	"	"	"	26305	20-25		.082	.015	.107	.001			99.80	✓
796	"	"	"	"	26306	25-30		.076	.022	.090	.001			99.81	✓
797	"	"	"	"	26307	30-35		.085	.027	.076	.001			99.81	✓
798	"	"	"	"	26308	35-40		.071	.004	.043	.001			99.88	✓
799	"	"	"	"	26309	40-45		.066	.001	.037	.001			99.90	✓
800	"	"	"	"	26310	45-50		.058	.003	.026	.001			99.89	✓
801	"	"	"	"	26311	50-55		.060	.001	.023	.001			99.82	✓
802	"	"	"	"	26312	55-60		.061	.001	.026	.001			99.91	✓
803	"	"	"	"	26313	60-65		.072	.001	.050	.001			99.88	✓
804	"	"	"	"	26314	65-70		.064	.003	.043	.001			99.89	✓
805	"	"	"	"	26315	70-75		.081	.007	.053	.001			99.86	✓
806	"	"	"	"	26316	75-80	715-4	.068	.001	.040	.001			99.89	✓
807	"	"	"	"	26317	0-5	715-5	.050	.003	.010	.001			99.91	✓
808	"	"	"	"	26318	5-10	715-5	.056	.007	.023	.001			99.91	✓
809	"	"	"	"	26319	10-15	715-5	.062	.001	.064	.001			99.87	✓
810	"	"	"	"	26320	15-20	715-5	1.372	1.035	1.045	.033			96.52	✓
811	"	"	"	"	26321	20-25	715-5	2.365	2.713	1.679	.111			92.13	✓
812	"	"	"	"	26323	25-30	715-5	1.247	.759	1.277	.025			96.69	✓
813	"	"	"	"	26327	30-35	715-6	.110	.053	.044	.001			99.79	✓
814	"	"	"	"	26328	35-40	715-6	.070	.018	.037	.001			99.87	✓
815	"	"	"	"	26329	40-45	715-6	.052	.008	.023	.001			99.91	✓
816	"	"	"	"	26330	45-50	715-6	.055	.001	.019	.001			99.92	✓
817	"	"	"	"	26331	50-55	715-6	.050	.001	.012	.001			99.94	✓
818	"	"	"	"	26332	55-60	715-6	.048	.001	.012	.001			99.94	✓
819	"	"	"	"	26333	60-65	715-6	.052	.001	.012	.001			99.93	✓

IV-4-1V
 SKW CANADA
 M. Y. S. ES:BO EE: ET
 11-11-10

APPENDIX 5

**SITE 2 - SECTIONS
WITH TONNAGE CALCULATIONS**

BEDROCK CONSULTING

1989 Quartz In Situ Reserves Report

QUARTZ IN SITU - SITE #2

SECTION 11-12

DRILL INDICATED SKW QUARTZ AREA. - NIL DUE TO VARIABILITY OF GRADE

DRILL INDICATED KIDD QUARTZ AREA

- ON QUARRY FLOOR - $\frac{15' \text{ dp} \times 55' \text{ wide}}{2} = \frac{825 \text{ ft}^2}{2} = 38.3 \text{ m}^2$

- ON QUARRY EAST WALL - DATA FROM 1988 RESERVES REPORT =
 $\frac{60' \text{ dp} \times 10' \text{ wide}}{2} = 300 \text{ ft}^2 = 27.8 \text{ m}^2$

TOTAL 66.1 m^2

KIDD VOLUME ON QUARRY FLOOR $412.5 \text{ ft}^2 \times (15+21) = 14,850 \text{ ft}^3 = 420.5 \text{ m}^3$

KIDD TONNES ON QUARRY FLOOR $420.5 \times 2.65 = \underline{\underline{1114 \text{ TONNES}}}$

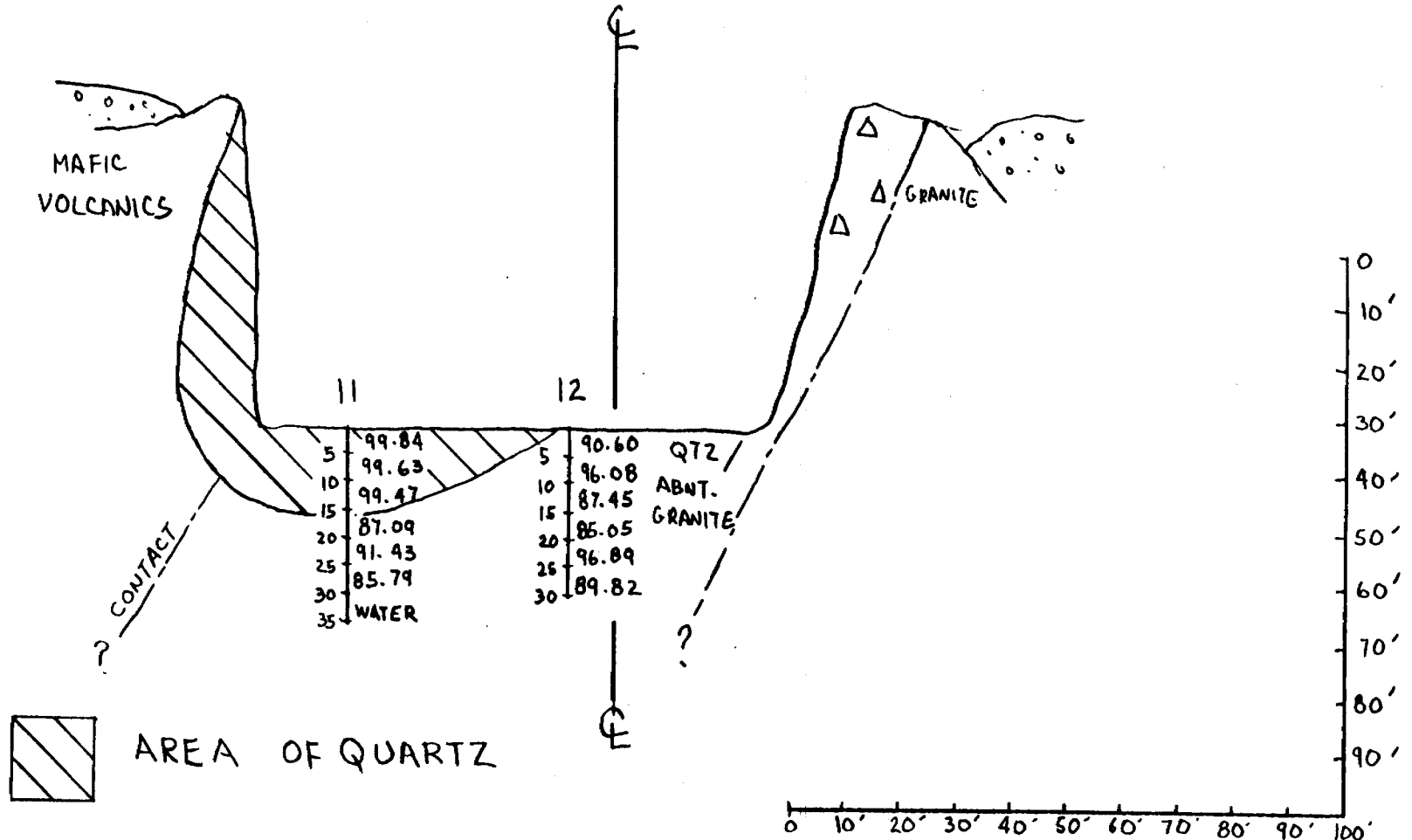
KIDD TONNES ON EAST WALL $300 \times 36 = 10,800 \text{ ft}^3 = 306 \text{ m}^3$

$306 \times 2.65 = \underline{\underline{811 \text{ TONNES}}}$

SOUTH EAST

NORTH WEST

V-2



SECTION 11-12

SCALE: 1" = 30' vertical; horizontal

QUARTZ IN SITU - SITE #2

SECTION 27-21

DRILL INDICATED SKW QUARTZ AREA - NIL DUE TO VARIABILITY OF GRADE

DRILL INDICATED KIDD QUARTZ AREA.

$$\underline{\text{ON QUARRY FLOOR}} - 65' \text{ wide} \times \frac{25 \text{ dp}}{2} = 812.5 \text{ ft}^2$$

$$\text{LENGTH OF SECTION } 15' + 21' = 36'$$

$$\therefore \text{VOL OF Q72} = 36 \times 812.5 = 29,250 \text{ ft}^3 = 828.3 \text{ m}^3$$

$$\text{TONNAGE OF Q72 ON FLOOR} = \underline{\underline{2,195 \text{ TONNES}}}$$

$$\underline{\text{ON EAST WALL}} - 30 \times 55 \left(\frac{1}{2}\right) = 825 \text{ ft}^2$$

$$825 \times 36 = 29,700 \text{ ft}^3 = 841 \text{ m}^3$$

$$= \underline{\underline{2,228 \text{ TONNES}}}$$

$$\underline{\text{ON WEST WALL}} - 35 \times 65 \left(\frac{1}{2}\right) = 1,137 \text{ ft}^2 \quad \times \text{SECTION AREA.}$$

$$\text{length of wall } 65' \text{ lg} \quad \therefore \text{area} = 65 \times 1,137 = 73,907 \text{ ft}^2 = 2099 \text{ m}^3$$

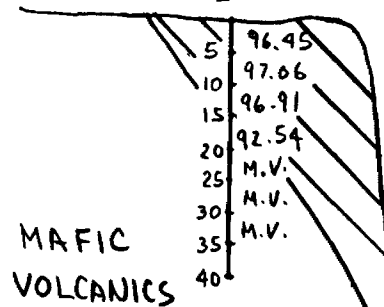
$$= \underline{\underline{5,548 \text{ TONNES}}}$$

SOUTHEAST

NORTHWEST

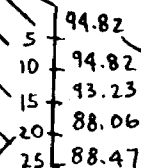
30' BEHIND SECTION

27



40' BEHIND SECTION

21

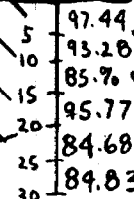
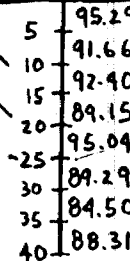


AREA OF QUARTZ

SECTION 27-21

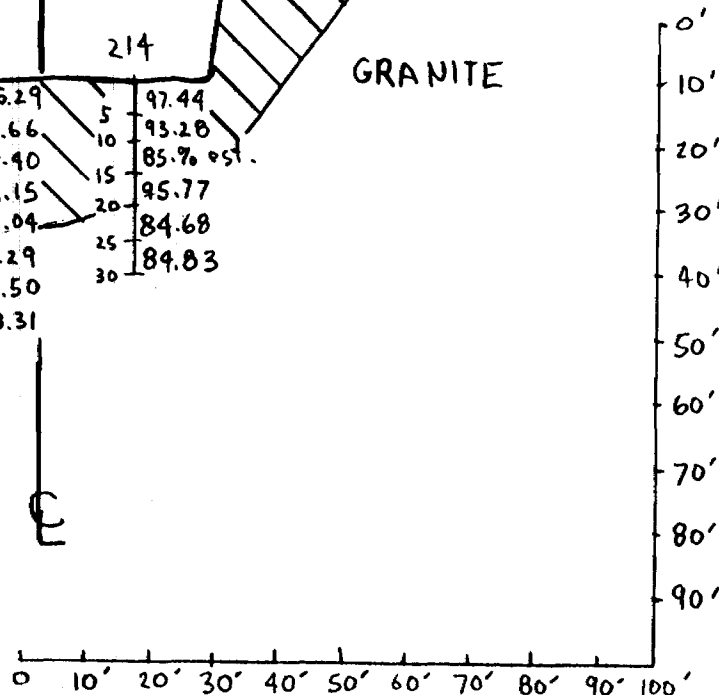
213

214



GRANITE

CONTACT



Scale 1" = 30' vertical ; horizontal

V-4

QUARTZ IN SITU - SITE #2

SECTION 26-RS-89-09

DRILL INDICATED SKW QUARTZ - NIL DUE TO VARIABILITY OF GRADE.

DRILL INDICATED KIDD QUARTZ AREA.

$$110' \text{ wide} \times 25' \text{ dp} \left(\frac{1}{2} \right) = 1,375 \text{ ft}^2 = 39 \text{ m}^2$$

$$\text{VOLUME OF QUARTZ ON BACK} = 1,375 \times 40 = 55,000 \text{ ft}^3 = 1,557 \text{ m}^3$$

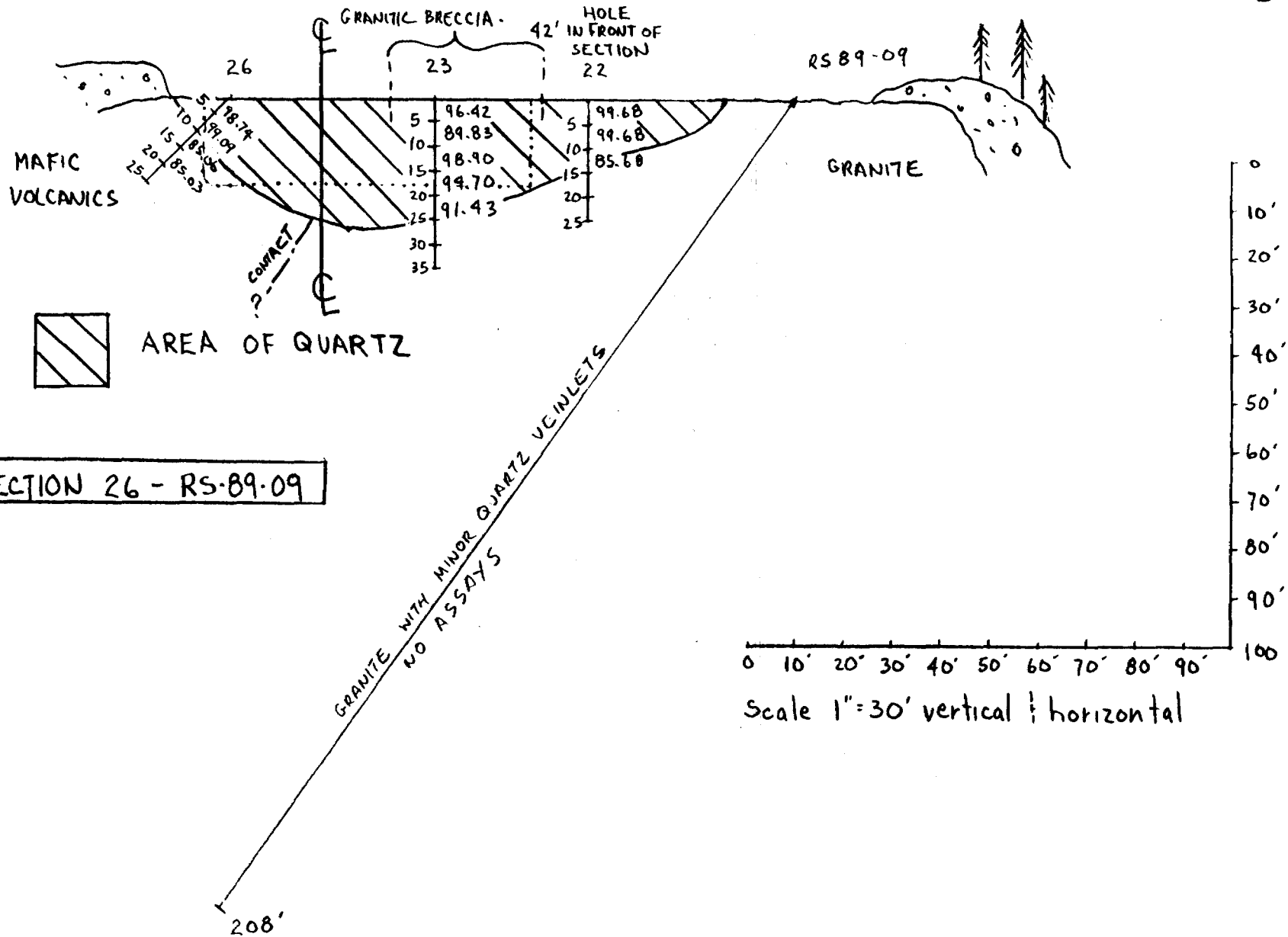
$$\text{VOLUME OF QUARTZ ON WEST SIDE} = \left(18 \times 40 \times \frac{1}{2} \right) \times 35 = 12,600 \text{ ft}^3 = 357 \text{ m}^3$$

$$\text{TOTAL VOLUME} = 1914 \text{ m}^3$$

$$\text{TOTAL TONNES} = \underline{\underline{5,072 \text{ TONNES}}}$$

SOUTHEAST

NORTHWEST



QUARTZ IN SITU - SITE #2

SECTION 24-25

DRILL INDICATED SKW QUARTZ - NIL DUE TO VARIABILITY OF GRADE.

DRILL INDICATED KIDD QUARTZ AREA.

$$125' \text{ wide} \times 25' \text{ dp}(\frac{1}{2}) = 1562.5 \text{ ft}^2$$

DRILL INDICATED KIDD QUARTZ

$$1562.5 \times 26 \text{ ft} = 40,625 \text{ ft}^3 = 1,150 \text{ m}^3$$

3,049 Tonnes.

SOUTHEAST

NORTH WEST

ACCESS ROAD

MAFIC VOLCANICS

SURFACE OBSERVATION OF BRECCIATION/GRANITE

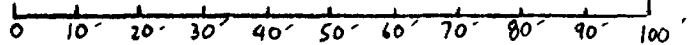
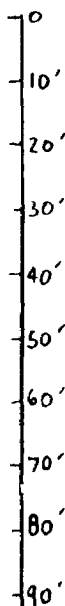
24

25

GRANITE



5	98.38	5	99.44
10	99.03	10	98.61
15	95.57	15	90.55
20	92.46	20	96.76
25	90.93	25	80% est.
30	83.38	30	85% est.
35	84.04	35	75% est.
40	85.07		



V-8



AREA OF QUARTZ

SECTION 24-25

SCALE : 1" = 30' vertical ; horizontal

NOTE : SAME SCALE APPLIES TO ALL SKETCHES IN SITE 2 ONLY

SOUTH EAST

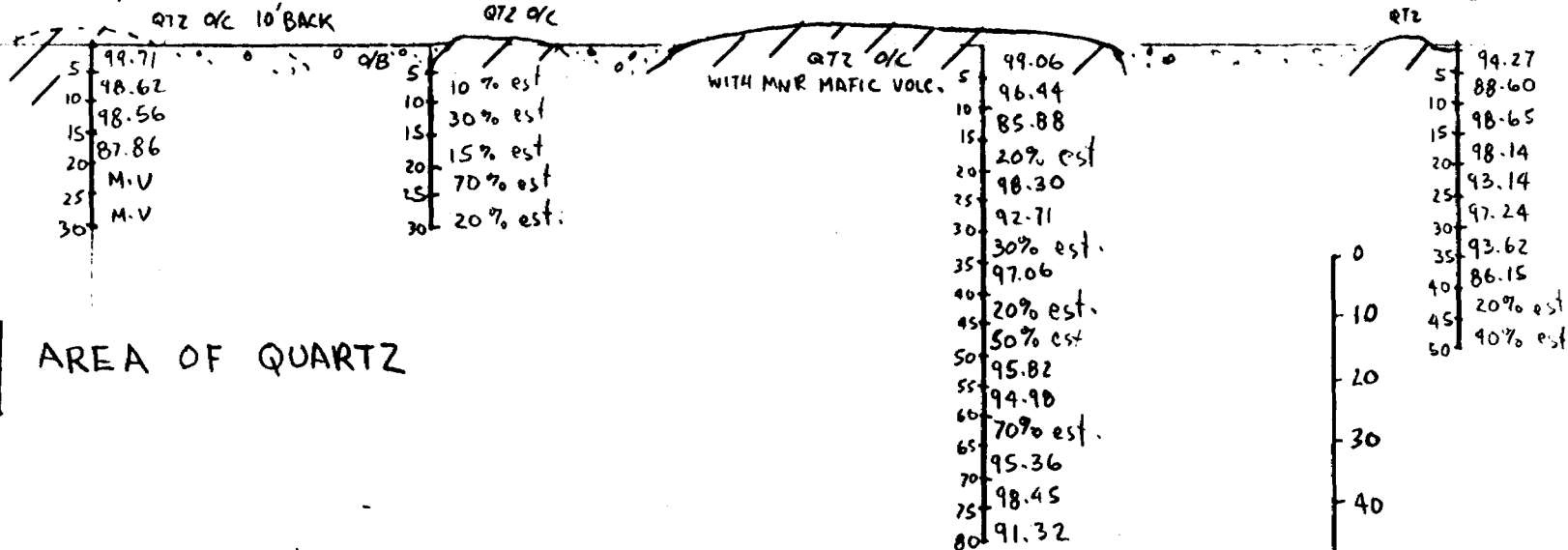
NORTH WEST

219

220

221

28



AREA OF QUARTZ

SECTION 219 - 28

NOTE: NO RESERVES ARE CALCULATED IN THIS SECTION DUE TO IRREGULAR QUARTZ VALUES

0 10 20 30 40 50 60 70 80 90 100

Scale 1" = 30' vertical 1/2 horizontal

b-v

APPENDIX 6

**SITE 2a - SECTIONS
WITH TONNAGE CALCULATIONS**

DRILL INDICATED QUARTZ IN SITU - SITE 2a

SECTION RS 89-3 - 223

DRILL INDICATED QTZ VOLUME (KIDD)

$$75 \text{ (width on surface)} + 34 \text{ (drill intersected horizontal width)} \times \frac{1}{2} = 59.$$

$$54.5' \times 137.5' = 7,494 \text{ ft}^2$$

$$7,494 \times 60' = 449,640 \text{ ft}^3 = 12,732 \text{ m}^3$$

$$\text{DRILL INDICATED TONNES} = 12,732 \times 2.65 = \underline{\underline{33,741}}$$

DRILL INFERRED TONNES = NIL DUE TO NARROWING VEIN

SOUTHEAST

NORTH WEST

RS89-3

222

223

5	97.25
10	94.04
15	85.24
20	91.11
25	94.55
30	94.15
35	98.92
40	95.21
45	96.35
50	99.16
55	99.67
60	99.34
65	98.70
70	98.37
75	98.54
80	99.48
85	98.88
90	

84.07

GRANITE

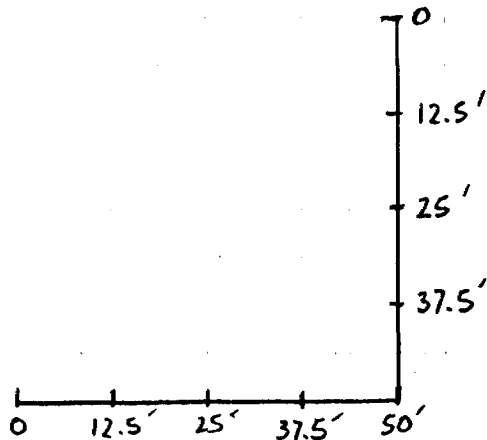
SITE 2a

SECTION
RS89-3 - 223

V1-2

SILICIFIED TUFF

SUBRE EXTENSION OF CORE AXIS CONTACT



Scale: 1" = 25'
vertical & horizontal

99.05
97.11
96.49
97.76
98.74
99.65
99.55
99.64
98.10
99.47
95.88

GRANITE

DRILL INDICATED QUARTZ IN SITU - SITE 2a.

SECTION 77 - RS 89-4

107.5

DRILL INDICATED QUARTZ AREA (KIDD)

$$70' \text{ (width on surface)} + 37.5 \text{ (horizontal width of drill intersection)} = 53.75'$$

$$53.75' \text{ (avg width)} \times 75' \text{ (drill intersected depth)} = 4,031 \text{ ft}^2$$

$$4,031 \text{ ft}^2 \times 60 \text{ ft}^* = 241,860 \text{ ft}^3 = 6,848 \text{ m}^3$$

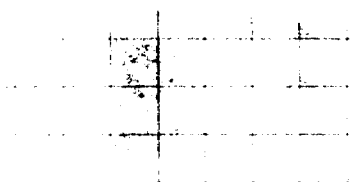
DRILL INDICATED TONNES $6,848 \times 2.65 = \underline{18,149 \text{ TONNES.}}$

DRILL INFERRED QUARTZ AREA.

$$4,031 \times (107.5 - 60) \text{ (ASSUMING EXTENSION OF QUARTZ TO MIDPOINT OF NEXT SECTION)}$$
$$= 191,472 \text{ ft}^3 = 5,422 \text{ m}^3$$

DRILL INFERRED TONNES $= 5,422 \times 2.65 = \underline{14,368 \text{ TONNES.}}$

* NOTE: ONLY PARTIAL CONTINUITY ON STRIKE IS INDICATED.



SOUTHEAST

NORTHWEST

T7

T4

RS89-4

QTZ OUTCROP

GRANITE

SILICIFIED
GRANITE
OR
METAVOLCANICS

MAGIC VOLCANICS

COLLARED 20'
IN FRONT OF
SECTION



AREA OF QUARTZ

SITE 2a

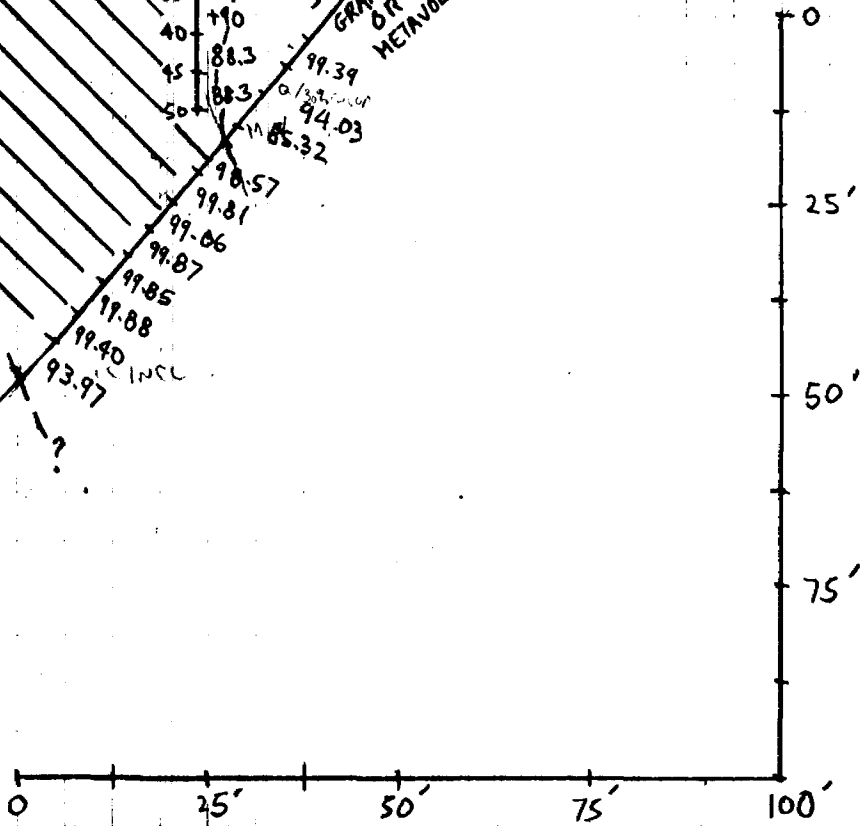
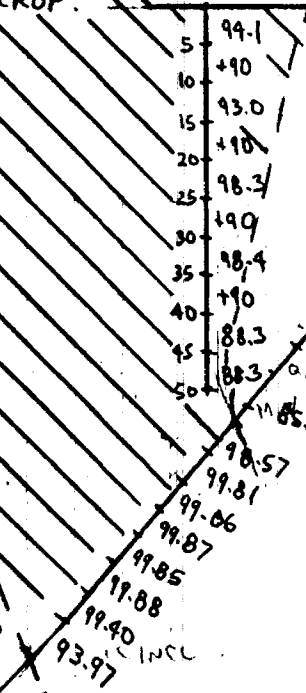
SECTION T7 - RS89-4

V1-4

SUBV. STRIPES
OF CORE
AND LAMINATIONS

5° STRIKES

SILICIFIED TUFF



Scale: 1" = 25' vertical ; horizontal

HOLE TERMINATED
ABOUT 20' BEHIND SECTION

DRILL INDICATED QUARTZ IN SITU - SITE 2a

SECTION RS 89-5 - NIL QUARTZ DUE TO ABUNDANT IMPURITIES

QUARTZ IN SITU - SITE 2a.

SECTION 215 - 210

ERRATIC ASSAY VALUES,

DUE TO POOR SURFACE EXPOSURE, AND ONLY ONE DRILL HOLE INTERSECTION ONLY DRILL INFERRED RESERVES ARE CALCULATED.

DRILL INFERRED RESERVES

WIDTH ON SURFACE, PROJECTED FROM CORE AXIS CONTACTS. - 62.5'

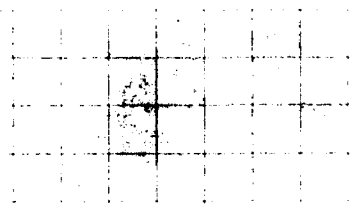
WIDTH AT LOWER INTERSECTION OF DRILL HOLE - 35'
(FROM PROJECTED CORE AXIS CONTACTS)

∴ AVERAGE WIDTH = 48.75

48.75 x 45 ft (depth from drilling) = 2194'

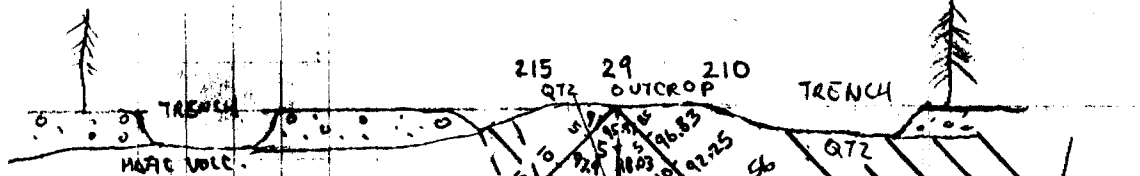
2194 ft x 130 ft = 285,220 ft² = 8,076.5 m²

8,076.5 x 2.65 = 21,403 TONNES.



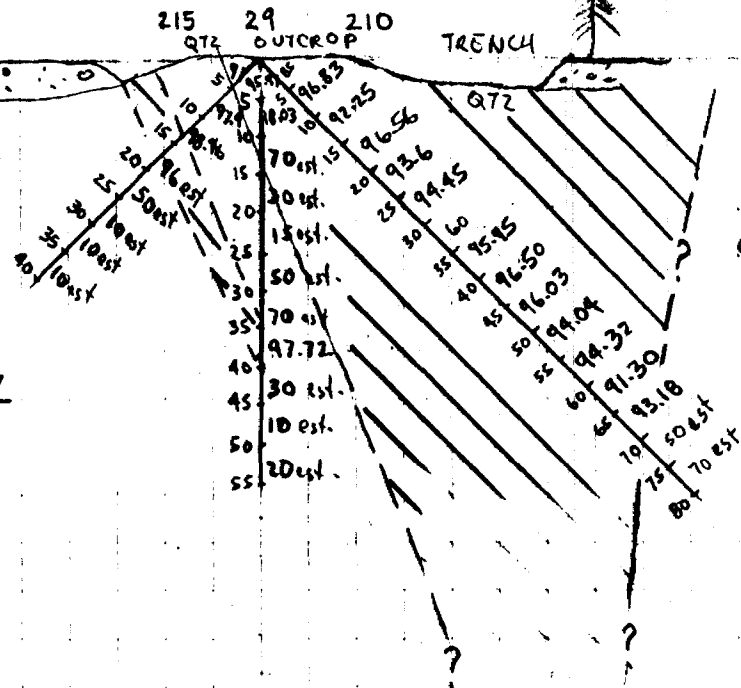
SOUTHEAST

NORTH WEST



Site 2a

SECTION 215-210



GRANITE

0
25'
50'
75'
100'

0 25' 50' 75'

Scale 1" = 25' vertical ; horizontal

8-1A



AREA OF QUARTZ

QUARTZ IN SITU - SITE 2a.

SECTION 210 - 217.

ERRATIC ASSAY VALUES.

DUE TO POOR SURFACE EXPOSURE, AND PRIMARILY ONE DRILL HOLE INTERSECTION ONLY DRILL INFERRED RESERVES ARE CALCULATED.

DRILL INFERRED RESERVES

WIDTH ON SURFACE = 55'

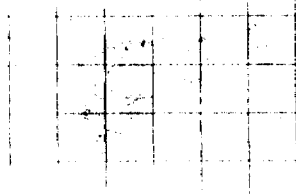
WIDTH AT LOWER SECTION OF DRILL HOLE = 37.5

AVERAGE WIDTH = 46.25

AREA = $46.25 \times 42.5 = 1965 \text{ ft}^2$

VOLUME = $1965 \times 105 = 206,325 \text{ ft}^3 = 5,842 \text{ m}^3$

TONNES = $5,842 \times 2.65 = \underline{\underline{15,483 \text{ TONNES.}}}$



SOUTHEAST

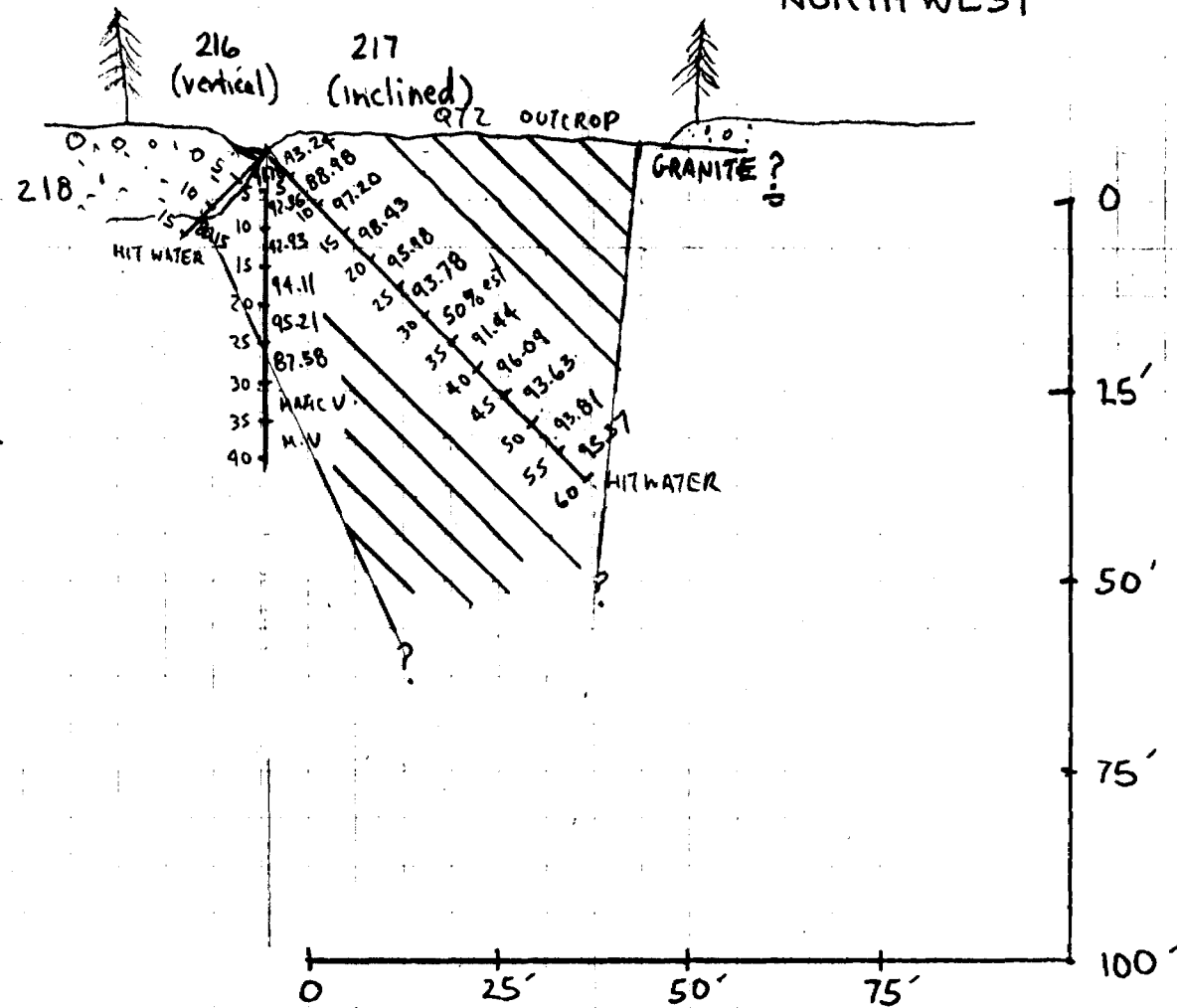
NORTH WEST

SITE 2a

SECTION 218-217



AREA OF QUARTZ



V1-10

APPENDIX 7

**SITE 3 - SECTIONS
WITH TONNAGE CALCULATIONS**

SECTION # 16

DRILL INDICATED QUARTZ

NORTH VEIN

SKW -

NIL

KIDD -

NIL

MAIN VEIN

SKW - $5250 \text{ft}^2 \times 32.5 \text{ft} = 170,625 \text{ft}^3 = 4832 \text{m}^3 \rightarrow 12,804 \text{ tonnes}$

KIDD - $1500 \text{ft}^2 \times 32.5 \text{ft} = 48,750 \text{ft}^3 = 1380 \text{m}^3 \rightarrow 3,658 \text{ tonnes}$

ADDITIONAL DRILL INFERRED QUARTZ

NORTH VEIN

SKW -

NIL

KIDD -

NIL

MAIN VEIN

SKW - $2800 \text{ft}^2 \times 32.5 \text{ft} = 91,000 \text{ft}^3 = 2,577 \text{m}^3 \rightarrow 6829 \text{ tonnes}$

KIDD - $2000 \text{ft}^2 \times 32.5 \text{ft} = 65,000 \text{ft}^3 = 1,841 \text{m}^3 \rightarrow 4878 \text{ tonnes}$

SOUTHEAST

SURFACE

NORTHWEST

90m

RAMP

BEHIND SECTION

SECTION 16 - SITE 3

LOOKING S.W

VII-2

MAFIC VOLC.

MAFIC VOLC.

DRILL INDICATED RESERVES:

UPPER KIDD 20x75 = 1500

SKW ARCH 35x150 = 5250

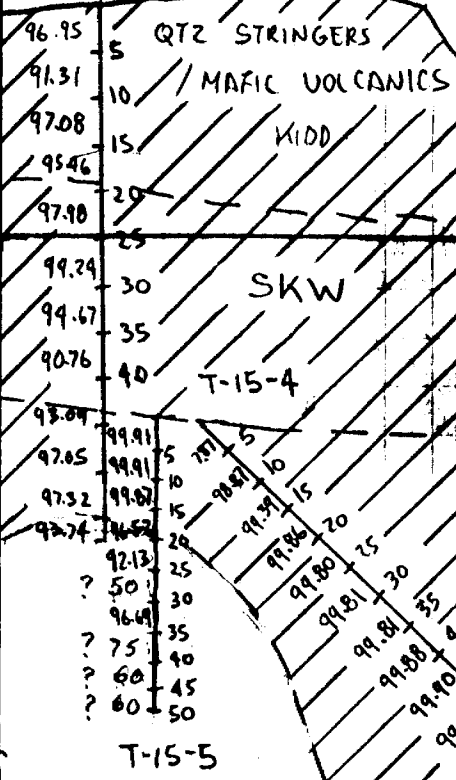
SKW
DRILL INFERRED 35x80 = 2800

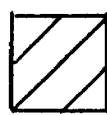
0'
10'
20'
30'
40'

0' 10' 20' 30' 40' 50' ft

Scale 1:250
vertical 1/3 horizontal.

89-T-01



 AREA OF QUARTZ

1m. SOUTH WEST

B. Komarechka
Dec. 20, 1989.

SECTION # 15

DRILL INDICATED QUARTZ

NORTH VEIN

SKW -

NIL

KIDD -

NIL

MAIN VEIN

SKW - $13,750 \text{ ft}^2 \times 32.5 \text{ ft} = 446,875 \text{ ft}^3 = 12,654 \text{ m}^3 \rightarrow 33,534 \text{ tonnes}$

KIDD - $6,875 \text{ ft}^2 \times 32.5 \text{ ft} = 223,438 \text{ ft}^3 = 6,327 \text{ m}^3 \rightarrow 16,767 \text{ tonnes}$

ADDITIONAL DRILL INFERRED QUARTZ

NORTH VEIN

SKW -

NIL

KIDD -

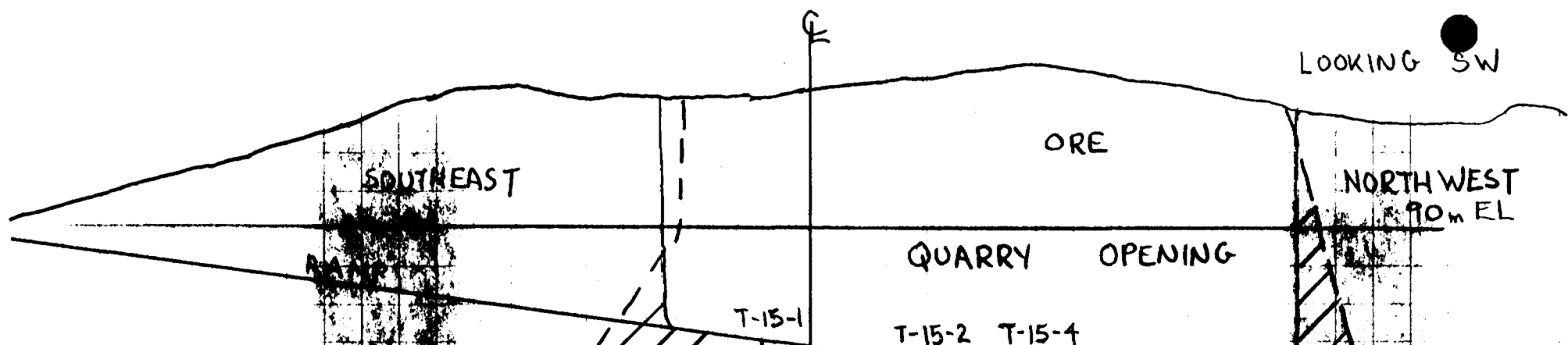
NIL

MAIN VEIN

SKW - $6,875 \text{ ft}^2 \times 32.5 \text{ ft} = 223,438 \text{ ft}^3 = 6,327 \text{ m}^3 \rightarrow 16,767 \text{ tonnes}$

KIDD - $6,875 \text{ ft}^2 \times 32.5 \text{ ft} = 223,438 \text{ ft}^3 \rightarrow 16,767 \text{ tonnes}$

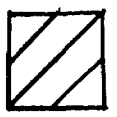
LOOKING SW



SECTION 15 - SITE B

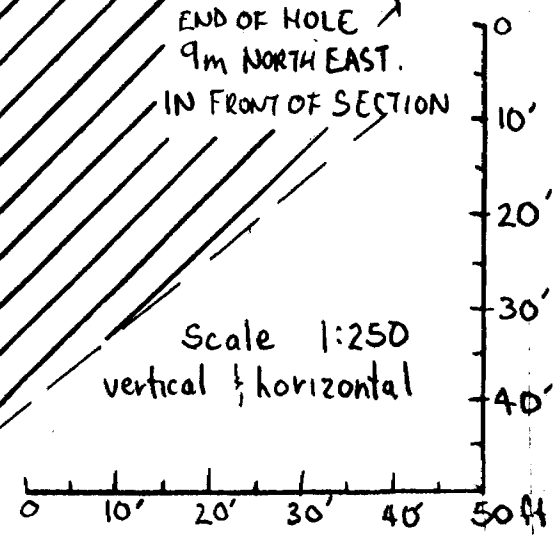
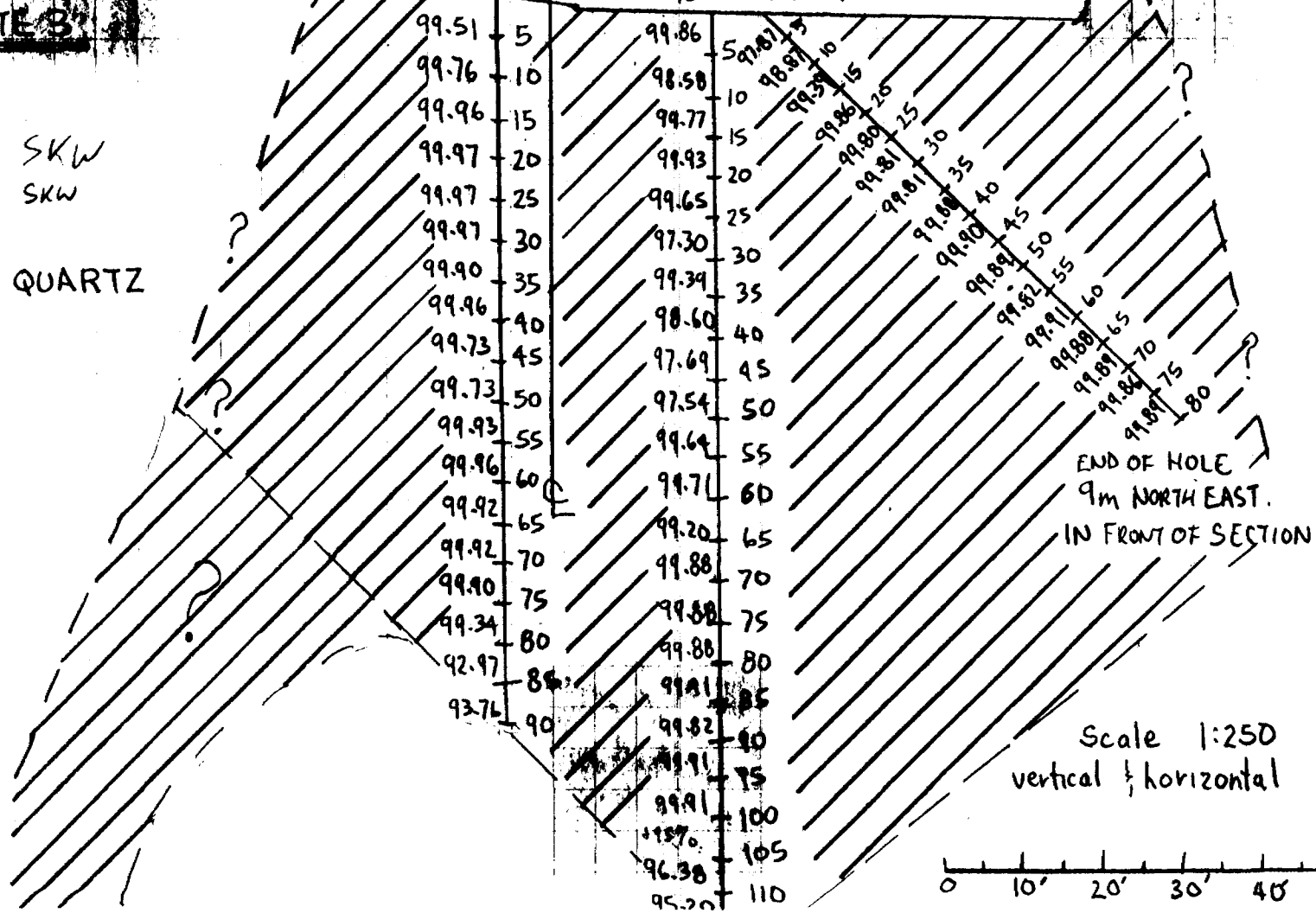
125x115 = 13750 SKW
INFERRED 3,430 SKW

VII-4



AREA OF QUARTZ

B. Komarechka
Dec. 20, 1989



SECTION # 14

DRILL INDICATED QUARTZ

NORTH VEIN

SKW -

NIL

KIDD -

NIL

MAIN VEIN

SKW - $9,500 \text{ ft}^2 \times 32.5 \text{ ft} = 308,750 \text{ ft}^3 = 8,743 \text{ m}^3 \rightarrow$

23,169 TONNES

KIDD -

NIL

ADDITIONAL DRILL INFERRED QUARTZ

NORTH VEIN

SKW -

NIL

KIDD -

NIL

MAIN VEIN

SKW - $9,500 \text{ ft}^2 \times 32.5 \text{ ft} = 308,750 \text{ ft}^3 \rightarrow$

23,169 .

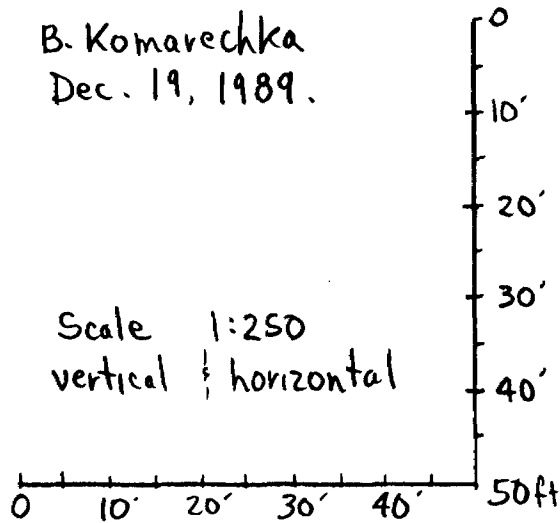
KIDD -


NIL .

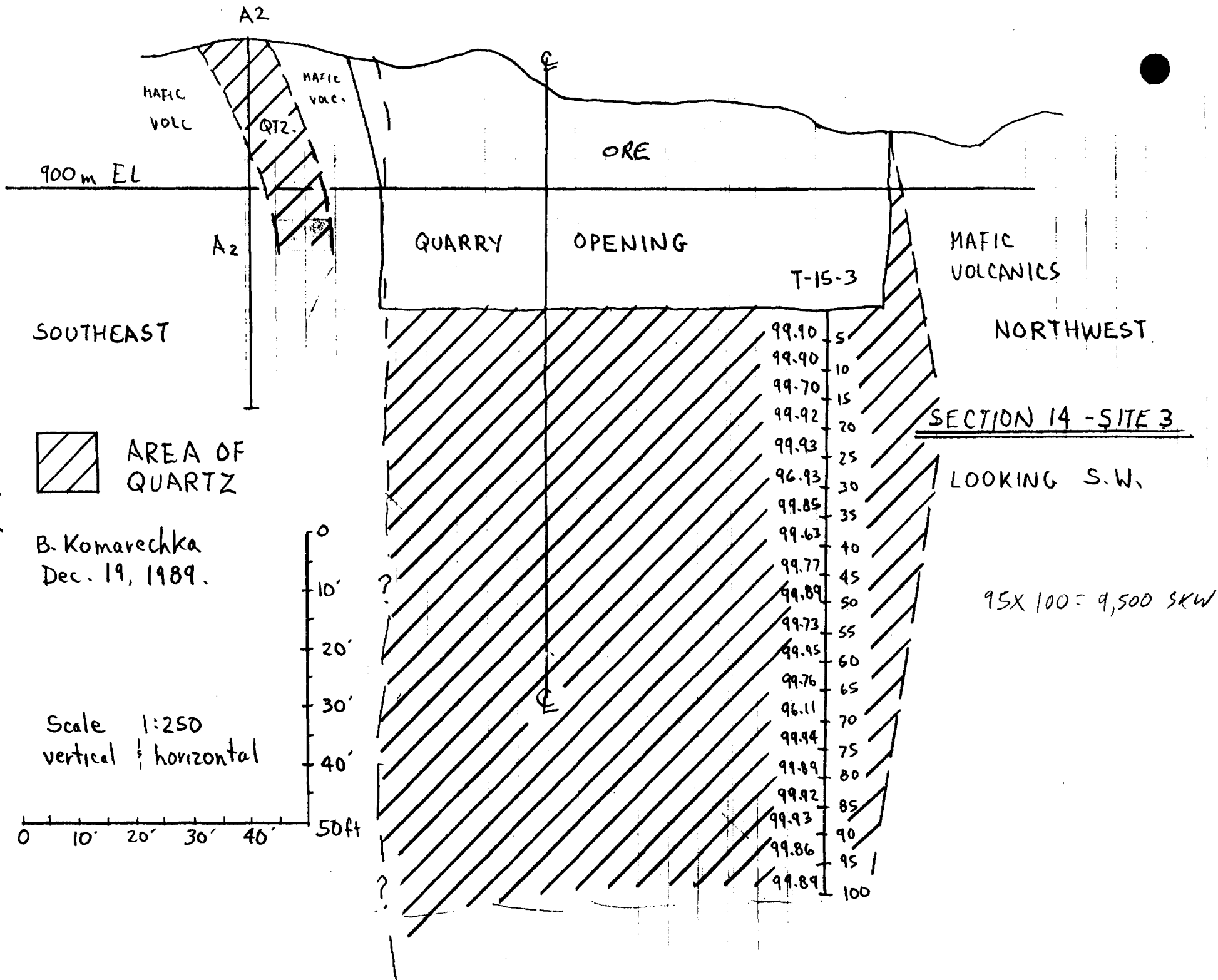
9-11A

B. Komarechka
Dec. 19, 1989.

Scale 1:250
vertical $\frac{1}{2}$ horizontal



 AREA OF QUARTZ



SECTION # 13

DRILL INDICATED QUARTZ

NORTH VEIN

SKW -

NIL

KIDD -

NIL

MAIN VEIN

SKW - $1,650 \text{ Ft}^2 \times 32.5 \text{ Ft} = 53625 \text{ Ft}^3 = 1519 \text{ m}^3$

→

4,024 TONNES

KIDD -

NIL

ADDITIONAL DRILL INFERRED QUARTZ

NORTH VEIN

SKW -

NIL

KIDD -

NIL

MAIN VEIN

SKW - $10,479 \text{ Ft}^2 \times 32.5 \text{ Ft} = 340567.5 \text{ Ft}^3 = 9644 \text{ m}^3$

→

25,556 TONNES

KIDD -

NIL

SECTION 13 - SITE 3

LOOKING SW.

NORTHWEST

SOUTHEAST

89T-02

89T-03

MAFIC
VOLCANICS

MAFIC
VOLCANICS

90m EL

5
10
15
20
25
30
35 SKW
40
45
50
55
60

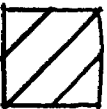
QUARRY

OPENING

ORE

DRILL INDICATED.

SKW - 15x110 = 1650

 AREA OF QUARTZ

99.59
99.82
99.86

est. 99.9
est. 99.9
est. 99.9

B. Komarechka
Dec. 19, 1989.

Scale 1:250
vertical $\frac{1}{2}$ horizontal

0 10 20 30 40 50 ft

VII-8

SECTION # 12

DRILL INDICATED QUARTZ

NORTH VEIN

SKW -

NIL

KIDD -

NIL

MAIN VEIN

SKW - $11,458 \text{ ft}^2 \times 48.75 \text{ ft} = 558,578 \text{ ft}^3 = 15,817 \text{ m}^3$

→ 41,915 TONNE

KIDD - $2,292 \text{ ft}^2 \times 48.75 \text{ ft} = 111,735 \text{ ft}^3 = 3,164 \text{ m}^3$

→ 8,385 TONNE

ADDITIONAL DRILL INFERRED QUARTZ

NORTH VEIN

SKW -

NIL

KIDD -

NIL

MAIN VEIN

SKW - $6,874 \text{ ft}^2 \times 48.75 \text{ ft} = 335,108 \text{ ft}^3 = 9,489 \text{ m}^3$

→ 25,176 TONNES

KIDD - $4,584 \text{ ft}^2 \times 48.75 \text{ ft} = 223,470 \text{ ft}^3 = 6,328 \text{ m}^3$

→ 16,769 TONNE

89-05-T

A-3

89-04-T

RS 89-6

SOUTEAST

NORTHWEST

90m EL



AREA OF QUARTZ

B. Komarechka
01-10
Dec. 19, 1989.

5	5
10	10
15 89-05-T	15 A3
20	20
25	25 QUARRY
30	30
35	35
40	40
45 T-14-2	45

5	5
10	10
15 89-04-T	15
20	20
25	25 OPENING
30	30
35	35 ORE
40	40
45	45

POSS. SPLITTING OF N. QTZ VEIN?

GRANITE

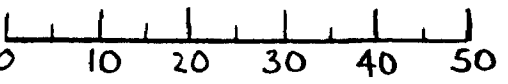
50	93.87	est +99%	50	est +99%	50
55	99.07	" +99%	55	" +99%	55
60	98.33	" +99%	60	" +99%	60
65	99.52		65		65

19.96
18.96
99.66
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

SECTION 12 - SITE 3

LOOKING S.W.

DRILL INDICATED.
125 MIO = 13,750
KIDD = 2,292
SKW = 11,458



Scale 1:250
vertical 1/2 horizontal

NOTE: ADDITIONAL
14' QTZ VEIN
98.99 - 96.85%
QTZ
@ 238 - 252'

99.24
99.92
99.07
99.81
99.66
99.89
96.97
99.09
99.86
99.82
99.85
99.85
99.86

QUARTZ
99.82
99.09
99.86

Volc
89.10
92.06
95.17
99.42
99.85
99.82
99.85
99.86

TALCose Chlorite
SCL157

SECTION # 10

DRILL INDICATED QUARTZ

NORTH VEIN

SKW - 0

NIL

KIDD - $2,000 \text{ ft}^3 \times 48.75 \text{ ft} = 97,500 \text{ ft}^3 = 2761 \text{ m}^3$

→ 7,317 Tonne

MAIN VEIN

SKW - $5,250 \text{ ft}^3 \times 48.75 \text{ ft} = 255,938 \text{ ft}^3 = 7,247 \text{ m}^3$

→ 19,205 Tonne

KIDD - $11750 \text{ ft}^3 \times 48.75 \text{ ft} = 85,313 \text{ ft}^3 = 2,416 \text{ m}^3$

→ 6,402 Tonne

ADDITIONAL DRILL INFERRED QUARTZ

NORTH VEIN

SKW - 0

NIL

KIDD - $2,000 \text{ ft}^3 \times 48.75 \text{ ft} = 97,500 \text{ ft}^3 = 2,761 \text{ m}^3$

7,317 Tonne

MAIN VEIN

SKW - $3,500 \text{ ft}^3 \times 48.75 \text{ ft} = 170,625 \text{ ft}^3 = 4,832$

12,803 Tonne

KIDD - $3,500 \text{ ft}^3 \times 48.75 \text{ ft} =$

12,803 Tonne

SOUTH EAST
90m EL.

QUARRY OPENING

SURFACE

NORTHWEST

SKW

T-12-1

SECTION 10 - SITE 3

LOOKING S.W.

V-11-12

99.92	5
99.69	10
99.95	15
99.95	20
99.96	25
99.96	30
99.96	35
99.96	40
99.86	45
99.92	50
99.92	55
99.65	60
90.55	65

KIDD

SKW

CLONALC
SEAM

KIDD

QUARTZ
INDICATED

VOL

GRANITE

87.23
86.60
88.87
89.19

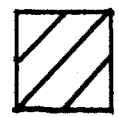
98.90 50°
98.10
98.23
97.69
98.67

KIDD
25 x 80 = 2,000 ft²

70 x 100 = 7,000 ft²

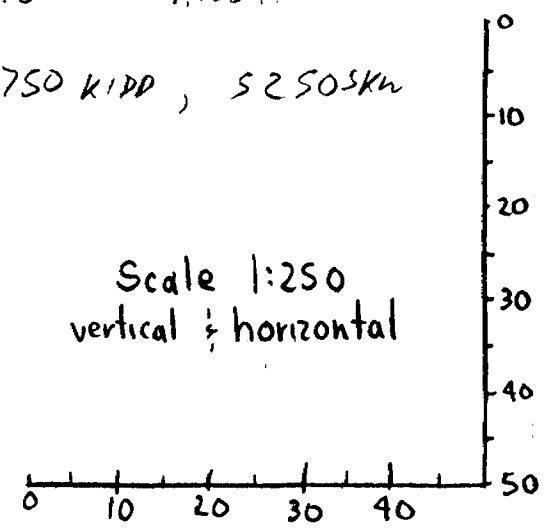
1750 KIDD, 5250 SKW

60m. EL.



AREA OF QUARTZ

Scale 1:250
vertical $\frac{1}{2}$ horizontal



B. Komarechka
Dec. 19, 1989

Vol

98.06
15.96
98.06

95.54
93.35

97.49
96.30

99.91
99.70

99.76
99.50

99.49
98.90

Vol

97.2
95.4

97.2
95.4

97.2
95.4

97.2
95.4

97.2
95.4

97.2
95.4

97.2
95.4

97.2
95.4

97.2
95.4

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97.2
95.4

97.2
95.4

97.2
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95.4

97.2
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97.2
95.4

Vol

97.2
95.4

97.2
95.4

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97.2
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97.2
95.4

97.2
95.4

Vol

97.2
95.4

97.2
95.4

97.2
95.4

97.2
95.4

97.2
95.4

97.2
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97.2
95.4

97.2
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97.2
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97.2
95.4

97.2
95.4

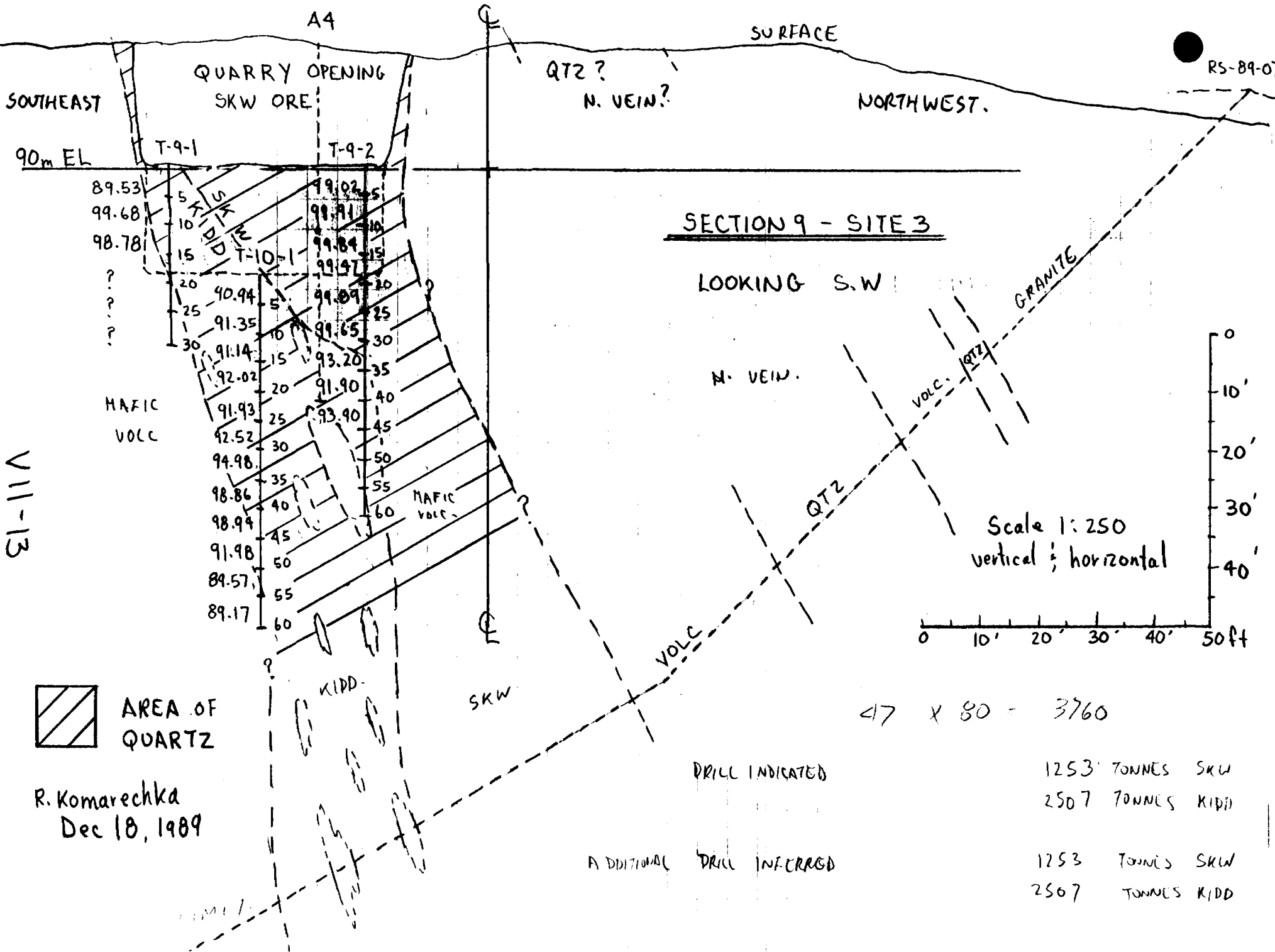
97.2
95.4

97.2
95.4

97.2
95.4

97.2
95.4

97.2
95.4



V11-13

RS-89-07

A4

SURFACE

SOUTHEAST

QUARRY OPENING
SKW ORE

QTZ?
N. VEIN.?

NORTHWEST.

90m EL

T-9-1

T-9-2

89.53	5	99.02	5
99.68	10	99.91	10
98.78	15	99.84	15
?	20	99.97	20
?	25	99.89	25
?	30	99.65	30
	35	93.20	35
	40	91.90	40
	45	93.90	45
	50		50
	55		55
	60		60
	65		65
	70		70
	75		75
	80		80
	85		85
	90		90
	95		95
	100		100

SECTION 9 - SITE 3

LOOKING S.W.

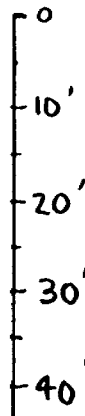
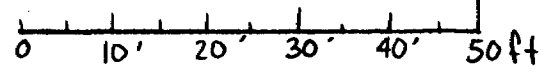
GRANITE

N. VEIN.

VOLC.

QTZ

Scale 1:250
vertical ; horizontal



AREA OF QUARTZ

R. Komarechka
Dec 18, 1989

DRILL INDICATED

ADDITIONAL DRILL INFERRED

47 x 80 = 3760

1253 TONNES SKW
2507 TONNES KIDD

1253 TONNES SKW
2507 TONNES KIDD

SECTION # 9

DRILL INDICATED QUARTZ

NORTH VEIN

SKW -

NIL

KIDD - $2,800 \text{ ft}^3 \times 32.5 \text{ ft} = 91,000 \text{ ft}^3 = 2577 \text{ m}^3 \rightarrow 6,829 \text{ TONNES}$

MAIN VEIN

SKW - $1253 \text{ ft}^3 \times 32.5 \text{ ft} = 40,722.5 \text{ ft}^3 = 1153 \text{ m}^3 \rightarrow 3,056 \text{ TONNES}$

KIDD - $2507 \text{ ft}^3 \times 32.5 \text{ ft} = 81,478 \text{ ft}^3 = 2307 \text{ m}^3 \rightarrow 6,114 \text{ TONNES}$

ADDITIONAL DRILL INFERRED QUARTZ

NORTH VEIN

SKW -

NIL

KIDD - $2,800 \text{ ft}^3 \times 32.5 \text{ ft} = 6,829 \text{ TONNES}$

MAIN VEIN

SKW - $1253 \text{ ft}^3 \times 32.5 \text{ ft} = 3,056 \text{ TONNES}$

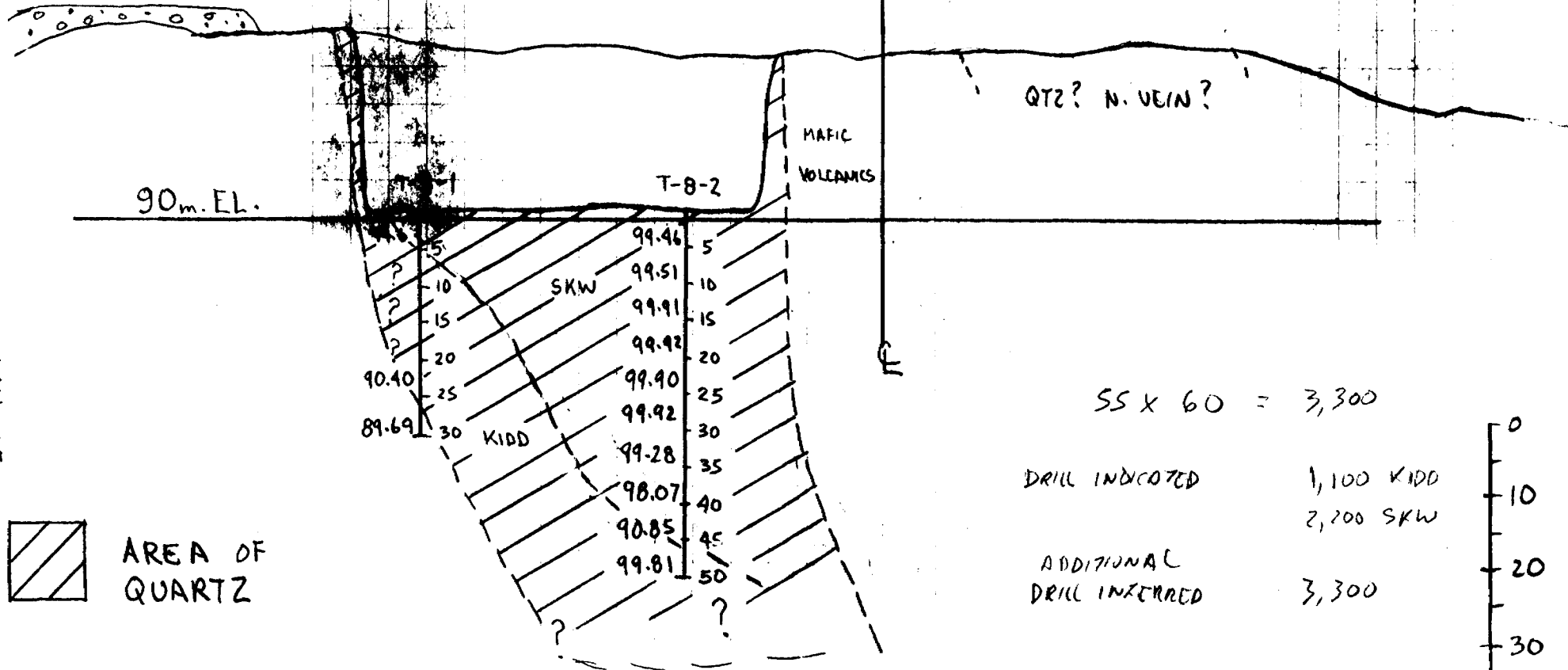
KIDD - $2507 \text{ ft}^3 \times 32.5 \text{ ft} = 6,114 \text{ TONNES}$

SECTION 8 - SITE 3

SOUTHEAST

NORTHWEST

LOOKING S.W.



90m. EL.

T-8-2

MAFIC
VOLCANICS

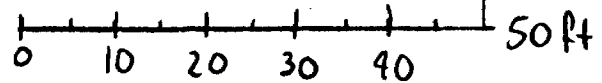
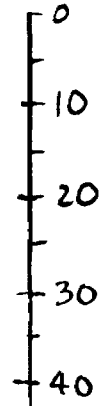
QTZ? N. VEIN?

5	99.46	5
10	99.51	10
15	99.91	15
20	99.92	20
25	99.90	25
30	99.92	30
35	99.28	35
40	98.07	40
45	90.85	45
50	99.81	50
?		?

SS x 60 = 3,300

DRILL INDICATED 1,100 KIDD
 2,200 SKW

ADDITIONAL
 DRILL INTERRED 3,300



Scale 1:250
 vertical & horizontal.

VII-11A



AREA OF
 QUARTZ

R. Komarechka
 Dec. 14 1989.

SECTION # 8

DRILL INDICATED QUARTZ

NORTH VEIN

SKW -

NIL

KIDD -

NIL

MAIN VEIN

SKW - $2,200 \text{ ft}^2 \times 48.75 \text{ ft} = 107,250 \text{ ft}^3 = 3,037 \text{ m}^3 \rightarrow 8,048 \text{ TONNES}$

KIDD - $1,100 \text{ ft}^2 \times 48.75 \text{ ft} = 53,625 \text{ ft}^3 = 1,519 \text{ m}^3 \rightarrow 4,024 \text{ TONNES}$

ADDITIONAL DRILL INFERRED QUARTZ

NORTH VEIN

SKW -

NIL

KIDD - $1,820 \text{ ft}^2 \times 48.75 \text{ ft} = 88,725 \text{ ft}^3 = 2,512 \text{ m}^3 \rightarrow 6,658 \text{ TONNES}$

MAIN VEIN

SKW -

NIL

KIDD - $3,300 \text{ ft}^2 \times 48.75 \text{ ft} = 160,875 \text{ ft}^3 = 4,556 \text{ m}^3 \rightarrow 12,072 \text{ TONNES}$

SECTION 6

DRILL INDICATED QUARTZ N. VEIN

$$\text{KIDD} - 890 \text{ft}^2 \times 48.75 \text{ft} = 54600 \text{ft}^3 = 1546.11 \text{m}^3 = 3,073 \text{ TONNES}$$

SKW - NIL

DRILL INDICATED QUARTZ MAIN VEIN

$$\text{KIDD} - 3234 \text{ft}^2 \times 48.75 \text{ft} = 210,210 \text{ft}^3 = 5952.52 \text{m}^3 = 11,831 \text{ TONNES}$$

$$\text{SKW} - 2156 \text{ft}^2 \times 48.75 \text{ft} = 140,140 \text{ft}^3 = 3968.34 \text{m}^3 = 7,887 \text{ TONNES.}$$

ADDITIONAL DRILL INFERRED QUARTZ

N. VEIN

$$\text{KIDD} - 840 \text{ft}^2 \times 48.75 \text{ft} = 54600 \text{ft}^3 = 1546.11 \text{m}^3 = 3,073 \text{ TONNES}$$

SKW - NIL

MAIN VEIN

$$\text{KIDD} - 3234 \text{ft}^2 \times 48.75 \text{ft} = 210,210 \text{ft}^3 = 5952.52 \text{m}^3 = 11,831 \text{ TONNES}$$

$$\text{SKW} - 2156 \text{ft}^2 \times 48.75 \text{ft} = 140,140 \text{ft}^3 = 3968.34 \text{m}^3 = 7,887 \text{ TONNES}$$

SECTION 5

DRILL INDICATED QUARTZ

NORTH VEIN

SKW -

NIL

KIDD -

NIL

MAIN VEIN

SKW -

NIL

KIDD -

NIL

ADDITIONAL DRILL INFERRED QUARTZ

NORTH VEIN

SKW -

NIL

KIDD - $1470 \text{ ft}^2 \times 48.75 = 71662.5 \text{ ft}^3 = 2029 \rightarrow 5378 \text{ TONNES}$

MAIN VEIN

SKW -

NIL

KIDD -

NIL

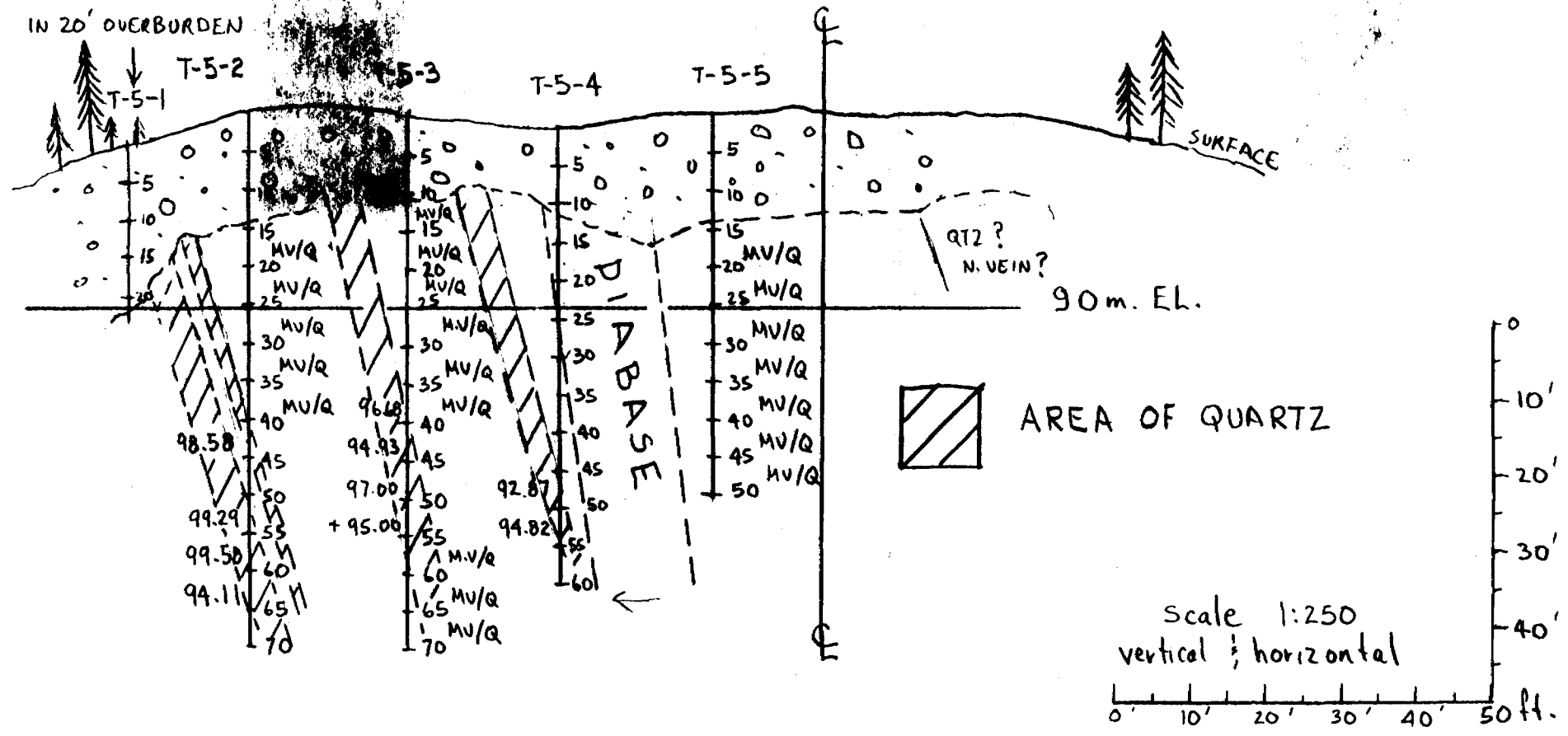
SECTION 5 - SITE 3

SOUTHEAST
LOST HOLE
IN 20' OVERBURDEN

NORTHWEST

LOOKING SW.

V11-19



DRILL INDICATED QUARTZ AREA - NIL
 DRILL INFERRED QUARTZ AREA - NIL
 QUARTZ QUALITY - N/A

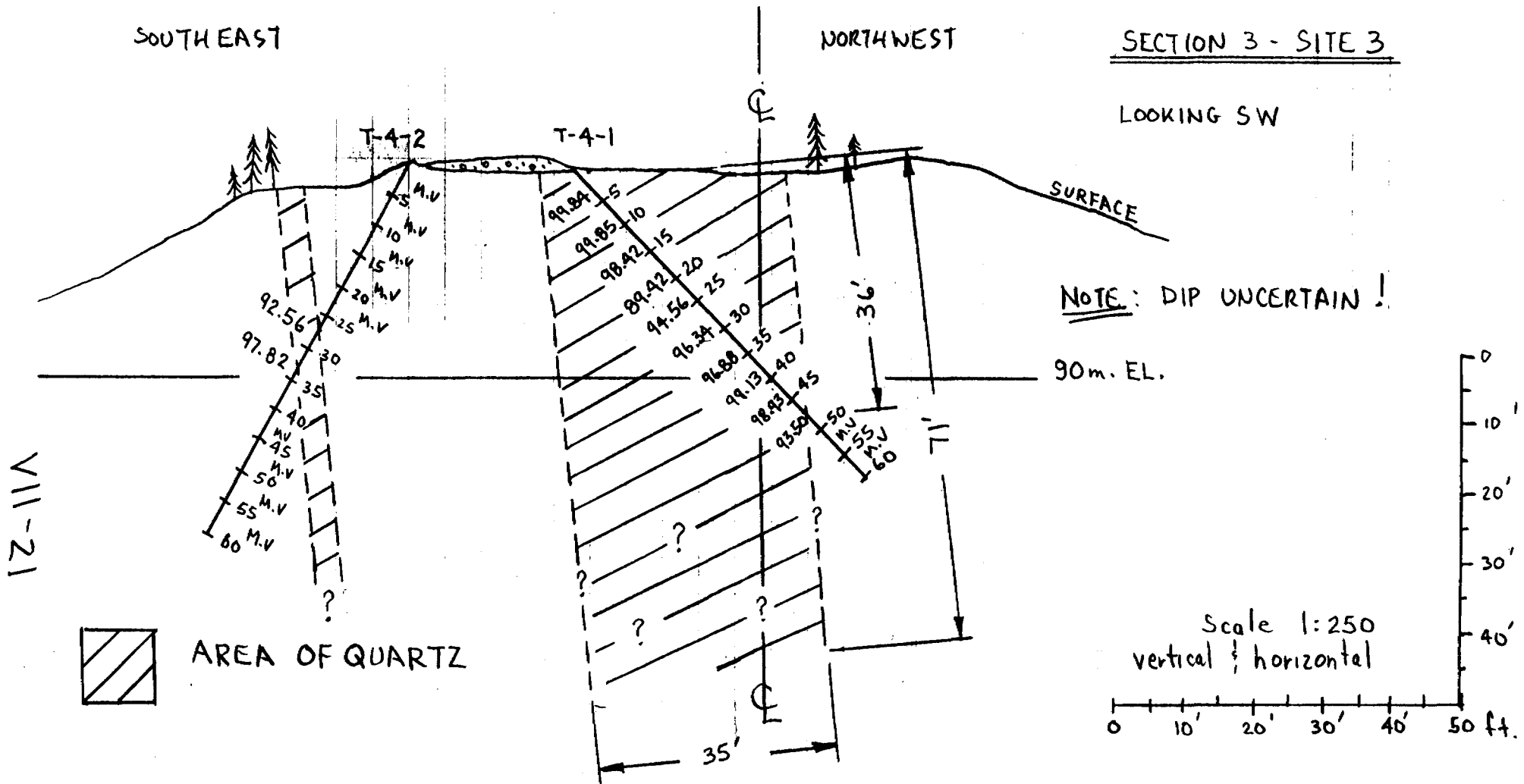
DEC. 6 1989
 R. Komarechka

SOUTHEAST

NORTHWEST

SECTION 3 - SITE 3

LOOKING SW



DRILL INDICATED QUARTZ AREA - 35' WIDE X 36' DEEP = 1260 ft²

DRILL INFERRED QUARTZ AREA - 35' WIDE X 71' DEEP = 2485 ft²

QUARTZ QUALITY - 50% SKW QUALITY, 50% KIDD QUALITY.

Dec. 6 1989.
R. Komarechka

60 m. EL.

SECTION 3

DRILL INDICATED QUARTZ

NORTH VEIN

SKW - $(.5) 1260 \text{ ft}^2 \times 65 \text{ ft} = 40,950 \text{ ft}^3 = 1,159.6 \text{ m}^3 \rightarrow 3073 \text{ TONNE.}$

KIDD - $(.5) 1260 \text{ ft}^2 \times 65 \text{ ft} = 40,950 \text{ ft}^3 \rightarrow 3073 \text{ TONNE.}$

MAIN VEIN

SKW \rightarrow NIL

KIDD \rightarrow NIL

ADDITIONAL DRILL INFERRED QUARTZ

NORTH VEIN

SKW - $630 \text{ ft}^2 \times 65 \text{ ft} \rightarrow 3073 \text{ TONNES}$

KIDD - $630 \text{ ft}^2 \times 65 \text{ ft} \rightarrow 3073 \text{ TONNES}$

MAIN VEIN

SKW \rightarrow NIL

KIDD \rightarrow NIL

APPENDIX 8

**METHODOLOGY
OF SKW LAB ASSAY ANALYSIS**

BEDROCK CONSULTING

1989 Quartz In Situ Reserves Report

January 15th, 1990

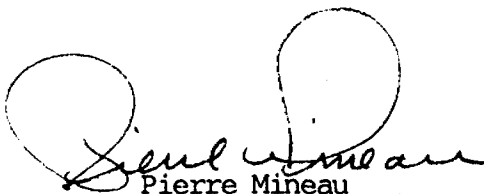
Mr. Bob Komarichka
Bitrock Consultants
Suite #1
396 Avenue
Sudbury, Ontario
P3C 4N3

Dear Sir:

Following our telephone conversation, here is our analysis procedure used for Roseval quartz.

1. We crush in 1/4" x 0 all the material of the sample received.
2. We pass this crushed sample into a separator until we get a weight of 40 grams.
3. To the 40 grams, we add 6 grams of binder and we pulverize the sample in a swing mill for 5 minutes.
4. We press at 20 MT/inch² 10 grams of the sample-binder to get a pellet.
5. This pellet is then analysed by fluorescence X-ray to evaluate impurities contained in the quartz.
6. The calibration curve used with X-ray is made from 36 standard samples from which impurities have been carefully analysed by humid chemistry on a plasma spectrometer.

I hope this information is to your satisfaction.



Pierre Mineau
Laboratory Supervisor

PM/rg

#63.5551



OMIP 89-15

900

THIS SUBMITTAL CONSISTED OF VARIOUS REPORTS, SOME OF WHICH HAVE BEEN CULLED FROM THIS FILE. THE CULLED MATERIAL HAD BEEN PREVIOUSLY SUBMITTED UNDER THE FOLLOWING RECORD SERIES (THE DOCUMENTS CAN BE VIEWED IN THESE SERIES):

- ① Appendix 1 Diamond Drill Core Logs with → See file 2-13226
 Assay Intervals - 1989 Quartz In Situ: R.O.W. W9006-60310 &
 Reserves Report; Roseval Silica Inc; -60362
 K. Jensen; Feb/90.
- ② Report on Roseval Silica Inc - Tionaga → " " "
 Quartz - 1989 E.M. Beep Map Study of " "
 Site 2a; Roseval Silica Inc; R.G. "
 Komarechka; Jan/90

63.5551
Vol. 2 of 2.



42B01SE0011 63.5551 PENHORWOOD

030

ROSEVAL SILICA INCORPORATED

OMIP 89-15

REPORT TO
ONTARIO MINERAL INCENTIVE PROGRAM
ON THE EXPLORATION PROJECT OF
HIGH-QUALITY QUARTZ VEINS
IN PENHORWOOD TOWNSHIP

DESIGNATED PROJECT OM88-015

VOLUME 3 -- GEOPHYSICS

February, 1990

MAGNETIC SURVEY

for

ROSEVAL SILICA INCORPORATED

on the

PENHORWOOD PROPERTY

PHASE 1

in

PENHORWOOD TOWNSHIP

PORCUPINE MINING DIVISION

DISTRICT OF COCHRANE

ONTARIO

by

Kian A. Jensen
Consulting Geologist/Geophysicist

February, 1990



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INTRODUCTION

During January 15 to February 6, 1990, line cutting and a total field magnetic survey were completed on the 14 contiguous unpatented mining claims known as the Penhorwood Property in the southwestern portion of Penhorwood Township. This report covers Phase 1 of the Roseval Silica Inc. Penhorwood property.

A total of 17.865 miles (28.97 km) of line cutting was completed of which 10.3 miles (16.57 km) was surveyed to establish a total of 621 magnetic readings. The survey was completed under the supervision of the author. The data reductions, drafting, interpretation and report were completed by the author from January 27 to February 9, 1990.

The project area is located approximately 51.5 miles (82.9 km) west of Timmins, Ontario. Access to the project area is by Highway 101 west of Timmins for 35.73 mile (57.5 km) to the all weather gravel Kenogaming/Penhorwood Main logging roads. Travelling about 4.29 miles (6.9 km) in a southerly direction on the gravel road is the Penhorwood Main Road leading in a westerly the southwesterly direction for about 10.13 miles (16.3 km) to the ballast pit of the Canadian National Railway. A new gravel road from the ballast pits lead west towards the Extender Mineral property. About 1.37 mile (2.2 km) along this road is Roseval Silica Pit No. 2 and an additional 0.68 miles (1.1 km) to Pit No. 3.

The purpose of the survey was to identify the lithological units and contact zones, structural features and favorable areas for massive high quality silica emplacement. A secondary purpose is to identify favorable target for gold and/or base metal mineralization.

LOCATION AND ACCESS

The 14 unpatented mining claims covered by this report is on Phase 1 of the total land package of Roseval Silica Incorporated. The claim group is located in the southwestern portion of Penhorwood Township, Porcupine Mining Division, District of Cochrane, Ontario as shown in Figure 1.

The project area is located approximately 51.5 miles (82.9 km) west of Timmins, Ontario. Access to the project area is by Highway 101 west of Timmins for 35.73 mile (57.5 km) to the all weather gravel Kenogaming/Penhorwood Main logging roads. Travelling about 4.29 miles (6.9 km) in a southerly direction on the gravel road is the Penhorwood Road leading in a westerly the southwesterly direction for about 10.13 miles (16.3 km) to the former ballast pit of the Canadian National Railway. A new gravel road from the ballast pits lead west towards the Extender Mineral property. About 1.37 mile (2.2 km) along this road is Roseval Silica Pit No. 2 and an additional 0.68 miles (1.1 km) to Pit No. 3. Figure 2 illustrates the access roads in Penhorwood Township and the Penhorwood Township property of Roseval Silica Incorporated. The project is located in NTS 42B/1 and approximately Latitude 48°05' and Longitude 82°09'.

PROPERTY

The Penhorwood Township property of Roseval Silica Incorporated covered by this report consists of 14 unpatented contiguous mining claims. The claims are held either by Roseval Silica Incorporated or under an option agreement, as shown in Figure 3, and consists of the following mining claims and recording dates:

P-986583 to P-986585	inclusively	June 22, 1987
P-986587		June 22, 1987
P-986589		June 22, 1987
P-995809		August 24, 1987
P-995810		September 1, 1987
P-994260 to P-994261	inclusively	September 17, 1987
P-984380		September 17, 1987
P-994114		September 17, 1987
P-995807 to P-995808	inclusively	October 8, 1987
P-1114596		August 28, 1989

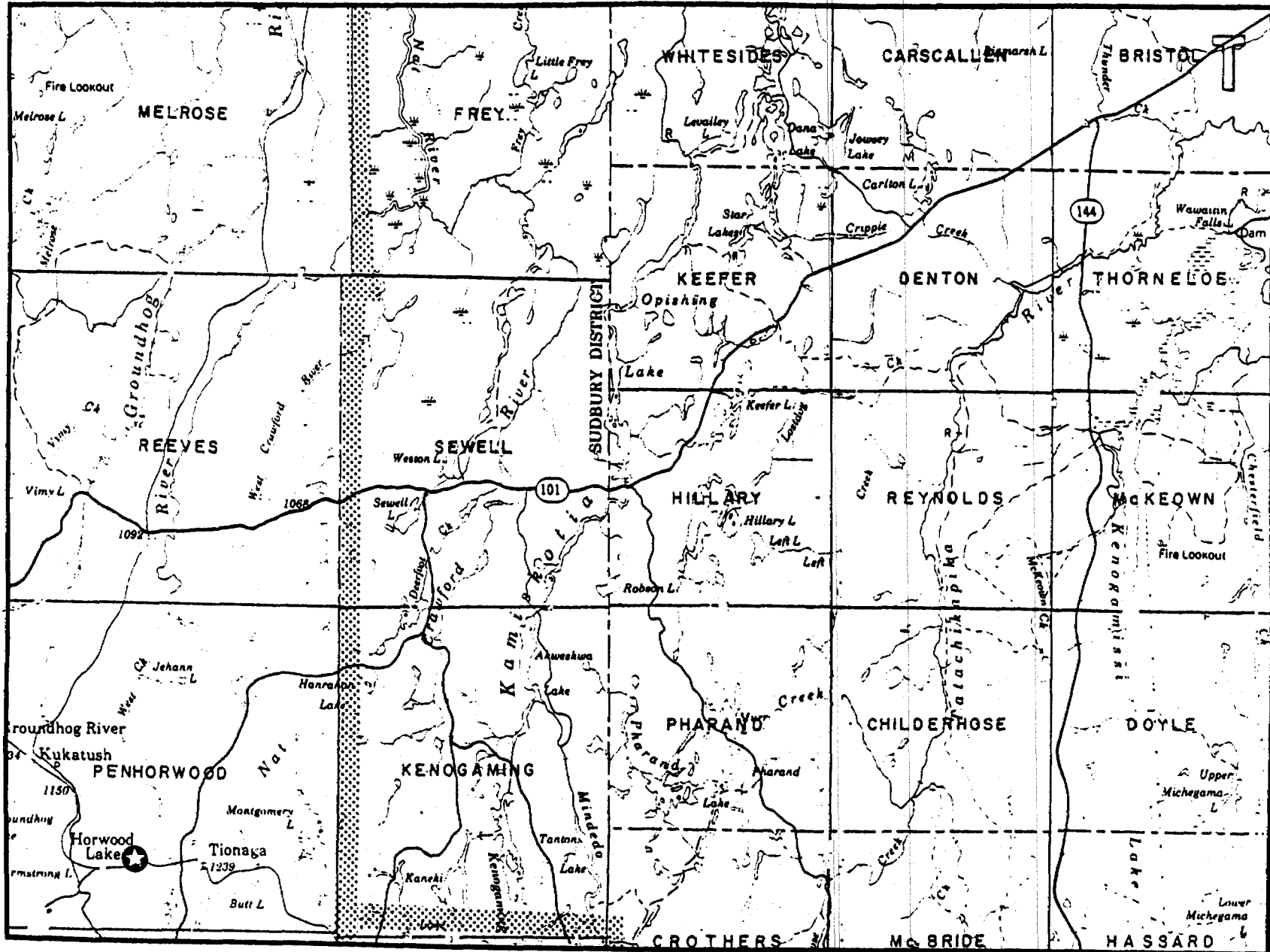


Figure 1: Location Map of the Roseval Silica Incorporated Penhorwood Property, Penhorwood Township, Porcupine Mining Division, Ontario. Scale: 1 inch to 4 miles.

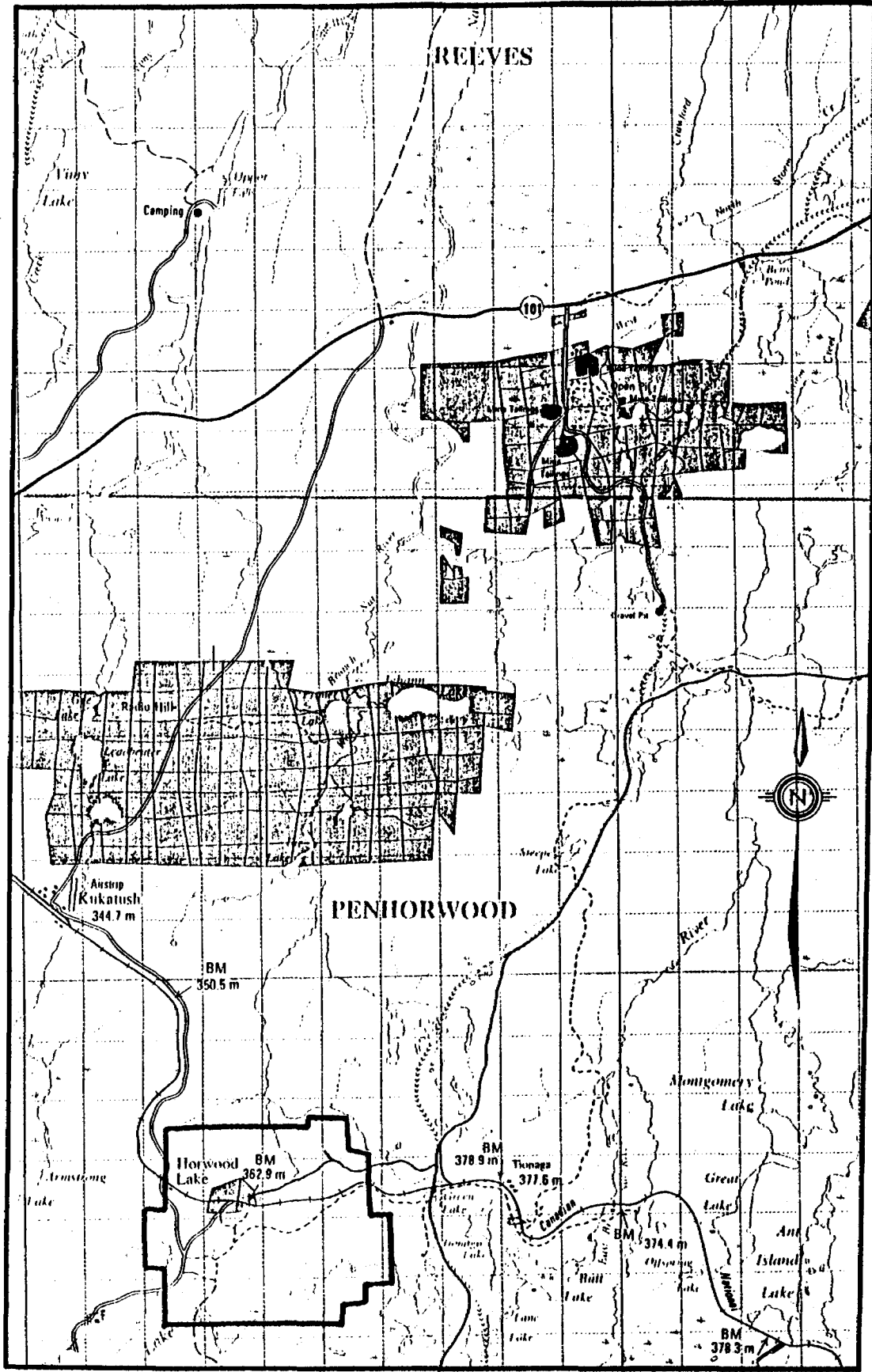


Figure 2: Access Roads to the Penhorwood Property, Penhorwood Township, Porcupine Mining Division, Ontario.
Scale: 1:100 000.

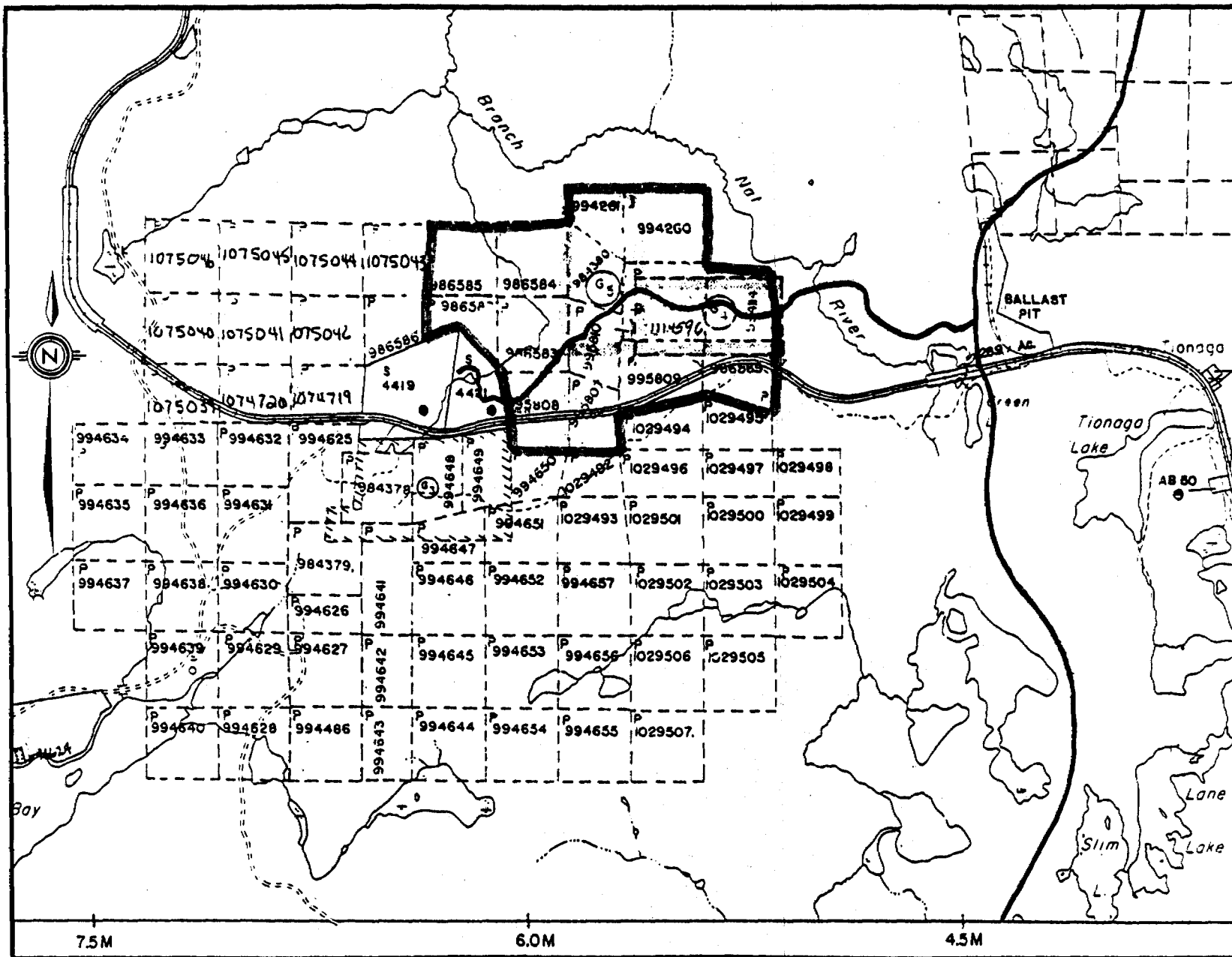


Figure 3: Claim Map and Property Location Map of the Roseval Silica Incorporated Penhorwood Property, with Phase 1 outlined, Penhorwood Township, Porcupine Mining Division, Ontario. Scale: 1 inch to 2640 feet.

GENERAL GEOLOGY

The rock units of Penhorwood Township consists of a complexly folded mass of mafic metavolcanics, pyroclastics and metasediments, cut by mafic, ultramafic and felsic igneous rocks. The units are intruded by granite to granodiorite intrusives. Intruding all the rock units are northerly trending diabase dikes.

The metavolcanic and metasediment sequence has a greenschist metamorphic facies except near the contacts of the granite contacts where it is an epidote-amphibolite facies. Carbonatization is common in the shear zones and at the contacts between the mafic and ultramafic intrusives.

Figure 4 illustrates the generalized geology of the Penhorwood Property. Based upon the published preliminary geological map of Penhorwood Township (Milne, V.G., 1967, P.419) the claim group is underlain by a 2500 to 3000 foot wide mafic metavolcanics trending approximately North 60 degrees East. The southeastern and northwestern flanks of the metavolcanics have exposures of biotite granodiorite gneiss and quartz porphyry to a granodiorite gneiss respectively. The extreme northwestern portion of the claim group is underlain by mafic metavolcanics which have been intruded by irregular shaped serpentinized ultramafic intrusives. The extreme northeastern portion and a 600 foot zone within the central mafic metavolcanics are late felsic intrusives of hornblende-biotite granodiorite and muscovite granite respectively. The central portion of the property contains northerly trending late intrusive diabase dikes.

PREVIOUS EXPLORATION ACTIVITIES

The two patented mining claims located in the center of the claim group has had extensive exploration work. In 1917, barite was discovered about 1600 feet east-northeast of Horwood Lake CNR station. Small tonnages of barite were shipped in 1923, 1933, and 1940. During 1965, Horwood Mining Limited shipped quartz chip from a vein located south of the train tracks.

The recent exploration activity involving parts of the claim group were completed by B.M. Arnoit who drilled 4 diamond drill holes. No dates were available on the drilling.

Canadian John Mansville on their Horwood Lake Group now the northwestern portion of the present property. The conducted a magnetic survey and geological mapping during 1956.

Roseval Silica Incorporated has completed stripping of quartz zones in June of 1987 and September 1988, and limited geological mapping and 1946 feet of drilling which was completed in 1987.

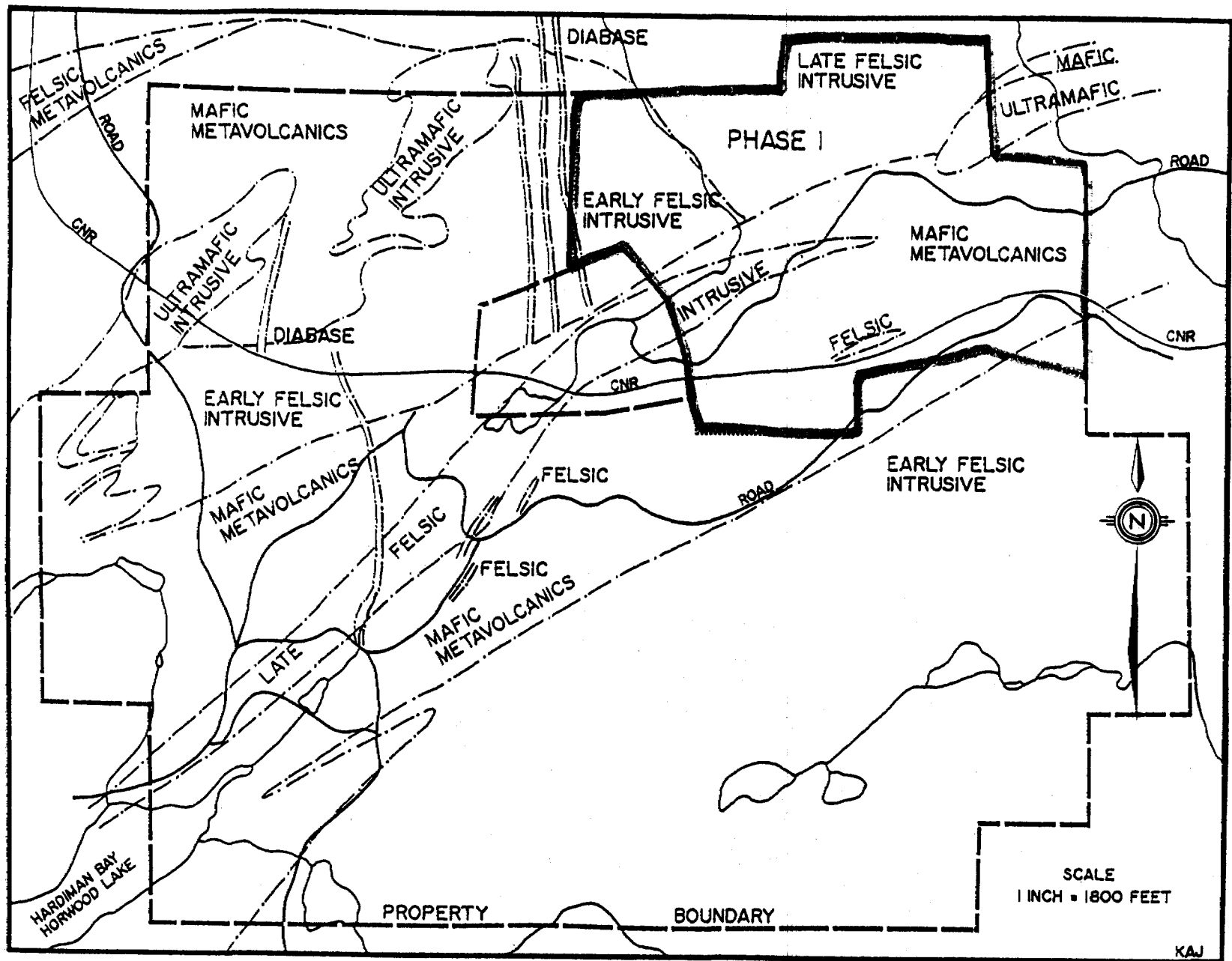


Figure 4: Generalized Geology of the Penhorwood Property of the Roseval Silica Incorporated Penhorwood Property, with Phase 1 outlined, Penhorwood Township, Porcupine Mining Division, Ontario. Scale: 1 inch to 1800 feet.

GEOPHYSICAL SURVEY

INTRODUCTION:

A total of 18.0 miles (28.97 km) of line cutting was completed. The base line trending on a bearing of North 60 degrees East, was established at the southeastern corner of the patented mining claim. The grid separation was 400 feet and with intermediate lines at 200 foot separation for detail surveying. Pickets were established at 50 foot intervals along the base line, Tie Line 22 North and all grid lines.

A total of 621 magnetic readings were established. The survey was completed from January 15 to February 6, 1990, under the supervision of the author. The data reductions, drafting, interpretation and report were completed by the author from January 27 to February 9, 1990. Figure 5 illustrates the grid layout for Phase 1 of the northeastern portion of the Penhorwood Property.

MAGNETIC SURVEY:

The total field magnetic survey was completed utilizing the EDA OMNI IV Magnetometer System and the Geometrics G-816 Magnetometer. The system specifications are located in the appendix. The base station for the survey was established at the Base Line and Line 0+00 with an average base value of 58,760 gammas.

The base line and all the tie lines were surveyed at 100 foot intervals in a looping fashion to establish accurate control stations for each grid line. The north-south grid lines were surveyed at 100 foot intervals and in places with higher magnetic gradient, the readings were established at 50 foot intervals.

The data was corrected for the daily drift and the tie-ins at the control stations. A base level of 58,000 gammas has been removed from all the observed readings.

The corrected data was plotted on a base map with a scale of 1 inch to 200 feet (1:2400). Figure 6 shows the corrected magnetic data and Figure 7 shows the contoured magnetic lines at 50 gamma intervals wherever possible.

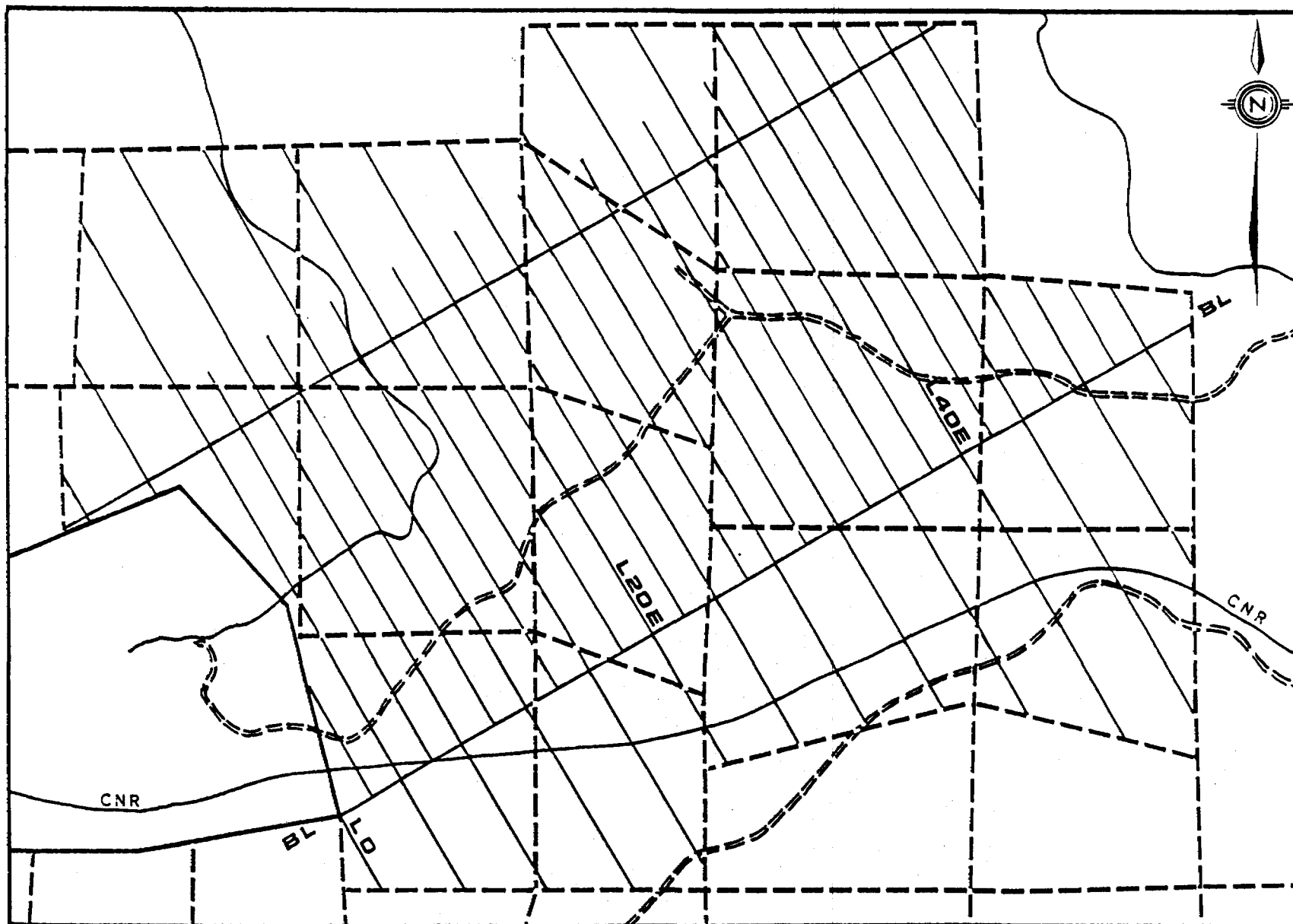


Figure 5: Grid Map of Phase 1, Penhorwood Property of the Roseval Silica Incorporated Penhorwood Property, Penhorwood Township, Porcupine Mining Division, Ontario.
Scale: 1 inch to 800 feet.

INTERPRETATION:

The most striking magnetic features of the survey area are the three areas of high magnetic values. The highest area is located between Lines 28+00 East to 36+00 East and centered at 22+50 North. This dipole magnetic anomaly may represent a plug of ultramafic intrusive metavolcanics or a magnetic diabase. To the east of the plug, a 1200 foot narrow high magnetic band trending northeast probably represents an ultramafic metavolcanic horizon.

The second high magnetic area is a long, narrow magnetic band from Line 16+00 East at 3+50 North to Line 48+00 East at 2+50 South, trending from northeast to east-northeast. This unit appears to have been faulted in several places by North 20 to 30 degree East zones. The unit is probably an ultramafic metavolcanic.

The third unit may be very similar to the above ultramafic metavolcanic and is located about 400 to 600 feet further to the southeast. This unit has magnetic interference from the Canadian National Railway and the hydro transmission line.

A moderated magnetic anomaly located from Line 4+00 East at 8+00 North trending northeast to Line 32+00 East at 10+00 North is probably caused by the late felsic intrusive into the mafic metavolcanic sequence. The higher area on the northeastern portion may be due to a northerly trending diabase dike trending towards the magnetic plug.

The contact between the early and late felsic intrusives in the northern portion of the survey area may be located just north of the magnetic anomaly of the late felsic intrusive. This possible contact is marked by numerous magnetic lows trending in a northeasterly direction.

South of the above contact, the rock units appear to be moderate magnetic mafic metavolcanics with higher magnetic ultramafic units.

The structural features of the survey area appear to be trending in at least three directions: 1) North 70 to 80 degrees East, 2) North 40 degrees West, and 3) North 20 to 30 degrees East.

The fault zones are located at Line 8+00 East at 3+50 North and Line 16+00 East at 5+00 North trending in a North 70 to 80 degrees East. These zones appear to flank the north and south boundaries of the ultramafic metavolcanics. The North 40 degree West fault is located on Line 48+00 East at the Base Line and terminates near the ultramafic metavolcanic unit east of the magnetic plug.

The last structural feature trends North 20 to 30 degree East and is more evident in the southern magnetic units on Line 4+00 East at 11+00 North, Line 24+00 East at 16+00 North, Line 32+00 East at 6+50 North, Base Line at 30+00 East, and Base Line at 41+50 East.

The magnetic lows near the mafic metavolcanic and felsic intrusive contacts may represent large bodies of silica emplacement and along the northern side of the ultramafic metavolcanics which traverses the Base Line at 28+00 East.

The possible silica emplacements are located between Lines 40+00 and 44+00 East at 17+50 North and 13+00 North, Base Line at 44+00 East, Line 44+00 East at 3+00 North and 5+00 North, Lines 16+00 East at 5+00 North to Line 28+00 East at 2+00 North, between Line 8+00 East and 12+00 East at 3+50 North to 3+00 North respectively, and from Lines 16+00 East at 13+00 North to Line 32+00 East at 13+00 North.

CONCLUSIONS

The total field magnetic survey was successful in locating the major lithological units of the early and late felsic intrusives in the northern to northwestern 30% of the survey area and the remainder of the area is underlain by mafic and ultramafic metavolcanic sequence.

The structural features of the survey area appear to be in three orientations of 1) North 70 to 80 degrees East, 2) North 40 degrees West, and 3) North 20 to 30 degrees East.

The primary objective of the survey was to locate potential areas of silica emplacements. A total of 6 areas appear to warrant further investigations.

RECOMMENDATIONS

Based upon the results of the present survey and the available information, the author recommends an electromagnetic survey and geological mapping of the property. The areas of importance for the potential silica emplacement are near the felsic intrusive and mafic metavolcanic contacts and along the northern contact of the ultramafic metavolcanic unit.

Based upon the present work and the results of the recommended work, the surveying of the detail grid lines should be completed with a magnetic and electromagnetic surveys. Trenching and stripping are warranted in the suspected areas of silica emplacements. On completion on this work, a diamond drilling program should be completed to provide additional information on the width, depth and quality of the silica deposits.

The recommended electromagnetic surveys would be useful in the identification of the structural features and sulphide zones for gold mineralization. The more promising areas should be stripped or trenched and if the results warrant additional work, then a limited diamond drilling program should be completed.

Dated at Timmins, Ontario
February 9, 1990

Respectfully submitted,



Klan A. Jensen
Consulting Geologist/Geophysicist

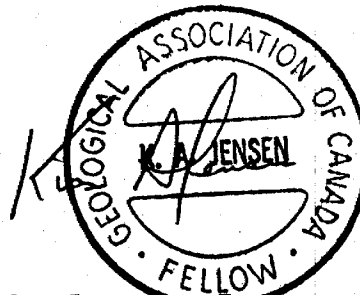
CERTIFICATE

With reference to my report and maps on the Magnetic Survey on the Penhorwood Property of Roseval Silica Incorporated Dated February 9, 1990.....

I, Kian A. Jensen, of the City of Timmins, Ontario, do hereby certify the following to be true and accurate to the best of my knowledge:

- 1) That I received an Honour B.Sc. degree in Earth Science, Geology Major, from the University of Waterloo,
- 2) That I have been employed as a geologist and/or geophysicist by various exploration companies and consulting companies since 1978,
- 3) That I have been and still am a member in good standing in the following associations:
 - a) Society of Exploration Geophysicists - Associate, 1981
 - b) Geological Association of Canada - Fellow, 1983
- 4) That I am the author of the corresponding report, and have been actively exploring and prospecting in the Timmins area since 1981,
- 5) That I have no interest directly or indirectly in the mining claims comprising the property described in this report or in the shares of any company or companies in this joint venture on this property or the surrounding properties, nor do I expect to receive any directly or indirectly.

Dated this 9th day of February, 1990
Timmins, Ontario



Kian A. Jensen, B.Sc.
Consulting Geologist/Geophysicist

REFERENCES

Milne, V.G. and assistants
1967 Preliminary Geology of Penhorwood Township, District of Sudbury; Ontario Department of Mines, Map No. P-419, scale 1 inch to 1/4 mile.

Milne, V.G.
1972 Geology of the Kukatush-Sewell Lake Area, District of Sudbury; Ontario Division of Mines, GR97, 116p. Accompanied by Maps 2230, 2231, scale 1 inch to 1/2 mile.

Resident Geologist Assessment Files
T-495 Arnoit, B.M.
T-506 Canadian John Mansville
T-3237 Roseval Silica Incorporated

Vos, M.A., Abolins, T., McKnight, R.L.W., and Smith, V.
1987 Industrial Minerals of Northern Ontario; Geological Survey, Mineral Deposits Circular 26, 272p.

APPENDIX A

SURVEY PERSONNEL

Line Cutting
Exsics Exploration Limited

January 15 to February 2, 1990

Magnetic Survey

Ray Meiko
Steve Anderson
Ed Brunet

February 6, 1990

February 6, 1990

February 6, 1990

Data Reductions, Computer Plotting, Interpretation and Report
Kian A. Jensen

January 27 to February 9, 1990

APPENDIX B

1.0 GENERAL INFORMATION

1.1 INTRODUCTION

The Model G-826 Portable Proton Magnetometer is a complete system designed for man-carry field applications requiring simple operation and stable measurements of the total intensity of the earth's magnetic field. The G-826 is accurate and has a sensitivity of ± 1 gamma over a range from 20,000 to 90,000 gammas. Since the instrument measures total field intensity, the accuracy of each measurement is not affected by sensor orientation. The inherent simplicity of the G-826 proton magnetometer allows rapid, accurate measurements to be obtained from a rugged, compact field instrument. This is a precision instrument and reasonable attention must be given to handling, battery condition, and magnetic environment.

1.2 MAGNETIC ENVIRONMENT

It is important that the earth's magnetic field is not perturbed by allowing unwanted magnetic objects to come close to the sensor. Such objects include rings, keys, watches, belt buckles, pocket knives, metal pencils, zippers, etc. When the sensor is used on the staff, one gamma surveys are easily performed provided the sensor is kept at a distance of three feet from the operator. When the sensor is used in the backpack, certain articles of clothing and some types of batteries within the console will cause a five to ten gamma heading error in the readings. The G-826, however, still provides one gamma sensitivity and repeatability despite the presence of such a base line shift. The backpack feature is recommended for use in difficult terrain where "hands free" operation is required.

Prior to survey use, objects that are suspected to be magnetic may be checked in the following manner:

1. Attach sensor to staff and connect coiled signal cable to console. Sensor should not be moved or turned during the test, and the suspected article should be far away initially.
2. Cycle the magnetometer a few times by depressing the READ button--releasing--and waiting for a reading each cycle.

Operating Manual
Model G - 826
Portable Proton Magnetometer

3. Observe measurement readings. Each reading should repeat to ± 1 gamma. (A slow shift may occur over several minutes due to a diurnal change in the earth's field.)
4. Place the suspected article at the distance from the sensor expected during actual survey operation.
5. Cycle magnetometer several times and note the readings.
6. Remove the article and repeat steps 2 and 3 to check for diurnal shifts in the earth's field. If a diurnal shift is present, repeat entire test.
7. If the readings obtained in step 5 differ by more than ± 1 gamma (\pm one count) from those obtained in steps 3 and 6, then the article is magnetic.

IF THE ARTICLE IS HIGHLY MAGNETIC, OR IF THE SENSOR IS INSIDE OR NEAR A BUILDING OR VEHICLE, THE PROTON PRE-CESSION SIGNAL WILL BE LOST, GIVING COMPLETELY ERRATIC READINGS AND LOSS OF ± 1 COUNT REPEATABILITY.

The magnetometer should not be operated in areas that are known sources of radio frequency energy, power line noise (transformers), in buildings or near highly magnetic objects. The sensor should always be placed on the staff above the ground, or in the "backpack." The sensor will NOT operate properly when placed directly on the ground.

1.3 SPECIFICATIONS

Sensitivity:	± 1 gamma throughout range
Range:	20,000 to 90,000 gammas (worldwide)
Tuning:	Multi-position switch with signal amplitude indicator light on display
Gradient Tolerance:	Exceeds 800 gammas/feet

Operating Manual
 Model G-826
 Portable Proton Magnetometer

Sampling Rate: Manual push button, one reading each six seconds.

Output: Five digit numeric display with readout directly in gammas.

Power Requirements: Twelve 1.5 volt "D" cell universally available flashlight-type batteries. Charge state or replacement signified by flashing indicator light on display.

Temperature Range: Console and sensor: -40° to $+85^{\circ}$ C.
 Battery pack: 0° to $+50^{\circ}$ C (limited use to -15° C; lower temperature battery belt operation — optional).

Accuracy (Total Field): ± 1 gamma through 0° to $+50^{\circ}$ C temperature range.

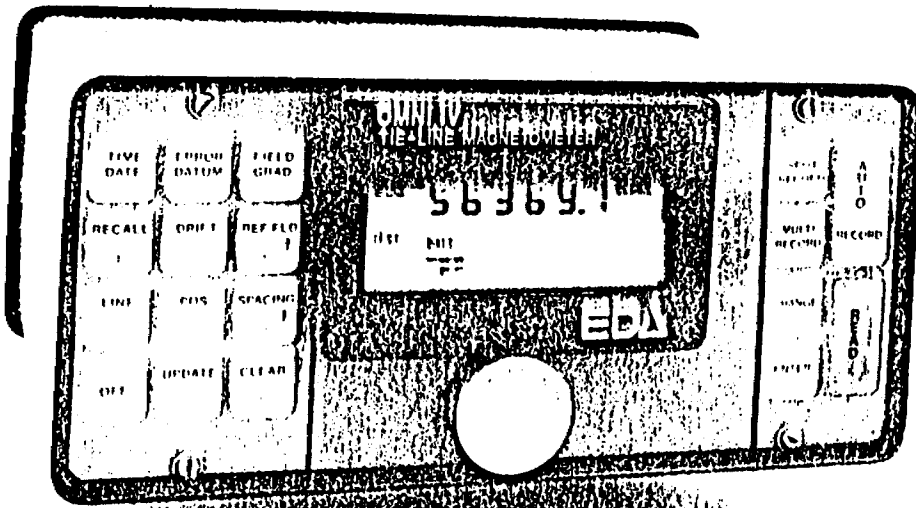
Sensor: High signal, noise cancelling, mounted on staff or attached to backpack.

Size: Console: 3.5 x 7 x 11 inches
 (9 x 18 x 28 cm)
 Sensor: 3.5 x 5 inches (9 x 13 cm)
 Staff: 1 inch diameter x 8 ft. length
 (3 cm x 2.5 m)

Weight:

	Lbs.	Kgs.
Console (w/batteries):	5.5	2.5
Sensor and signal cable:	4	1.8
Aluminum staff:	2	.9
	11.5	5.2

OMNI IV "Tie-Line" Magnetometer



OMNI IV's Major Benefits

- Four Magnetometers in One
- Self Correcting for Diurnal Variations
- Reduced Instrumentation Requirements
- 25% Weight Reduction
- User Friendly Keypad Operation
- Universal Computer Interface
- Comprehensive Software Packages



Specifications

Dynamic Range	18,000 to 110,000 gammas. Roll-over display feature suppresses first significant digit upon exceeding 100,000 gammas.
Tuning Method	Tuning value is calculated accurately utilizing a specially developed tuning algorithm
Automatic Fine Tuning	$\pm 15\%$ relative to ambient field strength of last stored value
Display Resolution	0.1 gamma
Processing Sensitivity	± 0.02 gamma
Statistical Error Resolution	0.01 gamma
Absolute Accuracy	± 1 gamma at 50,000 gammas at 23°C ± 2 gamma over total temperature range
Standard Memory Capacity	
Total Field or Gradient	1,200 data blocks or sets of readings
Tie-Line Points	100 data blocks or sets of readings
Base Station	5,000 data blocks or sets of readings
Display	Custom-designed, ruggedized liquid crystal display with an operating temperature range from -40°C to +55°C. The display contains six numeric digits, decimal point, battery status monitor, signal decay rate and signal amplitude monitor and function descriptors.
RS 232 Serial I/O Interface	2400 baud, 8 data bits, 2 stop bits, no parity
Gradient Tolerance	6,000 gammas per meter (field proven)
Test Mode	A. Diagnostic testing (data and programmable memory) B. Self Test (hardware)
Sensor	Optimized miniature design. Magnetic cleanliness is consistent with the specified absolute accuracy.
Gradient Sensors	0.5 meter sensor separation (standard), normalized to gammas/meter. Optional 1.0 meter sensor separation available. Horizontal sensors optional.
Sensor Cable	Remains flexible in temperature range specified, includes strain-relief connector
Cycling Time (Base Station Model)	Programmable from 5 seconds up to 60 minutes in 1 second increments
Operating Environmental Range	-40°C to +55°C; 0-100% relative humidity; weatherproof
Power Supply	Non-magnetic rechargeable sealed lead-acid battery cartridge or belt; rechargeable NiCad or Disposable battery cartridge or belt; or 12V DC power source option for base station operation.
Battery Cartridge/Belt Life	2,000 to 5,000 readings, for sealed lead acid power supply, depending upon ambient temperature and rate of readings
Weights and Dimensions	
Instrument Console Only	2.8 kg, 238 x 150 x 250mm
NiCad or Alkaline Battery Cartridge	1.2 kg, 235 x 105 x 90mm
NiCad or Alkaline Battery Belt	1.2 kg, 540 x 100 x 40mm
Lead-Acid Battery Cartridge	1.8 kg, 235 x 105 x 90mm
Lead-Acid Battery Belt	1.8 kg, 540 x 100 x 40mm
Sensor	1.2 kg, 56mm diameter x 200mm
Gradient Sensor (0.5 m separation - standard)	2.1 kg, 56mm diameter x 790mm
Gradient Sensor (1.0 m separation - optional)	2.2 kg, 56mm diameter x 1300mm
Standard System Complement	Instrument console; sensor; 3-meter cable, aluminum sectional sensor staff, power supply, harness assembly, operations manual.
Base Station Option	Standard system plus 30 meter cable
Gradiometer Option	Standard system plus 0.5 meter sensor

EDA Instruments Inc.
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ROSEVAL SILICA INC



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040

OMIP 89-15

REPORT TO

ONTARIO MINERAL INCENTIVE PROGRAM

ON THE EXPLORATION PROJECT OF

HIGH-QUALITY QUARTZ VEINS

IN PENHORWOOD TOWNSHIP

DESIGNATED PROJECT OM89-015

VOLUME 4 - SURFACE DRILLING

February 12th 1990

**EXPLORATION
AND
RESERVE CALCULATION
OF THE
ROSEVAL SILICA PROJECT**

Date: January 30, 1990

**by: E. van Hees, M.Sc.
Consulting Geologist**

ABSTRACT

The Roseval Silica Project consists of 66 staked claims and 3 quarry permits in the southwest corner of Penhorwood Township some 60 kilometres southwest of Timmins, Ontario. The property host 4 known quartz vein zones which lie on the contact between metavolcanic rocks of the Swayze greenstone belt and granitic intrusives.

Exploration of three areas known as the 2, 2A and 3 zones was undertaken. Geological mapping, stripping of outcrop using backhoes, bulldozers and fire pumps, and diamond drilling of some 1,866 feet of BQ sized core in 8 holes was completed in order to establish the reserves of mineable quartz.

Total probable and proven reserves of 538,204 tonnes grading better than 80% silica are present on the property. Seventy percent of this reserve grades better than 98% silica. An exploration potential of nearly an equal tonnage and grade is present.

The number 3 zone produced wide intersections of quartz in the drill core. Calculation of a reserve using the results of the drilling and surface mapping indicate that 372,293 tonnes of quartz grading better than 80% silica are present of which fifty percent is considered probable and fifty percent proven. Material grading better than 98% silica constitutes 70% of the total reserve between surface and the -60 metre elevation.

Geological mapping of the three zone quartz vein indicates that the northeast and southwest extensions, beyond the area for which the reserve was calculated, have a cumulative length equal to that of the reserve area. A potential tonnage of another 350,000 tons, or so, grading better than 80% silica, exists in the mapped portion of the 3 zone which was not drilled.

The number 2A zone has a probable reserve of 165,911 tonnes grading better than 80% silica. Better than 70% of this total reserve grades 98% silica or better. Exploration potential along strike, based on the geological mapping, suggests a minimum of approximately 100,000 tonnes grading better than 80% silica may be present.

Silicified granite, present in the hanging wall near all the quartz veins, has not been assayed for its silica content. This material could make the minimum 80% silica cutoff grade and thereby contribute to the overall reserves of flux in the deposit, provided that it does not contain some detrimental element.

Results from zone 2 were not encouraging although siliceous material having a Silica content of 70 to 80% may be present.

The silica content of the various samples submitted was calculated by subtracting 4 different oxides, which were analyzed for, from a total of 100 percent. Direct analysis of the silica content should be carried out on some of the samples to confirm the analytical method.

Analyses of some 32 samples for gold, silver and copper did not return values of any consequence from core that was sampled. Future exploration and mining programs should continue to monitor these elements from time to time.

Exploration is warranted and should be carried out to fully evaluate the reserves in the 2A and 3 zones between surface and the -60 metre elevation. This information can then be used to evaluate the viability of a large open pit in both these areas before the crown is mined out.

Exploration on a property wide basis is also warranted to look for and evaluate other quartz zones. A program for the latter is included herein.



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- cross section 2+00 east *	"
- cross section 3+25 east *	"
- cross section 4+00 east *	"

* note - various copies of each section are included. These have geological, assay and reserve polygon information.

INTRODUCTION

E. H. van Hees Geological Services was commissioned by Mr. G. Lavallee of Roseval Silica Inc. to complete an ore reserve study of the Roseval Silica property located some 60 kilometres southwest of Timmins, Ontario in the southwest quadrant of Penhorwood Township (Fig. 1).

The Penhorwood Township area is underlain by volcanic and granitic rocks of the Swayze Volcanic Belt. Exploration activity has not been extensive in the area around the Roseval property due to its remote nature, the lack of extensive outcrop and the lack of sizeable metallic mineral deposits in the area.

Initial review of the available data by E. van Hees, led to the recommendation that geological mapping, stripping of various outcrops and a diamond drill program should be completed in order to properly evaluate the potential of the known quartz veins on the property. This was approved and initiated in late August of 1989. Significant quartz veining was encountered in a number of drill holes as well as associated sulphide mineralization and fuchsite. Analysis of 32 samples of both wall rock and vein material for gold, silver and copper was carried out in order to test the possibility that low values of these metals might be encountered.

Reserve calculations, based in part on the existing percussion drill hole data, a new geological map and diamond drill sections, are included in this report.

Further work to fully explore the potential of the property is warranted. A recommended program and budget is included.

LOCATION, PHYSIOGRAPHY AND ACCESS

The Roseval Silica property is located in the southwest quadrant of Penhorwood Township of the Porcupine Mining Division, District of Sudbury. Quarry permits, which lie on the east side of the Roseval claim block, are located some 3 kilometres west of the Canadian National Railway Tionaga Station and some 60 kilometres southwest of Timmins (Fig. 2).

Access to the property is gained from the paved, all weather, highway 101 at a point some 48 kilometres west of Timmins. Here the gravel Kenogaming-Penhorwood Logging road leads south from the highway some 20 kilometres to Canadian National Railway spur line near Tionaga station, just east of the property. A 3 kilometre long gravel road leads from the logging road to the area where exploration and limited test pitting of quartz has taken place. The road into the

property from the railway spur line and part of the Kenogaming-Penhorwood logging road are only accessible during the period from late spring to the middle of the fall. The rest of the year these are unpassable because they are not plowed.

The mine property is located in an area which consists of topographic highs separated by deep swamp filled valleys. Maximum relief in the area is approximately 60 metres. Extensive, but thin, overburden cover throughout the area minimizes the amount of outcrop present. Vegetation consists of mixed deciduous and conifers with a heavy undergrowth of hazel brush, in the higher areas. The swamps are characterized by mixed cedar and black spruce for the most part, except near streams where tag alders and occasionally grasses are dominant.

PROPERTY STATUS

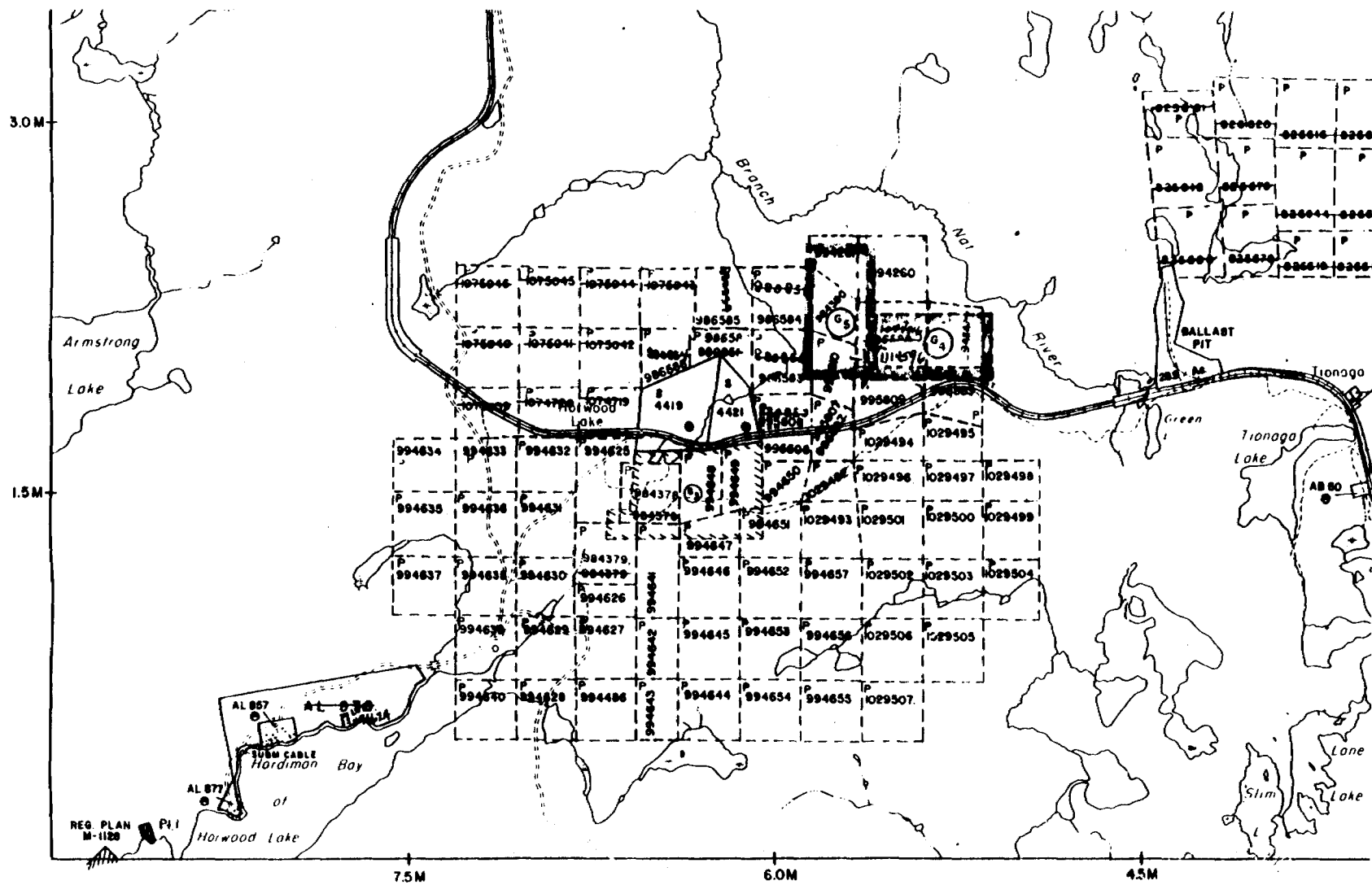
The property consists of 66 staked, unpatented mining claims and 3 quarry permits as reported on the Ontario Mineral Incentive Program Application (Fig 1). The status of these claims has not been fully checked by the author, as this was not part of the project mandate, and ownership of the property as reported here is based solely on the word of Mr. G. Lavallee.

PREVIOUS EXPLORATION

The area around the Roseval Silica property has seen very little previous exploration based on the records at the mining recorders office in Timmins and an Ontario Geological Survey report by V. G. Milne (1972). Surface and underground exploration has been completed on two patented mining claims (S4419, S4421) located in the center of the Roseval claim block. These claims have a barite showing discovered in 1917 by R. Cryderman. Exploration work on the property has included surface trenching, diamond drilling and bulk sampling at various intervals over the past 73 years. A ramp was driven by the current owner, Bob Hill of Matachewan, to explore both the gold and barite potential of the showing from underground. The exact nature of the latter work is uncertain as the project was being dismantled when last visited by this author in September of 1989.

Exploration of the rest of the property has no doubt occurred but there is no written record of this. A small open pit mining operation on a quartz vein, located south of the railway, was operational during the period 1964-65 and was owned by Horwood Mining Limited (Milne, 1972). Other than this work, the only public information is a report in the mining recorders office completed by J. Berard (1988) for Roseval Silica Inc. This report describes geological

Figure I. Location of Claims in Southwest Penhorwood Township.



mapping done using a pace and compass grid in the area of the quarry permits north of the railway.

Roseval Silica company in house exploration reports exist covering a portion of the current property. These reports principally concern the results of surface exploration during the period 1988 and 1989 in the area north of the railway underlying the two quarry permits. This author has only seen one of these but knows of the existence of the others through the OMIP grant application dated July 3, 1989.

REGIONAL GEOLOGY

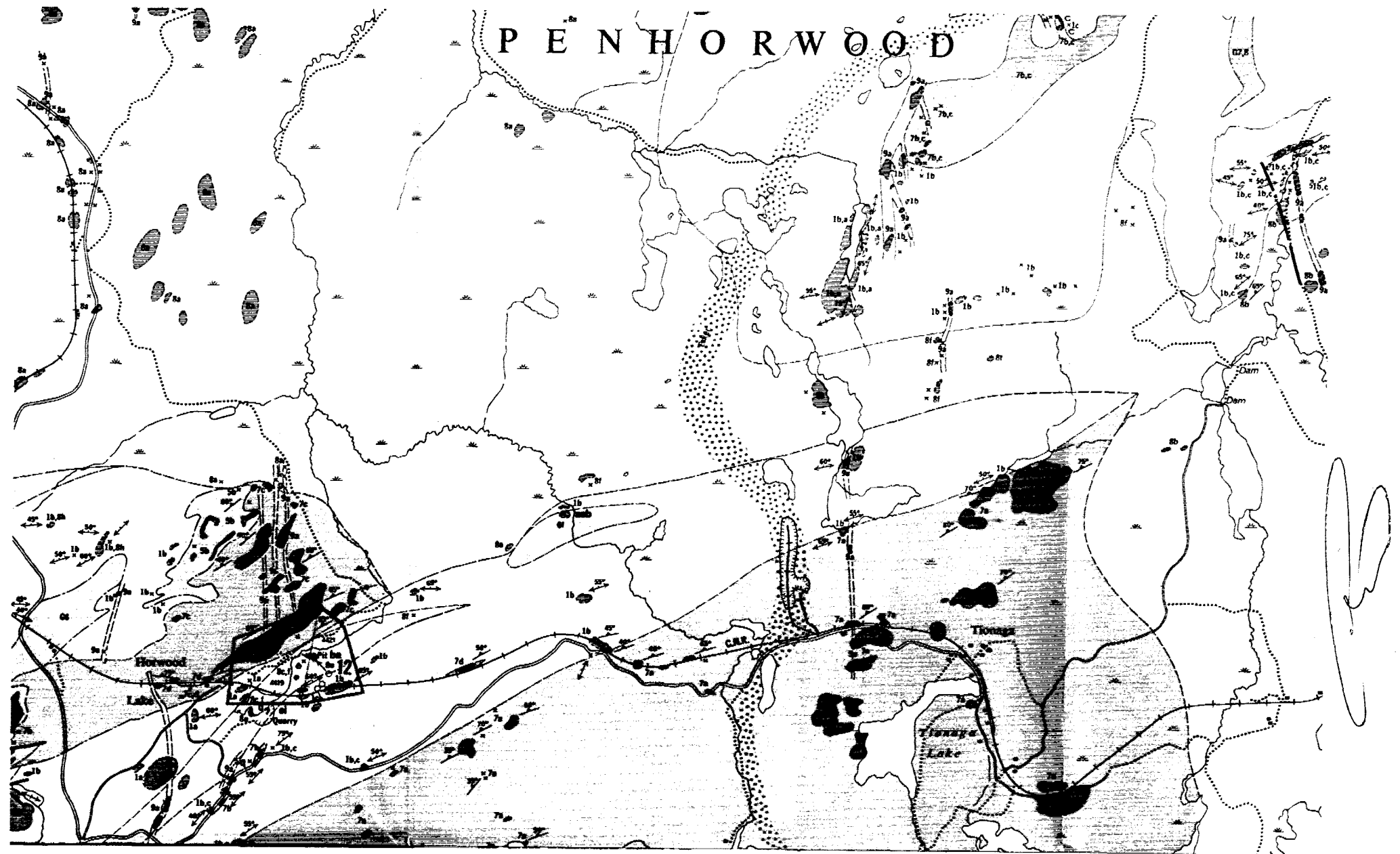
The regional geology has been studied by a number of people including E. W. Todd (1924), V. G. Milne (1972) and J. Ireland (unpublished). From this work it is evident that the rocks of the area are of precambrian age and part of the Swayze metavolcanic belt. These consist of one cycle of mafic to felsic metavolcanic and metasedimentary rocks that have been isoclinally folded into a large Z shaped structure whose limbs trend east northeast. The mafic material generally forms the base and the felsic material the cap of the pile. Intrusive rocks in the area include both early and late felsics as well as ultramafic and intermediate intrusions. Additionally, there are at least two different diabase dike swarms that cut the rocks of the area.

Economic mineralization, other than quartz, has not been found in either of Penhorwood or Kenogaming Townships. Significant showings of iron formation, base metals, barite and asbestos do occur however. The iron formation located in the northwest corner of Penhorwood Township has been extensively explored resulting in reserve estimates of 158 million tons of 20.8 percent magnetite. This has associated with it some low gold values (Milne, 1972). Immediately east of the iron formation, and due north of the Roseval property, a series of early felsic intrusions in mafic volcanic country rocks are associated with gold, silver, copper and lead values. Elsewhere throughout the area a number of asbestos showings have been uncovered principally by the Johns-Manville Company.

LOCAL GEOLOGY

The Roseval property is underlain by a northeast trending body of metavolcanic rocks, primarily of mafic composition (unit 1) but including minor ultramafic bodies (unit 5 + 6) (Fig. 2). These are sandwiched between an early biotite trondhjemite gneiss to the south (unit 7) and a later biotite-hornblende granodiotite to the north (unit 8).

Figure 2. General Geology of the Roseval Project Area.



after: V. Milne 1972

The quartz bodies are located on or near the contacts between the metavolcanic rocks and both the older and younger felsic rocks. These appear to strike parallel to the contact and dip vertically, although the latter is uncertain.

All of the rocks in the area are cut by the later diabase sikes that trend north to northwest (unit 9). These dikes appear to intruded into faults which have the same orientation and age.

RESULTS OF THE RECENT PROGRAMS

GEOLOGICAL MAPPING

Mapping of two areas on the Roseval property known as the 2A and 3 zones was completed by Mr. B. McKay of Timmins, Ontario, during the latter part of August, 1989, at a scale of 1 inch to 20 feet. This was done in order to map out the quartz veins exposed by backhoe and bulldozer work early in the summer of 1989 as well as immediately prior to the mapping program.

The 2A area is an on strike extension of the number two area. The 2A area was exposed in a few outcrops as well as some 20 pits and trenches dug to an average depth of 4 feet in the overburden (see Geology for Sites #2 and #2A in back pocket). The quartz vein appears to be continuous and have a strike length of 175 metres. The zone has a maximum width, as exposed on surface, of 21 metres and an average width of 15 metres. The southern contact of the vein lies against volcanics and the northern one lies against granitic rocks. The detailed nature of the zone is difficult to assess as the zone was only exposed in a few trenches which had not been washed prior to mapping.

The number 2A zone has, based on the surface mapping, a total potential of 2,720 tonnes per vertical metre.

The number 3 zone lies west and north of the number 2 and 2A zones approximately 400 metres. The zone consists of the crest of a northeast trending ridge that is some 200 metres long and 50 metres wide on surface suggesting a potential of 6,200 tonnes per vertical metre. Further stripping and washing of the zone was completed in September after the mapping by Mr. B. McKay. and may have extended the veins.

The 3 zone quartz vein is bounded by a mafic volcanic host rock on its southern side and a granitic intrusive on the northern side. Examination by the author of a portion of the freshly washed surface of the vein, as well as the cross cut into the open pit, produced an understanding of the detailed geology of the vein itself. The contacts on both

sides of the vein consist of a wall rock breccia having a quartz matrix. The breccia fragments, up to 2 metres thick and 8 metres long, are for the most part nearly flat lying. Surface exposure of quartz in the 3 zone area is extensive and appears to consist of both the breccia matrix quartz and the quartz vein. The brecciated nature of the wallrock contacts also makes the dip of the zone difficult to interpret but it appears to be vertical to steeply northwest dipping.

OUTCROP WASHING

Washing of the bedrock surface exposed by both bulldozer and backhoe was completed over much of the month of September and early October by a two or three man crew using a Wajax Mark III firepump. Mssrs. R. Arbic, B. Blais, T. Corbett and P. Colbert all of Timmins, Ontario carried out the work by pumping water from streams located 300 metres north of the number 3 zone and 1000 metres east of the number 2A zone. A second firepump was used to relay the water to the number 2A zone. A total of 440 hours was spent washing the outcrop.

The outcrop washing enabled the detailed evaluation of the geology of the quartz veins as well as guide the exploratory percussion test hole drilling needed to delineate parts of the zones.

DIAMOND DRILLING PROGRAM

Diamond drill holes were laid out to test the 2, 2A and 3 zones at depth beyond the reach of airtrack drills and to obtain core to test the purity of the quartz. Information gathered was used to calculate a reserve for the various quartz zones. Logging of the core was done by Mssrs. K. Jensen and J. Walmsley, of Timmins Ontario, under contract to E. H. van Hees Geological Services Inc.

Eight diamond drill holes, having a cumulative length of 1,866 feet, were laid out to test the down dip extension of the number 2, 2A and 3 zones to depths between 200 and 300 feet.

Hole 1 and 9 were laid out to test the down dip extension of the number 2 pit. These did not encounter a massive quartz vein like that exposed in the pit, but did find numerous quartz veins in both a mafic and granitic host rock. The lack of big quartz intersections resulted in the drilling being focussed in those areas where there were better intersections.

Holes 3, 4 and 5 were laid out to test the 2A zone. These holes were drilled to test the depth extent of the quartz veining exposed in outcrop. The three holes drilled

encountered quartz veins which were widest near the number 2 zone end of the 2A zone and a little narrower at the southwestern end of the zone. The zone appears to dip to the northwest at about 60 to 70 degrees as indicated by the drilling and a strike which suggests it is an extension of the number 2 zone. Assay results for the quartz veins returned values of quartz which were in excess of 98% silica for most of the material sampled. The granitic hanging wall is characterized by silicification consisting of quartz veining in the granite immediately adjacent to the quartz veins. This veined area has a minimum width of 7 metres (20 feet) and typically has 10% quartz veins cutting the granite. Two percent disseminated pyrite also characterizes the silicified granite as well as some of the quartz veins.

The number 3 zone was tested by drill holes 6, 7 and 8. These holes encountered silicified granitic hanging wall rock like that present in the 2A zone as well as wide quartz vein intersections (see drill sections in back pocket). The dip of the zone as indicated by the drilling appears to be 60 to 70 degrees to the northwest and the strike northeast-southwest. Assay results returned indicate a silica content of better than 98% at the northeastern end of the zone, where the widest quartz veins were encountered, and values of better than 90% at the southwest end of the zone where narrower quartz veins were encountered. Disseminated sulphides were present only in the silicified granite and consisted of 2% disseminated pyrite.

Analysis of some of the core for gold, silver and copper was also carried out based on the presence of sulphide and fuchsite mineralization in the core. A total of 32 samples averaging 1.5 metres in length were taken. Results (see Appendix B) indicate that there were no values of consequence encountered.

RESERVE CALCULATIONS

Calculation of the reserve of quartz on the Roseval project was completed on only the number 2A and 3 zones as the results of drilling under the number 2 zone appeared to indicate that this zone is breaking up at depth.

The total probable and proven silica reserve of the Roseval silica property in Penhorwood Township is 538,204 tonnes of better than 80% silica, of which some 379,848 tonnes grades better than 98% silica.

The total reserve in the 2A zone is 165,911 tonnes grading better than 80% silica to a depth of 60 metres. 119,328 tonnes of this grade better than 98% silica. The density of drilling and the geological exposure on surface places this tonnage in the probable category. Details of the calculation are presented in Appendix A.

The total reserve of the 3 zone is 372,293 tonnes grading better than 80% silica to a depth of 60 metres. 260,520 tonnes of this material grades better than 98% silica. The density of drilling as well as the geological exposure on surface places all of the total reserve in at least the probable category and half of this is considered proven based on the mining of a test pit in the 3 zone during the period August to November 1989. The tonnage removed by the test mining has not been taken into account here as the exact figures are unknown to this author although they are believed to be in the range of 20,000 tonnes.

The silica grade of the different samples submitted for analysis to SKW Canada, through G. Lavallee, was calculated (as per the instructions of G. Lavallee) by subtracting the oxides analyzed (Fe_2O_3 , Al_2O_3 , CaO and TiO_2) from a total of 100 percent. This assumes that these are the only elements of concern and does not take into account any others that may exist such as MnO , MgO etc. .

The reserve calculations were performed as described in Appendix A. The earlier airtrack drilling was used to interpret the geology, but was not used to calculate the actual reserve values, although the results are plotted on the drill sections. The reason for doing this is that the exact manner in which samples were taken using the air track is unknown, and this can seriously affect the assay results.

DISCUSSION

The reserve for the property was calculated for the quartz veins to 15 metres (50 feet) beyond the last diamond drill hole in a zone, using grades calculated by subtracting the four oxides analyzed by SKW Canada from 100 percent. The approach to calculating the reserve on the property has been conservative because of the fickle nature of the quartz veins as observed in the number 2 zone and the presence of breccia zones in the number 3 zone. In the number 3 zone, the quartz vein extends for 50 metres to the northeast of the area for which the reserve was calculated and approximately 75 metres to the southwest. This is equivalent to, if not longer than, the portion of the zone for which a reserve was calculated. Should drilling of the rest of the exposed vein produce results similar to that already encountered, we would add roughly another 375,000 tonnes to the reserve. Likewise the portion of the number 2A zone which has not been taken into the reserve calculation is at least 75 metres and probably longer because the last trench at the southwest end of the zone has a 15 metre wide quartz vein exposed. Another 80,000 tonnes of quartz may exist here resulting in a total potential of some 995,000 tonnes in the two zones to a depth of 60

metres. It is felt that with the extensive exposure of quartz on surface which has not been taken into the reserve calculation, the reserve quoted is present although its location on a given cross section may change due to the presence of breccia zones, feathering out or narrowing of the vein.

The silicified portions of the granitic hanging walls are of interest in that granite by definition has 75% silica. The addition of silica by the quartz veins or the general silicification of the granite as noted in the core has probably increased the silica content of the granite to 80% or more. Provided that there are no elements in the granite that are incompatible with using it as a smelter flux, further reserves of flux grade silica may exist here which have not been taken into account as yet. To determine the usefulness of this material, analysis of the silica content of this core will have to be determined as well as the nature of the other elements present. This could add significantly to the reserve of both the 2A and 3 zones.

The veins in both the 2A and 3 zones appear to have significant potential for continuing to depths beyond the present reserve depth of 60 metres. Should the economics of mining the silica be such that it would permit a stripping ratio of more than 1:1, then exploration to depth should be considered in order to establish the presence and grade of the quartz veins. This could then be used to evaluate the feasibility of a large pit before the easily extracted near surface material is removed.

The analysis of only four oxides by SKW Canada is of concern to this author as other elements and oxides could possibly be present. Check assaying for the major elements should be considered to ensure that no other elements are present. The concentration of any other elements is not likely to exceed a few percent, but this may be significant if 98% pure silica was required.

The probable presence of other quartz zones on the Roseval property is significant. A quartz vein was noted on the right hand side of the road leading down to the barite mine. This, along with the number 1 zone south of the railway, constitutes two targets, above the ones explored in the latest program, which need further exploration. The southwest extensions of both the 2A and 3 zones are open to further exploration as well. The northeast end of the number 3 zone plunges into a swamp after some 50 metres and will be difficult to exploit if there is any more quartz there. The 2A zone extends northeast into the number 2 zone which has already been explored.

CONCLUSIONS

Exploration of the number 2A and 3 zones on the Roseval Silica Property has defined a total probable reserve of 538,204 tonnes of silica flux (SiO_2) grading better than 80 percent silica within 60 metres of surface. Approximately 70 percent of this total grades better than 98 percent silica and 186,150 tonnes of the total reserve are considered as proven. The potential indicated by surface exposures of the quartz in both the 2A and 3 zones suggests that another 456,796 tonnes of silica flux may be present in the quartz veins and an unknown quantity at depth. Further potential reserves lie in the silicified granite hanging wall.

The presence of two other quartz vein exposures on the property besides those in the 2, 2A and 3 zones suggests exploration of the property as a whole is warranted.

Exploration of the 2 zone is not likely to turn up any higher grade silica flux but lower grade material in the 70 to 80 percent silica range may be present.

The analytical procedure used to establish the silica content of the flux is one which involved the subtraction of other elements from a total of 100 percent rather than a direct measurement of the silica value itself. Confirmation of the accuracy of this method should be carried out through check analysis.

No significant precious or base metal values have been encountered in the samples analyzed to date.

RECOMMENDATIONS

Potential exists for significant tonnage both along strike and at depth in the 2A and 3 zones. This potential should be evaluated before significant mining is carried out on either of the zones in order to permit a proper mining plan to be established and the evaluation of the feasibility of a big open pit operation.

Exploration of the property as a whole is warranted and should commence with the two known quartz showings located south of the railway and on the road to the barite mine.

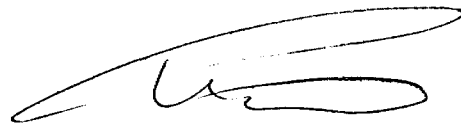
Exploration of the property as a whole should be carried out. The initial approach would be to carry out a combined magnetic and VLF-EM survey in order to locate other anomalous zones. The magnetic survey would search for the magnetic lows of the quartz veins and the VLF for the response from the pyrite which accompanies the silicified granite hanging wall.

Further analysis of base and precious metals should be carried out during any future exploration stage when the alteration mineral assemblage suggests that potential for these elements exists.

CERTIFICATE

I, Edmond, H. van Hees, do hereby certify the following:

- 1) That my permanent address is 165 Tamarack Street in the City of Timmins, Ontario and my temporary address is Apt. 6, 1811 Pauline Blvd., Ann Arbor, Michigan.
- 2) That I am the author of this report covering the exploration and reserve calculation of the Roseval Silica Property in Penhorwood Township. I did personally supervise the work on site, discussed herein, during the period from late August till early October, 1989.
- 3) That I am a consulting geologist who has practiced his profession full time since 1975 and part time since 1972.
- 4) That I have received by Honours Bachelor of Science in Earth Science from the University of Waterloo in 1975.
- 5) That I have received my Masters of Science from the University of Western Ontario in 1979.
- 6) That I am a fellow of the Geological Association of Canada.
- 7) That I have no interest either direct or indirect in the Roseval Silica project, nor do I expect to receive any in the future.
- 8) That I have personally examined the records at the mining recorders office in Timmins during September of 1989.



E. H. van Hees, M.Sc.,
Consulting Geologist

Rosevale Silica Project
Appendix A

Method of Reserve Calculations

Data collected by *E.H. van Hees Geological Services Inc.*, during the late summer and early fall of 1989, (from diamond drilling and surface mapping), was compiled and entered onto a computer. Software used to compile and treat the data was Geolog (for producing accurate drill sections), and Autocad (a drafting program used for enhancing and customizing the data).

Attitude of the stratigraphy was determined using the surface geology, the 1989 diamond drilling, and earlier air track drilling information. Geology was interpreted and plotted on 1 inch to 20 feet diamond drill sections, along with the assay information for each hole.

The break down of the reserve grades is as follows: T - is a total reserve of quartz veins with a silica content from 80% to 100%; A - has a grade from 80% to 90% silica; B - has a grade from 90% to 98% silica; and C - has a grade >98%. Both the #3 Site and the #2A Site were treated this way. Though diamond drilling was carried out at Site 2, not enough information was obtained for reserve calculations.

After the geology was interpreted on the drill sections, the assays were looked at and zones were delineated using "polygons". The area of these polygons was measured in square feet. To obtain a volume for each zone, a strike length for the zone was considered to be 1/2 the distance to the next drill section or 50 feet for the outside sections. The volume, obtained in cubic feet was converted to cubic metres and multiplied by a density factor of 2.65, producing a result in metric tonnes.

Rosevale Silica Project
Silica Reserve Calculations

Site #2A

Drill Section 1+50 West

Intersection	Area of Polygon	Strike Length	Volume (m ³)	Tonnes
T1	6643.2	100 ft	18,769	49,737
C1	6643.2	100 ft	18,769	49,737

Drill Section 2+50 West

T1	10,672.7	125 ft	37,691	99,881
B1	874.7	125 ft	3,089	8,186
C1	7436.0	125 ft	26,260	69,591

Drill Section 4+00 West

T1	4102.9	125 ft	14,490	38,397
B1	4102.9	125 ft	14,490	38,397

Totals for Site #2A

T Grade (80%-100%)	Section	Tonnes/Section
	1+50W	49,737
	2+50W	99,881
	<u>4+00W</u>	<u>38,397</u>
TOTAL		165,911 Tonnes

A Grade (80%-90%)	1+50W	0
	2+50W	0
	4+00W	0

B Grade (90%-98%)	1+50W	0
	2+50W	8,186
	<u>4+00W</u>	<u>38,397</u>
TOTAL		46,583 Tonnes

C Grade (>98%)	1+50W	49,737
	2+50W	69,591
	<u>4+00W</u>	<u>0</u>
TOTAL		119,328 Tonnes

(Note: adding the total tonnes for A,B and C will not give the number in T because values less than 80% silica were used in the T calculation but filtered out of the other grades).

Site #3

Drill Section 2+00 East

Intersection	Area of Polygon	Strike Length	Volume (m ³)	Tonnes
T1	2057.5	112.5	6539	17328
T2	5672.8	112.5	18030	47779
C1	2057.5	112.5	6539	17328
C2	5672.8	112.5	18030	47779

Drill Section 3-25 East

Intersection	Area of Polygon	Strike Length	Volume (m ³)	Tonnes
T1	1751.9	100	4949	13115
T2	4659.6	100	13164	34885
T3	9064.5	100	25609	67864
A1	4659.6	100	13164	34885
C1	1751.9	100	4949	13115
C2	3419.8	100	9662	25604
C3	3943.3	100	11141	29524

Drill Section 4+00 East

Intersection	Area of Polygon	Strike Length	Volume (m ³)	Tonnes
T1	8298.6	87.5	20515	54365
T2	20906.4	87.5	51682	136957
B1	2821.4	87.5	6975	18484
C1	8298.6	87.5	20515	54365
C2	10470.8	87.5	25885	68595
C3	7129	87.5	17623	46701

Totals for Site #3

T Grade (80%-100%)	Section	Tonnes/Section
	2+00E	65107 (ie. T1 +T2)
	3+25E	115864
	<u>4+00E</u>	<u>191322</u>
TOTAL		372293

A Grade (80%-100%)	Section	Tonnes/Section
	2+00E	0
	3+25E	34885
	<u>4+00E</u>	<u>0</u>
TOTAL		34885

B Grade (80%-100%)	Section	Tonnes/Section
	2+00E	0
	3+25E	0
	<u>4+00E</u>	<u>18484</u>
TOTAL		18484

C Grade (80%-100%)	Section	Tonnes/Section
	2+00E	62107
	3+25E	25752
	<u>4+00E</u>	<u>169661</u>
TOTAL		260520

DRILL HOLE LOG SUMMARIES
AND
DRILL HOLE ASSAY SUMMARIES

DIAMOND DRILL LOG - SITE #3
RS8906
GEOLOG - GEOLOGICAL INTERVAL

PAGE: 1

FROM	TO	ROCK	ROCK DESCRIPTION
0.00	2.00	OVB	Overburden/Casing
2.00	59.00	SiZn	Silicified Zone, Prim. Unknown
59.00	63.60	QV	Quartz Vein
63.60	73.30	TCS	Talc Chlorite Schist
73.30	114.60	QV	Quartz Vein
114.60	122.60	TCS	Talc Chlorite Schist
122.60	221.70	QV	Quartz Vein
221.70	238.00	2a	Mafic Volcanic
238.00	251.80	QV	Quartz Vein
251.80	288.00	TCS	Talc Chlorite Schist

DIAMOND DRILL LOG - SITE #3
RS8907
GEOLOG - GEOLOGICAL INTERVAL

PAGE: 1

FROM	TO	ROCK	ROCK DESCRIPTION
0.00	5.00	OVB	Overburden/Casing
5.00	63.90	SiZn	Silicified Zone, Prim. Unknown
63.90	68.00	QV	Quartz Vein
68.00	82.50	TCS	Talc Chlorite Schist
82.50	117.00	QV	Quartz Vein
117.00	152.10	TCS	Talc Chlorite Schist
152.10	194.80	QV	Quartz Vein
194.80	198.90	2a	Mafic Volcanic
198.90	206.70	QV	Quartz Vein
206.70	212.30	2a	Mafic Volcanic
212.30	222.70	QV	Quartz Vein
222.70	249.00	2a	Mafic Volcanic
249.00	288.00	TCS	Talc Chlorite Schist

DIAMOND DRILL LOG - SITE #3
RS8908
GEOLOG - GEOLOGICAL INTERVAL

PAGE: 1

FROM	TO	ROCK	ROCK DESCRIPTION
0.00	11.00	OVB	Overburden/Casing
11.00	38.80	SiZn	Silicified Zone, Prim. Unknown
38.80	62.30	2b	Mafic Tuff
62.30	67.50	QV	Quartz Vein
67.50	69.10	2a	Mafic Volcanic
69.10	70.10	QV	Quartz Vein
70.10	70.20	2a	Mafic Volcanic
70.20	72.90	4d	Diabase Dyke
72.90	73.30	2a	Mafic Volcanic
73.30	92.00	QV	Quartz Vein
92.00	97.10	2aL	Chloritic Mafic Volcanic
97.10	103.70	QV	Quartz Vein
103.70	168.60	2a	Mafic Volcanic
168.60	202.70	QV	Quartz Vein
202.70	208.20	2a	Mafic Volcanic
208.20	214.40	QV	Quartz Vein
214.40	238.00	2a	Mafic Volcanic

SILICA ASSAY RESULTS
RS8906
Rosevale Drilling - % Silica

FROM	TO	LENGTH	NUMBER	SiO2
16.50	18.00	1.50	14427	91.780
18.00	23.00	5.00	14428	91.120
43.00	48.00	5.00	14429	88.125
48.00	53.00	5.00	14430	87.500
53.00	59.00	6.00	14431	88.651
59.00	63.60	4.60	15499	99.141
73.30	78.00	4.70	15500	99.456
78.00	83.00	5.00	14351	98.179
83.00	88.00	5.00	14352	99.804
88.00	93.00	5.00	14353	95.879
93.00	98.00	5.00	14354	92.599
98.00	103.00	5.00	14355	99.783
103.00	108.00	5.00	14356	99.870
108.00	114.60	6.60	14357	99.870
119.50	123.00	3.50	14358	89.100
123.00	128.00	5.00	14359	92.061
128.00	133.00	5.00	14360	95.066
133.00	138.00	5.00	14361	99.415
138.00	143.00	5.00	14362	97.847
143.00	148.00	5.00	14363	99.818
148.00	153.00	5.00	14364	99.815
153.00	158.00	5.00	14365	99.846
158.00	163.00	5.00	14366	99.864
163.00	168.00	5.00	14367	99.926
168.00	173.00	5.00	14368	99.823
173.00	178.00	5.00	14369	99.864
178.00	184.70	6.70	14370	99.089
187.00	193.00	6.00	14371	96.971
193.00	198.00	5.00	14372	99.885
198.00	203.00	5.00	14373	99.809
203.00	208.00	5.00	14374	91.264
208.00	213.00	5.00	14375	99.240
213.00	218.00	5.00	14376	99.916
218.00	221.70	3.70	14377	99.020
238.00	243.00	5.00	14432	98.323
243.00	248.00	5.00	14433	98.941

SILICA ASSAY RESULTS
RS8907
Rosevale Drilling - % Silica

PAGE: 1

FROM	TO	LENGTH	NUMBER	SiO2
48.00	53.00	5.00	14435	87.233
53.00	58.00	5.00	14436	86.601
58.00	63.90	5.90	14437	88.867
63.90	68.00	4.10	14378	89.791
82.50	86.50	4.00	14379	98.902
86.50	90.50	4.00	14380	98.097
95.50	100.50	5.00	14381	98.229
102.30	106.90	4.60	14382	96.309
108.00	113.30	5.30	14383	97.690
114.50	117.00	2.50	14384	98.669
152.10	157.00	4.90	14385	98.398
157.00	162.00	5.00	14386	99.492
162.00	167.70	5.70	14387	98.756
169.00	171.40	2.40	14388	95.001
173.70	178.00	4.30	14389	99.704
178.00	183.00	5.00	14390	99.914
183.00	188.00	5.00	14381	99.472
188.00	191.80	3.80	14392	97.494
191.80	194.80	3.00	14393	95.596
199.00	202.30	3.30	14394	93.745
202.30	206.70	4.40	14395	95.544
212.30	218.50	6.20	14396	99.513
220.20	222.70	2.50	14397	98.066

SILICA ASSAY RESULTS
RS8908
Rosevale Drilling - % Silica

FROM	TO	LENGTH	NUMBER	SiO2
36.00	38.00	2.00	14438	89.791
62.30	67.50	5.20	14398	96.929
78.80	84.00	5.20	14399	99.637
84.00	88.00	4.00	14400	96.872
88.00	92.00	4.00	14401	98.228
170.00	175.60	5.60	14402	93.734
175.60	178.60	3.00	14403	99.403
178.60	184.50	5.90	14404	88.968
184.50	189.00	4.50	14405	97.963
189.00	194.00	5.00	14406	94.702
194.00	198.00	4.00	14407	97.464
198.00	202.70	4.70	14408	99.028
208.20	214.40	6.20	14409	93.914

SILICA ASSAY RESULTS
A2
Rosevale Drilling - % Silica

FROM	TO	LENGTH	NUMBER	SiO2
2.00	5.00	3.00	396	97.180
10.00	15.00	5.00	395	94.620
15.00	20.00	5.00	397	91.410

SILICA ASSAY RESULTS
A3
Rosevale Drilling - % Silica

FROM	TO	LENGTH	NUMBER	SiO2
0.00	5.00	5.00	386	99.770
10.00	15.00	5.00	387	98.440
20.00	25.00	5.00	388	99.120
30.00	35.00	5.00	389	99.700
40.00	45.00	5.00	390	99.790
50.00	55.00	5.00	391	99.500
60.00	65.00	5.00	392	99.630

SILICA ASSAY RESULTS
A5
Rosevale Drilling - % Silica

FROM	TO	LENGTH	NUMBER	SiO2
5.00	10.00	5.00	353	98.500
15.00	20.00	5.00	354	98.800
25.00	30.00	5.00	355	99.000
35.00	40.00	5.00	356	99.200

SILICA ASSAY RESULTS
A6
Rosevale Drilling - % Silica

FROM	TO	LENGTH	NUMBER	SiO2
0.00	5.00	5.00	357	98.000
10.00	15.00	5.00	358	99.300
20.00	25.00	5.00	359	99.010
30.00	35.00	5.00	360	99.600
40.00	45.00	5.00	361	99.500
50.00	55.00	5.00	362	99.300

SILICA ASSAY RESULTS
EXP01
Rosevale Drilling - % Silica

FROM	TO	LENGTH	NUMBER	SiO2
0.00	5.00	5.00	342	95.990
20.00	25.00	5.00	343	94.150
35.00	40.00	5.00	344	98.000
45.00	50.00	5.00	345	99.520
55.00	60.00	5.00	346	99.270

SILICA ASSAY RESULTS
EXP02
Rosevale Drilling - % Silica

FROM	TO	LENGTH	NUMBER	SiO2
5.00	10.00	5.00	347	95.310
15.00	20.00	5.00	348	97.300
25.00	30.00	5.00	349	96.650
35.00	40.00	5.00	350	96.770
45.00	50.00	5.00	351	96.400
55.00	60.00	5.00	352	94.760

DIAMOND DRILL LOG - SITE #2A
RS8903
GEOLOG - GEOLOGICAL INTERVAL

PAGE: 1

FROM	TO	ROCK	ROCK DESCRIPTION
0.00	15.00	OVB	Overburden/Casing
15.00	169.50	2bS	Silicified Mafic Tuff
169.50	227.50	QV	Quartz Vein
227.50	248.00	4a	Granite

DIAMOND DRILL LOG - SITE #2A
RS8904
GEOLOG - GEOLOGICAL INTERVAL

PAGE: 1

FROM	TO	ROCK	ROCK DESCRIPTION
0.00	19.00	OVB	Overburden/Casing
19.00	32.00	4a	Granite
32.00	52.50	SiZn	Silicified Zone, Prim. Unknown
52.50	53.00	2a	Mafic Volcanic
53.00	57.40	QV	Quartz Vein
57.40	62.00	QV	Quartz Vein
62.00	70.00	2a	Mafic Volcanic
70.00	103.60	QV	Quartz Vein
103.60	110.00	QV	Quartz Vein
110.00	200.00	2bS	Silicified Mafic Tuff

DIAMOND DRILL LOG - SITE #2A
RS8905
GEOLOG - GEOLOGICAL INTERVAL

PAGE: 1

FROM	TO	ROCK	ROCK DESCRIPTION
0.00	10.00	OVB	Overburden/Casing
10.00	53.70	SiZn	Silicified Zone, Prim. Unknown
53.70	75.30	2aQV	Mafic Volcanic/Quartz Vein
75.30	94.00	QV	Quartz Vein
94.00	112.00	2aS	Silicified Mafic Volc.
112.00	119.40	QV	Quartz Vein
119.40	123.60	2aA	Altered Mafic Volcanics
123.60	129.00	4f	Felsic Dyke
129.00	137.00	2aSK	Silicified, Sericitic Volc.
137.00	198.00	2aA	Altered Mafic Volcanics

Rosevale Drilling - % Silica
RS8903
SILICA ASSAY RESULTS

FROM	TO	LENGTH	NUMBER	SIO2
171.00	175.00	4.00	15487	99.046
175.00	180.00	5.00	15488	97.111
180.00	185.00	5.00	15489	96.458
185.00	188.00	3.00	15490	97.759
188.00	193.00	5.00	15491	98.742
193.00	198.00	5.00	15492	99.400
198.00	203.00	5.00	15493	99.654
203.00	208.00	5.00	15494	99.552
208.00	213.00	5.00	15495	99.635
213.00	218.00	5.00	15496	98.978
218.00	223.00	5.00	15497	99.469
223.00	228.00	5.00	15498	95.880

Rosevale Drilling - % Silica
RS8904
SILICA ASSAY RESULTS

PAGE: 1

FROM	TO	LENGTH	NUMBER	SI02
53.00	57.40	4.40	14410	99.390
57.40	62.00	4.60	14411	94.028
62.00	68.00	6.00	14412	89.322
70.00	75.00	5.00	14413	98.576
75.00	80.00	5.00	14414	99.808
80.00	85.00	5.00	14415	99.063
85.00	88.00	3.00	14416	99.866
88.00	93.00	5.00	14417	99.850
93.00	98.00	5.00	14418	99.882
98.00	103.60	5.60	14419	99.403

Rosevale Drilling - % Silica
RS8905
SILICA ASSAY RESULTS

PAGE: 1

FROM	TO	LENGTH	NUMBER	SI02
75.30	80.00	4.70	14421	99.270
80.00	85.00	5.00	14422	99.138
85.00	88.70	3.70	14423	88.377
88.70	94.00	5.30	14424	97.532
112.00	114.90	2.90	14425	98.016
114.90	119.00	4.10	14426	95.409

Rosevale Drilling - % Silica
T4
SILICA ASSAY RESULTS

PAGE: 1

FROM	TO	LENGTH	NUMBER	SiO2
0.00	5.00	5.00	363	99.050
10.00	15.00	5.00	364	93.000
20.00	25.00	5.00	365	98.310
30.00	35.00	5.00	366	98.370
40.00	50.00	10.00	367	88.260

Rosevale Drilling - % Silica
T5
SILICA ASSAY RESULTS

PAGE: 1

FROM	TO	LENGTH	NUMBER	SIO2
0.00	5.00	5.00	310	96.140
10.00	15.00	5.00	311	97.320
20.00	25.00	5.00	312	98.260
30.00	35.00	5.00	313	98.020

Rosevale Drilling - % Silica
T6
SILICA ASSAY RESULTS

FROM	TO	LENGTH	NUMBER	SIO2
0.00	5.00	5.00	314	98.000
10.00	15.00	5.00	315	93.930
15.00	20.00	5.00	316	98.050
25.00	30.00	5.00	317	97.100

ASSAY CERTIFICATES

TEL NO. 513-763-4620
 GEOLUST. PL. SCIENCES
 JAN 9 5 50 10 51 NO. 004 F. 06706

DEC 14 3 39 23 S.K.M. CANADA

No LAB	DATE	INIT	QUART	PROVENANCE	DESCRIPTION	%Fe2O3	%Al2O3	%CoO	%TiO2				
554	19-10-57	GC	K-24	Timmins	14399	.104	.064	.194	.001	99.637			
555	"	"	"	"	14401	.713	.717	.317	.025	98.228			
556	"	"	"	"	14402	2.592	1.880	1.753	.041	93.734			
557	"	"	"	"	14403	.217	.197	.180	.003	99.403			
558	"	"	"	"	14404	5.989	3.003	2.119	0.122	88.968			
559	"	"	"	"	14407	.947	.632	.940	.017	97.464			
560	"	"	"	"	14419	.137	.356	.095	.009	99.403			
561	"	"	"	"	14421	.156	.265	.300	.009	99.27			
562	"	"	"	"	14423	4.929	5.470	1.154	.230	88.371			
563	"	"	"	"	14425	.213	.239	1.529	.004	98.016			
564	"	"	"	"	14392	.937	.517	.959	.023	97.494			
565	"	"	"	"	14398	.972	.286	1.805	.008	96.929			
566	"	"	"	"	14405	.901	.435	.688	.013	97.463			
567	"	"	"	"	14410	.075	.148	.381	.003	99.29.			
568	"	"	"	"	14411	.959	2.852	2.166	.095	94.028			
569	"	"	"	"	14414	.037	.093	.061	.001	99.808			
570	"	"	"	"	14415	.110	.219	.604	.004	99.063			
571	"	"	"	"	14416	.032	.066	.035	.001	99.866			
572	"	"	"	"	14417	.029	.064	.056	.001	99.85			
573	"	"	"	"	14422	.156	.236	.454	.016	99.138			
574	"	"	"	"	14426	1.621	1.376	1.573	.021	95.401			

REMARQUES:

P.T.R.

TEL No. 313-765-4690
 GEOLOGICAL SCIENCES
 Jan 9, 90 10:51 No. 004 F. 05/06

INW CANADA

**RAPPORT DU LABORATOIRE
 POUR QUARTZ**

Date de 12/6
 à

No LAB	DATE	INIT	QUARTZ	PROVENANCE	DESCRIPTION	%Fe2O3	%Al2O3	%CaO	%TiO2				
578	39-10-28	GC	K-24	Timmins	14351	.684	.214	.916	.007	98.179			
579	"	"	"	"	14355	.075	.072	.069	.001	99.783			
580	"	"	"	"	14357	.645	.050	.0	.001	99.87			
581	"	"	"	"	14358	5.990	2.954	2.000	.131	89.1			
582	"	"	"	"	14359	3.909	2.038	1.911	.078	92.061			
583	"	"	"	"	14360	1.506	1.537	1.447	.048	95.066			
584	"	"	"	"	14361	.19	.146	.257	.002	99.415			
585	"	"	"	"	14363	.02	.088	.036	.001	99.818			
586	"	"	"	"	14364	.041	.042	.100	.001	99.815			
587	"	"	"	"	14378	.811	.718	.989	.013	97.659			
588	"	"	"	"	14428	1.206	6.914	.632	.128	91.12			
589	"	"	"	"	15484	1.173	1.511	1.463	.092	90.759			
590	"	"	"	"	15485	.756	4.103	.97	.056	94.302			
591	"	"	"	"	15486	1.087	5.929	.861	.080	92.243			
592	"	"	"	"	14365	.025	.106	.03	.001	99.816			
593	"	"	"	"	15492	.061	.112		.001	99.4			
594	"	"	"	"	15488	.773	.811	1.25	.020	97.111			
595	"	"	"	"	15489	.692	1.571	1.342	.037	96.458			
596	"	"	"	"	15487	.116	.327	.506	.005	99.046			

MARQUES:

32-03-3-3-A-M-1414-17
 P. 7/12

GEOLOGICAL SCIENCES TEL NO. 313-763-4690 Jan 9, 90 10:51 No. 004 F. 03/08

No LAB	DATE	INIT	QUART	PROVENANCE	DESCRIPTION	%Fe ₂ O ₃	%Al ₂ O ₃	%CaO	%TiO ₂				
630	89-10-30	GC	16-24	Mine	14420	1.019	3.671	1.268	.069	93.973			
631	"	"	"	"	14424	.129	.237	2.100	.002	97.532			
632	"	"	"	"	14369	.027	.064	.044	.001	99.804			
633	"	"	"	"	14370	.249	.154	.504	.004	99.089			
634	"	"	"	"	14371	1.304	.769	.925	.031	90.921			
635	"	"	"	"	14372	.024	.045	.045	.001	99.885			
636	"	"	"	"	14374	4.524	2.092	2.072	.108	91.264			
637	"	"	"	"	14379	.379	.273	.439	.007	98.902			
638	"	"	"	"	14310	.672	.420	.806	.005	98.097			
639	"	"	"	"	14386	.159	.137	.209	.003	99.492			
640	"	"	"	"	14387	.409	.289	.537	.009	98.756			
641	"	"	"	"	14390	.018	.047	.020	.001	99.914			
645	79-10-31	GC	09	"	14352	.055	.062	.082	.001	99.804			
646	"	"	"	"	14353	1.189	2.097	.712	.053	95.879			
647	"	"	"	"	14354	1.708	4.508	1.078	.107	92.599			
648	"	"	"	"	14356	.036	.064	.029	.001	99.87			
649	"	"	"	"	14362	.929	.818	.385	.021	97.847			
650	"	"	"	"	14366	.048	.059	.028	.001	99.864			
651	"	"	"	"	14367	.021	.042	.012	.001	99.926			
652	"	"	"	"	14427	.987	6.251	.574	.114	91.768			
653	"	"	"	"	14435	1.669	2.827	1.084	.187	87.233			
654	"	"	"	"	14436	1.856	10.113	1.176	.184	86.601			
655	"	"	"	"	14337	1.453	9.618	.902	.162	88.867			
656	"	"	"	"	15483	2.817	4.388	1.928	.137	90.72			
657	"	"	"	"	15499	.211	.302	.312	.006	99.141			
658	"	"	"	"	15500	.112	.074	.337	.008	99.456			
671	"	GC	16-24	"	14314	.445	.273	.606	.007	98.669			
672	"	"	"	"	14394	2.920	1.419	1.779	.067	93.745			
673	"	"	"	"	14395	2.145	1.148	1.088	.055	95.544			

GEO 14 55 09:32 S.K.M. CHAD

GEOLOGICAL SCIENCES
 TEL No. 313-763-4690
 Jan 9.90 10:51 No. 004 F. 02/06

MIN. CANADA

POUR QUARTZ *Reserve*

de *Leve*
 & J.P., P.M., M.L....

No LAB	DATE	INIT	QUART	PROVENANCE	DESCRIPTION		%Fe ₂ O ₃	%Al ₂ O ₃	%CaO	%TiO ₂			
674	89-10-31	GC	16-24	Mixe	14396		.142	.128	.215	.002	99.513		
675	"	"	"	"	14397		.726	.404	.791	.013	98.066		
676	"	"	"	"	14408		.300	.175	.492	.005	99.028		
677	"	"	"	"	14409		2.980	1.446	1.595	.065	93.914		
678	"	"	"	"	14413		.533	.738	.130	.033	98.576		
679	"	"	"	"	14418		.019	.067	.031	.001	99.882		
680	"	"	"	"	14429		1.586	9.022	1.042	.175	88.175		
681	"	"	"	"	14430		1.565	9.800	.953	.182	85.76		
682	"	"	"	"	14431		1.499	8.690	1.011	.169	88.651		
683	"	"	"	"	14438		1.109	8.000	.911	.189	89.791		
684	"	"	"	"	14368		.035	.122	.019	.001	99.823		
685	"	"	"	"	143743		.033	.121	.036	.001	99.809		
686	"	"	"	"	14377		.482	.213	.280	.005	99.02		
687	"	"	"	"	14382		.551	2.887	.181	.072	96.309		
688	"	"	"	"	14385		.679	.662	.232	.029	98.398		
689	"	"	"	"	14412		4.985	7.351	1.921	.421	85.322		
690	"	"	"	"	14375		.281	.216	.256	.007	99.24		
693	89-11-21	V	05	"	14376	2. →	.078	.041	.023	.001	99.916		
694	"	"	"	"	14381		.558	.311	.892	.010	98.029		
695	"	"	"	"	14383		1.007	.931	1.335	.037	97.69		
696	"	"	"	"	14388		2.003	1.001	1.258	.037	95.001		
697	"	"	"	"	14389		1.075	.071	.149	.001	99.704		
698	"	"	"	"	14390	→	.178	.150	.197	.002	99.472		
699	"	"	"	"	14393		1.753	1.008	1.402	.041	95.596		
700	"	"	"	"	14400		1.431	1.221	.433	.043	96.872		
701	"	"	"	"	14406	2. →	2.375	1.053	1.405	.045	94.702		
702	"	"	"	"	14432	→	.479	.210	.584	.005	98.323		
703	"	"	"	"	14433		.374	.182	.499	.004	98.941		
704	"	"	"	"	14434		.991	.642	1.499	.024	96.591		

p. 12/12

APPENDIX B



Established 1928

Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Certificate of Analysis

Certificate No. 76157 - A Date Jan. 18, 1990

Received Sept. 11, 1989 12 Split Core Samples

Submitted by E. H. Van Hees Geological Services Ltd., Timmins, Ontario.

File #92-0788

SAMPLE NO.	SILVER PPM	COPPER PPM
15451	0.2	128
15452	0.1	92
15453	0.1	53
15454	0.1	93
15455	0.2	59
15456	0.1	45
15457	0.1	70
15458	0.1	63
15459	0.1	51
15460	0.1	95
15461	0.1	65
15462	0.3	55

Per 

G. Lebel - Manager /ns



P.O. Box 10, Swastika, Ontario P0K 1T0
Telephone (705) 642-3244 FAX (705) 642-3300



Established 1928

Swastika Laboratories

A Division of Assayers Corporation Ltd.

Assaying - Consulting - Representation

Certificate of Analysis


Certificate No. 76286 - A Date Jan. 18, 1990

Received Sept. 21, 1989 20 Split Core Samples

Submitted by E. H. Van Hees Geological Services Ltd., Timmins, Ontario.

Proj. #Rosedale

SAMPLE NO.	SILVER PPM	COPPER PPM
15463	0.2	22
15464	0.1	31
15465	0.1	84
15466	0.1	37
15467	0.2	18
15468	0.1	20
15469	0.2	26
15470	0.1	42
15471	0.1	27
15472	0.2	26
15473	0.1	32
15474	0.1	25
15475	0.1	24
15476	0.1	32
15477	0.2	27
15478	0.1	34
15479	0.1	122
15480	0.1	25
15481	0.1	123
15482	0.1	81

Per 
G. Lebel - Manager /ns



P.O. Box 10, Swastika, Ontario P0K 1T0

Telephone (705) 642-3244

FAX (705) 642-3300

ED. VAN HEES

DATE	NO.	PPB.
SEPT 11/89	15451	10
	15452	Nil
	15453	Nil
	15454	10
	15455	Nil
	15456	
	15457	
	15458	
	15459	
	15460	
	15461	
	15462	

DATE	NO.	PPB.
SEPT 21/89	15463	10
	15464	10
SPLIT CORE	15465	Nil
	15466	10
	15467	Nil
	15468	
	15469	
	15470	
	15471	
	15472	
	15473	Nil
	15474	10
	15475	Nil
	15476	Nil
15477	10	
15478	Nil	
15479	10	
15480	10	
15481	10-20	
15482	10	

APPENDIX C

PROPOSED EXPLORATION PROGRAM

Exploration of the property should be undertaken in two phases in order to establish the best combination of techniques at the minimum cost. The two phases would consist of 1) Exploration over and near the known quartz bodies and 2) Exploration of the rest of the property.

Phase one work involve a small cut grid over the number 2A and 3 zones as well as the first 500 feet beyond the ends of the two zones. Lines would be cut or picketed at 200 foot intervals across the quartz bodies (strike of about 140 degrees) and would probably total some 5 to 6 miles of grid. A combined total field magnetic, gradient magnetic and VLF geophysical surveys (using 2 channels) would be carried out over the small grid to establish if total field magnetic is the best option for a magnetic or gradient and whether the VLF survey is of any use in establishing the contacts of the quartz veins by detecting the sulphide mineralization found there.

Phase two of the exploration work would involve the cutting of a grid over the balance of the property with lines at 300 foot intervals. The geophysical technique or combination of techniques chosen would be conducted on the newly cut lines. Results from this work would then be interpreted and the anomalous areas tested by stripping with a backhoe to establish the presence of quartz (or other mineralization such as gold). This second phase could be broken up into several pieces, if necessary due to financing, such that areas where surface showings of quartz are known could be explored first.

PROPOSED EXPLORATION BUDGET

Phase I

Linecutting - 6 miles at \$450/mile	- \$ 2700
Geophysical survey - 6 miles at \$100/mile	- \$ 600
- plotting of results	- \$ 200
- interpretation	- N/C
Total for Phase I	- \$ 3500

Phase II (Note *)

Linecutting - 1.5 miles at \$ 450/mile	- \$ 675
Geophysical Survey - 1.5 miles at \$ 100/mile	- \$ 150
- 1.5 miles of plotting	- \$ 50
- interpretation	- N/C
Report - If required for assesment work	- \$ 1000

Note * - The above phase II is quoted on a per claim basis assuming that the claims are 1320 feet by 1320 feet. The report price is a total price for the report and is not on a per claim basis. Cost of the surveying may drop slightly if the results of phase I indicate that some of the geophysical techniques are of no use.

Project: ROSEVALE SILICA

Hole No.: RS-89-01
 Logged By: Kian Jensen
 Date: Oct. 2, 1989

Page 1 of 1

FROM (ft)	TO (ft)	UNIT/DESCRIPTION	FROM (ft)	TO (ft)	SAMPLE NO.	LENGTH (ft)	SiO2 %
0.0	32.5	CASING					
32.5	166.0	MAFIC TO ULTRAMAFIC METAVOLCANICS -moderate to strongly sheared CA=50 -strong chloritic alteration, moderate to strong pervasive carbonate alteration -20% quartz and quartz-carbonate stringers and veinlets <1", predominate concord to foliation, minor pink carbonate -<1% to 1% disseminate pyrite, patches throughout -79.2' to 80.3' - 60% quartz, 40% carbonate and host inclusion -carbonate ● LC, U.C. & L.C. CA=50 -quartz-carbonate veining becomes sub-parallel to CA -shearing becomes irregular to lower contact (LC) and weaker -137.7' to 142.5' - quartz-carbonate vein 80%, 20% silicified sericitic inclusions, 5% chrome mica (fuschite) no visible mineralization	137.7	142.5	15483		90.72
166.0	198.0	SILICIFIED GRANITE OR VOLCANICS -30% strongly silicified granite or volcanics, 30% chloritic altered volcanics, 40% quartz veining, minor carbonate along fractures -granite locally hematite staining -<1% disseminated, medium grained to coarse grained euhedral to subhedral pyrite usually in volcanics -upper contact (UC) broken -188.0' to 192.7' - 60% quartz, 40% inclusions -upper contact CA=40	173.0	178.0	15484		94.759
			178.0	180.2	15485		94.312
			188.0	192.7	15486		92.243
198.0		END ON HOLE					

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FROM (ft)	TO (ft)	UNIT/DESCRIPTION	FROM (ft)	TO (ft)	SAMPLE NO.	LENGTH (ft)	SiO2 %
0.0	15.0	CASING					
15.0	169.5	SILICIFIED TUFF					
		-laminated CA=10, weakly silified grading to strongly silicified					
		with increased carbonate and sericite alteration below 38.0'					
		-38.0' to 71.1' strongly silicified, sericite, carbonate and					
		pyritization					
		-3% very fine disseminated pyrite and pyrite stringers often					
		concordant to lamination, pyrite locally up to 5%					
		-58.5' to 78.2' - 40% quartz and sericite veins					
		-laminations less apparent below 58.0'					
		-87.1' to 97.8' - 80% quartz with carbonate along fractures					
		-5% host inclusions, 10% graphite along fractures					
		98.0' to 115.0' - granitic alteration as 38' to 71.1', 1% pyrite,					
		5% quartz, lapilli size tuff fragments at 118.0', 122.0'					
		-127.5' to 156.0' - same as 98' to 115', 40% quartz					
		-Lower Contact (LC) marked by fault and 1.5' quartz vein					
169.5	227.5	QUARTZ VEIN	171.0	175.0	15487		99.046
		-5% chloritic host inclusions, minor green carbonate	175.0	180.0	15488		97.111
		-inclusions grade to <1% by 183.5' then to 3% over bottom 4 feet,	180.0	185.0	15489		96.458
		very minor pyrite with inclusions	185.0	188.0	15490		97.759
		-very minor carbonate alteration along fractures in quartz	188.0	193.0	15491		98.742
		-milky white quartz, low contact CA=25	193.0	198.0	15492		99.4
227.5	248.0	GRANITE	198.0	203.0	15493		99.654
		-fine grained, silicified, with overall 2% - 3% fine grained pyrite:	203.0	208.0	15494		99.552
		locally up to 5% - 7%, quartz stringers and veining barren of	208.0	213.0	15495		99.635
		sulphides with inclusions containing pyrite, minor sericitic	213.0	218.0	15496		98.978
		alteration	218.0	223.0	15497		99.469
		-233.35' to 235.0' - white quartz vein with granitic inclusions	223.0	228.0	15498		95.88
		-236.5' to 237.75' - white quartz vein with granitic inclusions					

FROM : (ft)	TO : (ft)	UNIT/DESCRIPTION	FROM : (ft)	TO : (ft)	SAMPLE : NO.	LENGTH : (ft)	SiO2 : %
		-238.0' to 239.2' - white quartz vein with granitic inclusions					
		-241.4' to 242.4' - whitish orange quartz vein with granitic inclusion					
248.0		END OF HOLE					

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FROM (ft)	TO (ft)	UNIT/DESCRIPTION	FROM (ft)	TO (ft)	SAMPLE NO.	LENGTH (ft)	SiO2 %
0.0	19.0	CASING					
19.0	32.0	GRANITE -fine grained, mottled pinkish pale brown, overall 1% to 2% fine grained pyrite with odd patches or blebs -26.0' to 27.0' - milky white quartz vein with pinkish granitic inclusions - contacts CA=40					
32.0	52.5	SILICIFIED GRANITE OR MATAVOLCANICS -fine grained, buff pink to greyish green buff, sections aphaneritic massive uniform, scattered to 1% to 2% very fine pyrite -possible silified massive altered tuff -scattered quartz stringers and veinlets <5% of core					
52.5	53.0	MAFIC METAVOLCANIC -fine grained, chloritic, blackish to blackgreen, contorted schistosity					
53.0	57.4	QUARTZ VEIN -milky white, <1% chloritic metavolcanic inclusions -contact at 53' CA=60	53.0	57.4	14410		99.39
57.4	62.0	QUARTZ VEIN -whitish to pinkish brown white with chloritic metavolcanic inclusions and chlorite about 30% of core, -62.0' - contact CA=50	57.4	62.0	14411		94.028
62.0	70.0	MAFIC METAVOLCANICS -fine grained, chloritic, massive, uniform, contorted schistosity -2% to 3% 1/8" euhedral pyrite locally up to 10% 3/16" euhedral	62.0	68.0	14412		85.322

FROM (ft)	TO (ft)	UNIT/DESCRIPTION	FROM (ft)	TO (ft)	SAMPLE NO.	LENGTH (ft)	SiO2 %
		pyrite					
		-68.0' to 69.0' - quartz vein with chloritic inclusions, CA=61 contacts					
70.0	103.6	QUARTZ VEIN	70.0	75.0	14413		98.576
		-milky white, barren of sulphides	75.0	80.0	14414		99.808
		-70.0' to 71.0' - quartz vein with 20% chlorite inclusions	80.0	85.0	14415		99.063
		-71.0' to 103.6' - occasional wisp of chlorite <0.5%/5 feet	85.0	88.0	14416		99.866
		-82.8' - chrome mica patch	88.0	93.0	14417		99.85
			93.0	98.0	14418		99.882
103.6	110.0	QUARTZ VEIN	98.0	103.6	14419		99.403
		-whitish to greyish white, barren	103.6	110.0	14420		93.973
		-103.6' to 104.2' - granitic inclusions					
		-104.2' to 104.9' - volcanic inclusions					
		-105.4' to 105.7' - volcanic inclusions					
		-106.4' to 110.0' - chlorite fracture filling about 40% of core					
110.0	200.0	SILICIFIED METAVOLCANIC TUFF					
		-aphaneritic silicified, hard to brittle, local sections of laminated tuff with massive sections; banding brownish dark grey to blackish, dark green, pinkish brff, grey to greyish brown, quartz fracture filling					
		-110.0' to 110.6' - trace sulphides with local 1% to 2% fine grained pyrite					
		-110.6' to 112.3' - pink buff					
		-112.3' to 140.5' - grey to greyish brown, prominent laminated tuff, 1/2" to 1"					
		-138.8' to 140.5' - silicified with 80% with quartz stringers					
		-140.5' to 168.0' - laminated, brownish dark grey and blackish, 1/2" to 1"					
		-146.8' - bedding CA=70					
		-163.5' - bedding CA=62					
		-167.7' - bedding CA=60					
		-168.0' to 200.0' - gradual decrease in silicification, laminated tuff, brownish black and blackish grey band 1/4" to 1"					

FROM (ft)	TO (ft)	UNIT/DESCRIPTION	FROM (ft)	TO (ft)	SAMPLE NO.	LENGTH (ft)	SiO2 %
		-187.5' - bedding CA=75					
200.0		END OF HOLE					



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FROM (ft)	TO (ft)	UNIT/DESCRIPTION	FROM (ft)	TO (ft)	SAMPLE NO.	LENGTH (ft)	SiO2 %
0.0	10.0	CASING - bedrock at 6.5 feet					
6.5	53.75	SILICIFIED GRANITE OR METAVOLCANICS -fine grained, salmon pink to greyish pink, massive, trace to scattered very fine grained pyrite -9.2' to 9.7' - quartz vein, contacts ground -12.2' to 13.7' - blackish to greyish black -18.3' - 1/2" quartz stringers CA=55 -18.8' - 1" quartz stringer CA=40 -21.4' to 21.55' - quartz stringer CA=23, 2% to 3% fine grained euhedral pyrite -33.0' to 46.0' - pale greenish grey -46.0' to 53.75' - pinkish buff					
53.75	75.3	QUARTZ VEIN AND CHLORITIC MAFIC METAVOLCANICS -milky white to glass white quartz veining in fine grained, chloritic black green to black, massive to contorted metavolcanics -53.75' to 56.3' - 50% veining -55.7' to 56.1' - pinkish buff granitic inclusion -56.3' to 58.2' - glass white quartz vein -58.2' to 63.0' - 50% veining grading to 40% veining -63.0' to 64.3' - mafic metavolcanics, scattered pyrite -64.3' to 65.4' - milky white quartz vein, contact CA=irregular and 60 -69.1' to 69.8' - milky white quartz vein, contacts CA=70 in opposite direction -70.4' to 71.8' - 60% quartz veining -71.8' to 75.3' - mafic to buff brown metavolcanics with minor quartz stringers					
75.3	94.0	QUARTZ VEIN	75.3	80.0	14421		99.27

FROM (ft)	TO (ft)	UNIT/DESCRIPTION	FROM (ft)	TO (ft)	SAMPLE NO.	LENGTH (ft)	SiO2 %
		-75.3' to 85.0' - glassy white, brittle, 35% chloritic inclusions	80.0	85.0	14422		99.27
		83.0' to 83.2'	85.0	88.7	14423		88.377
		-85.0' to 86.3' - metavolcanics, black green, inclusion	88.7	94.0	14424		97.532
		-86.3' to 88.7' - milky white with 20% chloritic inclusions					
		-87.9' to 88.0' - granitic inclusions					
		-88.7' to 94.0' - white, 3% fracture filling chlorite, and rusty staining					
94.0	112.0	SILICIFIED ALTERED MAFIC METAVOLCANICS					
		-fine grained, dark green to brownish, silicified, massive, local sections of pinkish hard felsic dikelets, 20% to 25% quartz stringers					
		-scattered to trace pyrite					
		-102.95' - 1/8" seam of euhedral pyrite					
		-111.0' to 112.0' - increasing to 60% quartz veining greyish					
112.0	119.4	QUARTZ VEIN	112.0	114.9	14425		98.016
		-112.0' to 114.9' - whitish with <2% pale green chlorite staining	114.9	119.0	14426		95.409
		-114.9' to 119.4' - whitish with 40% to 60% chlorite fracture filling/inclusions					
119.4	123.6	ALTERED METAVOLCANICS					
		-fine grained, pale greenish grey to grey, massive, poor to no schistosity, occasional quartz and pinkish calcite stringers					
123.6	129.0	FELSIC DIKE					
		-aphaneritic, salmon pink, hard, minor epidote alteration					
		-126.7' to 127.2' - altered metavolcanic inclusion					
		-126.9' - locally 3% fine grained pyrite					
129.0	137.0	SILICIFIED SERICITIC METAVOLCANICS					
		-fine grained, pale green to pale pinkish green, sericitic alteration, massive, poor schistosity, trace sulphides					
		-130.6' to 131.0' - salmon pink felsic dike					

FROM (ft)	TO (ft)	UNIT/DESCRIPTION	FROM (ft)	TO (ft)	SAMPLE NO.	LENGTH (ft)	SiO2 %
137.0	198.0	WEAKLY ALTERED METAVOLCANICS					
		-fine grained, decreasing alteration and silicification, pale brownish grey to blackish green, trace to scattered sulphides					
		-138.0' to 138.7' - milky white quartz vein, contacts CA=50 & 60					
		158.9' to 161.5' - pale greenish sericite alteration					
		-161.5' - contact CA=63					
		-161.5' to 168.0' - pale grey					
		-166.0' - bedding CA=65					
		-168.0' to 198.0' - light blackish grey to light black					
		173.0' - schistosity CA=67					
		175.5' to 176.9' - pinkish aphaneritic ground mass with white phenocrysts - FELDSPAR PORPHYRY DIKE					
		-195.0' - bedding CA=70					
198.0		END OF HOLE					

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FROM (ft)	TO (ft)	UNIT/DESCRIPTION	FROM (ft)	TO (ft)	SAMPLE NO.	LENGTH (ft)	SiO2 %
0.0	2.0	CASING					
2.0	59.0	SILICIFIED GRANITE OR METAVOLCANICS					
		-fine grained, pinkish brown with minor sections of pale greenish buff grading to pale greenish buff at 38.0 feet, sericitic alteration					
		-cut by narrow quartz veinlets 1/4" to 2.3 feet, occasionally veinlets have minor pyrite mineralization, minor granitic inclusion					
		-sulphides 1% to 2% overall, locally up to 5% very fine grained to fine grained pyrite; 18.0' to 59.0' up to 2% to 3% fine pyrite					
		-significant quartz veining at 3.6' to 4.2' CA=70; 11.4' to 12.9' CA=55 and 85; 13.5' to 15.9' CA=50 and broken; 16.5' to 17.8' CA=65 and irregular (with granitic inclusions and wispy pyrite in vein approx. 2%); 19.7' to 20.4' CA=irregular and 80 (1% to 2% pyrite); 23.3' to 24.4' CA=40 to 45; 25.5' to 28.5' numerous 2" to 6" quartz veinlets	16.5	18.0	14427		91.78
			18.0	23.0	14428		91.12
			43.0	48.0	14429		88.125
			48.0	53.0	14430		87.5
			53.0	59.0	14431		88.651
59.0	63.6	QUARTZ VEIN	59.0	63.6	15499		99.141
		-milky white quartz, minor chloritic mafic to ultramafic metavolcanic inclusions from 62.0' to 63.2' with 1% to 2% fine grained pyrite and blebs associated with the metavolcanics					
		-62.7' - local splashes of chalcopyrite in quartz vein					
63.6	73.3	TALCOSE CHLORITIC SCHIST					
		-fine grained, blackish to blackish dark green, mafic to ultramafic, extremely schistose, wispy carbonate stringers parallel to schistosity, with minor wispy to krinkled quartz carbonate veinlets at 63.95' and 69.9' to 70.05'					
		-scattered to <1% fine grained euhedral pyrite					
		-67.4' - shearing CA=52					

FROM : (ft)	TO : (ft)	UNIT/DESCRIPTION	FROM : (ft)	TO : (ft)	SAMPLE : NO.	LENGTH : (ft)	SiO2 : %
73.3	114.6	QUARTZ VEIN	73.3	78.0	15500		99.456
		-milky white quartz with scattered chlorite on fractures <1%,	78.0	83.0	14351		98.179
		minor black green talcose chloritic schist inclusions at 81.0'	83.0	88.0	14352		99.804
		-81.7' to 81.9'; 82.35' to 82.5', 83.0'	88.0	93.0	14353		95.879
		-86.6' to 87.5' - quartz sample to G.L.	93.0	98.0	14354		92.599
		-87.75' to 93.0' - chloritic inclusions 10% to 15%	98.0	103.0	14355		99.788
		-90.0' to 90.15' - granitic inclusions	103.0	108.0	14356		99.87
		-90.75' to 91.25' - talcose chloritic schist inclusion	108.0	114.6	14357		99.87
		-93.1' to 93.5' - talcose chloritic schist inclusion					
		-93.5' to 95.3' - granitic inclusion with 1% to 2% fine grained pyrite					
		-95.3' - contact krinkled CA=45					
		-95.3' to 103.0' - <0.5% chloritic inclusions					
		-103.0' to 114.6' - milky white quartz, no inclusion, barren of sulphides					
		-112.2' to 113.5' - sample to G.L.					
114.6	122.6	CHLORITIC TALCOSE SCHIST					
		-as above, no carbonatization, trace to <1% fine grained pyrite	119.5	123.0	14358		89.1
		-118.5' - schistosity CA=63					
		-119.5' to 121.1' - quartz vein with chloritic inclusions at 120.7' to 120.8'					
		-119.5' to 123.0' - 50% quartz 50% C.T.S.					
		-122.6' - contact CA-35 irregular	123.0	128.0	14359		92.061
			128.0	133.0	14360		95.066
122.6	221.7	QUARTZ VEIN	133.0	138.0	14361		99.415
		-milky white quartz with chloritic talcose schist inclusions at	138.0	143.0	14362		97.847
		124.0' to 124.55'; 124.6' to 125.4'; 127.7' to 128.3'; 129.1' to	143.0	148.0	14363		99.818
		129.8' (with granitic inclusions at 129.6' to 129.75'); 130.7' to	148.0	153.0	14364		99.815
		131.0'; 132.7'; 137.1 to 137.3'; 140.5' to 141.0' (with 1% to 2%	153.0	158.0	14365		99.846
		fine grained pyrite); 158.2' to 158.4' (carbonate chloritic talcose	158.0	163.0	14366		99.864
		schist);	163.0	168.0	14367		99.926
		-165.4' to 167.2' - sample to G.L. pure milky white quartz	165.0	173.0	14368		99.823
		-181.5' to 183.5' - sample to G.L. pure milky white quartz	173.0	178.0	14369		99.864
		-184.2' - pale green mica inclusion	178.0	184.7	14370		99.089

FROM (ft)	TO (ft)	UNIT/DESCRIPTION	FROM (ft)	TO (ft)	SAMPLE NO.	LENGTH (ft)	SiO2 %
		-184.7' to 186.4' - medium grey, fine grained volcanic tuff CA=80 and 40					
		-186.4' to 187.2' - medium grey tuff inclusions and wispy chloritic	187.0	193.0	14371		96.971
		-187.2' to 187.6' - emerald green chrome mica flecks	193.0	198.0	14372		99.885
		-191.7' to 191.85' - chloritic volcanic inclusions	198.0	203.0	14373		99.809
		-192.6' to 192.85' - chloritic volcanic inclusion with green chrome	203.0	208.0	14374		91.269
		-191.15' to 196.3' - patches and wisps of chrome mica					
		-205.1' - carbonate mass with chrome mica	208.0	213.0	14375		99.24
		-205.4' to 207.7' - fine to medium grained, greyish green	213.0	218.0	14376		99.916
		metavolcanic inclusion with white carbonate patches on contacts and minor chrome mica flecks	218.0	221.7	14377		99.02
		-quartz veinlets at 205.9' to 206.4' 1" wide, low angle to CA;					
		-206.9' to 207.3' irregular quartz veinlet; 1" at 207.5' CA=50					
221.7	238.0	MAFIC METAVOLCANICS TO CHLORITIC SCHIST					
		-fine grained, black to greyish black green, with greyish to grey buff stretched fragments, scattered fine grained pyrite					
		-223.0' - schistosity CA=74 to 75					
		-223.6' to 224.0' - quartz veinlet with minor carbonate					
		-229.0' to 238.0' - grading into chloritic schist					
		-227.0' to 227.3' - quartz veinlet CA=53					
		-230.2' to 230.7' - quartz veinlet with chloritic wisps CA=58					
		-235.55' to 235.75' - quartz veinlet CA=70					
238.0	251.8	QUARTZ VEIN	238.0	243.0	14432		98.323
		-whitish with orange to orange-red carbonate, 10% to 20%	243.0	248.0	14433		98.941
		-chloritic inclusions about 1%	248.0	251.8	14434		N/S
		-quartz whitish to greyish white					
251.8	288.0	CHLORITIC SCHIST					
		-fine grained, black green, carbonated wisps and patches, minor 2" to 4" irregular quartz carbonate veinlets, scattered to trace pyrite, fine grained					
		-272.0' - 1" mud seam					
		-272.9' - 1" mud seam					

FROM : (ft)	TO : (ft)	UNIT/DESCRIPTION	FROM : (ft)	TO : (ft)	SAMPLE : NO.	LENGTH : (ft)	SiO2 : %
		-273.7' to 277.45' - LOST CORE					
		-287.5' - 1" mud seam					
288.0		END OF HOLE					

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FROM (ft)	TO (ft)	UNIT/DESCRIPTION	FROM (ft)	TO (ft)	SAMPLE NO.	LENGTH (ft)	SiO2 %
0.0	5.0	CASING					
5.0	63.9	SILICIFIED GRANITE OR METAVOLCANICS					
		-fine grained, pinkish brown with sections of pale greenish buff (sericitic alteration), pale green fine grained to aphaneritic from 24.0' to 63.9'; overall 1% to 2% pyrite very fine grained to fine grained with local sections up to 3% to 5%					
		-4.5' to 5.6' - quartz vein with pink granitic inclusions					
		-7.0' to 8.6' - quartz vein with brownish to rusty brown staining on fractures CA=irregular and 50 at 8.6'					
		-20.5' to 21.0' - quartz vein breccia with granite fragments angular					
		-21.0' - crumbly core, possible shearing					
		-21.4' to 22.3' - greyish quartz vein with pink granite inclusions					
		-22.4' to 23.0' - quartz vein breccia with pink granite inclusions					
		-24.6' to 25.1' - quartz vein					
		-26.2' to 27.8' - quartz vein with numerous granitic inclusions					
		-37.9' to 39.3' - quartz vein minor inclusions granitic					
		-41.3' to 42.6' - quartz vein with minor inclusions	48.0	53.0	14435		87.233
		-63.9' - CONTACT irregular CA approx. 72	53.0	58.0	14436		86.601
			58.0	63.9	14437		88.867
63.9	68.0	QUARTZ VEIN	63.9	68.0	14378		89.791
		-white with about 5% chloritic metavolcanic inclusions					
		-68.0' - contact irregular					
68.0	82.5	CHLORITIC SCHIST					
		-fine grained, black to black green, schistose to contorted schistosity, wispy carbonate parallel to schistosity, trace pyrite					
		-68.0' to 71.7' - carbonated, contorted schistosity					
		-69.3' to 71.2' - numerous 1" to 2" quartz and/or quartz carbonate contorted stringers					
		-71.7' to 82.5' - black green, chloritic schist with contorted to krinkled schistosity, locally uncontrotd					

FROM (ft)	TO (ft)	UNIT/DESCRIPTION	FROM (ft)	TO (ft)	SAMPLE NO.	LENGTH (ft)	SiO2 %
		81.5' schistosity CA=50					
82.5	117.0	QUARTZ VEIN	82.5	86.5	14379		98.902
		-whitish to greyish quartz vein with chloritic schist metavolcanic	86.5	90.5	14380		98.097
		inclusions, generally barren of sulphides	95.5	100.5	14381		98.229
		-82.5' to 90.5' - 2% to 3% chloritic schist inclusions about 1/4"	102.3	106.9	14382		96.309
		in vein					
		-90.5' - contact CA=80 to 85	108.0	113.3	14383		97.69
		-90.5' to 95.5' - carbonated chloritic schist	114.5	117.0	14384		98.669
		-95.5' - contact irregular CA approx. 80					
		-95.5' to 100.5' - Quartz vein with 2% to 3% chloritic schist					
		inclusions					
		-98.8' to 99.2' - chloritic volcanic inclusion					
		-100.5' to 102.3' - contorted chloritic schist, both contacts					
		irregular					
		-102.3' to 106.9' - greyish quartz vein with 5% chloritic schist					
		inclusions					
		104.5' to 106.15' - pinkish granitic inclusions with chlorite					
		about 30% to 35% of core					
		106.9' - contact irregular					
		-106.9' to 108.0' - chloritic schist with 1% to 2%, 1mm euhedral					
		pyrite					
		-108.0' to 113.3' - quartz vein with chloritic inclusion at 109.0'					
		109.5'					
		-113.3' to 114.5' - chloritic schist with irregular 1" quartz					
		stringers and 1% fine grained pyrite (50% quartz/50% volcanics)					
		114.4' to 117.0 - quartz vein					
		117.0' - contact CA=40					
117.0	152.1	CHLORITIC SCHIST					
		-fine grained, greyish black green to black green, carbonated,					
		contorted and krinkled schistosity, overall scattered to <1%					
		fine grained pyrite locally 1/8" blebs and up to 1% to 2% fine					
		grained pyrite.					
		-<1% quartz veinlets and stringers from 3/4" to 3" wide, some					

FROM (ft)	TO (ft)	UNIT/DESCRIPTION	FROM (ft)	TO (ft)	SAMPLE NO.	LENGTH (ft)	SiO2 %
		krinkled, CA range from 25 to 80					
152.1	194.8	QUARTZ VEIN					
		-milky white with chloritic schist inclusions to greyish green to greyish black green metavolcanic inclusions, barren of sulphides					
		-152.1' - contact irregular CA=45 to 50	152.1	157.0	14385		98.398
		-152.1' to 157.0' - <1% chloritic inclusions at 152.1' to 152.8'	157.0	162.0	14386		99.492
		-157.0' to 162.0' - quartz vein with chloritic schist and carbonated inclusions at 159.8' to 160.3'	162.0	167.7	14387		98.756
		-163.0' to 163.1' - chloritic schist band	169.0	171.4	14388		95.001
		-167.6' to 168.4' - carbonated chloritic schist, both contacts CA=40	173.7	178.0	14389		99.704
		-169.1' - 1/2" chloritic volcanic inclusion	178.0	183.0	14390		99.914
		-170.8' to 171.1' - chloritic volcanic inclusion					
		-171.4' to 173.7' - carbonated chloritic tuffaceous metavolcanic inclusion	183.0	188.0	14391		99.427
		-173.7' - quartz vein contact CA=45	188.0	191.8	14392		97.494
		-173.7' to 187.6' - Quartz vein - milky white, no inclusions	191.8	194.8	14393		95.596
		-188.0' to 191.8' - quartz vein with inclusions approx. 20% of core:					
		-190.3' to 191.2' and 191.6' to 191.8' volcanic inclusions					
		-191.8' to 194.8' - quartz vein with 25% to 30% inclusions					
		-194.8' - contact CA approx. 25					
194.8	198.9	MASSIVE MAFIC METAVOLCANICS					
		-fine grained, massive, greyish green to greyish black green, slightly carbonated, poorly developed schistosity, trace sulphides					
198.9	206.7	QUARTZ VEIN					
		-white with mafic volcanic inclusions	199.0	203.2	14394		93.745
		-198.9' - contact irregular CA approx. 20	202.3	206.7	14395		95.549
		-198.9' to 200.1' - about 40% mafic volcanic inclusions					
		-201.8' to 202.3' - mafic volcanic inclusion					
		-204.1' to 204.3' - mafic volcanic inclusion					
		-205.5' to 206.7' - low angle mafic volcanic inclusion with about 20% chloritic inclusions					
		-206.7' - contact CA=25					

FROM : (ft)	TO : (ft)	UNIT/DESCRIPTION	FROM : (ft)	TO : (ft)	SAMPLE : NO.	LENGTH : (ft)	SiO2 : %
206.7	212.3	MASSIVE MAFIC METAVOLCANICS					
		-as above, 3% of total 1" quartz stringers, trace pyrite					
212.3	222.7	QUARTZ VEIN	212.3	218.5	14396		99.513
		-milky white	220.2	222.7	14387		98.066
		-215.6' to 216.8' - sample to G.L.					
		-218.5' to 220.2' - mafic metavolcanic tuff inclusion					
		-222.7' - contact CA=85					
222.7	249.0	MAFIC METAVOLCANIC					
		-as above, possibly tuff to fine lapilli tuffaceous fragmental, gradual increase in chlorite content with depth, trace pyrite,					
		-223.4' to 224.1' - quartz carbonate veinlet with pinkish tint					
		-224.5' - 1/8" euhedral pyrite					
		-228.2' to 229.1' - quartz veinlet, CA=47 at 229.1'					
		-229.0' to 233.0' - gradual increase in chlorite					
		-234.8' to 235.2' - quartz veinlet CA approx. 80					
		-247.8' to 248.5' - quartz carbonate veinlet CA approx. 75					
		-249.0' - broken core, extreme increase in chlorite					
249.0	288.0	TALCOSE CHLORITIC SCHIST					
		-fine grained, talcose, black green, wispy carbonate parallel to straight and contorted schistosity, very soft, locally crumbly possibly representing fault zone					
		-258.4' to 258.8' - mud seam					
		-258.8' to 267.2' - LOST CORE					
		-267.2' to 271.3' - mud seam and broken crumbly core					
		-274.0' to 275.5' - LOST CORE					
		-275.5' to 276.0' - mud seam					
		-276.4' to 276.9' - low angle, fine grained, blood purple felsic intrusive and at 277.8'					
		-279.5' to 280.0' - blood purple felsic intrusive, contacts ground					
288.0		END OF HOLE					

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Project: ROSEVALE SILICA

Hole No.: RS-89-08
 Logged By: Kian Jensen
 Date: Oct. 2, 1989

Page 1 of 4

FROM (ft)	TO (ft)	UNIT/DESCRIPTION	FROM (ft)	TO (ft)	SAMPLE NO.	LENGTH (ft)	SiO2 %
0.0	11.0	CASING					
11.0	38.8	SILIFIED GRANITE OR VOLCANICS					
		-fine grained, pale greenish buff pink to buff pink, minor sections of sericitic alteration, 2% to 3% fine grained pyrite, occasional quartz stringer and veinlets about 10% of total unit					
		-26.3' to 27.5' - about 50% quartz stringers and veinlets					
		-28.3' to 29.95' - quartz vein with buff green inclusions 30%					
		-31.5' - 1 1/2" quartz stringer CA=20					
		-34.0' to 34.7' - fine grained to aphaneritic, pinkish					
		-34.7' to 35.3' - rusty yellow, crumbly core					
		-36.0' to 38.8' - fine grained, pinkish	36.0	38.0	14433		89.791
		-37.1' to 37.5' - irregular quartz stringer with chlorite, 1% to 2% fine grained pyrite, approx 1% chalcopyrite					
		-37.5' to 38.0' chlorite seams with <1% pyrite					
38.8	62.3	MAFIC TUFFACEOUS METAVOLCANICS					
		-fine grained, chloritic black green to carbonated medium brown massive, uniform, occasional fine lapilli size fragments, trace to scattered fine grained pyrite, poorly developed schistosity					
		-38.8' to 42.0' - blackish green					
		-48.4' to 52.0' - blackish green to dark grey					
		-56.3' to 60.2' - blackish green to blackish grey					
		-47.0' - schistosity CA=67					
62.3	67.5	QUARTZ VEIN	62.3	67.5	14398		96.929
		-milky white, barren of sulphides					
		-62.3' - contact CA=50					
		-63.2' to 63.5' - mafic metavolcanic inclusion					
		-67.5' - contact CA=36					

FROM (ft)	TO (ft)	UNIT/DESCRIPTION	FROM (ft)	TO (ft)	SAMPLE NO.	LENGTH (ft)	SiO2 %
67.5	69.1	MAFIC METAVOLCANICS -fine grained, contorted schistosity, medium brown to pale green with minor sericitic alteration, trace sulphides					
69.1	70.1	QUARTZ VEIN -greyish white, barren of sulphides and inclusions -69.1' - contact CA=70 -70.1' - contact CA=25					
70.1	70.2	MAFIC METAVOLCANICS -fine grained dark green, contorted schistosity					
70.2	72.9	DIABASE DIKE -aphaneritic, black, trace very fine sulphides, magnetic -contacts CA=40 at 70.2, CA=broken at 72.9'					
72.9	73.3	MAFIC METAVOLCANICS -as above contorted					
73.3	92.0	QUARTZ VEIN -73.3' to 78.8' - greyish white to whitish, barren of sulphides -73.3' - contact CA=35 contorted -73.3' to 74.7' - greyish white -75.2' to 75.8' - black green, chloritic schist inclusion -76.25' to 76.9' - chloritic schist inclusion -77.3' to 78.8' - chloritic schist inclusion -78.3' to 92.0' - white, barren -78.8' - contact CA=60 -83.9' to 84.2' - chloritic metavolcanic inclusion -89.5' to 90.2' - chlorite on fractures and small granitic inclusions - total about 70% quartz -92.0' - contact CA=40	78.8	84.0	14399		99.637
			84.0	88.0	14400		96.872
			88.0	92.0	14401		98.228
92.0	97.1	MAFIC CHLORITIC METAVOLCANIC -fine grained, chloritic, massive uniform, 2% to 3% fine grained					

FROM (ft)	TO (ft)	UNIT/DESCRIPTION	FROM (ft)	TO (ft)	SAMPLE NO.	LENGTH (ft)	SiO2 %
		pyrite occasional pyrite blebs up to 15%					
		93.0' - schistosity CA=58					
97.1	103.7	QUARTZ VEIN					
		-whitish, barren of sulphides					
		-97.1' to 99.0' - veining with granitic inclusions at 97.6' to 97.7'					
		-99.0' to 100.5' - granitic intrusive or fragment CA approx. 60					
		-100.5' to 101.5' - chloritic, contorted metavolcanics					
		-101.5' - contact CA=64 to 65					
		-101.5' to 103.7' - veining white					
		-103.7' - contact CA=45					
103.7	168.6	MAFIC METAVOLCANIC					
		-fine grained massive chloritic, medium to dark green					
		-scattered pyrite <1%, locally 1% to 2% 1/8" euhedral pyrite					
		-104.5' - schistosity CA=70					
		-107.0' to 108.0' - quartz veinlet with pinkish staining, 2% patchy:					
		bleb pyrite, contacts CA=40 irregular and 50, possible graphitic					
		-116.0' - schistosity CA=40					
		-117.5' to 119.35' - quartz vein, white					
		-117.5' - contact CA=57					
		-118.6' to 118.8' - mafic metavolcanic inclusion					
		-119.35' - contact CA=33					
		-120.6' to 122.6' - white quartz vein, barren					
		-120.6' - contact CA=50					
		-122.6' - contact CA=60					
		-123.8' - pyrite bleb					
		-123.0' to 138.0' - contorted, carbonated					
		-125.7' to 126.85' - white quartz vein, contacts CA=60 and 50					
		-136.6' to 138.0' - white quartz vein, contacts irregular					
		CA=70 and 85					
		-145.5' to 147.3' - white quartz vein, barren					
		146.3' to 147.3' - sample to G.L.					
		-153.6' to 154.6' - pinkish white quartz vein, contacts					

FROM (ft)	TO (ft)	UNIT/DESCRIPTION	FROM (ft)	TO (ft)	SAMPLE NO.	LENGTH (ft)	SiO2 %
		CA=irregular and 60					
		-154.6' to 156.0' - white quartz vein, contact CA=55 at 156.0'					
		-156.15' to 156.45' - whitish quartz veinlet, contacts CA=80 and 40					
		-157.55' to 158.4' - quartz vein contacts CA=40 and 65, whitish					
168.6	202.7	QUARTZ VEIN	170.0	175.6	14402		93.734
		-milky white barren of sulphides	175.6	178.6	14403		99.403
		-168.6' to 170.0' - irregular quartz stringers and veinlets with	178.6	184.5	14404		88.968
		50% to 55% mafic metavolcanic inclusions	184.5	189.0	14405		97.963
		-quartz vein with mafic metavolcanic inclusions as follows	189.0	194.0	14406		94.702
		-170.0' to 175.6' - 35% with chlorite	194.0	198.0	14407		97.464
		-175.6' to 178.6' - 2%	198.0	202.7	14408		99.028
		-178.6' to 184.5' - 50% to 60%					
		-184.5' to 189.0' - 5% to 10%					
		-189.0' to 194.0' - 3% to 5%					
		-194.0' to 198.0' - 2% to 3%, chrome mica patch at 196.5'					
		-198.0' to 202.7' - 3%					
202.7	208.2	MAFIC METAVOLCANICS as above					
		-203.5' - schistosity CA=70					
		-204.65' to 204.8' - quartz veinlet CA=55					
		-205.15' to 205.5' - quartz veinlet glassy white					
208.2	214.4	QUARTZ VEIN	208.2	214.4	14409		93.914
		-glassy, white, barren of sulphides					
		-208.2' - contact CA=50					
		-208.7' - 208.8' - chloritic metavolcanic inclusion					
		-210.8' to 211.9' - metavolcanic inclusion, contacts both CA=75					
		-214.4' - contact CA=56					
214.4	238.0	MAFIC METAVOLCANICS					
		-fine grained, chloritic, black green, as above, broken core with					
		occasional quartz stringers					
238.0		END OF HOLE					

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Project: ROSEVALE SILICA

Hole No.: RS-89-09
 Logged By: Kian Jensen
 Date: Oct. 2, 1989

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FROM : (ft) :	TO : (ft) :	UNIT/DESCRIPTION	FROM : (ft) :	TO : (ft) :	SAMPLE : NO. :	LENGTH : (ft) :	SiO2 : % :
0.0	3.0	CASING					
3.0		GRANITE					
		-fine grained, buff grey to buff to buff brown with minor pinkish brown to orange brown section, local sections medium grained					
		-1% to 2% fine grained pyrite					
		-3.0' to 4.8' - white quartz vein, contact CA=25 at 4.8'					
		-5.9' to 8.7' - 40% to 45% quartz stringers and veinlets					
		-8.7' to 11.1' - glassy white to greyish white quartz vein					
		-11.1' to 11.6' - 5% fine grained pyrite on fractures					
		-45.5' to 46.9' - pinkish quartz vein with scattered pyrite <1%					
		-59.5' to 61.2' - numerous quartz stringers about 25%					
		-61.2' to 98.0' - medium to coarse grained granite					
		-89.5' - 1/8" pyrite seam CA=30					
		-98.0' to 103.8' - fine grained buff brown					
		-103.8' to 107.7' - 1/4" to 1/2" low angle quartz stringer					
		-132.0' to 134.6' - mafic chloritic metavolcanic inclusion and quartz stringer, contacts CA=62 and 40					
		-134.6' - 5% to 7% pyrite on contact					
		-157.4' to 158.0' - low angle white quartz veinlet or stringer					
		-158.8' to 159.4' - white quartz carbonate veinlet CA=25					
		-159.4' to 160.6' - glassy greyish white low angle quartz stringer					
		-162.4' to 163.4' - glassy greyish white low angle quartz stringer					
		-175.0' to 178.0' - 1/4" to 1/2" low angle white quartz stringer					
		-178.1' to 178.4' - quartz veinlet with granitic inclusions					
		contacts CA=50					
		-188.3' to 188.5' - quartz veinlet CA=25					
		-201.2' - 1/2" low angle quartz stringer					
		-206.5' - 208.0' - pale pinkish and minor sericitic alteration					
208.0		END OF HOLE					

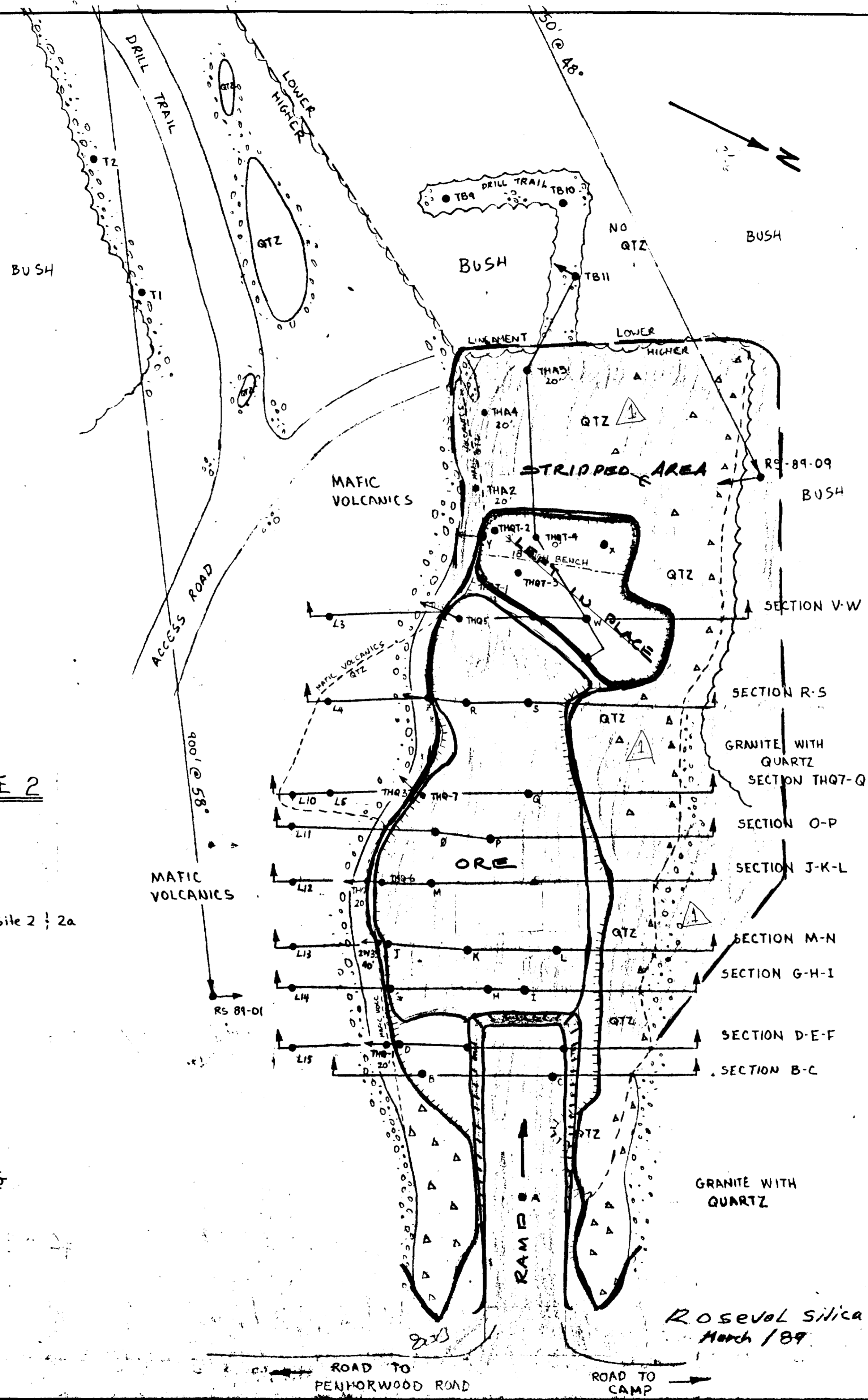
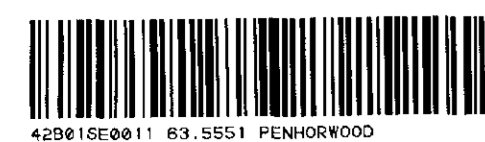
QUARRY SITE 2

MAP # rev. - Site 2 ; 2a

- LEGEND**
- T1 ● DRILL HOLE (VERTICAL)
 - OVERBURDEN
 - QTZ OUTCROP
 - △ BRECCIA
 - ▬ QUARRY WALL

Scale 1" = 30 feet

Sketch map prepared by
BEDROCK CONSULTING
for
ROSEVAL SILICA INC.
JULY 10, 1989



△ STRIPPED AREA

△ STRIPPED AREA

ROSEVAL SILICA INC.

TIONAGA SITE 2

1989 PROGRAM	SCALE 1"=30'
L. POU LIOT	DATE 89-10-30

Roseval silica
March 1989

QUARRY SITE 2

MAP # lev. - Site 2 ; 2a

LEGEND

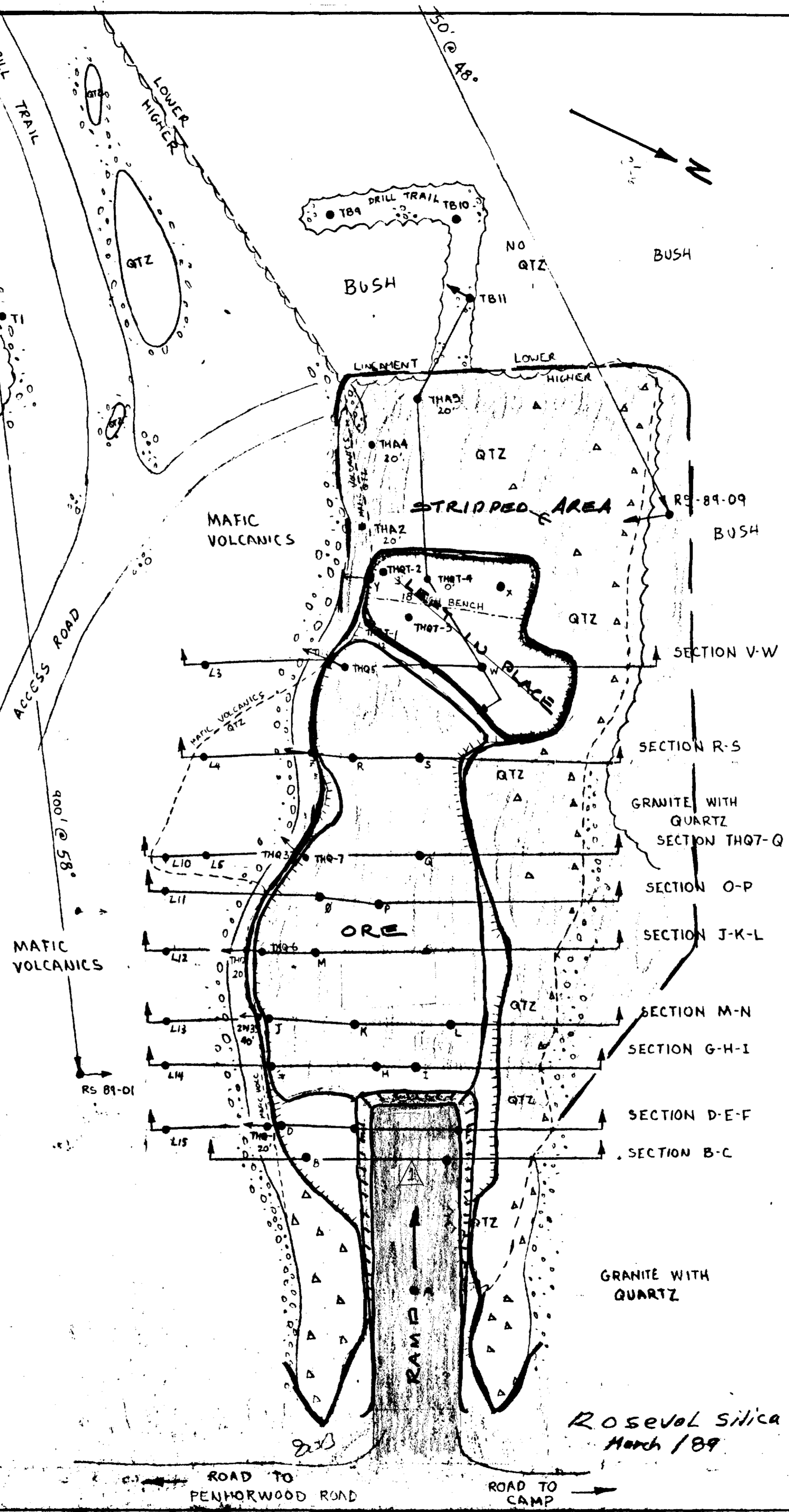
- T_v ● DRILL HOLE (VERTICAL)
- OVERBURDEN
- QTZ OUTCROP
- △ BRECCIA
- ▬ QUARRY WALL

Scale 1" = 30 feet

Sketch map prepared by
BEDROCK CONSULTING

for
ROSEVAL SILICA INC.

JULY 10, 1989



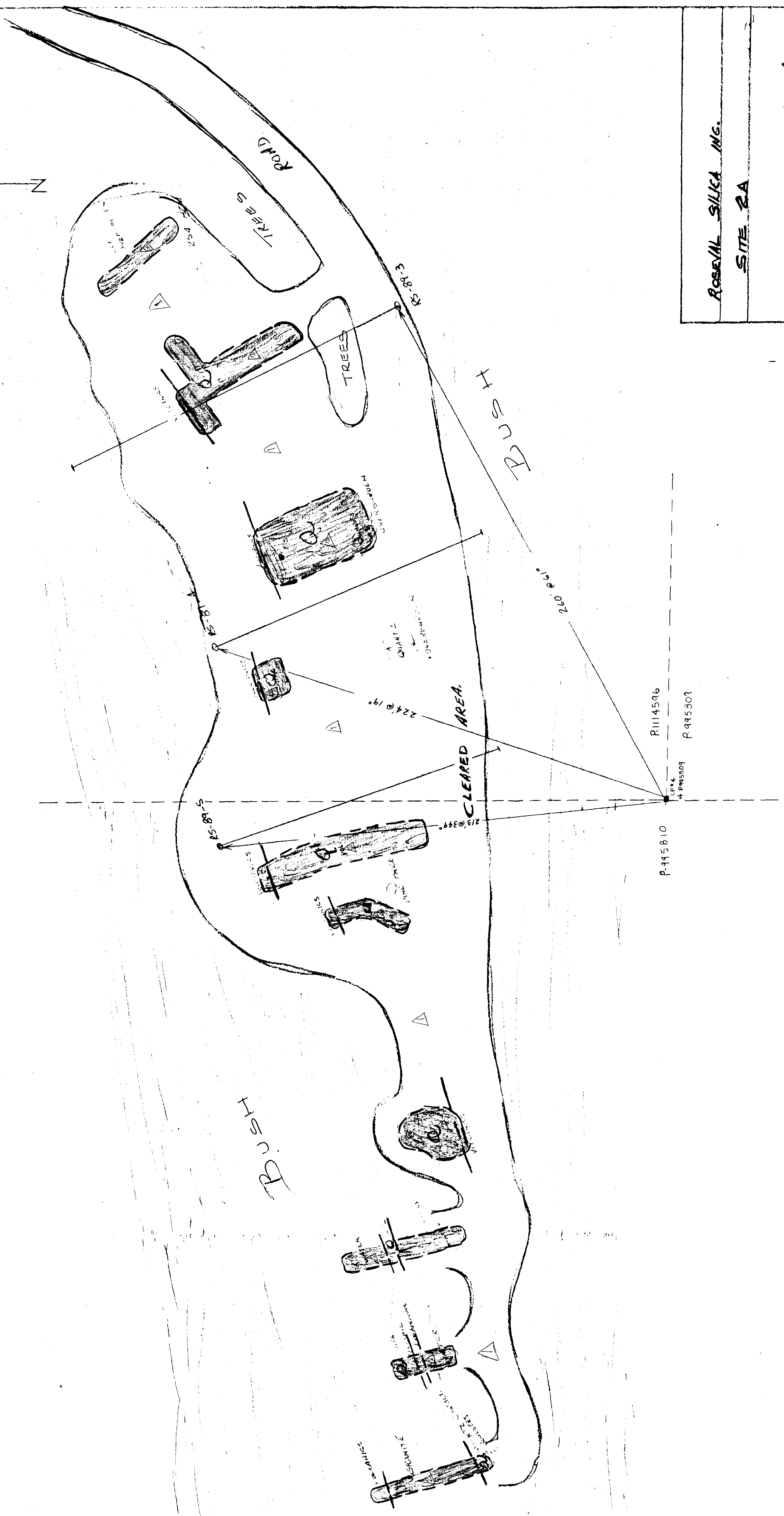
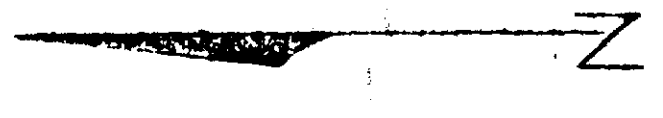
△ RAMP

Vol. 1 of 2
CMP 89-15 63.5551

ROSEVAL SILICA INC.	
TIONAGA SITE 2	
1989 PROGRAM	SCALE 1"=30'
L. POU LIOT	DATE 89-10-30

Roseval silica
March 1989

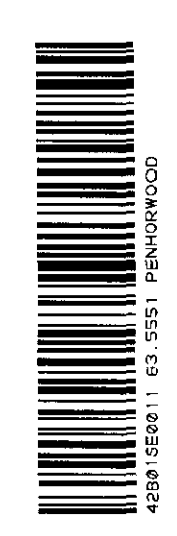




ROSEVAL SILICA MGS.
 SITE 2A
 SKETCH MAP OF TRENCHING
 SCALE 1:250
 DRAWN BY D. CARON
 DATE: 09-08-19

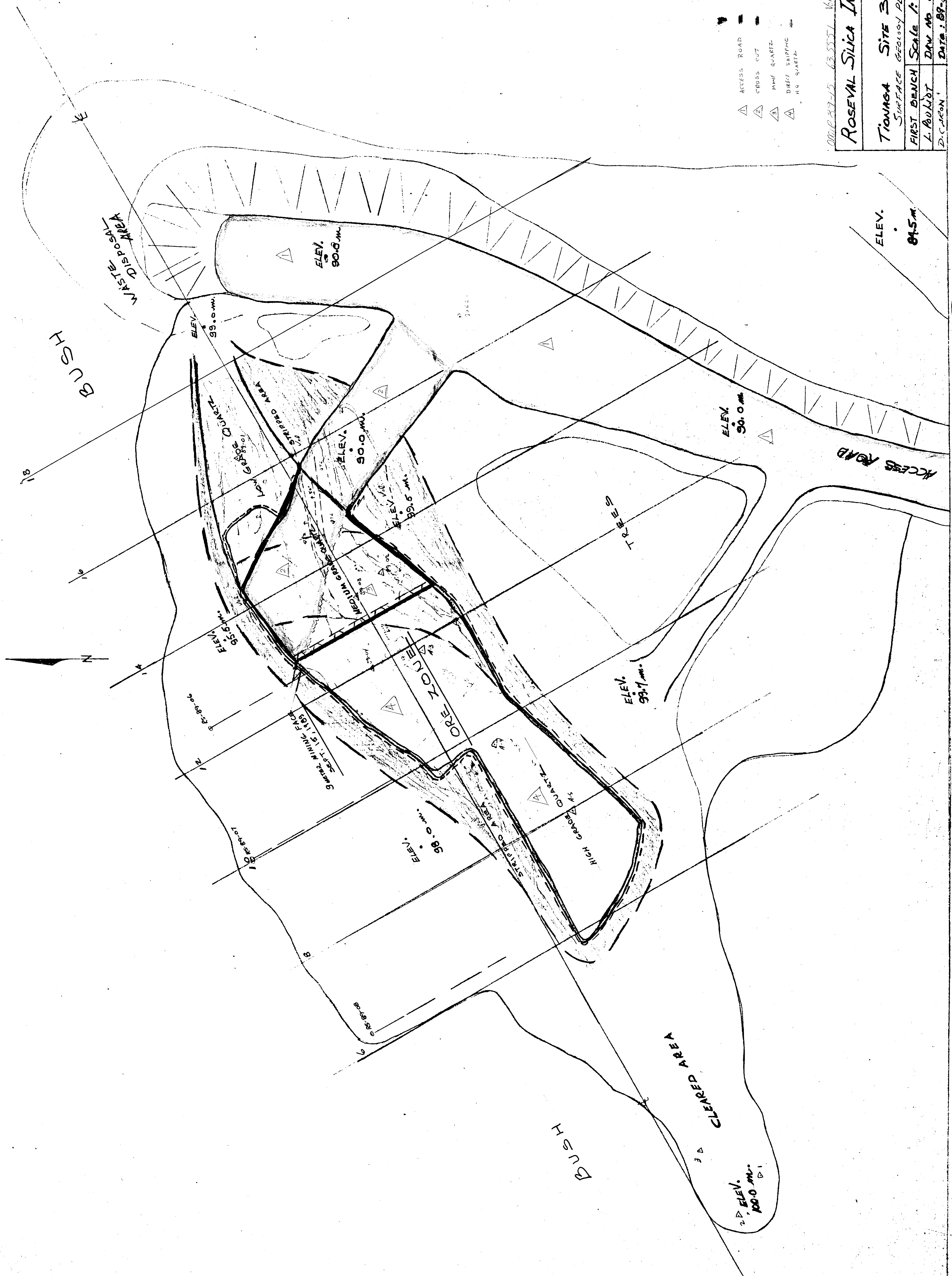
- △ STRIPPED AREA
- ▢ EXPLORATION TRENCH

OMP 89-15 63-5551
 Vol 1 of 2

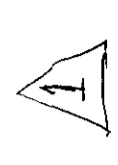


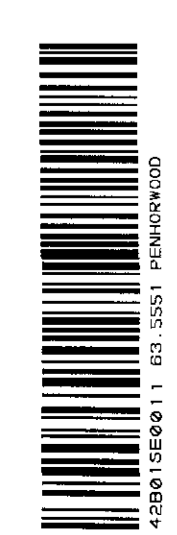
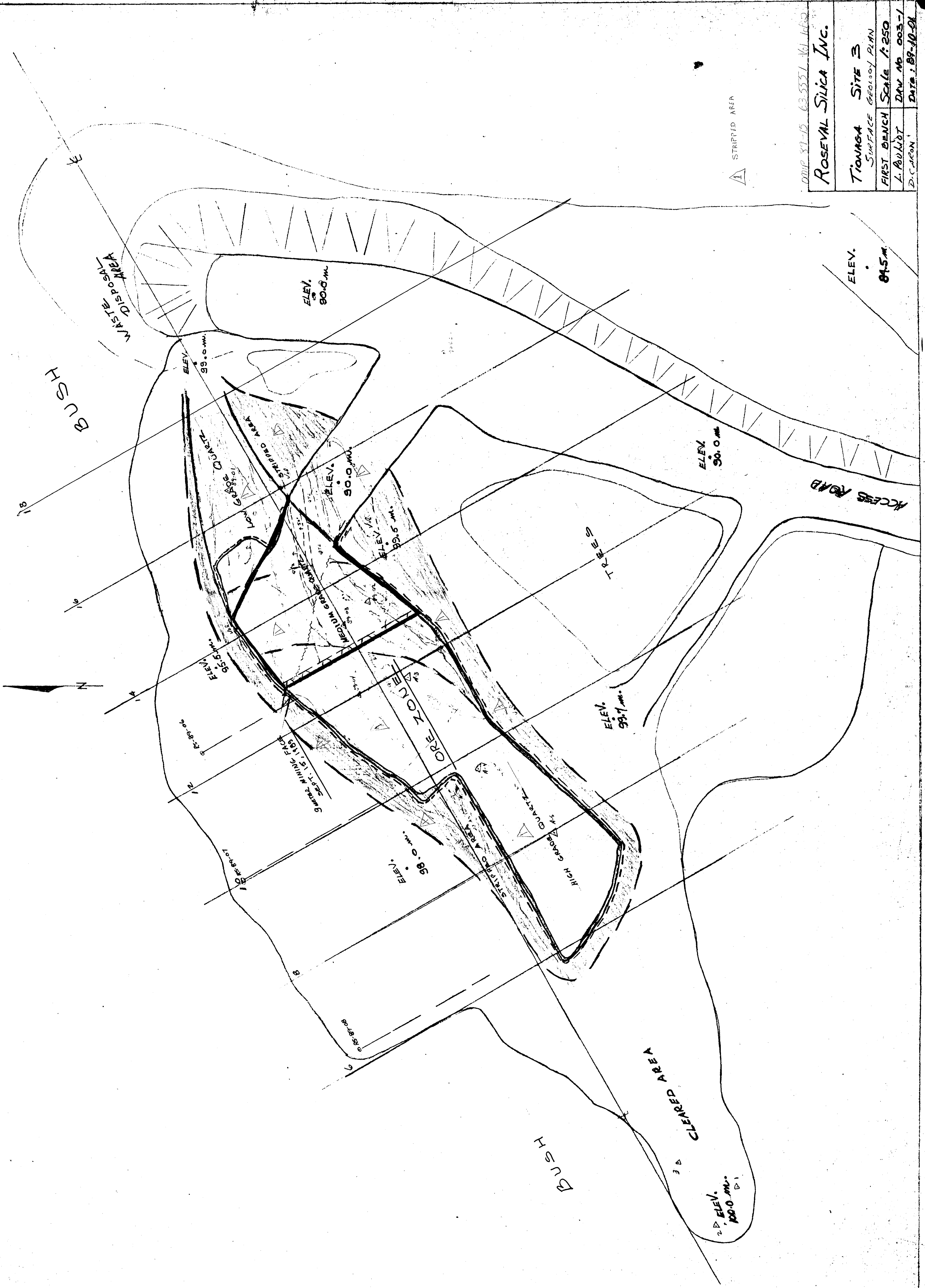
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ROSEVAL SILICA INC.
TIONAGA SITE 3
 SURFACE GEOLOGY PLAN
 FIRST BENCH SCALE 1:250
 L. BULLOT DRAW NO. 003-1
 D. COON DATE: 89-10-21

- ▲ ACCESS ROAD
- △ CROSS CUT
- △ MINE QUARTZ
- △ DIRECT SHIPPING
- △ H.R. QUARTZ



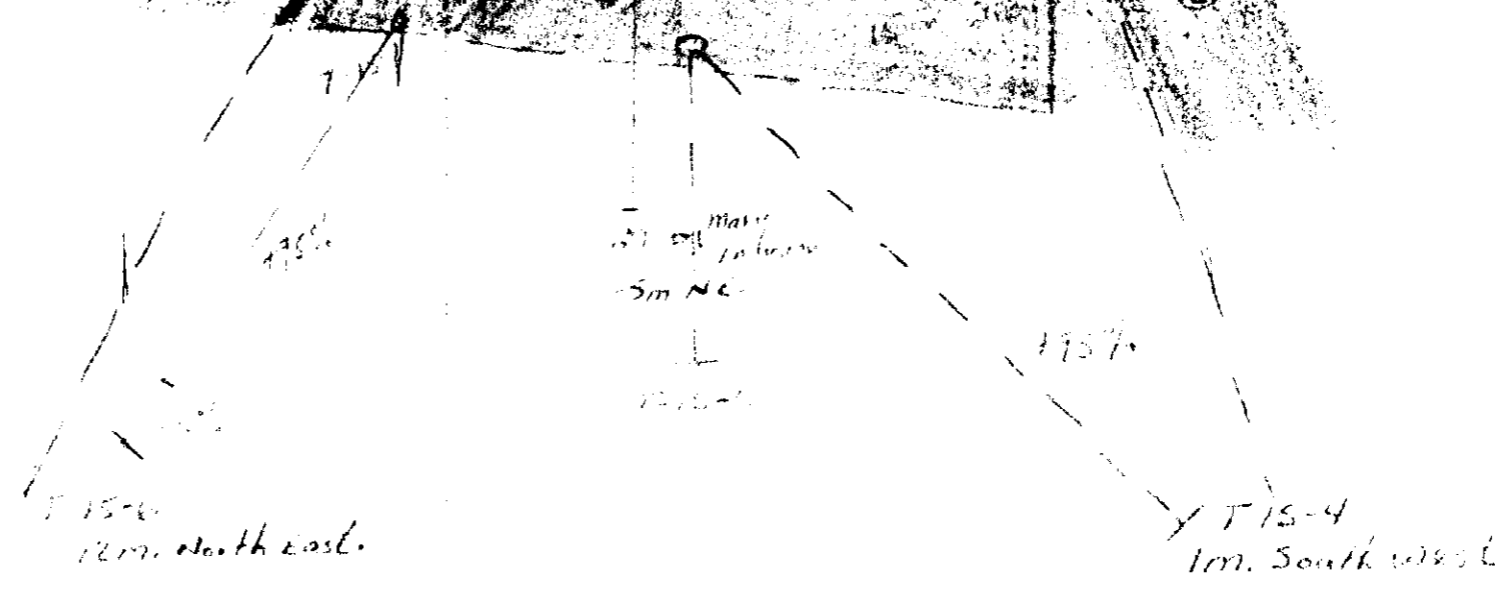
CAMP 87-15 63-5557 161 1450
ROSEVAL SILICA INC.
TIONAGA SITE 3
 SURFACE GEOLOGY PLAN
 FIRST BENCH SCALE 1:250
 L. BOULTON DRAW NO 003-1
 D. CARSON DATE: 09-10-01

 STRIPED AREA



100 m 1:1

70 m 1:1



- 1956-10
- ① = quartz
 - ② = walls

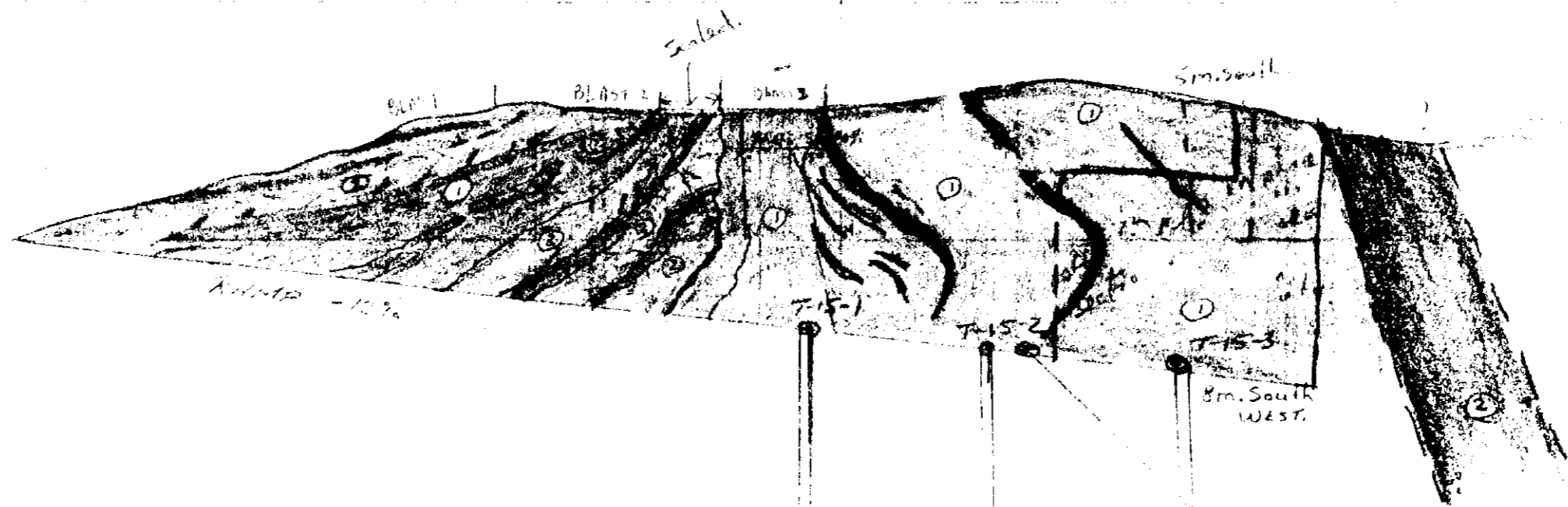
Vol 1 of 2
 OMIP 89-13 63-5551
 KOSOVA SLOVENIA
 SITE 5
 SECTION 16
 Scale 1:250



E

100 m. LL.

90 m. LL.



LEGEND

① - QUARTZ

② - WASTE

13% waste
10% waste
10% waste

Vol 1 of 2
OMIP 89-15 635551

SECTION 15

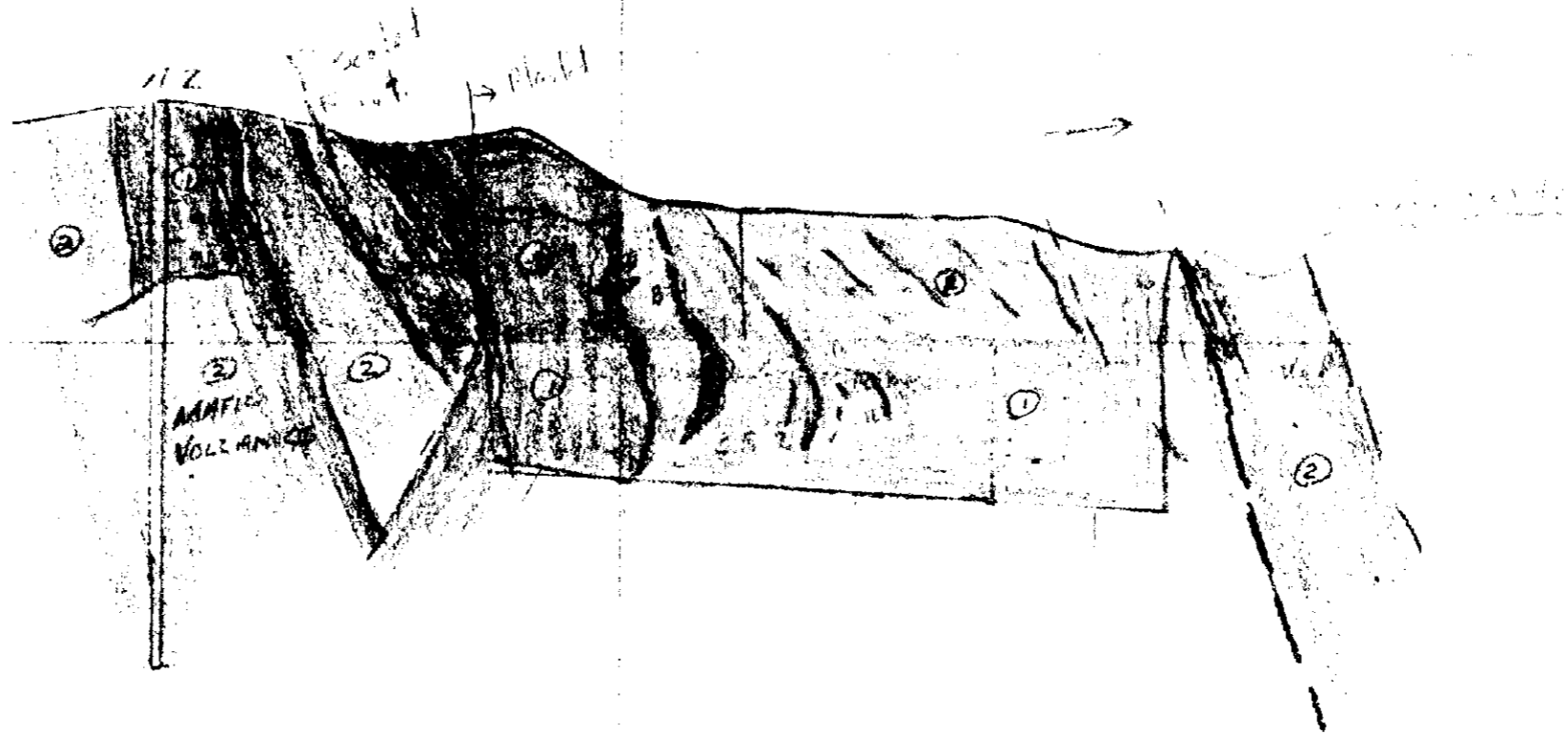


42B01SE0011 63.5551 PENHORWOOD

260

1/10/1985

W. J. ...



11Z
 ① KOLLANT
 ② KOLLANT

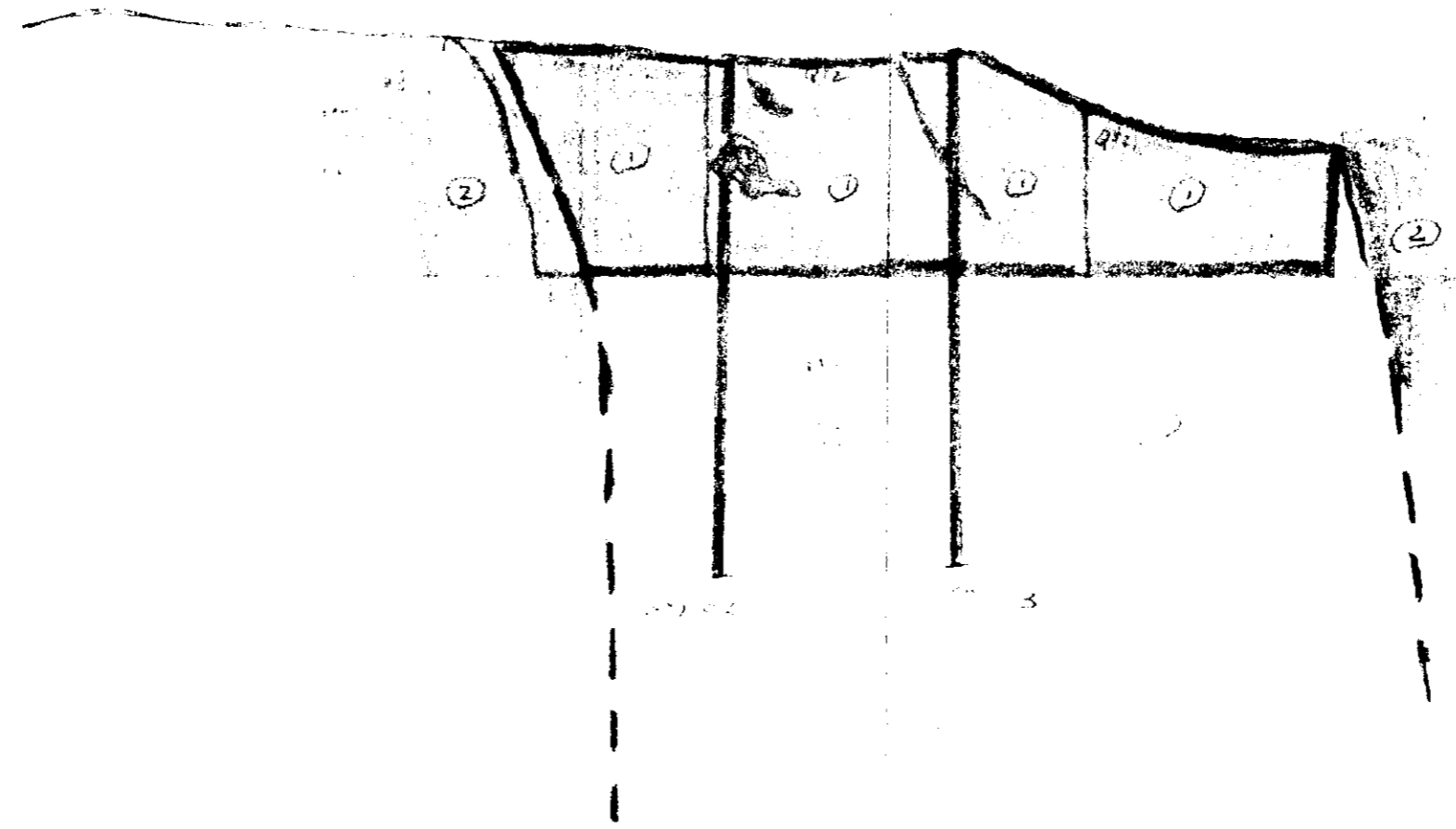
Vol. 1 of 2
 OMI P 89-15 (63.5551)
 Next with Serial 1111
 8/1/88
 1/1/88
 1/1/88



42801SE0011 63.5551 PENHORWOOD

100' E.L.

70m E.L.



LEGEND

① - QUARTZ

② - WASTE

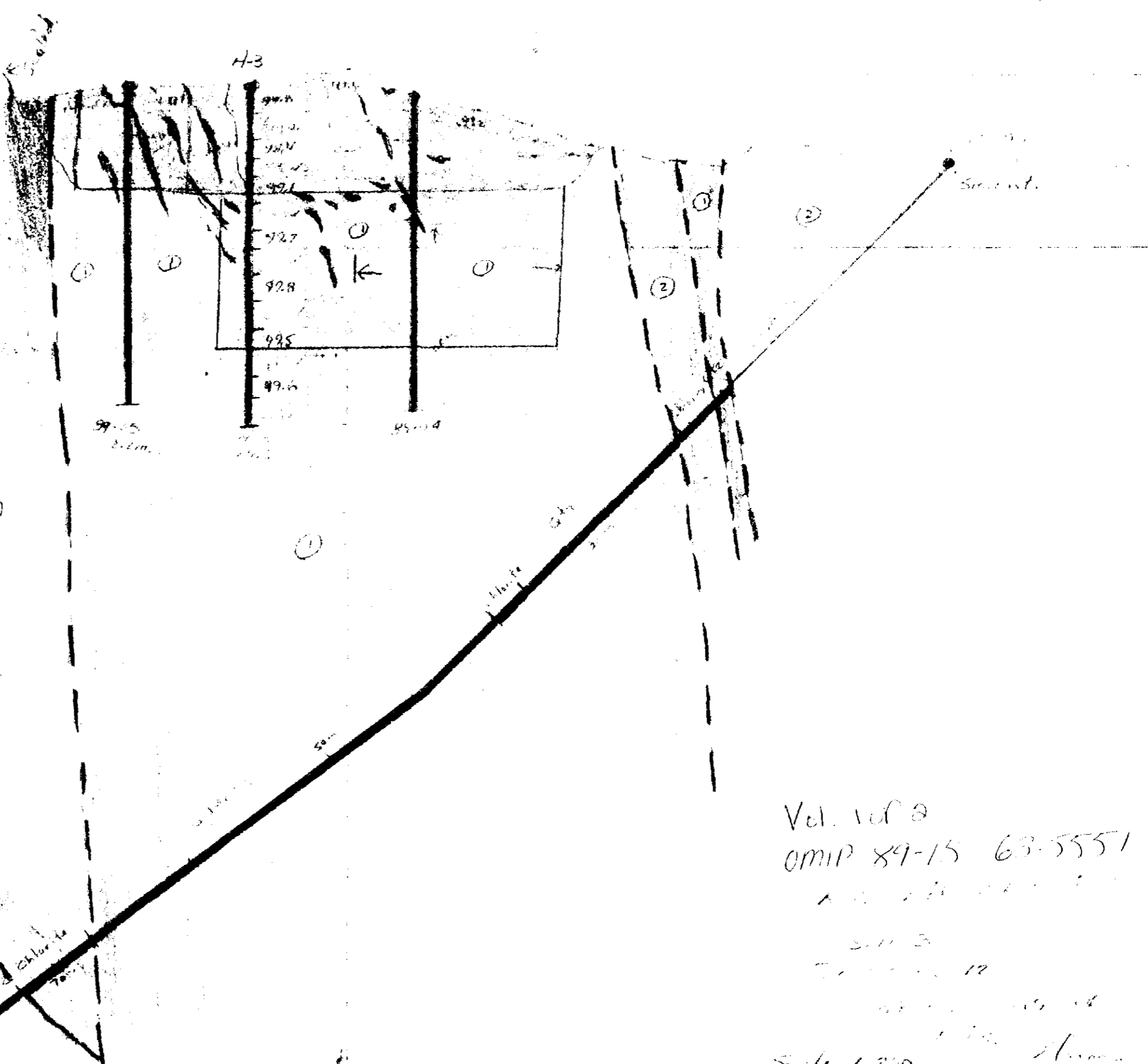
Vol. 1 of 2

OMIP 89-15 63.5551
ROSELIN 51214 100'

SECTION 13
81-10
J. Brown



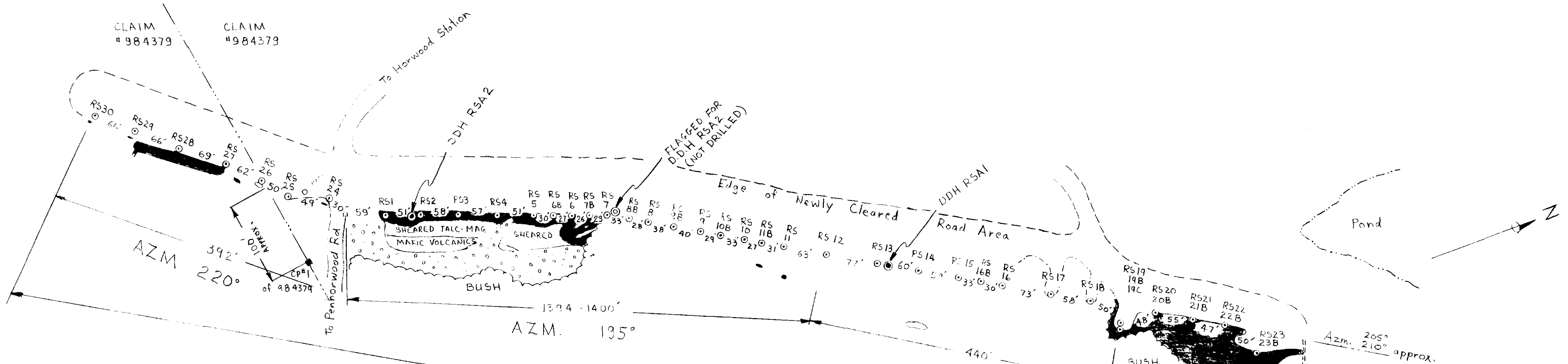
42B01SE0011 63.5551 PENHORWOOD



LEGEND
 ① QUARTZ
 ② WASTE

Vol. 1 of 2
 OMIP 89-15 63-5551
 A. H. ...
 S. H. ...
 ...
 Date: 1/20/80





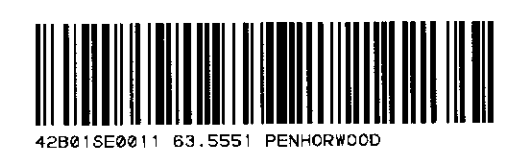
MAP #3 SITE #1 DRILL HOLE LOCATIONS

LEGEND

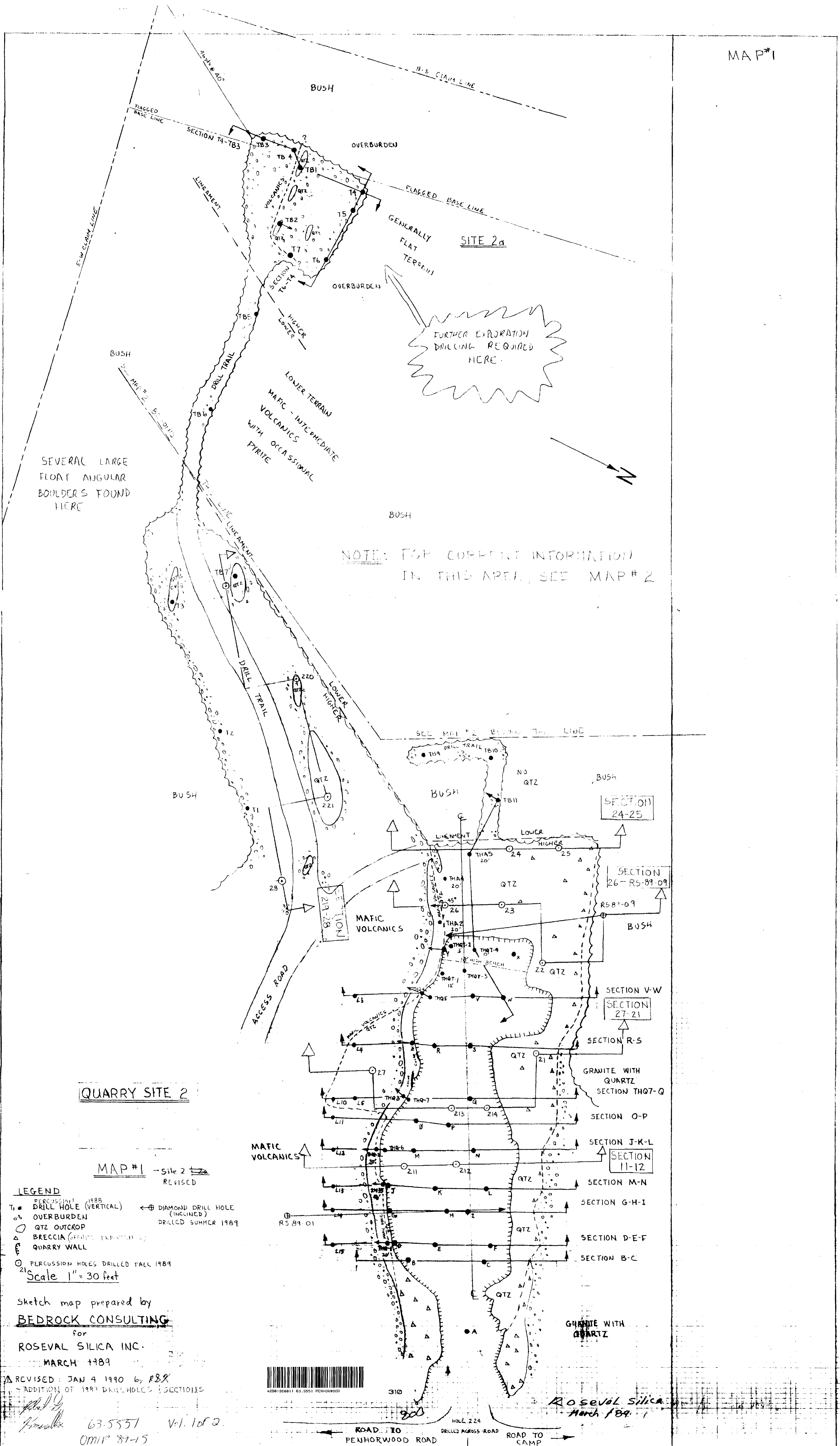
- ⊙ QUERTZ VEIN
- NEW QUARTZ OUTCROP
- - - EDGE OF CLEARING
- W BUSH
- - - TRAIL
- POND
- OVERBURDEN
- ⊙ DIAMOND DRILL HOLE DRILLED SPOTTED
- ⊙ RECONSTRUCTION (AIRTRACK) FILLED HOLE
- EXCAVATION TRENCH

Scale: 0 100 200 300 ft.

OMP 89-15 63.5551 Vol 1 of 2



Prepared for:
ROSEVAL SILICA
 MAP #3
 MAR 4/89.
 by:
 BEDROCK CONSULTING



SEVERAL LARGE FLOAT ANGULAR BOULDERS FOUND HERE

FURTHER EXPLORATION DRILLING REQUIRED HERE

NOTE: FOR CURRENT INFORMATION IN THIS AREA, SEE MAP #2

QUARRY SITE 2

MAP #1 - Site 2 REVISED

- LEGEND**
- T_v DRILL HOLE (VERTICAL) ← DIAMOND DRILL HOLE (INCINED) DRILLED SUMMER 1989
 - OVERBURDEN
 - △ QTZ OUTCROP
 - △ BRECCIA (GRANITE TERRAIN)
 - QUARRY WALL
 - PERCUSSION HOLES DRILLED FALL 1989
- Scale 1" = 30 feet

Sketch map prepared by
BEDROCK CONSULTING
 for
ROSEVAL SILICA INC.
 MARCH 1989

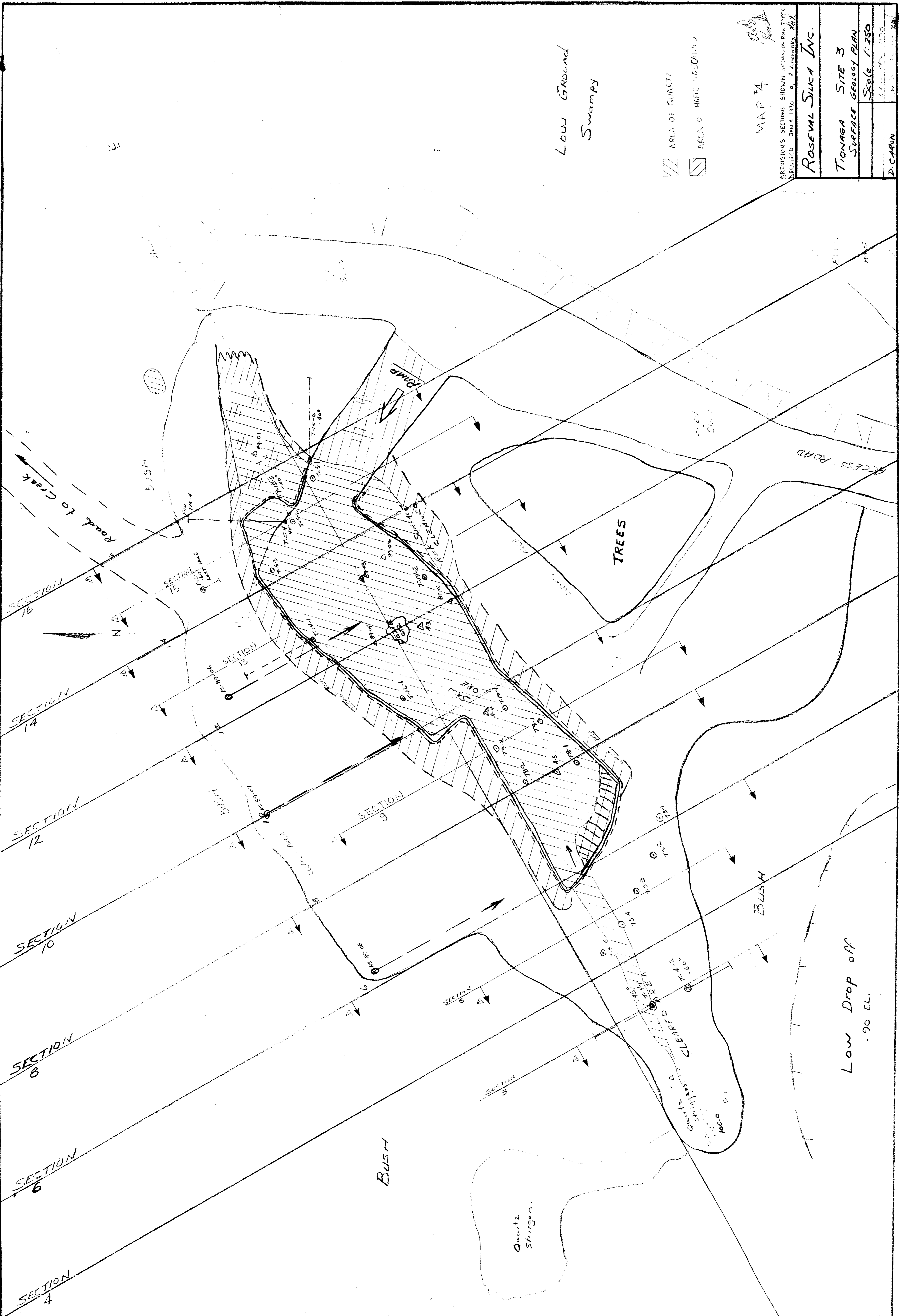


REVISED: JAN 4 1990 by R&X
 ADDITION OF 1989 DRILL HOLES & SECTIONS

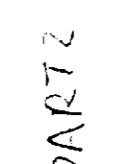
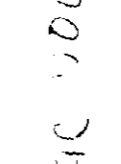
63-5551 Vol. 1 of 2
 OMI 89-15

Roseval Silica
 March 1989

ROAD TO PENHORWOOD ROAD ROAD TO CAMP



Low Ground
Swampy

-  AREA OF QUARTZ
-  AREA OF MAFIC VOLCANICS

MAP #4

REVISIONS - SECTIONS SHOWN WITHIN OF BULK TYPES
APPROVED JAN 4 1990 BY P. KOMAREK, ABX

ROSEVILLE SILICA INC.

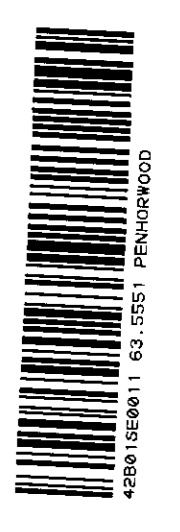
TONAGA SITE 3
SURFACE GEOLOGY PLAN

Scale 1:250

D. CARON

63-5557 Vol. 10 of 8

Low Drop off
90 EL.





SCALE 1:2400
 200 0 200 400 600 800
 1 INCH = 200 FEET

SURVEY BY: KIAN A. JENSEN
 REVISION BY: DATE: JAN. 15 - FEB. 9, 1990
 DATE:
 PROJECT NO.: 90-002
 Kian A. Jensen
 Exploration and Consulting Services

ROSEVAL SILICA INCORPORATED

MAGNETIC SURVEY

PENHORWOOD TOWNSHIP
 PORCUPINE MINING DIVISION, ONTARIO

LEGEND

INSTRUMENTS: GEOMETRICS G-816
 EDA OMNI IV

BASE MAGNETIC LEVEL: 58,000 Gammas

BASE STATION: BASE LINE AT LINE 0+00
 58,780 Gammas

CONTOUR INTERVAL: 50 Gammas

TOTAL NUMBER OF STATIONS: 621

FIGURE 6
 6010 87-15 635551 Vol. 2 of 2





SCALE 1:2400
 1 INCH = 200 FEET
 0 200 400 600 800
 SURVEY BY: KIAN A. JENSEN DATE: JAN. 15 - FEB. 9, 1980
 REVISION BY: DATE: FILE NO.:
 PROJECT NO.: 90-002
 KIAN A. JENSEN
 Exploration and Consulting Services

ROSEVAL SILICA INCORPORATED

MAGNETIC SURVEY

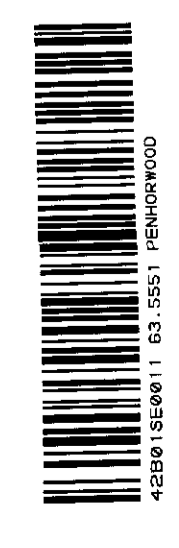
PENHORWOOD TOWNSHIP
 PORCUPINE MINING DIVISION, ONTARIO

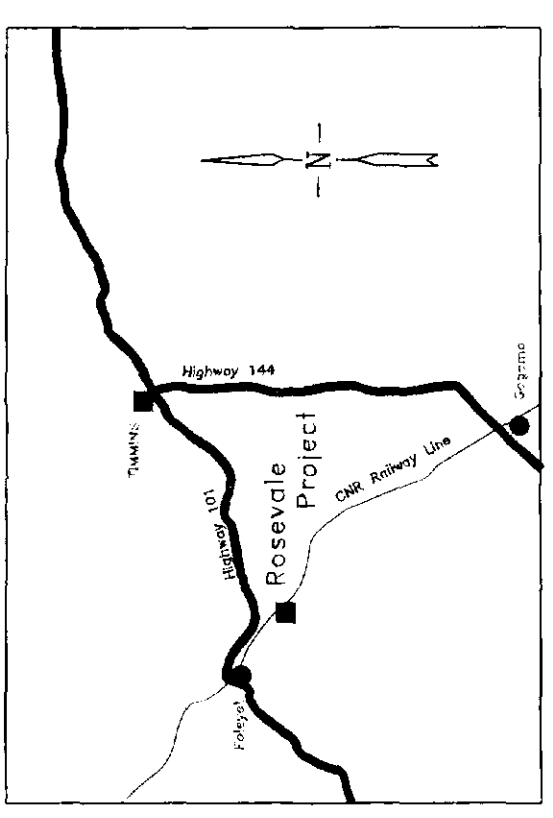
LEGEND

INSTRUMENTS: GEOMETRICS G-816
 EDA OMNI IV
 BASE MAGNETIC LEVEL: 58,000 Gammas
 BASE STATION: BASE LINE AT LINE 0+00
 38,780 Gammas
 CONTOUR INTERVAL: 50 Gammas
 TOTAL NUMBER OF STATIONS: 621

FIGURE 7

4011P 87-15 635557 Vol 2 of 2



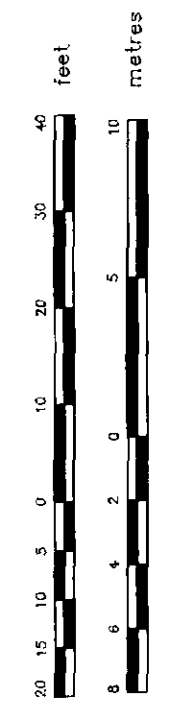


LEGEND

- Quartz
- Mafic Volcanics
- Quartz with Mafic Volcanic Inclusions
70% quartz with 20% mafic volcanic fragments
- Quartz Rubble

SYMBOLS

- Outcrop
- Trench
Numbers around trenches represent depth of overburden
- Diamond Drill Hole
- Percussion Drill Hole
- Quartz (qtz)
- Contact
- Strike and Dip of Contact

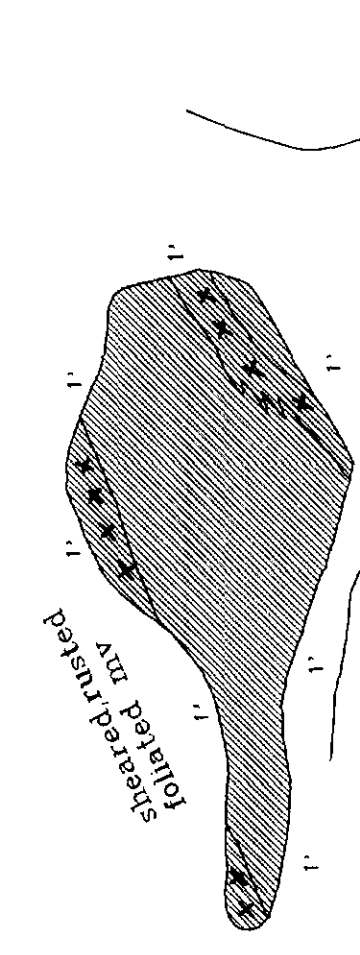
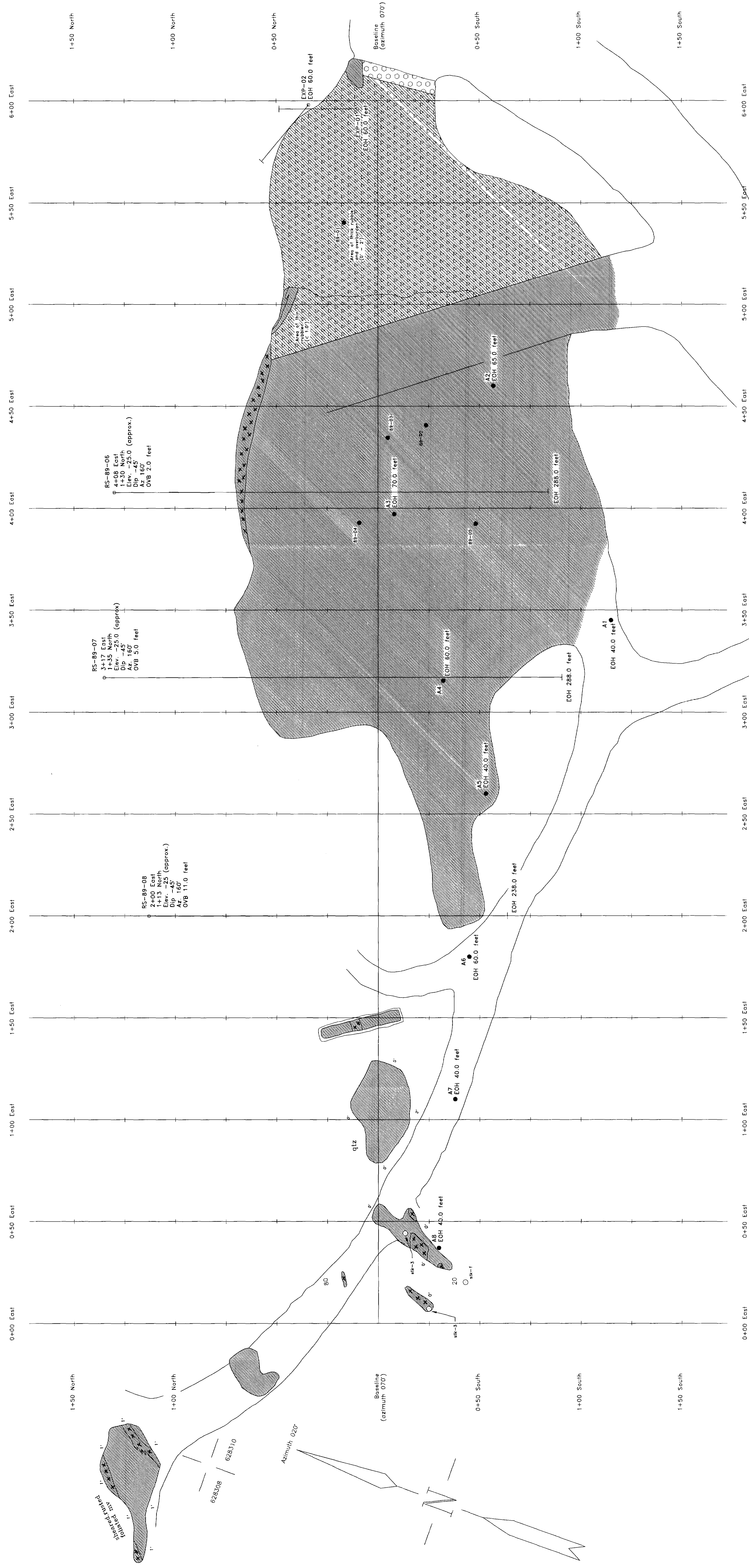


Mapping was completed by B.J. McKay for E.H. van Hees Geological Services in September of 1989.
The grid illustrated on this map does not exist on the ground. It is a grid used for the geological mapping and the drill holes.

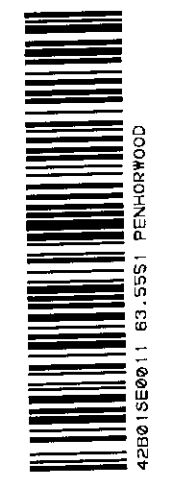
E.H. van Hees Geological Services Inc.
Rosevale, Silica Inc.

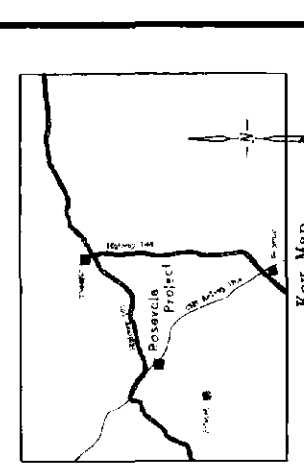
Drill Hole Locations and Geology for Site #3

Mining Division - Percupine, Dist. Cochran, Twp. Pebarwood
References: Map #7, Bedrock Cons. 1989 Province, Ontario
Drawn: B.J. McKay, Redrawn: J.R.W. Rev. Date: Jan. 1990
Scale: 1 inch = 20 feet



E.H. van Hees Geological Services Inc.
165 Tomrack Street
Timmins, Ontario
P4N 6P7





LEGEND

- Quartz
- Mafic Volcanics
- Quartz with Mafic Volcanic Inclusions
- Quartz - Mafic Volcanics

S Y M B O L S

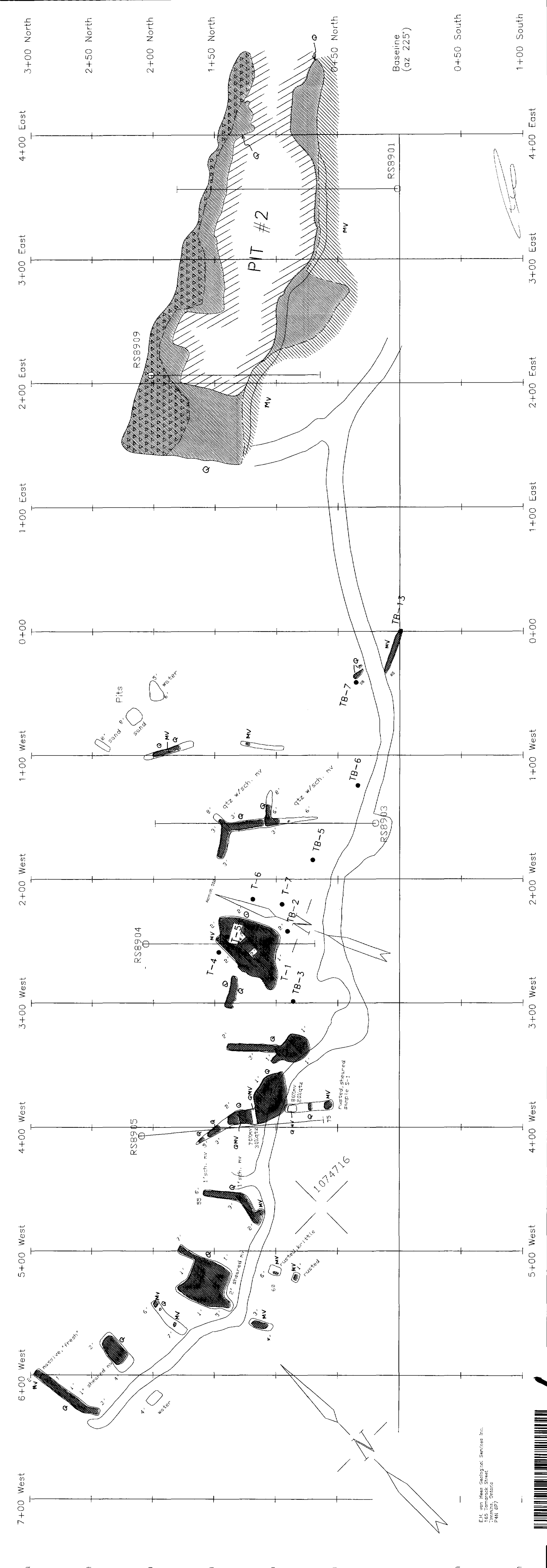
- Outercrop
- Trench
- Diamond Drill Hole
- Percussion Drill Hole
- Quartz
- Contact
- Strike and Dip of Contact

Mapping was completed by B.J. McKee for E.H. van Hoes Geological Services in September 1988. The map was prepared in order to be used in the geological mapping and the drill plans.

E.H. van Hoes Geological Services, Inc.
 Roseville, Alaska Inc.

Drill Hole Locations and Geology for Sites #2 and #2A

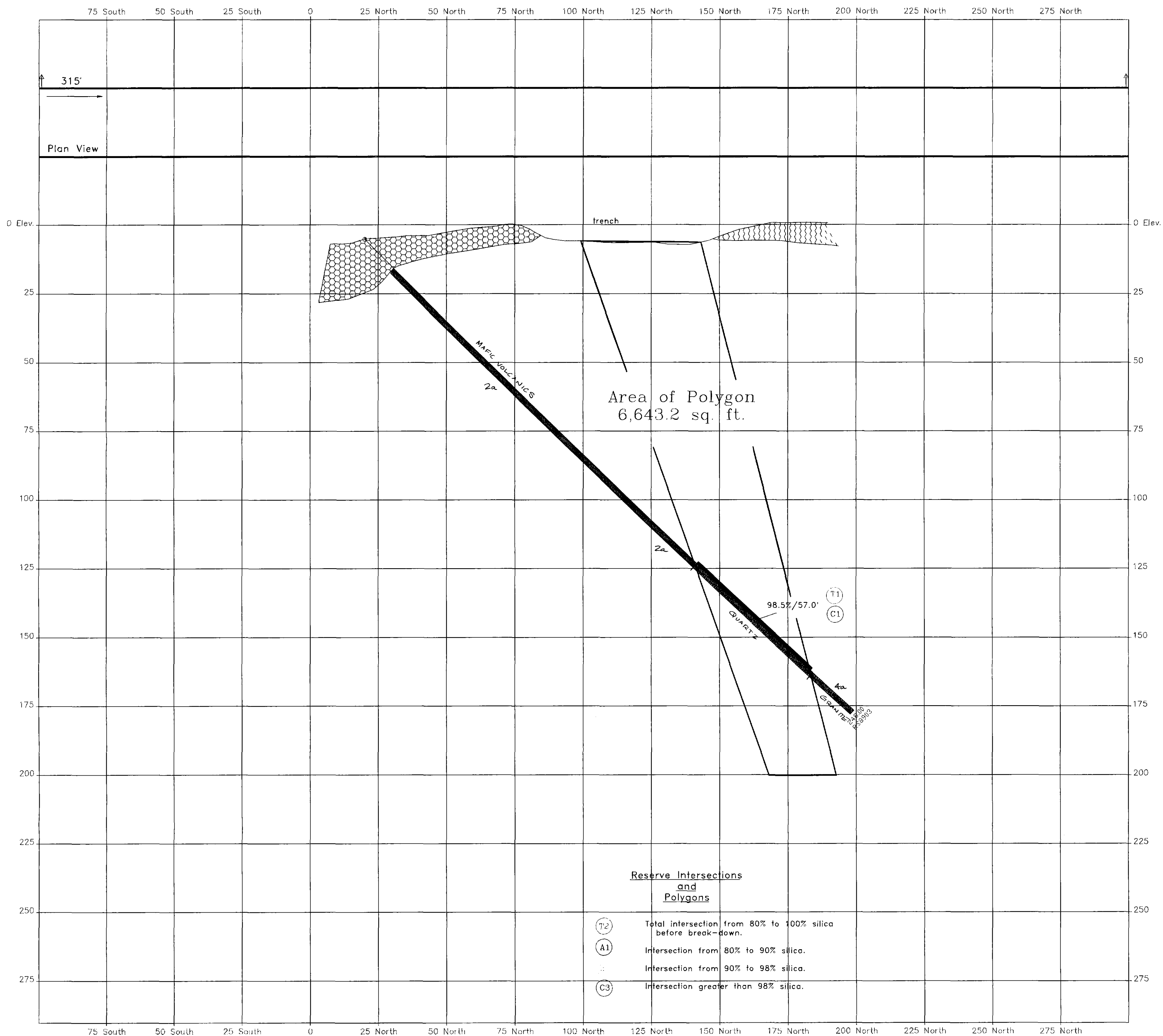
Scale: 1" = 200' (approx.)



E.H. van Hoes Geological Services, Inc.
 165 Tompback Street
 Anchorage, Alaska
 PAN 8P7



EMP 89-15 63.5551

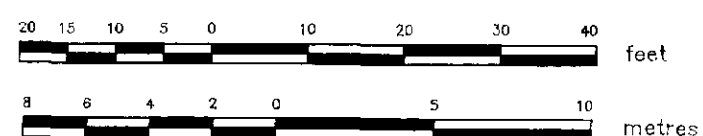


LEGEND

- Overburden
- Mafic Volcanics - Unsubdivided
- Granite - Unsubdivided
- Quartz
- Silicified Zone
- Diabase Dyke

Diamond Drill and Percussion Drill
Cross Section
Site #2A

Section Dip -90° Section Azimuth 315°



KEY

- | | | | |
|------|-------------------------------------|------|---------------------------------|
| 2aQV | Host/Quartz Veining Mix | 2b | Mafic Tuff |
| 1aS | Silicified Ultramafic Volcanic | 2bS | Silicified Mafic Tuff |
| 1bL | Sheared Mafic Volcanic | 4a | Granite |
| 2a | Mafic Volcanic | 4d | Diabase Dyke |
| 2aA | Altered Mafic Volcanic | 4f | Felsic Intrusive |
| 2aK | Chloritic Mafic Volcanic | ? | SKW - not recorded on 1989 Maps |
| 2aQV | Mafic Volcanic/Quartz Vein | OVB | Overburden/Casing |
| 2aS | Silicified Mafic Volcanic | QCV | Quartz-Carb. Vein |
| 2aSC | Silicified Sericitic Mafic Volcanic | QS | Quartz Stringer |
| TCS | Talc-Chlorite Schist | QV | Quartz Vein |
| | | QB | Quartz Breccia |
| | | SiZn | Silicified Zone |

E.H. van Hees Geological Services Inc.
Rosevale Silica Project

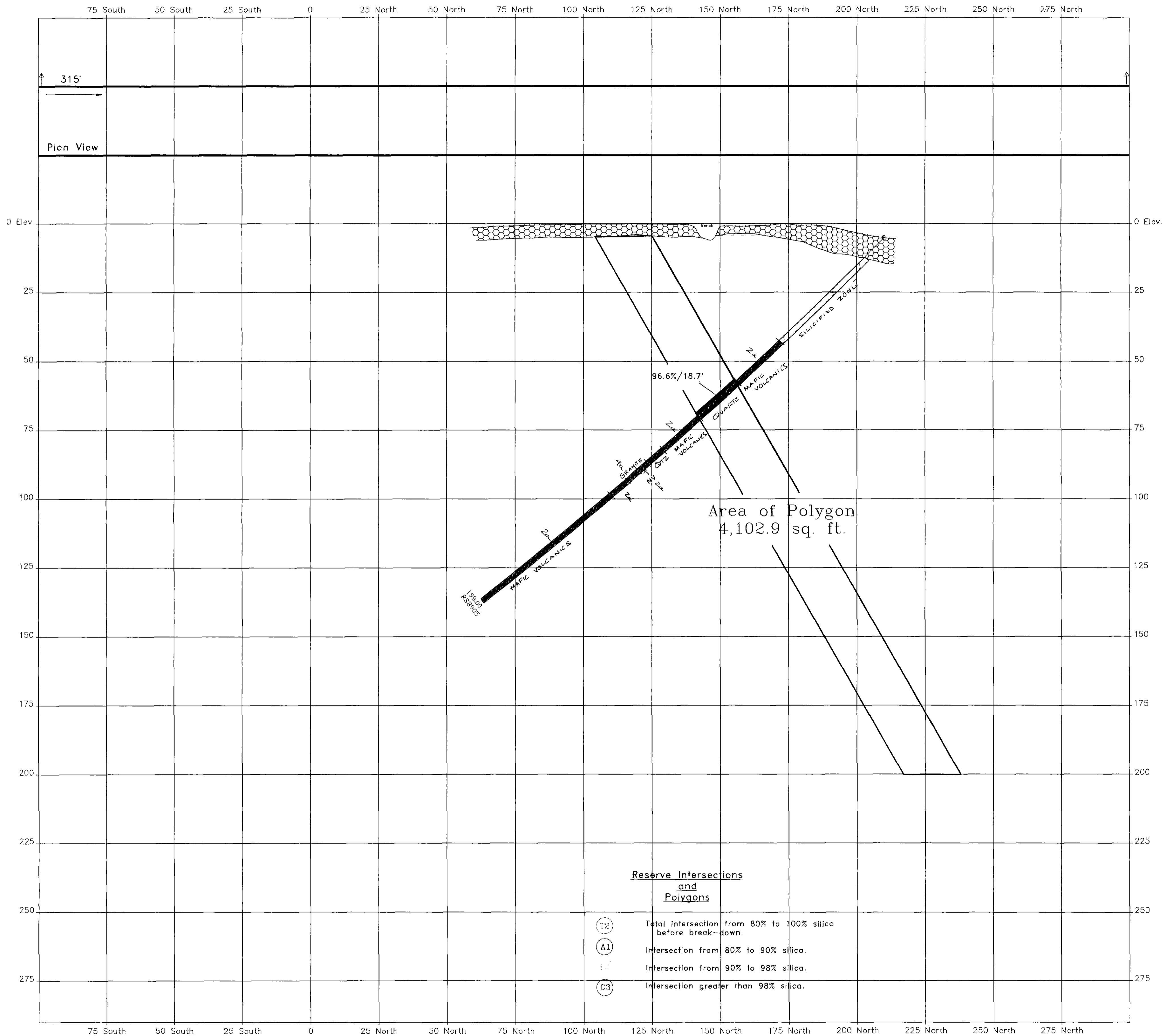
Cross Section
1+50 West
Intersections and
Polygon Data

Section Looking South-West

Mining Div.: Porcupine, Cochrane District Twp.: Penhorwood
References: Map #2, Bedrock Cons., 1989 Province: Ontario
Drawn: J. Wainsley Checked: J. Wainsley Date: January, 1990
Scale: 1 inch = 20 feet



428016E9011 63.5551 PENHORWOOD

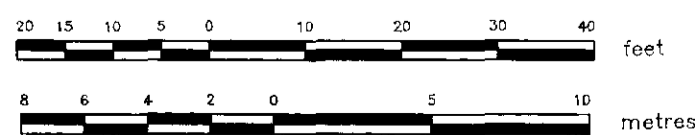


LEGEND

- Overburden
- Mafic Volcanics -Unsubdivided
- Granite -Unsubdivided
- Quartz
- Silicified Zone
- Diabase Dyke

**Diamond Drill and Percussion Drill
Cross Section
Site #2A**

Section Dip -90° Section Azimuth 315°



KEY

- | | | | |
|------|------------------------------------|------|---------------------------------|
| 7QV | Host/Quartz Veining Mix | 2b | Mafic Tuff |
| 1aS | Silicified Ultramafic Volcanic | 2bS | Silicified Mafic Tuff |
| 1bL | Sheared Mafic Volcanic | 4a | Granite |
| 2a | Mafic Volcanic | 4d | Diabase Dyke |
| 2aA | Altered Mafic Volcanic | 4f | Felsic Intrusive |
| 2aK | Chloritic Mafic Volcanic | ? | SKW - not recorded on 1989 Maps |
| 2aQV | Mafic Volcanic/Quartz Vein | OVB | Overburden/Casing |
| 2aS | Silicified Mafic Volcanic | QCV | Quartz-Carb. Vein |
| 2aSG | Silicif., Sericitic Mafic Volcanic | QS | Quartz Stringer |
| TCS | Talc-Chlorite Schist | QV | Quartz Vein |
| | | QB | Quartz Breccia |
| | | SiZn | Silicified Zone |

E.H. van Hees Geological Services Inc.

Rosevale Silica Project

**Cross Section
4+00 West
Intersection and
Polygon Data**

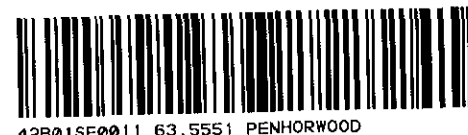
Section Looking South-West

Mining Div.: Porcupine, Cochrane District Twp.: Penhorwood

References: Map #2, Bedrock Cons., 1989 Province: Ontario

Drawn: J. Walmsley Checked: J. Walmsley Date: January, 1990

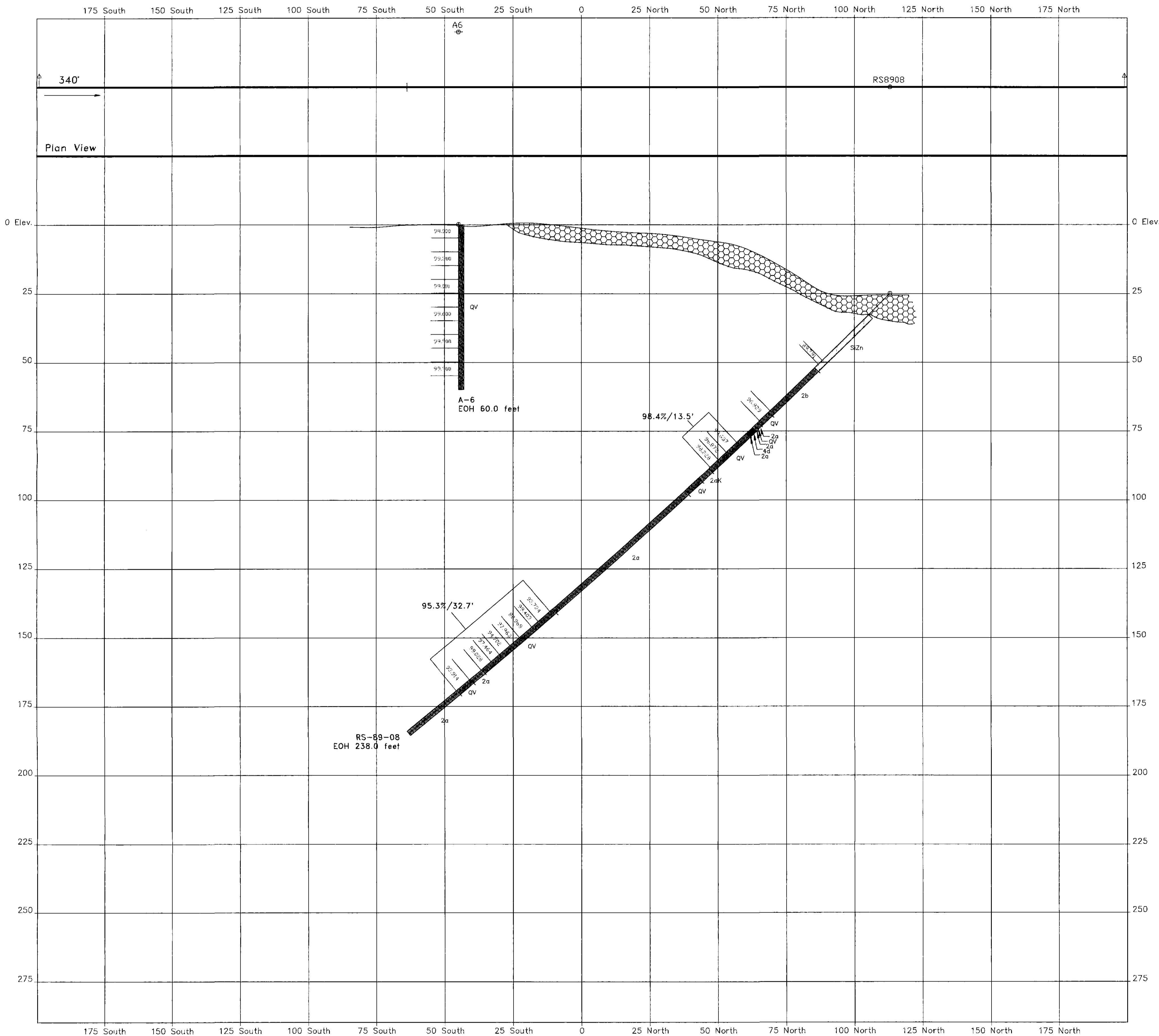
Scale: 1 inch = 20 feet



428015E011 63.5551 PENHORWOOD

400

MAP 89-15 63.5551

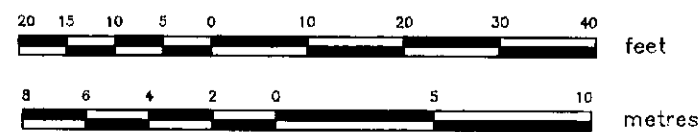


LEGEND

- Overburden
- Mafic Volcanics - Unsubdivided
- Granite - Unsubdivided
- Quartz
- Silicified Zone
- Diabase Dyke

**Diamond Drill and Percussion Drill
Cross Section
Site #3**

Section Dip -90° Section Azimuth 340°



KEY

- | | | | |
|------|-----------------------------------|------|---------------------------------|
| 7QV | Host/Quartz Veining Mix | 2b | Mafic Tuff |
| 1aS | Silicified Ultramafic Volcanic | 2bS | Silicified Mafic Tuff |
| 1bL | Sheared Mafic Volcanic | 4a | Granite |
| 2a | Mafic Volcanic | 4d | Diabase Dyke |
| 2aA | Altered Mafic Volcanic | 4f | Felsic Intrusive |
| 2aK | Chloritic Mafic Volcanic | ? | SKW - not recorded on 1989 Maps |
| 2aQV | Mafic Volcanic/Quartz Vein | OVB | Overburden/Casing |
| 2aS | Silicified Mafic Volcanic | OCV | Quartz-Carb. Vein |
| 2aSG | Silicif. Sericitic Mafic Volcanic | QS | Quartz Stringer |
| | | QV | Quartz Vein |
| | | QB | Quartz Breccia |
| | | SiZn | Silicified Zone |
| | | TCS | Talc-Chlorite Schist |

E.H. van Hees Geological Services Inc.

Rosevale Silica Project

Cross Section
2+00 East

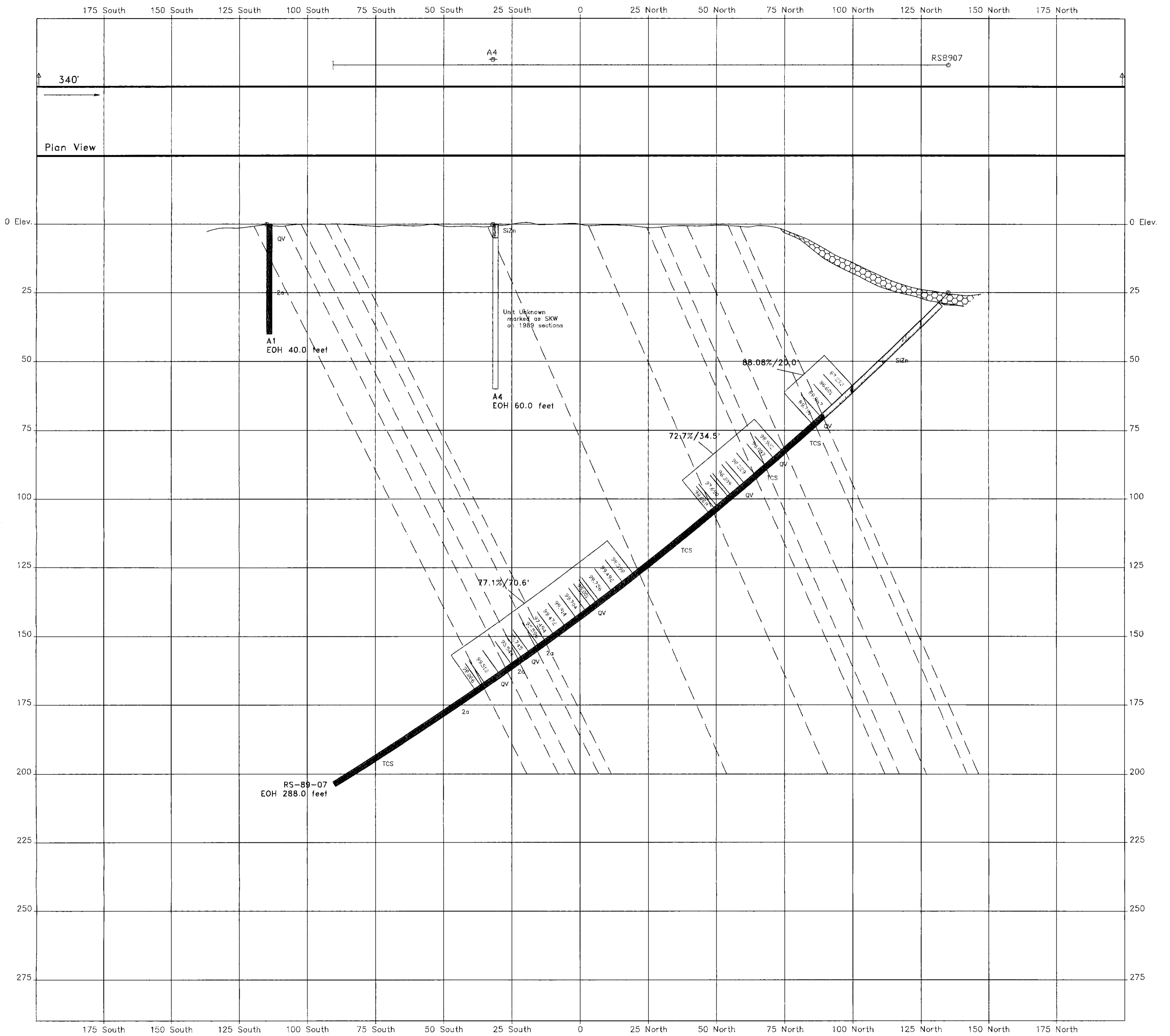
Assay Information

Section Looking South-West

Mining Div.: Porcupine, Cochrane District Twp.: Penhorwood
References: Map #2, Bedrock Cons., 1989 Province: Ontario
Drawn: J. Walmsley Checked: J. Walmsley Date: January, 1990
Scale: 1 inch = 20 feet



428015E0011 63.5951 PENHORWOOD

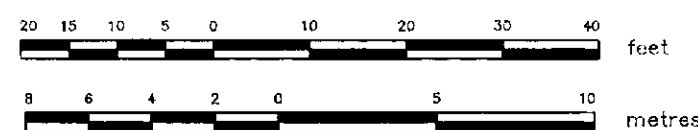


LEGEND

- Overburden
- Mafic Volcanics - Unsubdivided
- Granite - Unsubdivided
- Quartz
- Silicified Zone
- Diabase Dyke

Diamond Drill and Percussion Drill
Cross Section
Site #3

Section Dip -90° Section Azimuth 340°



KEY

- | | | | |
|------|------------------------------------|------|---------------------------------|
| 2aQV | Host/Quartz Veining Mix | 2b | Mafic Tuff |
| 1aS | Silicified Ultramafic Volcanic | 2bS | Silicified Mafic Tuff |
| 1bL | Sheared Mafic Volcanic | 4a | Granite |
| 2a | Mafic Volcanic | 4d | Diabase Dyke |
| 2aA | Altered Mafic Volcanic | 4f | Felsic Intrusive |
| 2aK | Chloritic Mafic Volcanic | ? | SKW - not recorded on 1989 Maps |
| 2aQV | Mafic Volcanic/Quartz Vein | OVb | Overburden/Casing |
| 2aS | Silicified Mafic Volcanic | QCV | Quartz-Carb. Vein |
| 2aSC | Silicif., Sericitic Mafic Volcanic | QS | Quartz Stringer |
| | | QV | Quartz Vein |
| | | QB | Quartz Breccia |
| | | SiZn | Silicified Zone |
| | | TCS | Talc-Chlorite Schist |

E.H. van Hees Geological Services Inc.
for
Rosevale Silica Project

Cross Section
3+25 East
Assay Data

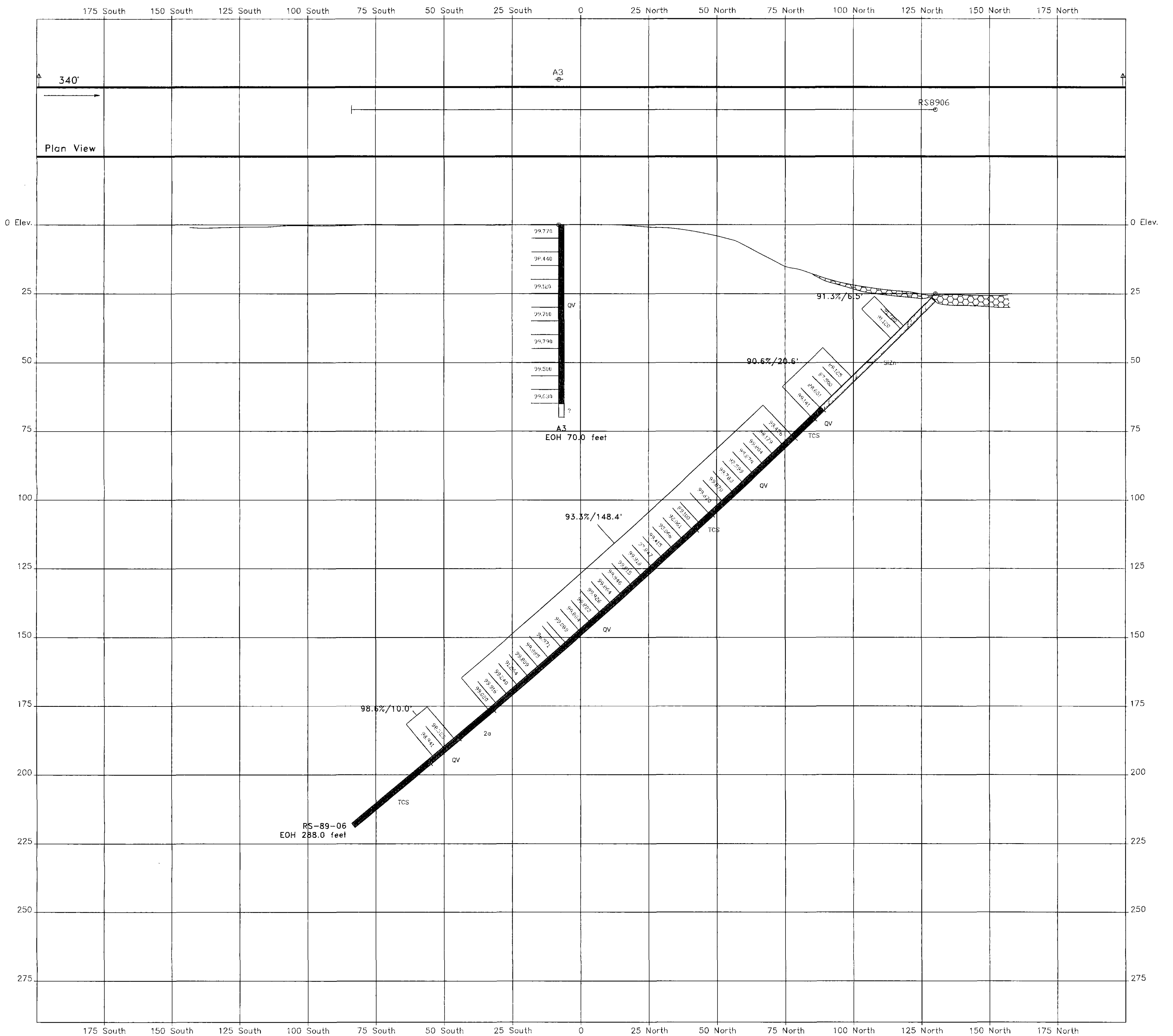
Section Looking South-West

Mining Div. Porcupine, Cochrane District	Twp. Penhorwood
References: Map #2, Bedrock Cons., 1989	Province: Ontario
Drawn: J. Walmsley	Checked: J. Walmsley
Date: January, 1990	Scale: 1 inch = 20 feet



423815E0011 63.5551 PENHORWOOD

QMP 87-15 63-5551



LEGEND

- Overburden
- Mafic Volcanics - Unsubdivided
- Granite - Unsubdivided
- Quartz
- Silicified Zone
- Diabase Dyke

**Diamond Drill and Percussion Drill
Cross Section
Site #3**

Section Dip -90° Section Azimuth 340°



KEY

- | | |
|------------------------------------|-----------------------------------|
| 7QV Host/Quartz Veining Mix | 2b Mafic Tuff |
| 1aS Silicified Ultramafic Volcanic | 2bS Silicified Mafic Tuff |
| 1bL Sheared Mafic Volcanic | 4a Granite |
| 2a Mafic Volcanic | 4d Diabase Dyke |
| 2aA Altered Mafic Volcanic | 4f Felsic Intrusive |
| 2aK Chloritic Mafic Volcanic | ? SKW - not recorded on 1989 Maps |
| 2aQV Mafic Volcanic/Quartz Vein | OVb Overburden/Casing |
| 2aS Silicified Mafic Volcanic | QCV Quartz-Carb. Vein |
| 2aSG Silicified Mafic Volcanic | QS Quartz Stringer |
| TCS Talc-Chlorite Schist | QV Quartz Vein |
| | QB Quartz Breccia |
| | SiZn Silicified Zone |

E.H. van Hees Geological Services Inc.

Rosevale Silica Project

Cross Section
4+00 East
Assay Data

Section Looking South-West

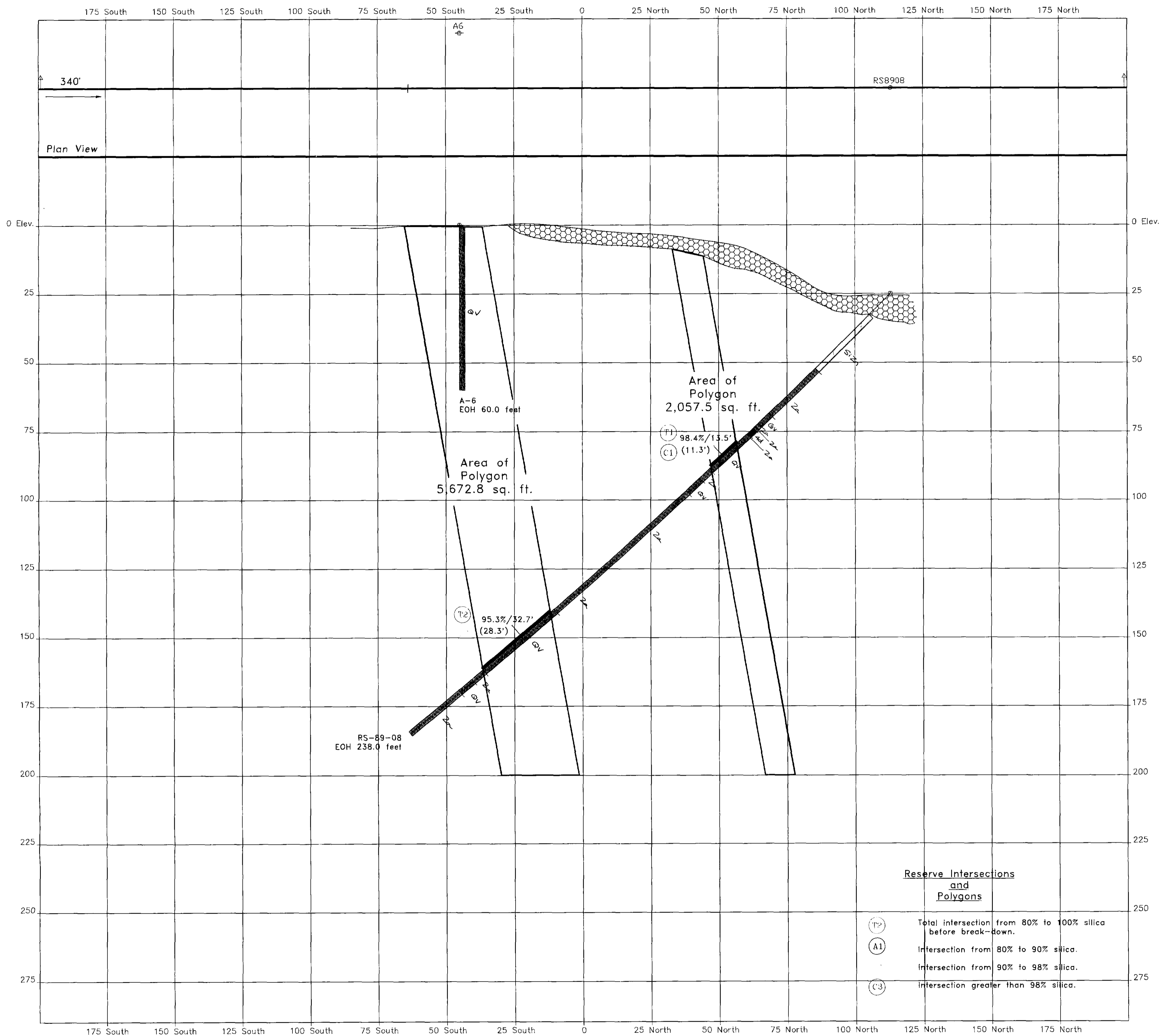
Mining Div.: Porcupine, Cochrane District	Twp.: Penhorwood
References: Map #2, Bedrock Cons., 1989	Province: Ontario
Drawn: J. Walsley	Checked: J. Walsley
Date: January, 1990	Scale: 1 inch = 20 feet



42815E0011 63.5551 PENHORWOOD

430

DMIP 89-15 63.5551



**Reserve Intersections
and
Polygons**

(T-2) Total intersection from 80% to 100% silica before break-down.

(A1) Intersection from 80% to 90% silica.

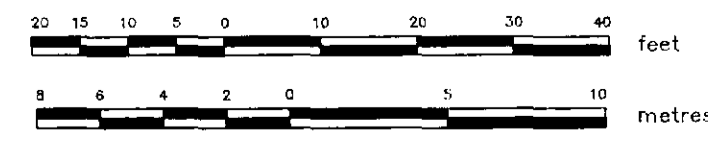
Intersection from 90% to 98% silica.

(C1) Intersection greater than 98% silica.

- LEGEND**
- Overburden
 - Mafic Volcanics - Unsubdivided
 - Granite - Unsubdivided
 - Quartz
 - Silicified Zone
 - Diabase Dyke

**Diamond Drill and Percussion Drill
Cross Section
Site #3**

Section Dip -90° Section Azimuth 340°



KEY

3QV	Host/Quartz Veining Mix	2b	Mafic Tuff
1eS	Silicified Ultramafic Volcanic	2bS	Silicified Mafic Tuff
1bL	Sheared Mafic Volcanic	4a	Granite
2a	Mafic Volcanic	4d	Diabase Dyke
2aA	Altered Mafic Volcanic	4f	Felsic Intrusive SKW - not recorded on 1989 Maps
2aK	Chloritic Mafic Volcanic	OVb	Overburden/Casing
2aQV	Mafic Volcanic/Quartz Vein	QCv	Quartz-Carb. Vein
2aS	Silicified Mafic Volcanic	QS	Quartz Stringer
2aSG	Silicified Mafic Volcanic	QV	Quartz Vein
		QB	Quartz Breccia
		SIzN	Silicified Zone
		TCS	Talc-Chlorite Schist

E.H. van Hees Geological Services Inc.
Rosevale Silica Project

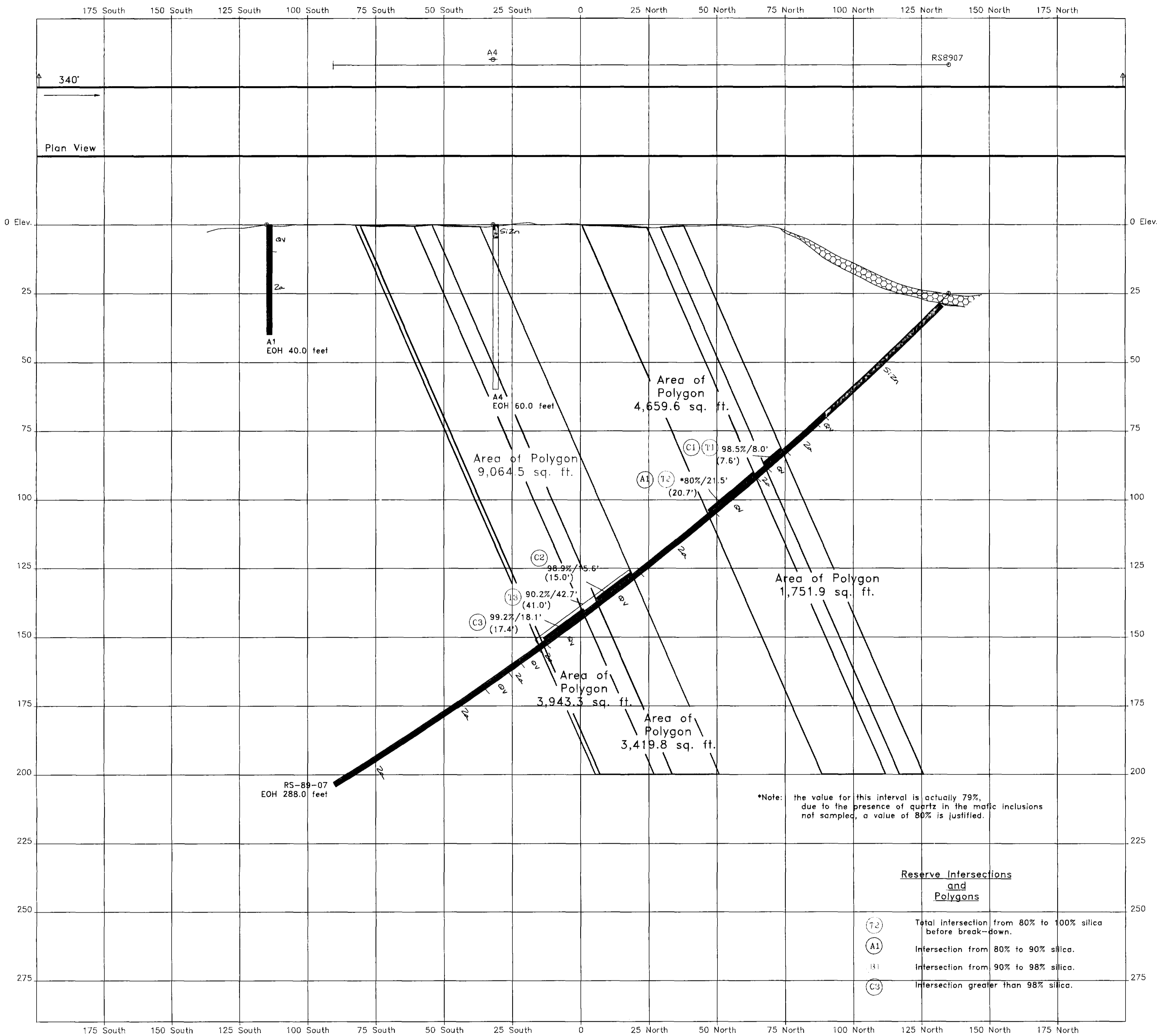
**Cross Section
2+00 East
Polygon Data**

Section Looking South-West

Mining Div.: Porcupine, Cochrane District	Twp.: Penhorwood
References: Map #2, Bedrock Cons., 1989	Province: Ontario
Drawn: J. Walmisley	Checked: J. Walmisley
Date: January, 1990	Scale: 1 inch = 20 feet



02/12/89-15 63.5551

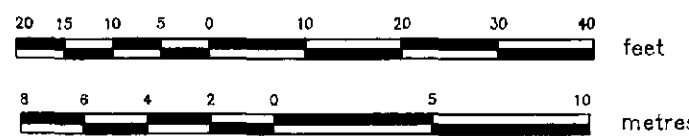


LEGEND

- Overburden
- Mafic Volcanics - Unsubdivided
- Granite - Unsubdivided
- Quartz
- Silicified Zone
- Diabase Dyke

Diamond Drill and Percussion Drill
Cross Section
Site #3

Section Dip -90° Section Azimuth 340°



KEY

- | | | | |
|------|-----------------------------------|------|---------------------------------|
| 2QV | Host/Quartz Veining Mix | 2b | Mafic Tuff |
| 1aS | Silicified Ultramafic Volcanic | 2bS | Silicified Mafic Tuff |
| 1bL | Sheared Mafic Volcanic | 4a | Granite |
| 2a | Mafic Volcanic | 4d | Diabase Dyke |
| 2aA | Altered Mafic Volcanic | 4f | Felsic Intrusive |
| 2aK | Chloritic Mafic Volcanic | ? | SKW - not recorded on 1989 Maps |
| 2aQV | Mafic Volcanic/Quartz Vein | OVb | Overburden/Casing |
| 2aS | Silicified Mafic Volcanic | QCV | Quartz-Carb. Vein |
| 2aSG | Silicif. Sericitic Mafic Volcanic | QS | Quartz Stringer |
| TCS | Talc-Chlorite Schist | QV | Quartz Vein |
| | | QB | Quartz Breccia |
| | | SiZn | Silicified Zone |

E.H. van Hees Geological Services Inc.
Rosevale Silica Project

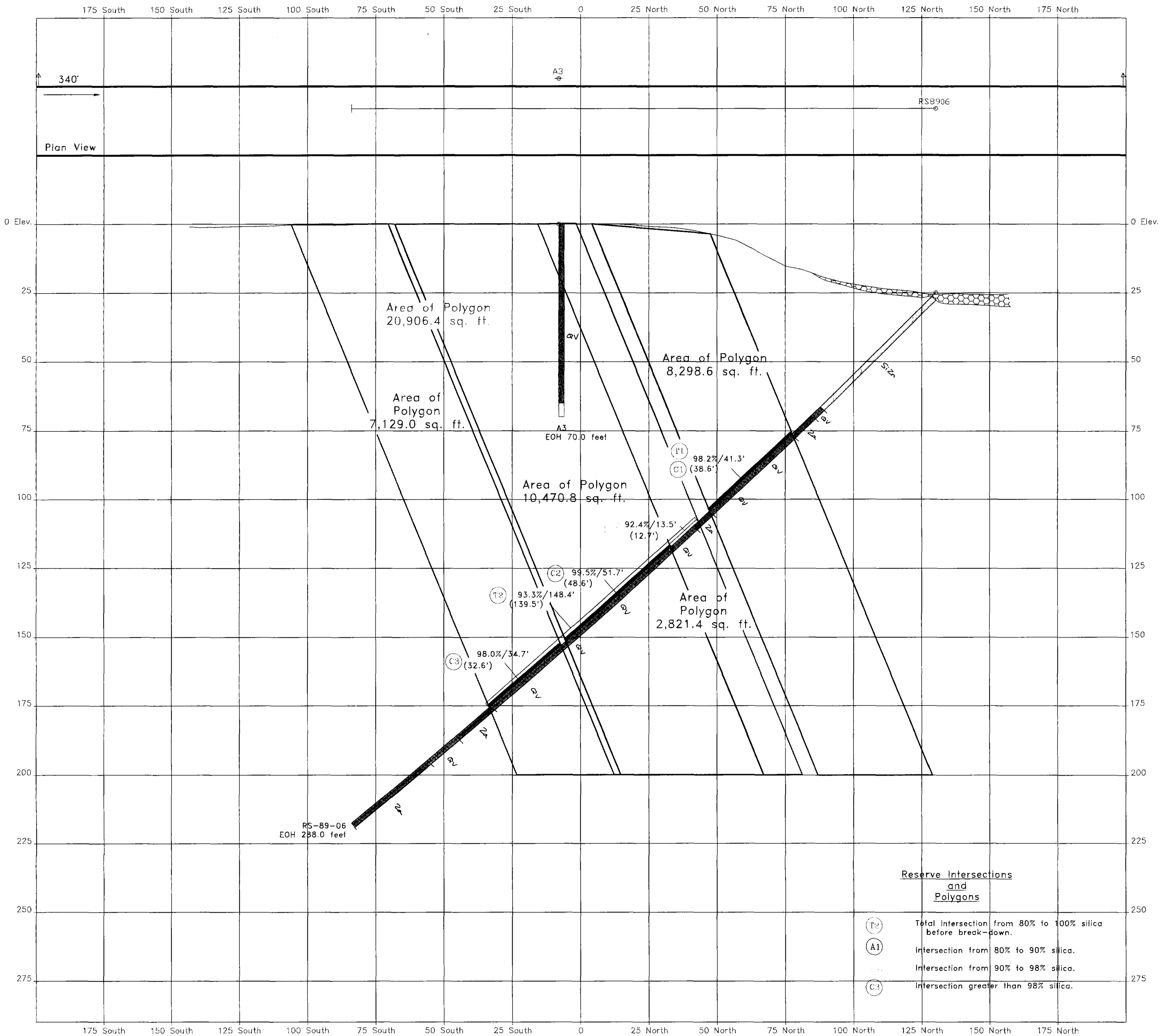
Cross Section
3+25 East
Polygon Data

Section Looking South-West

Mining Div.: Porcupine, Cochrane District Twp.: Penhorwood
References: Map #2, Bedrock Cons., 1989 Province: Ontario
Drawn: J. Walmisley Checked: J. Walmisley Date: January, 1990
Scale: 1 inch = 20 feet



428015E0011 83.5551 PENHORWOOD

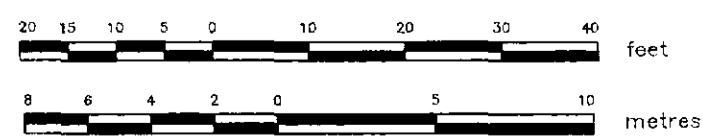


LEGEND

- Overburden
- Mafic Volcanics - Unsubdivided
- Granite - Unsubdivided
- Quartz
- Silicified Zone
- Diabase Dyke

Diamond Drill and Percussion Drill
Cross Section
Site #3

Section Dip -90° Section Azimuth 340°



KEY

- | | | | |
|------|------------------------------------|------|---------------------------------|
| 2QV | Host/Quartz Veining Mix | 2b | Mafic Tuff |
| 1aS | Silicified Ultramafic Volcanic | 2bS | Silicified Mafic Tuff |
| 1bL | Sheared Mafic Volcanic | 4a | Granite |
| 2a | Mafic Volcanic | 4d | Diabase Dyke |
| 2aA | Altered Mafic Volcanic | 4f | Felsic Intrusive |
| 2aK | Chloritic Mafic Volcanic | SKW | SKW - not recorded on 1989 Maps |
| 2aQV | Mafic Volcanic/Quartz Vein | OVB | Overburden/Casing |
| 2aS | Silicified Mafic Volcanic | QCV | Quartz-Carb. Vein |
| 2aSC | Silicif., Sericitic Mafic Volcanic | QS | Quartz Stringer |
| TCS | Talc-Chlorite Schist | QV | Quartz Vein |
| | | QB | Quartz Breccia |
| | | SiZn | Silicified Zone |

E.H. van Hees Geological Services Inc.
Rosevale Silica Project

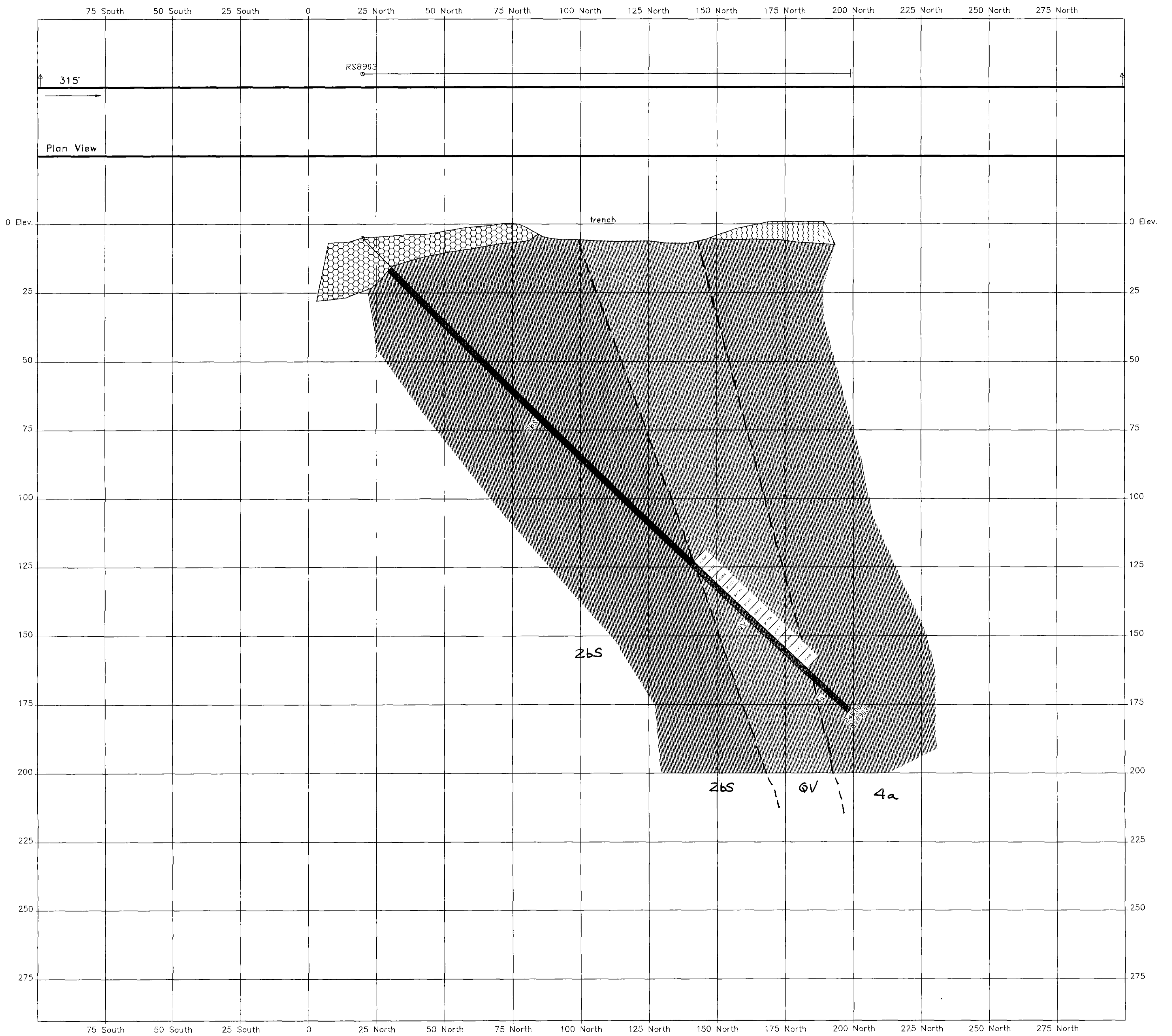
Cross Section
4+00 East
Polygon Data

Section Looking South-West

Mining Div - Porcupine, Cochrane District Twp. - Penhorwood
References: Map #2, Bedrock Cons., 1989 Province: Ontario
Drawn: J. Walmisley Checked: J. Walmisley Date: January, 1990
Scale: 1 inch = 20 feet



42991GE0011 63.5551 PENHORWOOD

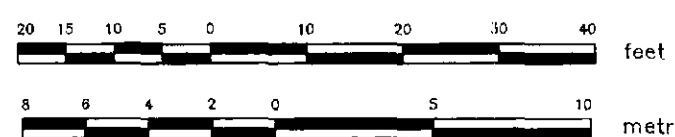


LEGEND

- Overburden
- Mafic Volcanics - Unsubdivided
- Granite - Unsubdivided
- Quartz
- Silicified Zone
- Diabase Dyke

**Diamond Drill and Percussion Drill
Cross Section
Site #2A**

Section Dip -90° Section Azimuth 315°



KEY

- | | | | |
|------|------------------------------------|------|---------------------------------|
| 2aQV | Host/Quartz Veining Mix | 2b | Mafic Tuff |
| 1aS | Silicified Ultramafic Volcanic | 2bS | Silicified Mafic Tuff |
| 1bL | Sheared Mafic Volcanic | 4a | Granite |
| 2a | Mafic Volcanic | 4d | Diabase Dyke |
| 2aA | Altered Mafic Volcanic | 4f | Felsic Intrusive |
| 2aK | Chloritic Mafic Volcanic | ? | SKW - not recorded on 1989 Maps |
| 2aQV | Mafic Volcanic/Quartz Vein | OVB | Overburden/Casing |
| 2aS | Silicified Mafic Volcanic | QCV | Quartz-Carb. Vein |
| 2aSC | Silicif., Sericitic Mafic Volcanic | QV | Quartz Stringer |
| TCS | Talc-Chlorite Schist | QV | Quartz Vein |
| | | QB | Quartz Breccia |
| | | SiZn | Silicified Zone |

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Rosevale Silica Project

**Cross Section
1+50 West
Geology and
Assay Data**

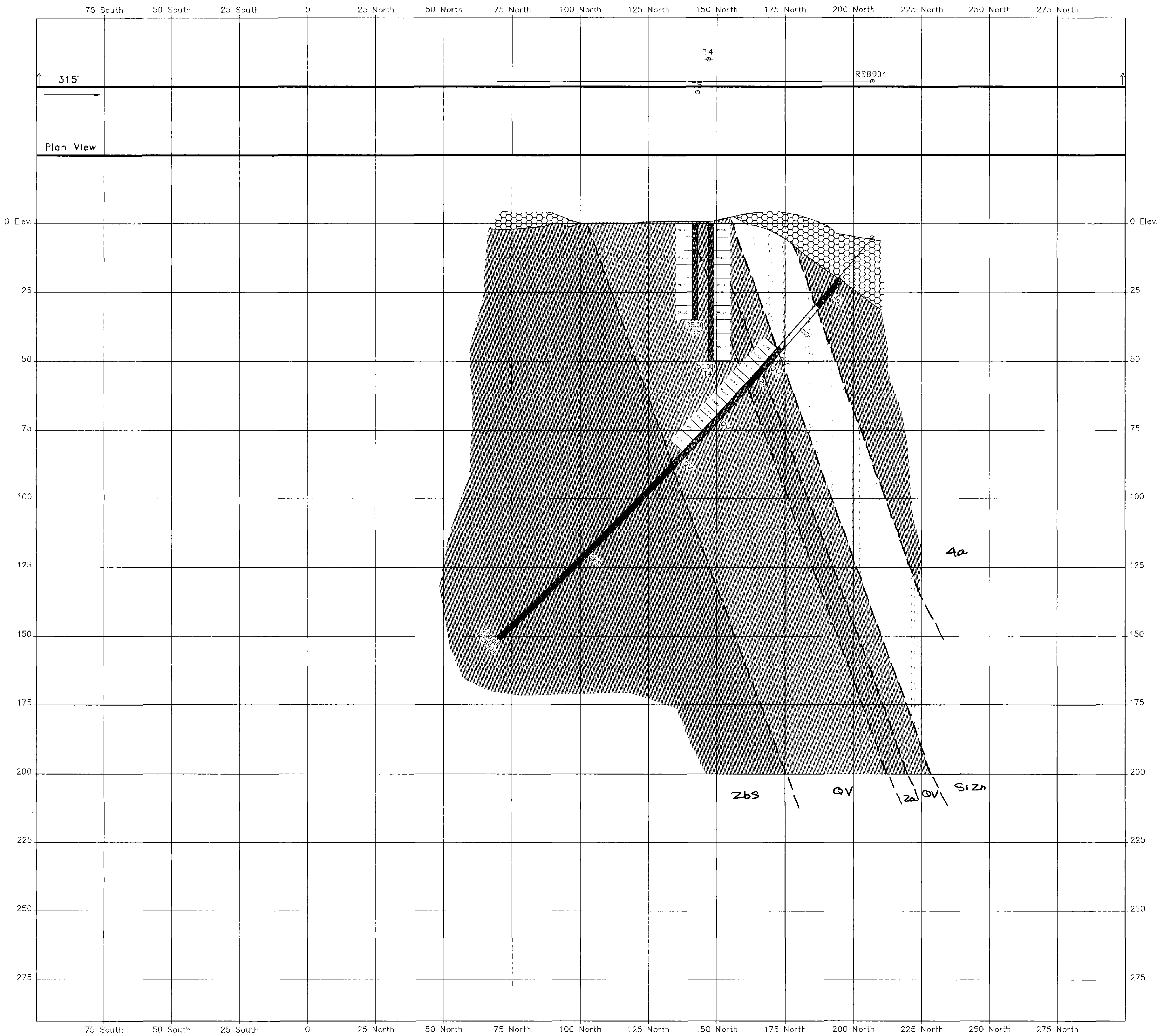
Section Looking South-West

Mining Div.: Porcupine, Cochrane District Twp.: Penhorwood
References: Map #2, Bedrock Cons., 1989 Province: Ontario
Drawn: J. Walmsley Checked: J. Walmsley Date: January, 1990
Scale: 1 inch = 20 feet



42901SE0011 63.5551 PENHORWOOD

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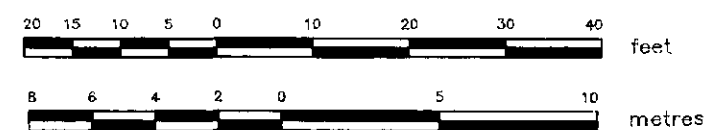


LEGEND

- Overburden
- Mafic Volcanics - Unsubdivided
- Granite - Unsubdivided
- Quartz
- Silicified Zone
- Diabase Dyke

**Diamond Drill and Percussion Drill
Cross Section
Site #2A**

Section Dip -90° Section Azimuth 315°



KEY

- | | | | |
|------|--------------------------------|------|---------------------------------|
| 2QV | Host/Quartz Veining Mix | 2b | Mafic Tuff |
| 1aS | Silicified Ultramafic Volcanic | 2bS | Silicified Mafic Tuff |
| 1bL | Sheared Mafic Volcanic | 4a | Granite |
| 2a | Mafic Volcanic | 4d | Diabase Dyke |
| 2aA | Altered Mafic Volcanic | 4f | Felsic Intrusive |
| 2aK | Chloritic Mafic Volcanic | ? | SKW - not recorded on 1989 Maps |
| 2aQV | Mafic Volcanic/Quartz Vein | OV | Overburden/Casing |
| 2aS | Silicified Mafic Volcanic | QCV | Quartz-Carb. Vein |
| 2aSG | Silicified Mafic Volcanic | QV | Quartz Stringer |
| | TCS | QB | Quartz Vein |
| | | SIZn | Quartz Breccia |
| | | | Silicified Zone |
| | | | TCS |
| | | | Tale-Chlorite Schist |

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Rosevale Silica Project

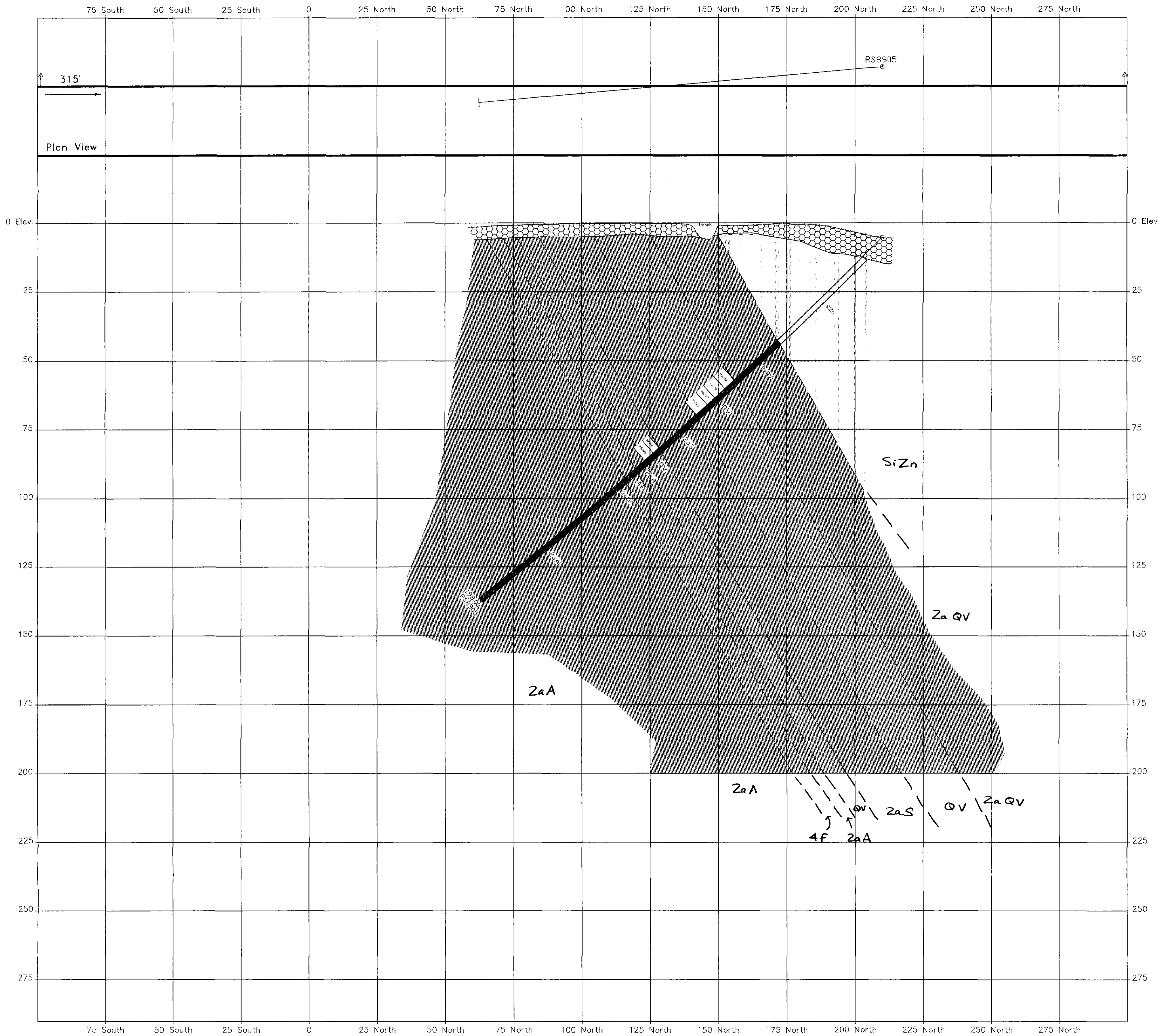
**Cross Section
2+50 West
Geology and
Assay Data**
Section Looking South-West

Mining Div.: Porcupine, Cochrane District Twp.: Penhorwood
References: Map #2, Bedrock Cons., 1989 Province: Ontario
Drawn: J. Wainsley Checked: J. Wainsley Date: January, 1990
Scale: 1 inch = 20 feet



428015E0011 63.5551 PENHORWOOD

5MIP 89-15 162-255

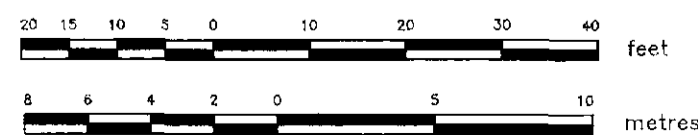


LEGEND

- Overburden
- Mafic Volcanics - Unsubdivided
- Cranite - Unsubdivided
- Quartz
- Silicified Zone
- Diabase Dyke

**Diamond Drill and Percussion Drill
Cross Section
Site #2A**

Section Dip -90° Section Azimuth 315°



KEY

- | | | | |
|------|-------------------------------------|------|---------------------------------|
| 7QV | Host/Quartz Veining Mix | 2b | Mafic Tuff |
| 1aS | Silicified Ultramafic Volcanic | 2bS | Silicified Mafic Tuff |
| 1bL | Sheared Mafic Volcanic | 4a | Cranite |
| 2a | Mafic Volcanic | 4d | Diabase Dyke |
| 2aA | Altered Mafic Volcanic | 4f | Felsic Intrusive |
| 2aK | Chloritic Mafic Volcanic | ? | SKW - not recorded on 1989 Maps |
| 2aQV | Mafic Volcanic/Quartz Vein | OVB | Overburden/Casing |
| 2aS | Silicified Mafic Volcanic | QCV | Quartz-Carb. Vein |
| 2aSG | Silicified Sericitic Mafic Volcanic | QS | Quartz Stringer |
| TCS | Talc-Chlorite Schist | QV | Quartz Vein |
| | | QB | Quartz Breccia |
| | | SiZn | Silicified Zone |

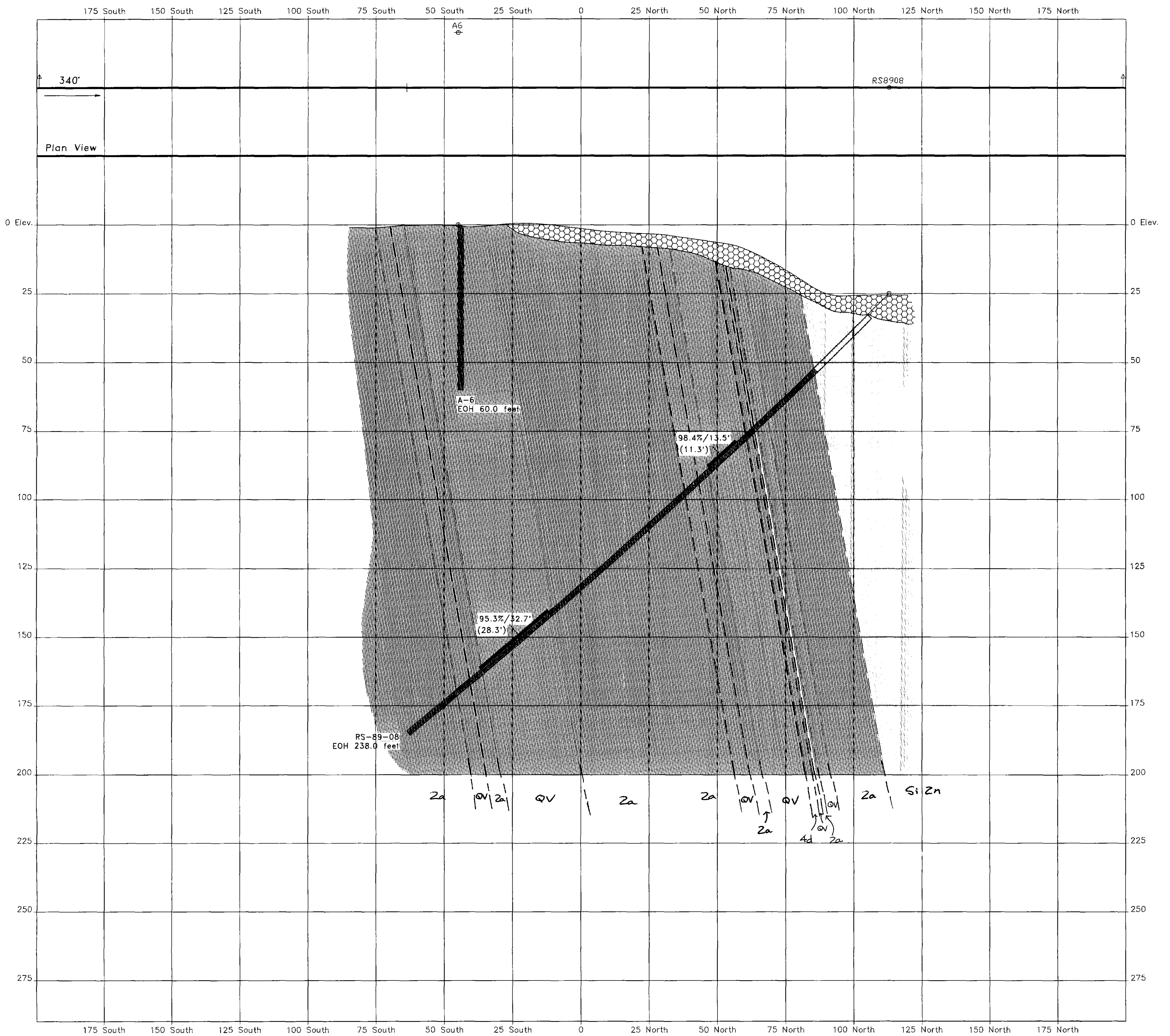
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Rosevale Silica Project
Cross Section
4+00 West
GEOLOGY AND
ASSAY DATA
Section Looking South-West

Mining Div.: Porcupine, Cochrane District Twp.: Penhorwood
References: Map #2, Bedrock Cons., 1989 Province: Ontario
Drawn: J. Walmsley Checked: J. Walmsley Date: January, 1990
Scale: 1 inch = 20 feet



428615E0011 63.5551 PENHORWOOD

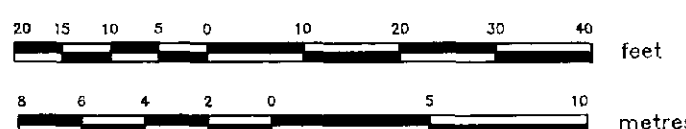


LEGEND

- Overburden
- Mafic Volcanics - Unsubdivided
- Granite - Unsubdivided
- Quartz
- Silicified Zone
- Diabase Dyke

**Diamond Drill and Percussion Drill
Cross Section
Site #3**

Section Dip -90° Section Azimuth 340°



KEY

- | | |
|--|-----------------------------------|
| 7QV Host/Quartz Veining Mix | 2b Mafic Tuff |
| 1aS Silicified Ultramafic Volcanic | 2bS Silicified Mafic Tuff |
| 1bL Sheared Mafic Volcanic | 4a Granite |
| 2a Mafic Volcanic | 4d Diabase Dyke |
| 2aA Altered Mafic Volcanic | 4f Felsic Intrusive |
| 2aK Chloritic Mafic Volcanic | ? SKW - not recorded on 1989 Maps |
| 2aQV Mafic Volcanic/Quartz Vein | OVB Overburden/Casing |
| 2aS Silicified Mafic Volcanic | OCV Quartz-Carb. Vein |
| 2aSG Silicif. Sericitic Mafic Volcanic | QS Quartz Stringer |
| TCS Talc-Chlorite Schist | QV Quartz Vein |
| | QB Quartz Breccia |
| | SiZn Silicified Zone |

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Rosevale Silica Project

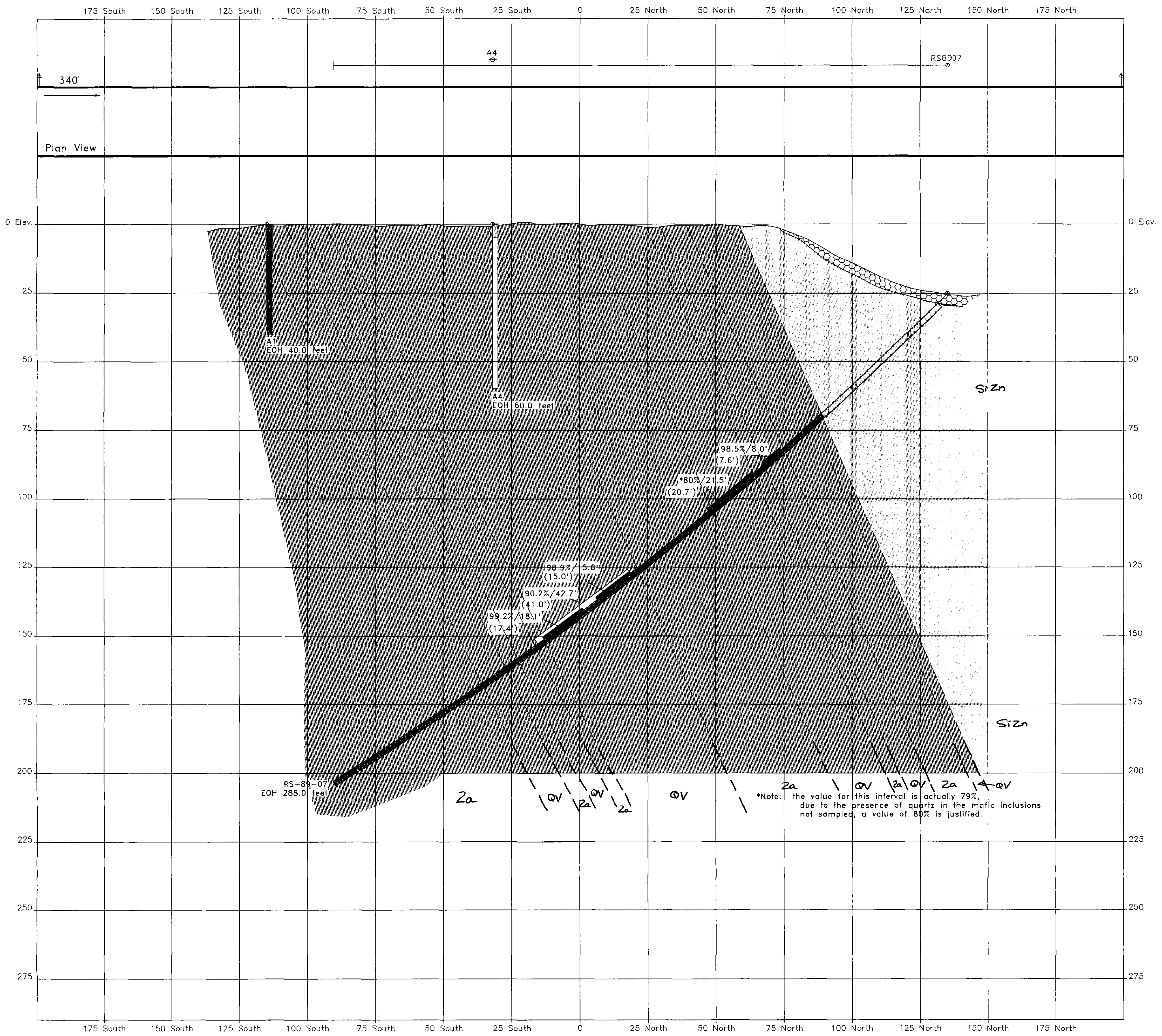
**Cross Section
2+00 East
Reserve Intersections**

Section Looking South-West

Mining Div.: Porcupine, Cochrane District Twp.: Penhorwood
References: Map #2, Bedrock Cons., 1989 Province: Ontario
Drawn: J. Walmsley Checked: J. Walmsley Date: January, 1990
Scale: 1 inch = 20 feet



42B015E0811 63.5551 PENHORWOOD

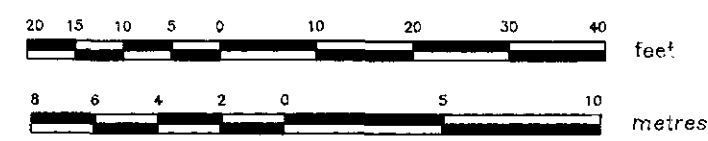


LEGEND

- Overburden
- Mafic Volcanics - Unsubdivided
- Granite - Unsubdivided
- Quartz
- Silicified Zone
- Diabase Dyke

**Diamond Drill and Percussion Drill
Cross Section
Site #3**

Section Dip -90° Section Azimuth 340°



KEY

- | | | | |
|------|--------------------------------------|------|---------------------------------|
| 20V | Host/Quartz Veinings Mix | 2b | Mafic Tuff |
| 1aS | Silicified Ultramafic Volcanic | 2bS | Silicified Mafic Tuff |
| 1bL | Sheared Mafic Volcanic | 4a | Granite |
| 2a | Mafic Volcanic | 4d | Diabase Dyke |
| 2aA | Altered Mafic Volcanic | 4f | Felsic Intrusive |
| 2aK | Chloritic Mafic Volcanic | ? | SKW - not recorded on 1989 Maps |
| 2aQ | Mafic Volcanic/Quartz Vein | OVb | Overburden/Casing |
| 2aS | Silicified Mafic Volcanic | QCV | Quartz-Carb. Vein |
| 2aSG | Silicified, Sericitic Mafic Volcanic | QS | Quartz Stringer |
| | | QV | Quartz Vein |
| | | QB | Quartz Breccia |
| | | SiZn | Silicified Zone |
| | | TCS | Talc-Chlorite Schist |

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Rosevale Silica Project

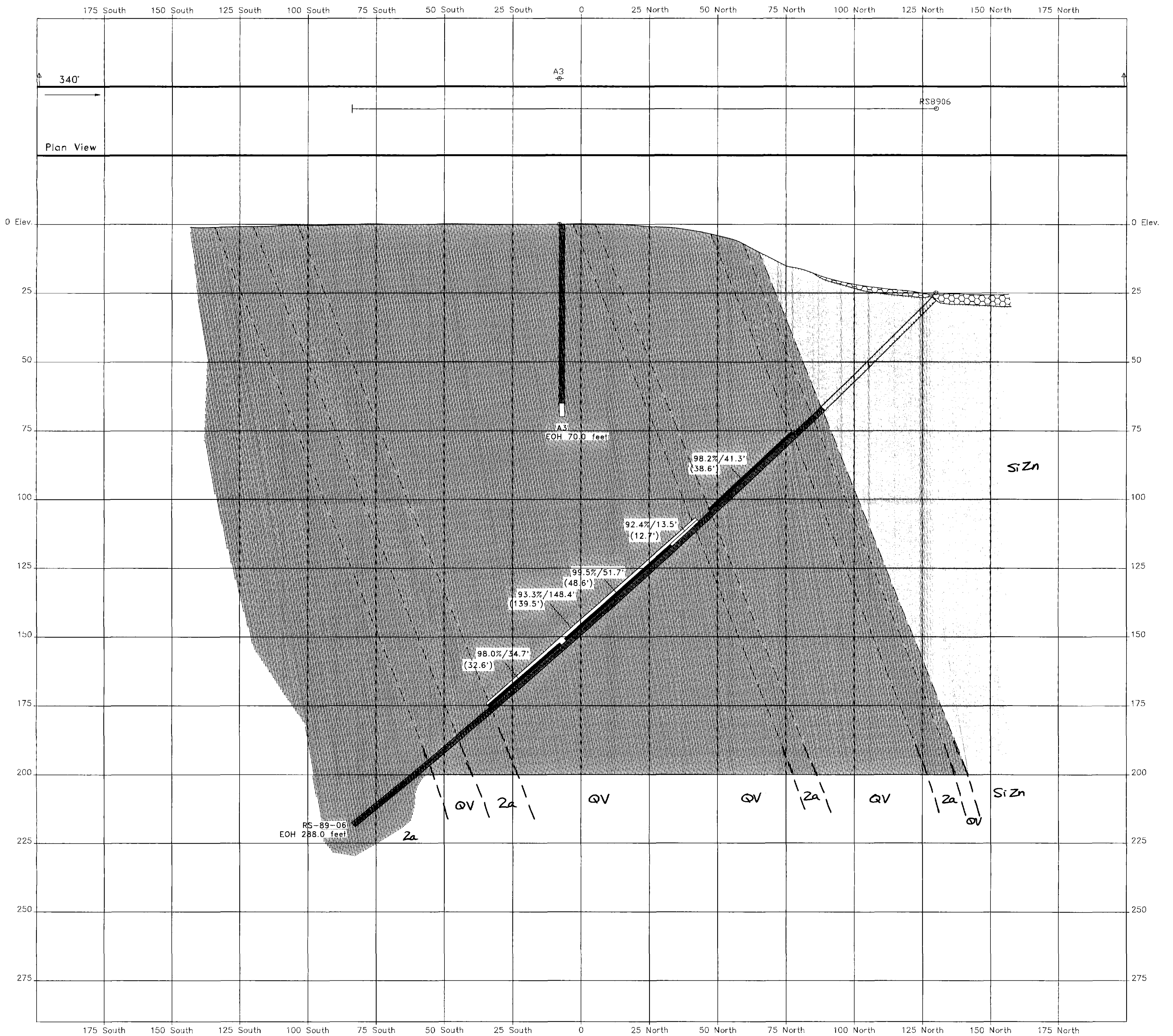
**Cross Section
3+25 East
Reserve Intersections**

Section Looking South-West

Mining Div.: Porcupine, Cochrane District Twp.: Penhorwood
References: Map #2, Bedrock Cons., 1989 Province: Ontario
Drawn: J. Walmsey Checked: J. Walmsey Date: January, 1990
Scale: 1 inch = 20 feet



428015E0011 63.5551 PEN-ORWOOD

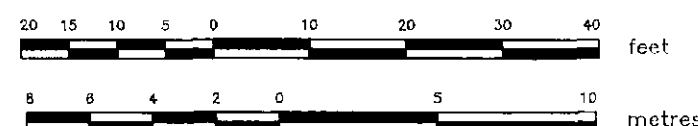


LEGEND

- Overburden
- Mafic Volcanics - Unsubdivided
- Granite - Unsubdivided
- Quartz
- Silicified Zone
- Diabase Dyke

Diamond Drill and Percussion Drill
Cross Section
Site #3

Section Dip -90° Section Azimuth 340°



KEY

2aQV	Host/Quartz Veining Mix	2b	Mafic Tuff
1aS	Silicified Ultramafic Volcanic	2bS	Silicified Mafic Tuff
1bL	Sheared Mafic Volcanic	4a	Granite
2a	Mafic Volcanic	4d	Diabase Dyke
2aA	Altered Mafic Volcanic	4f	Felsic Intrusive
2aK	Chloritic Mafic Volcanic	?	SKW - not recorded on 1989 Maps
2aQV	Mafic Volcanic/Quartz Vein	OVb	Overburden/Casing
2aS	Silicified Mafic Volcanic	QCV	Quartz-Carb. Vein
2aSC	Silicified Mafic Volcanic	QS	Quartz Stringer
		QV	Quartz Vein
		QB	Quartz Breccia
		SiZn	Silicified Zone
		TCS	Talc-Chlorite Schist

E.H. van Hees Geological Services Inc.
Rosevale Silica Project

Cross Section
4+00 East
Reserve Intersections

Section Looking South-West

Mining Div.: Porcupine, Cochrane District	Twp.: Penhorwood
References: Map #2, Bedrock Cons., 1989	Province: Ontario
Drawn: J. Walmsley	Checked: J. Walmsley Date: January, 1990
Scale: 1 inch = 20 feet	

