MAR 20080032: TAY RIVER

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PART B

ASSESSMENT REPORT

Metallic and Industrial Mineral Permit Number 9306090842

TAY RIVER PROSPECT

NTS: 83B

For

1208013 ALBERTA LTD.

Submitted by

Fish Creek Excavating Ltd., Filing on behalf of

1208013 ALBERTA LTD.

November 5, 2008

Table of Contents

ASSESSMENT REPORT

Metallic and Industrial Mineral Permit Number 9306090842

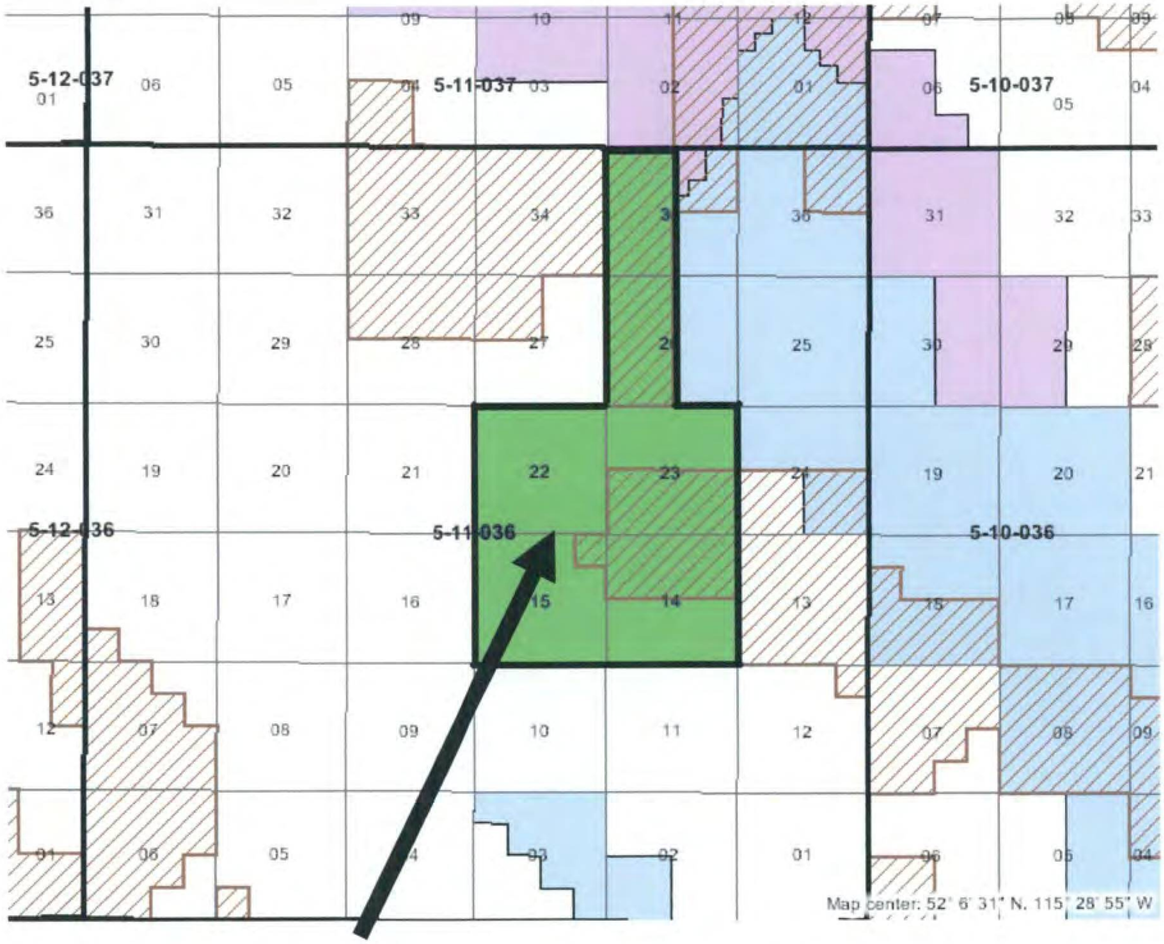
TAY RIVER PROSPECT

LIST OF FIGURES

LIST OF TABLES

Metallic and Industrial Mineral Permit Number 9306090842

Map of Current Permits and Boundaries



METALLIC AND INDUSTRIAL MINERALS
PERMIT NO. 9306090842
5-11-036; 14;15;22;23;26W;35W
W5M

PART B - TECHNICAL REPORT

SUMMARY

Metallic and Industrial Minerals Permit No. 9306090842 Obtained (September 01, 2006)

Tay River Prospect – File No. MME-060016
Exploration Approval November 22, 2006

Exploration performed and samples obtained from site January 2007 for Lab testing.

INTRODUCTION

Original interest in this site started with information obtained from a Geological Survey Map – Canada (Appendix 2).

Geological Maps indicated a significant deposit of Quartzitic Sandstone.

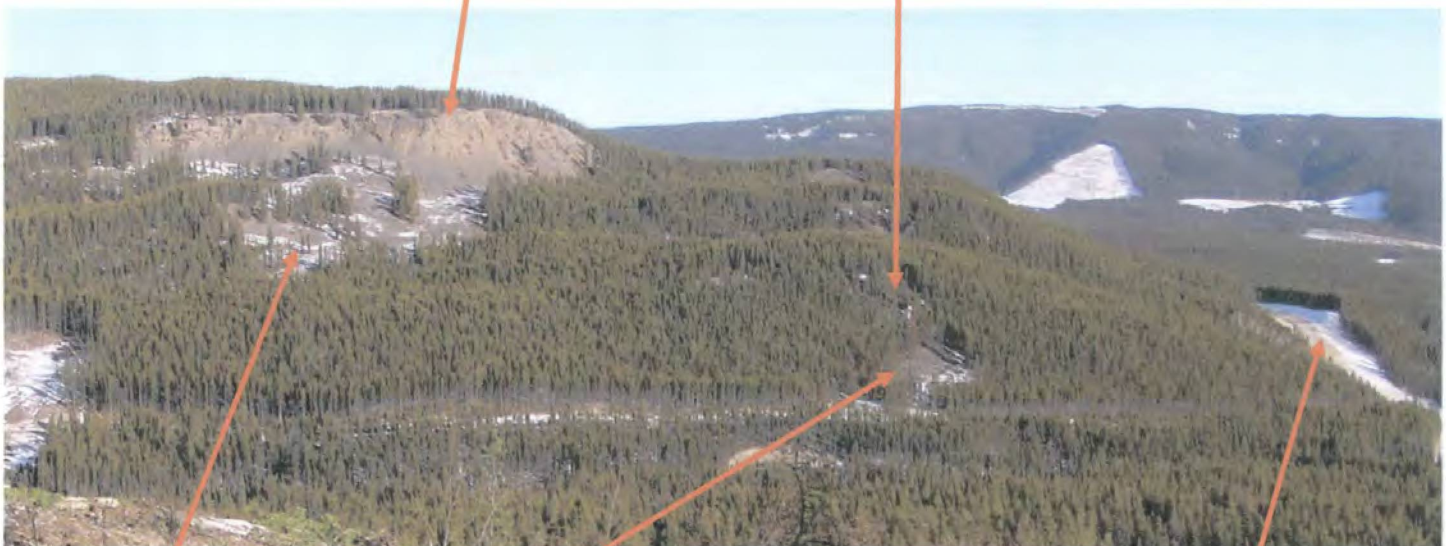
Figure 1 - Lichen Covered Surface Sandstone

Figure 2 – Lichen covered sandstone - Layered

Site examination confirmed almost the entire site was covered with lichen covered sandstone (fig. 1,2). Outcroppings at higher elevations appeared to contain more competent thicker layers of sandstone (fig. 3,4). This tan colored sandstone material was found to be a very hard, dense and fine grained.

Figure 3 – Outcrop B

Figure 4 - Outcrop A
Competent Sandstone



Lichen covered surface sandstone

Figure 5 – Photograph of Sandstone Deposit

Test Pit Locations .

Entire section of hill appears to consist of Quartzitic Sandstone

Secondary Hwy 752

Metallic and Industrial Mineral Permit Number 9306090842

MINERAL ASSESSMENT
EXPENDITURE BREAKDOWN BY TYPE OF WORK

Estimated Expenditure ($8,085.00)

Actual Expenditure ($12,201.00)

Project Name: TAY RIVER PROSPECT

AMOUNT

1. Prospecting	$	3,105.00
2. Test Pit Excavating	$	3,245.00
3. X-Ray Diffraction / Petrographic Analysis	$	941.82
4. Other Work: Physical Properties	$	2,760.00
5. Report Preparation	$	1,040.00
SUBTOTAL	**$**	**11,091.82**
6. Administration (up to 10% of subtotal)	$	1,109.18
TOTAL	$	**12,201.00**

[redacted]

Nov 27 08

SUBMITTED BY (Don Scheurman) DATE

Tay River Prospect, Part B
1208013 Alberta Ltd.
November 5, 2008

Regional Geology

The property included in this Metallic and Industrial Mineral Permit No. 9306090842 lies along the Eastern Slope of the Rocky Mountains in west central Alberta and is part of the Bighorn Formation (Upper Cretaceous)

Exploration

Test pit excavation was performed on site with a tracked excavator to determine the physical characteristics of the subsurface layers. These layers were composed of hard, fractured sandstone to a depth of approximately 3 meters. There were no thick competent layers found in the excavated test pits.

Test Pit Excavation Site

52 deg 05 min 54 sec N

115 deg 29 min 23 sec W

TAY RIVER PROSPECT - EXPLORATION PROGRAM

An exploration plan (File No. MME 060016) was approved in November of 2006, and a tracked excavator was transported to the site January 04, 2007. A series of test pits were excavated in an open un-treed area near the base of the hill close to an existing logging road. (Figure. 6,7) The test pits were approximately 3 meters deep and consisted of layered, fractured brittle sandstone. Competent thick layers of sandstone were not evident in these test pits. A sample, approximately 10 tonnes was loaded into a dump truck and hauled to Calgary for further testing.

Portions of this sample were subjected to various testing procedures.

Figure 6 – Test Pit

Figure 7 – Test Pit

Figure 8 – Test Pit
Layered / Fractured Sandstone

Figure 9 – Thin Flat Layering

SPLITTER SAMPLES

A variety of sandstone pieces were put through a hydraulic splitter (fig. 11,11a) to determine the splitting and shaping properties of this material for possible masonry applications e.g. natural stone facing and building restoration. This stone split straight and true regardless of thickness or length (fig. 12).

Figure 11a – Thinly Split Sandstone
Straight true split regardless of
Irregular surface

Figure 11 – Thinly Split Sandstone

Figure 12 – Excellent Splitting Characteristics – Ideal for masonry applications

SAWCUTTING

A relatively narrow piece of sandstone was saw cut lengthwise to produce two thinner slices approximately 20mm thick (Figure 13). These pieces remained completely in tact with no signs of fracture or weakness. This stone is dense, fine grained, and very competent.

Figure 13 – Saw cut Sandstone Section

The dense structure of this stone was further demonstrated through the ability of this stone to receive a polish (Figure 14).

Figure 14 – Polished section of Saw cut Sandstone

CRUSHING AND SCREENING

A portion of the truckload sample hauled to Calgary was run through a Horizontal Impact Crusher and screened to a Class 1 Railway Ballast Specification (figure 15). This product was the subjected to a Los Angeles Abrasion Test (Appendix 4) to determine the durability of this stone. The Los Angeles Abrasion loss was 27.3 % (a good result for sandstone) which would qualify this material for use in many aggregate applications.

Figure 15 – Crushed and screened sample of Sandstone

X-RAY DIFFRACTION

An X-Ray Diffraction analysis of a sandstone sample was also performed to determine the mineralogy of the deposit. Quantitative measurements indicate the mineral composition of this sandstone is 92% quartz. A detailed report is included in Appendix 5.

PETROLOGICAL ANALYSIS

A Thin section prepared from the sandstone sample was analyzed using petrographic analysis to determine the basic mineralogy and texture. A copy of this report is included in Appendix 3.

Metallic and Industrial Mineral Permit Number 9306090842

Conclusion

The sandstone found in this deposit is a very hard durable sandstone with a desirable tan coloration. It was evident while traversing this area that there is an abundant reserve of high quality quartzitic sandstone in this permit area. Further exploration will be necessary to determine if thick competent layers are present. This will likely involve future core drilling in certain areas.

Author Qualifications

I, Don Scheurman, residing at Calgary, Alberta Canada do hereby certify that:

I am the Manager of the Aggregate Division with Fish Creek Excavating Ltd. (7515 – 84 Street S.E., Calgary, Alberta, Canada), and also a Shareholder and Manager of the company 1208013 Alberta Ltd (7515 – 84 Street S.E., Calgary, Alberta, Canada).

I am a graduate of the University of Lethbridge AB. with a Bachelor of Science Degree and have managed the aggregate division of Fish Creek Excavating Ltd. for the past 25 years.

I am not aware of any material fact or material change with respect to the subject matter of the Report that is not reflected in the Report, or the omission to disclose which makes the Report misleading.

[redacted]

Don Scheurman B.Sc.
Aggregate Division Manager
Fish Creek Excavating Ltd.

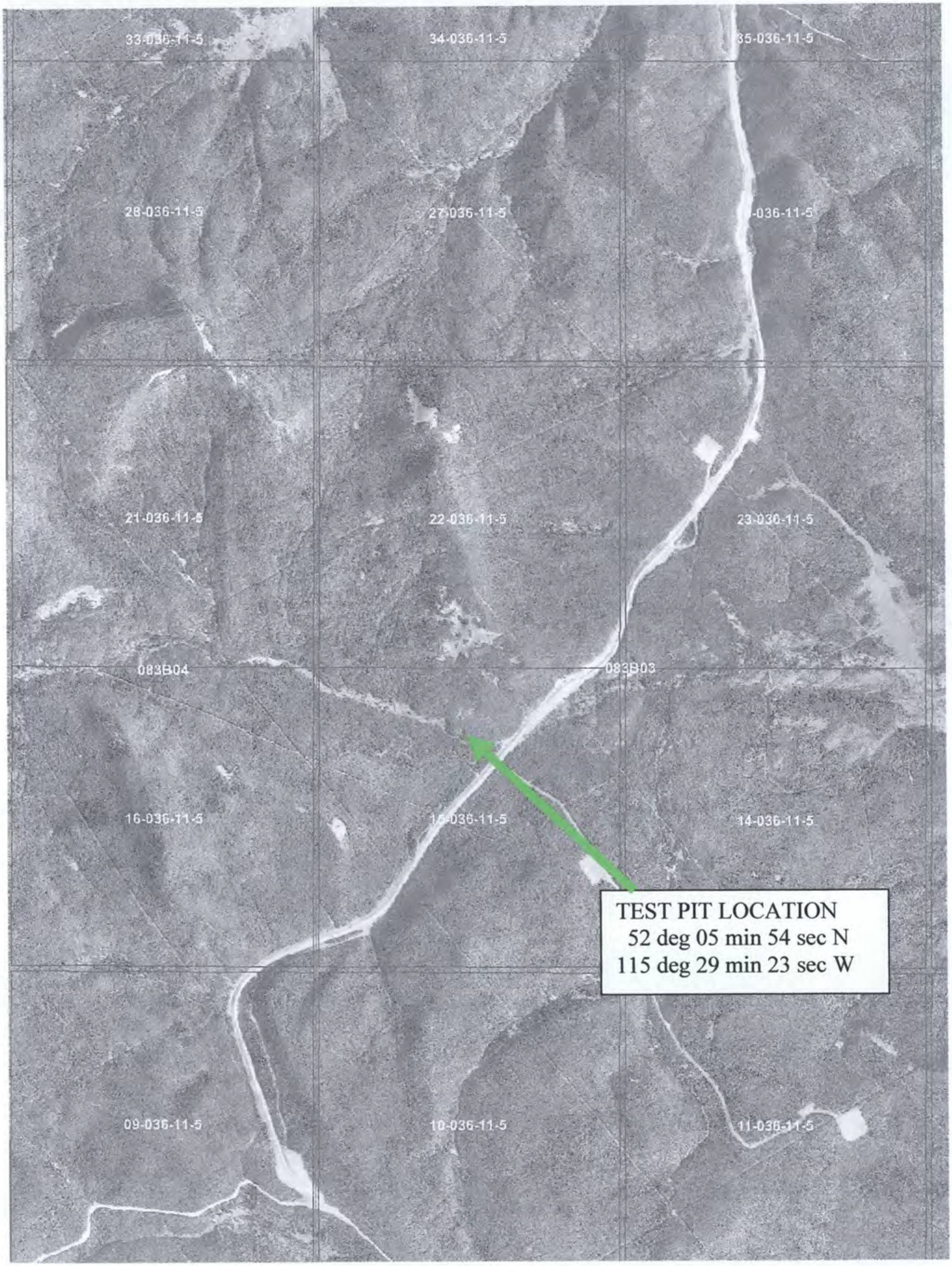
Signed at Calgary, Alberta, Canada, November 27, 2008

Metallic and Industrial Mineral Permit Number 9306090842

APPENDICES TABLE OF CONTENTS

List of Appendices

APPENDIX 1
MAP OF ASSESSMENT WORK AREA
METALLIC AND INDUSTRIAL MINERALS PERMIT No. 9306090842



APPENDIX 2

MESOZOIC

CRETACEOUS

UPPER CRETACEOUS

9	*BRAZEAU and EDMONTON FORMATIONS: sandstone, shale, conglomerate*
8	*WAPIABI FORMATION: shale, minor sandstone and limestone*
7	*BIGHORN FORMATION: quartzitic sandstone, sandy shale, pebble-conglomerate*
6	*BLACKSTONE FORMATION: shale, minor thin sandstone beds*

LOWER CRETACEOUS

5	*BLAIRMORE GROUP: sandstone, shale, conglomerate, carbonaceous shale*

JURASSIC

4	*FERNIE GROUP: platy argillaceous limestone, black phosphatic limestone, cherty limestone, black fissile shale, carbonaceous shale, sandstone. May include Triassic limestone at base and some Cretaceous (Nikanassin) sandstone at top*

PALÆOZOIC

CARBONIFEROUS

MISSISSIPPIAN AND (?) PENNSYLVANIAN

3	*RUNDLE FORMATION: limestone, cherty limestone, argillaceous and arenaceous dolomite*

MISSISSIPPIAN

2	*BANFF FORMATION: dark limestone, calcareous platy shale*

DEVONIAN

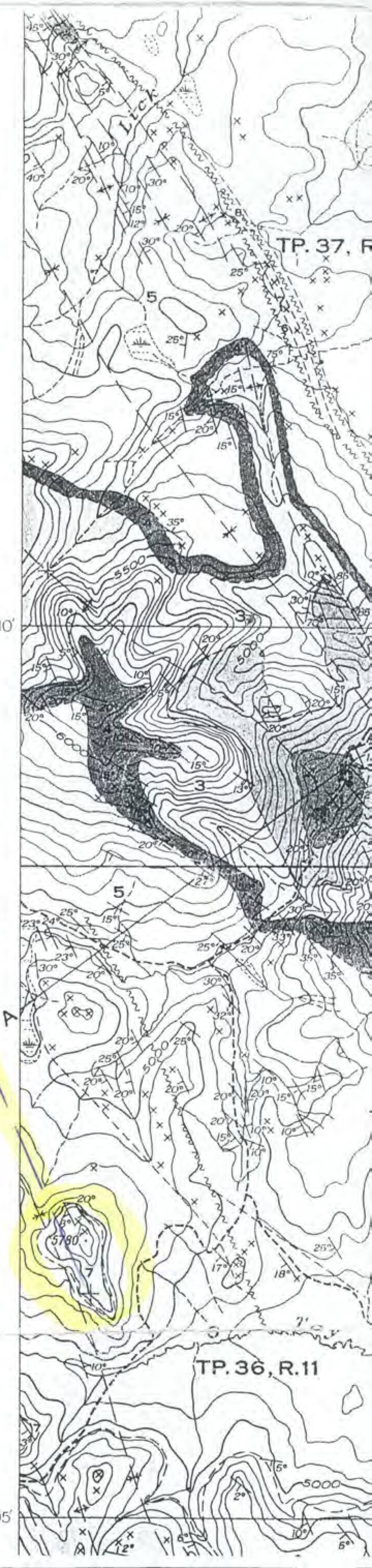
1	*Dark limestone and dolomite*

Bedding (horizontal, inclined, vertical, overturned)
Bedding (direction of dip known, upper side of bed unknown)
Rock outcrop (attitude of beds unknown) ×
Fault
Anticlinal axis
Synclinal axis
Well (drilled for oil and gas)

Road not well travelled
Trail and building
Abandoned building
Township boundary (surveyed)
Township boundary (unsurveyed)
Section line
Forest Reserve boundary
Intermittent stream
Marsh

10'

05'



PUBLISHED, 1945.

MAP 840A

TAY RIVER

WEST OF FIFTH MERIDIAN

ALBERTA

Scale, $\frac{1}{63,360}$ or 1 Inch to 1 Mile

Miles

1 0 1 2 3

Approximate magnetic declination, 25°15' East.

APPENDIX 3

Petrological Analysis

Fish Creek Excavating

Brown Sandstone

September 7, 2006

CR Calgary Rock and Materials Services Inc.

TABLE OF CONTENTS

Petrographic Study
Brown Sandstone

Introduction

The main purpose of this study is to evaluate the mineralogy, texture and durability for one outcrop sample (Brown Sandstone, TS1).

The thin-section produced from an outcrop sample, was impregnated with blue epoxy to identify porosity and to prevent delicate structures (e.g. clays) from being destroyed during preparation. The samples were stained with Alizarin Red and potassium ferricyanide to distinguish ferroan carbonates as well as sodium cobaltinitrite stain to identify the presence of alkali feldspars.

Petrographic Descriptions

Sample TS1: Brown Sandstone

The outcrop sample was analyzed using petrographic analysis to determine the basic mineralogy and texture. Sample TS1 (Brown Sandstone, see Image A) is identified as a coarse-silt-size (0.05mm) to fine-grained lower (0.15mm), predominantly very fine-grained (rare medium-size grains), moderately-sorted, subangular to subrounded sublitharenite (Folk, 1968). A sublitharenite in the Folk classification states that between 75% and 95% of the total grain component is composed of quartz.

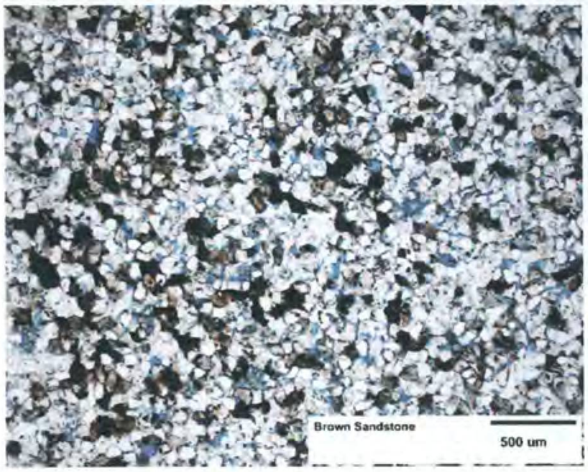


Image A: Low magnification view of sample TS1. Note minor porosity (blue-epoxy), which is estimated at between five and six percent.

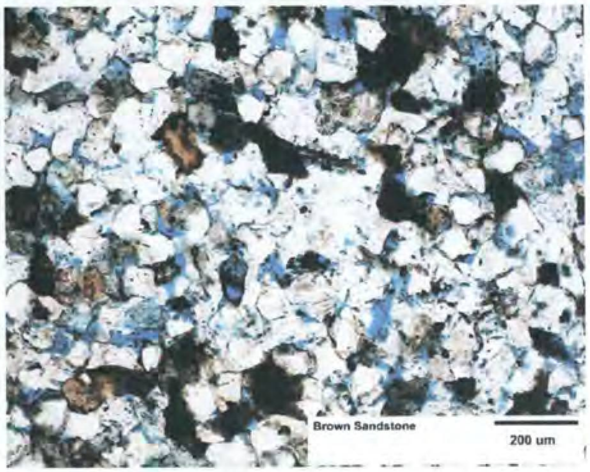


Image B: Closer view illustrating abundant quartz grains (white) with common quartz cement.

The rock framework composition consists primarily of quartz with minor amounts of chert, alkali feldspar, plagioclase feldspar, glauconite pellets and trace amounts of sedimentary lithoclasts, muscovite and heavy minerals.

Quartz grains exhibit undulose (predominant, due to stress and compaction) and uniform extinction as well as common quartz overgrowths/cement. Occasional sutured grain contacts are observed due to moderate compaction. Chert grains observed consist of microquartz (tiny crystals of quartz generally less than 5 to 20 microns in diameter, which display an equigranular texture with pinpoint extinction pattern), megaquartz (generally displays a progressive increase in crystal size from margin to center) and rare chalcedony (bundles of fibers with a commonly radiating pattern). Partial dissolution of chert is observed.

Alkali feldspar is identified by yellow-staining and occasionally is partially dissolved. Plagioclase feldspar is present in twinned (polysynthetic twinning observed in cross-polarized light) and untwinned varieties with partial to near complete dissolution observed. Glauconite is brown to green in colour and opaque in cross-polarized light.

Authigenic minerals consist of common quartz cement and minor amounts of pore-lining clay and pyrite. Minor amounts of carbonaceous material and bitumen are observed coating grains and lining pore spaces.

Quartz cement/overgrowths are identified by a thin rim of dust inclusions around the detrital grain (see Image D). Pore-lining clay (brown/dark brown in colour) consists predominantly of illite with trace amounts of chlorite and illite-smectite identified by XRD analysis.

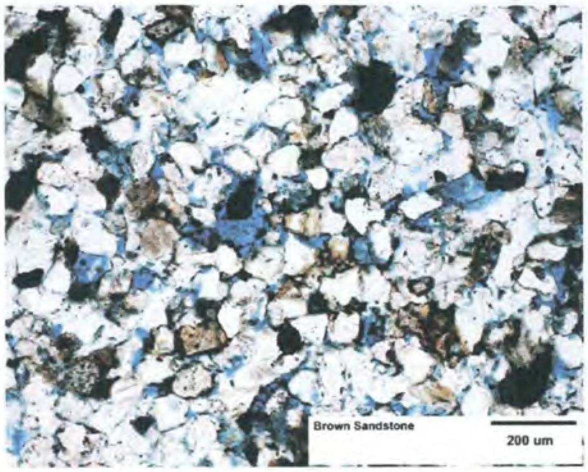


Image C: Closer view illustrating minor intergranular porosity (blue-epoxy).

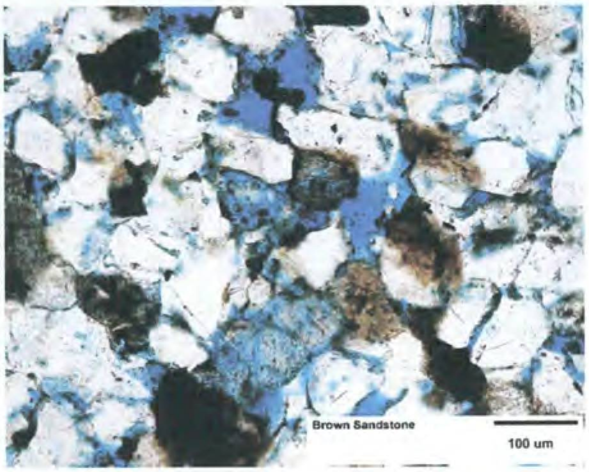


Image D: High magnification view illustrating partial chert dissolution and quartz overgrowths. Note carbonaceous material and bitumen lining pore spaces.

Minor intergranular porosity (see Image D, blue epoxy) and common microporosity is observed associated with partial dissolution and small intergranular pores. Total porosity is estimated a between five and six percent.

Conclusions

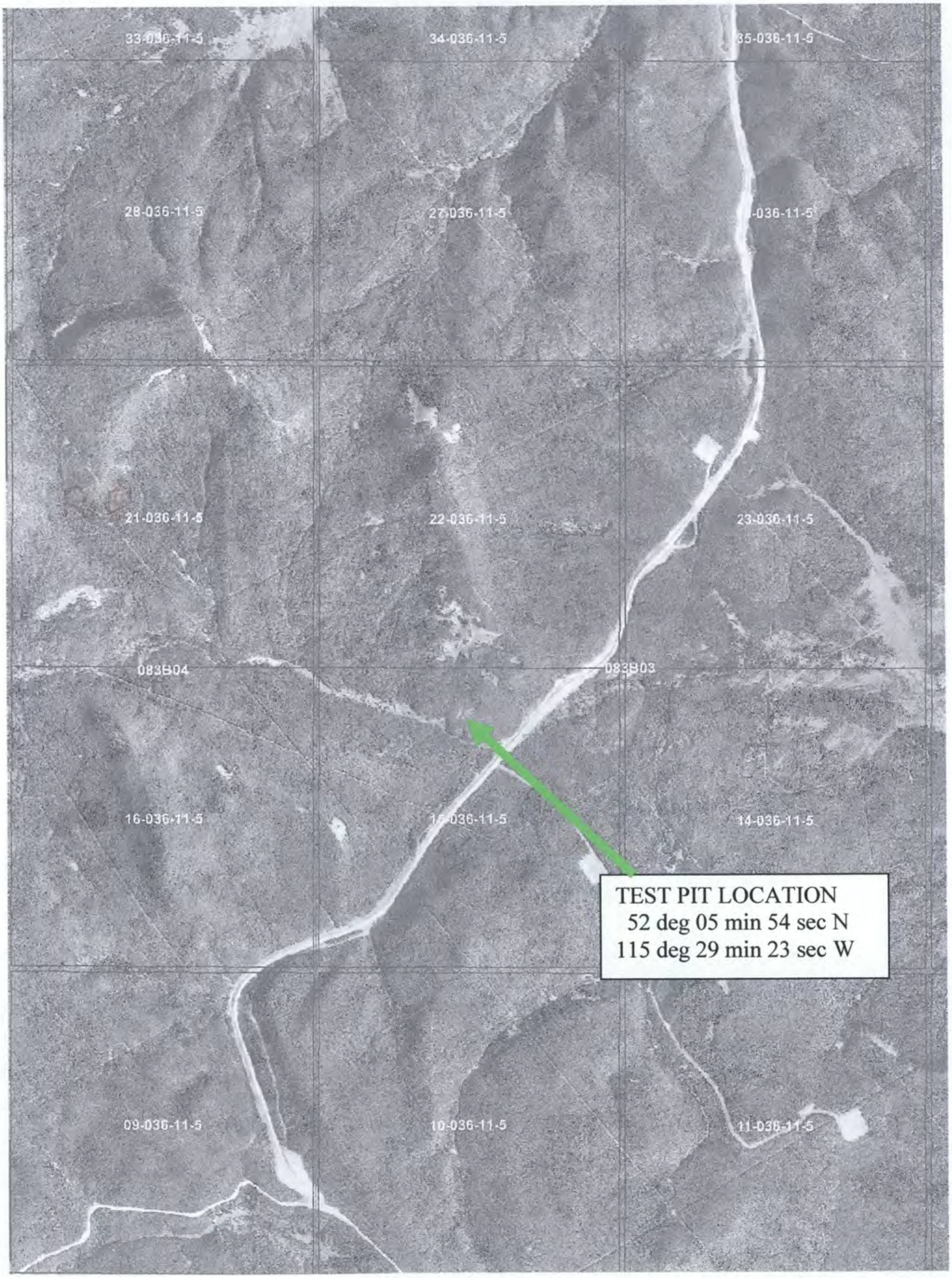
The outcrop sample briefly analyzed was identified as coarse-silt-size to fine-grained lower, moderately-sorted, subangular to subrounded sublitharenite.

Abundant quartz, common quartz overgrowths and minor chert strengthen the rock framework. Porosity (estimated at between five and six percent) within the rock could cause potential durability issues. Additional tests are recommended to determine the strength and weathering potential of the rock.

Aaron Bonk, B.Sc.
Manager, Petrographic Services
Calgary Rock and Materials Services

Raymond Strom, Ch.T.
President
Calgary Rock and Materials Services

APPENDIX 1
MAP OF ASSESSMENT WORK AREA
METALLIC AND INDUSTRIAL MINERALS PERMIT No. 9306090842



LOS ANGELES ABRASION TEST REPORT

APPENDIX 4

amec

TO: **Fish Creek Excavating Ltd.**
7515 – 84 Street SE
Calgary, Alberta
T2C 4Y1

OFFICE: **Calgary**
PROJECT NO: **CA17418**
CC:

PROJECT: **Aggregate Testing**

SOURCE:
DATE SAMPLED: **JUNE 10, 2008**
SAMPLED ID: **8**
DATE RECEIVED: **JUNE 10, 2008**
SAMPLED BY: **CLIENT**
DATE TESTED: **JUNE 10, 2008**

MATERIAL GRADING: 2			
ACTUAL SIEVE SIZES		AMOUNT	
- 50.0	+ 37.5		5035.3 g
- 37.5	+ 25.0		4977.6 g
NO. OF REVOLUTIONS	1000	TOTAL SAMPLE	10012.9 g
NO. OF SPHERES	12	+ #12 MATERIAL AFTER	7220.0 g
WT. OF SPHERES	4955.4	- #12 MATERIAL AFTER	2792.9 g
LOSS AT 100 REVOLUTIONS	N/A	LOSS AT 500 REVOLUTIONS	N/A
LOSS AT 200 REVOLUTIONS	N/A	LOSS AT 1000 REVOLUTIONS	27.9 %

TESTED IN ACCORDANCE WITH ⁱCSA A23.2 – 16A (ASTM C131) ⁱCSA S23.2 – 17A (ASTM C535)

COMMENTS:

Per: Ryr RH

Reporting of these test results constitutes a testing service only. Engineering interpretation or evaluation of the test results is provided only on written request.

APPENDIX 5

X-Ray Diffraction Report

Fish Creek Excavation

Brown Sandstone

21 August, 2006

Calgary Rock and Materials Services Inc.

Calgary Rock and Materials Services Inc.

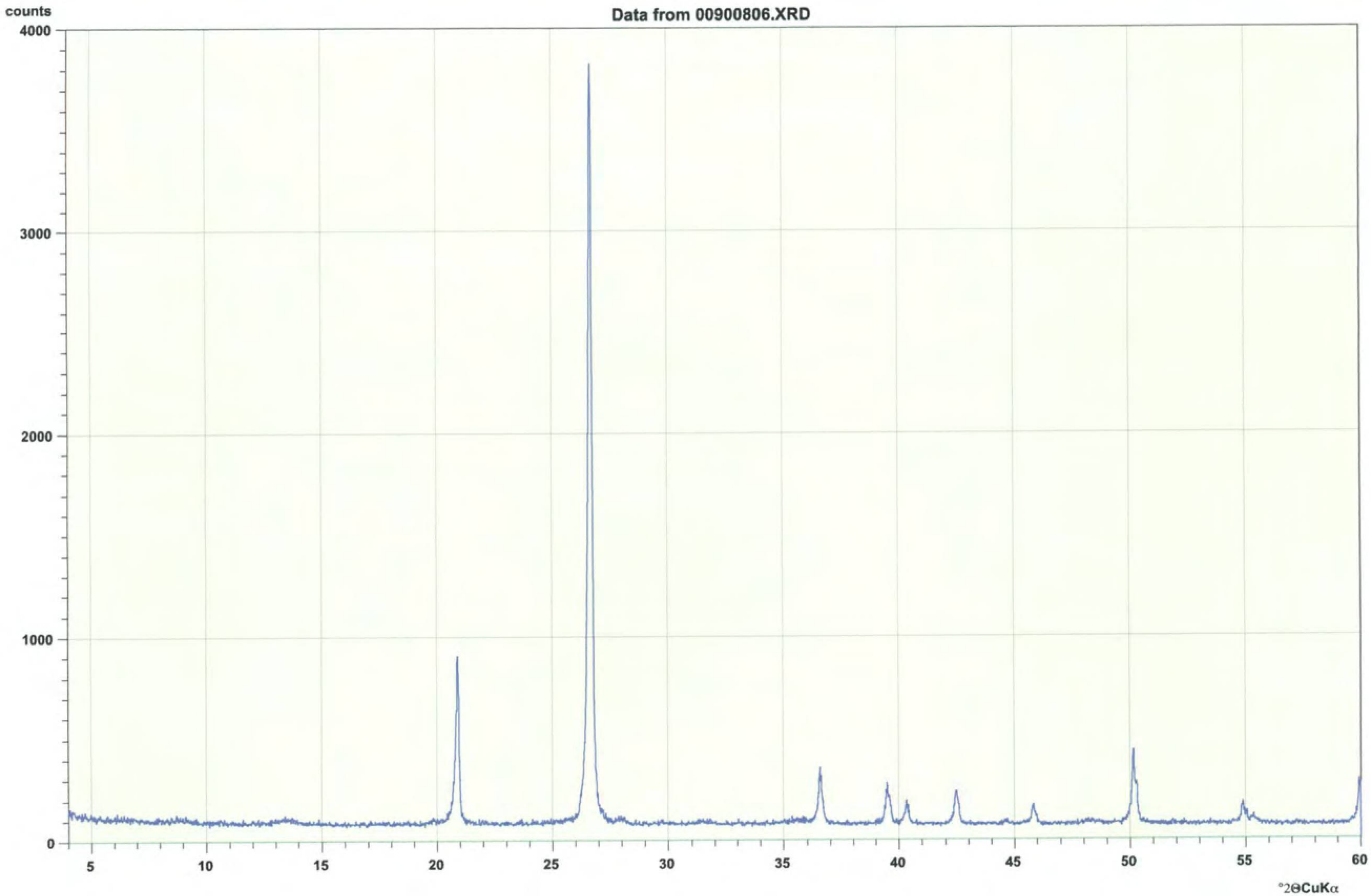
SEMI QUANTITATIVE MINERALOGY BY XRD

COMPANY: Fish Creek Excavation REQ BY: Don Scheurman
LOCN: Brown Sandstone
DEPTH: BULK POWDER
FORM: 00900806

	2 THETA	DENSITY	INTENSITY	FACTOR	WGHT FRACTION	VOL FRACTION
QUARTZ	20.9	2.65	799	1.00	0.92	0.92
K-FELDSPAR	25.8	2.58	0	3.12	0.00	0.00
K-FELDSPAR	27.5	2.58	12	1.10	0.02	0.02
PLAGIOCLASE	22.1	2.63	0	1.63	0.00	0.00
PLAGIOCLASE	28.0	2.63	16	0.66	0.02	0.02
CALCITE	29.5	2.71	13	0.33	0.01	0.01
DOLOMITE	30.8	2.84	0	0.40	0.00	0.00
ARAGONITE	26.2	2.93	0	1.80	0.00	0.00
SIDERITE	32.0	3.80	0	0.84	0.00	0.00
APATITE	25.9	3.20	0	1.88	0.00	0.00
ANHYDRITE	25.5	2.95	0	0.13	0.00	0.00
GYPSUM	11.7	2.33	0	0.85	0.00	0.00
BARITE	26.0	4.50	0	0.96	0.00	0.00
HALITE	31.7	2.16	0	0.25	0.00	0.00
PYRITE	33.1	5.00	tr	0.60	0.00	0.00
KAOLINITE	12.5	2.65	0	1.20	0.00	0.00
ILLITE	8.9	2.75	22	2.07	0.03	0.03
ILLITE	19.8	2.75	0	4.20	0.00	0.00
CHLORITE	6.2	3.00	0	5.00	0.00	0.00
SMECTITE	5.0	2.50	0	1.00	0.00	0.00
MICA	8.9	2.75	0	1.00	0.00	0.00
BERTHIERINE	12.5	3.03	0	1.00	0.00	0.00
					1.00	1.00

CALCULATED GRAIN DENSITY = 2.65

Thu, Aug 3, 2006, 17:27
Operator: Raymond Strom
File: '00900806.XRD'



Calgary Rock and Materials Services Inc.

SEMI QUANTITATIVE MINERALOGY BY XRD

COMPANY: Fish Creek Excavation REQ BY: Don Scheurman
LOCN: Brown Sandstone
DEPTH: CLAY SMEAR < 5 um
FORM: 00900806

	2 THETA	DENSITY	INTENSITY	FACTOR	WGHT FRACTION	VOL FRACTION
QUARTZ	20.9	2.65	128	1.00	0.07	0.07
K-FELDSPAR	25.8	2.58	0	3.12	0.00	0.00
K-FELDSPAR	27.5	2.58	0	0.62	0.00	0.00
PLAGIOCLASE	22.1	2.63	0	1.63	0.00	0.00
PLAGIOCLASE	28.0	2.63	0	0.66	0.00	0.00
CALCITE	29.5	2.71	0	0.69	0.00	0.00
DOLOMITE	30.8	2.84	0	0.64	0.00	0.00
ARAGONITE	26.2	2.93	0	1.80	0.00	0.00
SIDERITE	32.0	3.80	0	0.84	0.00	0.00
APATITE	25.9	3.20	0	1.88	0.00	0.00
ANHYDRITE	25.5	2.95	0	0.13	0.00	0.00
GYPSUM	11.7	2.33	0	0.85	0.00	0.00
BARITE	26.0	4.50	0	0.96	0.00	0.00
HALITE	31.7	2.16	0	0.25	0.00	0.00
PYRITE	33.1	5.00	0	0.60	0.00	0.00
HEMATITE	33.3	5.27	0	1.00	0.00	0.00
KAOLINITE	12.5	2.65	127	1.20	0.08	0.08
ILLITE	8.9	2.75	182	7.20	0.70	0.70
ILLITE	19.8	2.75	0	4.20	0.00	0.00
CHLORITE	6.2	3.00	44	5.00	0.12	0.11
SMECTITE	5.0	2.50	0	1.00	0.00	0.00
ILLITE/SMECTITE	5.2	2.50	57	1.00	0.03	0.03
MICA	8.9	2.75	0	1.00	0.00	0.00
BERTHIERINE	12.5	3.03	0	1.00	0.00	0.00
					1.00	1.00

CALCULATED GRAIN DENSITY = 2.76

Thu, Aug 3, 2006, 17:27
Operator: Raymond Strom