# DOME CREEK SLATE PROPERTY

# GEOLOGY

Yaro Horachek, P.Eng., **GEO-ING** Resource Consulting Ltd.

November 1999

CEOLOGICAL SURVEY BRANCH



# DOME CREEK STRUCTURAL SLATE LTD.

July 2000

4767 Upper Sumas Mountain Road, Abbotsford, B.C.

# RJZ MINING CORPORATION, Operator

#### 538 Hawkside Mews NW, Calgary AB T3G 3R9 MINEDAL TALES BRANCH

Rec. 1. JUL 1 7 2000

# ASSESSMENT & GEOLOGICAL REPORT

submitted to Ministry of Energy & Mines, British Columbia Energy & Minerals Division Geological Survey Branch

#### TOTAL 1999 PROGRAM COST: \$ 32 430.00

Author:

Yaro Horachek, P.Eng., **GEO-ING** Resource Consulting Ltd.

NOTICE OF WORK: YEAR OF WORK:	1999-03-10 1999	PERMIT NUMBER: MX-11-140 STATEMENT OF WORK:	April 17, 1999 18 May 2000
PROPERTY NAME:	DOME CREEK SLATE	CLAIM NAME:	DOME 205 223
COMMODITY:	Structural and Roofing	Slate	
MINFILE NUMBER:			
MINING DIVISION: NTS: Latitude 121°	CARIBOO 0' 30" Longitude 53° 42'	40" (at centre of work)	
OWNERS:	Tony Rojac (90%)	4767 Upper Sumas Mountain R BC V2S 4N4	oad, Abbotsford,
	Rex Hatchard (10%)	Mc Bride, B.C.	
OPERATOR:	RJZ Mining Corporation	i, 538 Hawkside Mews NW, Calg	ary AB T3G 3R9

#### WORK SUMMARY AND COSTS

GEOLOGICAL MAPPING Limited geological mapping in 1:50000 scale has been con-ducted of an area underlain or suspected to be underlain by Yankee Bell and Yank Peaks Formations between Dome and Ptarmigan Creeks. <u>Cost of mapping: \$1744</u>

Only very limited photo interpretation has been employed.

No geophysical work has been done. No geochemical work has been done.

DRILLING RELATED TECHNICAL	One core hole, DC 99-1, was drilled at an angle of 55° to northeast and to the total depth of 226 m. 180 m of (excluding 46 m of overburden) slate bearing Yankee Belle Formation was cored. <u>Cost of drilling:</u> <u>\$.24000</u>
Sampling:	Core was described and tested for slate splitability. Cost of core description and rig supervision: \$1744
PROSPECTING:	An area to the east and to the west of Dome Creek Property was prospected to find additional slate resource; scale of prospecting was 1 : 20000. This resulted in staking Dome East claims.
TRAVEL:	Travel expenses and transportation: \$4942
TOTAL COST:	\$ 32430

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#### AUTHOR'S CERTIFICATE

I, YARO HORACHEK, residing at RR 4, 92 Bearspaw Acres, Calgary, Alberta, Canada, do hereby certify:

- I am a Consulting Geological Engineer, registered since 1973 with the Association Of Professional Engineers, Geologists and Geophysicists Of Alberta. My registration No. is M22034.
- 2. I am a graduate of the Mining University of Ostrava, Czech Republic, with a M.Sc. in Geological Engineering (1967).
- 3. I have practised my profession in North America, Finland and Czech Republic for over 30 years.
- This report on the Dome Creek Slate Property is based on my personal supervision of core drilling and study of core obtained in July 1999 and on my geological mapping of the Dome Creek area.
- 5. I have no personal interest, directly or indirectly in the property or the securities of RJZ Mining Corporation nor do I expect to receive, directly or indirectly, any interest in such property or securities.
- 6. I give permission to RJZ Mining Corporation to use this report in support of documents submitted to the Alberta Securities Commission and Alberta Stock Exchange.

Dated this 25<sup>th</sup> day of September, 1999, in Calgary, Alberta, Canada.

Yaro Horachek, P.Eng. Reg. No. M22034 Association Of Professional Engineers, Geologists and Geophysicists Of Alberta

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#### SUMMARY.

On July 15<sup>th</sup>, 1999, the a 226 m deep core hole was completed on the Dome Creek Slate Property optioned by RJZ Mining Corporation from Dome Creek Structural Slate Company of Vancouver. The property is located in Northeastern British Columbia, 86 km northwest of McBride and 125 km southeast of Prince George. The core hole, drilled at a distance of 160 m from a 300 m long outcrop of slate on the Yellowhead highway, tested slate measures found in the upper part of the Yankee Belle Formation of the Proterozoic age. Results greatly improved the potential for developing a large slate quarry near the hamlet of Dome Creek.

The core hole intersected 113 m of slate measures found into two zones. The slate is green and grey-green. It has a potential for the production of slate articles ranging from flagstone and high quality floor and wall tiles to roofing slates as well as strucural slate products such as counter tops, steps, billiard tables, fireplace and designer wall tiles.

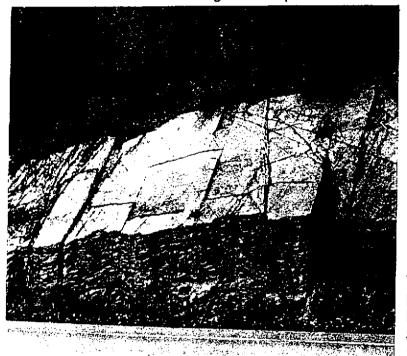
After the drill hole penetrated 46 metres of clay over-burden, it encountered bedrock of rusty stained, weathered slate. The drilling continued to a total depth of 225.6 metres, encountering two major slate intervals which have been designated the Upper Slate Zone and the Lower Slate Zone. Within the 89 m thick Upper Slate Zone 73% of the slate is categorized in the two best grades; namely, Easily Splitable (ES) and Very Easily Splitable (VES). Both are suitable for manufacturing roofing slates and tiles. An additional 6% of the Upper Slate Zone is rated as Moderately Splitable (MS) which is suitable for flagstone. The 19 m thick Lower Slate Zone contains 55% of VES & ES slate. Combined true thickness of slate (excluding any partings) is 81 m. Since the core hole entered the bedrock of slate, the top of the Upper Slate Zone is still unknown and so its thickness can be expected to be greater than the total thickness presently demonstrated.

The strata intersected in this first hole, the two slate zones, and especially a limestone marker found at the base of the slate measures, have been mapped for a total length of about seven kilometres. The mineral claims optioned by RJZ Mining Corporation control 3.5 km of this trend. A short distance to the southeast an additional block of claims was staked to cover extensions of the deposit that were available in that direction.

Resource calculation, based on four geological control points, including the core hole, a trench and two nearby outcrops, resulted in 1.6 million tonnes of potentially surface mineable slate of commercial quality available from the Dome Creek claims. The tonnage, classified as an indicated resource in place, is expected to increase substantially when more exploration is done and new claims and their resources added to the project total.

#### INTRODUCTION

The Domé Creek Slate Property is located on the Yellowhead Highway 125 km south-east of Prince George in Northeastern British Columbia. It is 10 km from the hamlet of Dome Creek which is situated along the Canadian National Railway in the Fraser River Valley. A massive wall of green slate, 1.5 to 5 m high and some 150 m long was exposed during construction of the highway in 1967, see Plate 1. The slate belongs to the Yankee Belle Formation of the Proterozoic age. The exposed slate has been attracting attention of many



people passing by and various quantities of it have been collected from the highway outcrop mainly for local landscaping use. Small and large pieces of Dome Creek slate can be seen around a number of houses in the nearby Fraser Valley communities including McBride and Prince George. The potential commercial value of the slate was recognized by Mr. Tony Rojac, a stonemason from Vancouver. who staked claims on the slate property in 1986 (Figure 1). Mr. Roiac founded the Dome Creek Structural Slate Company in 1987 with the aim of quarrying

and marketing slate products. However, progress towards the goal was slow. In the spring of 1999 RJZ Mining Corporation (RJZ) of Calgary optioned the property. RJZ decided that the first step should be to drill a core hole to assess the extent of the slate resource and to determine the overall slate quality within the slate-bearing interval of the Yankee Belle Formation. This report is an interim evaluation of the results of the drilling program carried out in mid July, 1999, and the geological mapping that was conducted prior to and after drilling. The next step in evaluating the property will consist of opening a test pit to produce approximately 1000 tonnes of slate flagstone. The flagstone will introduce the green Dome Creek Slate to markets in Western Canada and Northwestern US. But flagstone is only an interim step; RJZ's principal objective is to become a producer of roofing slates.

#### GEOGRAPHIC LOCATION AND ACCESS

The property straddles NTS 1:50000 map sheets 93 H/10 and 93 H/11. The slate outcrop at the highway is located at 121° 00' 20" and 53° 41'50" in the northeastern corner of map sheet 93 H/11. Within the area of Dome Creek Structural Slate Company's claims the slate resources extend northwesterly and southeasterly from the outcrop over a total distance of 3.5 km (see Figure 2). Access to the slate resource is excellent. The Yellowhead Highway passes through the property and partly overlaps the deposit. Nowhere is it further than 800 m from the potentially mineable slate. The hamlet of Dome Creek has a railway siding and is 10 km from the centre of the resource area (the highway outcrop). The property is 86 km from McBride which is the nearest significant population centre. Prince George, the nearest major population centre, is 125 km from the property.

#### EARLY EXPLORATION

Prior to 1999 several limited exploration programs were carried out. The earlier work included trenching and limited horizontal core drilling sampling of the outcrop at the highway. Previous assessment reports have not been made available to the author of this report. Results of tests conducted on samples of slate cores by Hardy BBT Limited Vancouver laboratory, Chemex Labs. Ltd. and by CANMET are attached as Appendix 3. Several deep trenches were excavated on the south side of the highway. Deep trenching encountered thick clay overburden (6 m and more) and exposed good slate in a trench located below the highway some 60 m south of and opposite the highway outcrop. While this work was encouraging, there was no information to indicate whether or not the stratigraphic interval under the highway, between the main outcrop and this small trench exposure, contained slate.

#### RJZ MINING CORPORATION

In early 1999 an interest in the slate at Dome Creek was expressed RJZ Mining Corporation, of Calgary, Alberta. An option agreement between RJZ and Dome Creek Structural Slate Ltd. regarding further exploration and development of the slate resource was reached in early July 1999. Soon after, RJZ engaged GEO-ING Resource Consulting Ltd. (GEO-ING) to manage the exploration program. GEO-ING arranged for J.T. Thomas Diamond Drilling Ltd. to drill and core at least 100 metres of the slate measures to determine the thickness and quality of commercial slate on the property. Geological mapping was conducted simultaneously with and following the drilling program.

#### CORE DRILLING IN JULY 1999

The first core hole, DC 99-1C, was located 160 m southwest of the highway outcrop. It was drilled at an inclination of 50 degrees from horizontal and on a northeast azimuth. As the slate dips at 55 degrees to the southwest the core hole was nearly perpendicular to the formation. Figure 4 is a cross section which illustrates the core hole results, their relation to the highway outcrop and the distribution of slate in the drilled section.

#### GEOLOGY

#### Regional setting

Results of the drilling program and recent mapping by the author indicate that the Dome Creek slate is the rock described by Campbell et al., 1972, as "light green-gray argillite and olive-gray shale" and thus it is believed that the slate measures are part of the Yankee Bell Formation of the Cariboo Group. Campbell et al., 1972, stated that the formation is of Proterozoic age belonging to the Hadrynian (Windermere) period.

The property is located in the Rocky Mountain Trench and the Fraser River valley where glacial and fluvial activity deposited large amounts of clay, sand and silt that buried most of the bedrock. As a result, outcrops are limited and very little of the remainder of the slate bearing formation can be found in the Dome Creek area. Campbell et al., 1972, described the Yankee Belle Formation from the headwaters of Dome Creek as a 908 m thick interval of alternating beds of shale, siltstone, fine-grained quartzite, and limestone with units of uniform argillite or shale up to 150 m thick. Slate was not mentioned. Campbell et al., 1972, reported that the Yankee Belle Formation is underlain by a 553 m thick limestone of the Cunningham Formation and overlain by a 402 m thick sequence of quartzite, shale, siltstone and calcareous sandstone of the Yanks Peak Formation.

#### Local geology

The following discussion of local geology is illustrated on Figure 3.

In the Dome Creek Property area the most prominent part of the Yankee Belle Formation is the slate itself. It outcrops at the north side of the highway at a location 3.5 km from the Dome Creek bridge. The outcrop is a almost 300 m long, green and locally rust stained. It forms a steep wall sloping southwesterly at 60° to 65° towards the highway (see Plate 1). A detailed description of the outcrop is attached as Appendix 3. The slope of the wall is formed by the slate's cleavage which masks the dip of the formation that ranges from 45° to 55° to the southwest. A short distance to the northwest a small outcrop of slate was found in the forest about 200 m from the highway outcrop. Beyond that point no other outcrop has been found as the slate is buried by sand and clay overburden. No slate was found in the valley of Dome Creek and in the area west of Dome Creek, on strike with the outcrop, there is nothing but hills of sand.

Following the strike of the slate wall to the southeast, another outcrop of slate was found 2.5 km from the highway outcrop. It is a 3 to 5 m high and 200 m long rounded ledge of slate hidden in the forest on the south side of the highway. Some 300 m farther, adjacent to the highway is an outcrop of gray limestone which underlies the slate. This limestone marker was also found below

the Lower Slate Zone in the bottom of the core hole (Figure 4). Along strike to the southeast more outcrops have been found; two of limestone, at a distance of 0.7 km and 1.3 km from the limestone at the highway. At 1.4 km, an outcrop of slate occurs further along strike and at 2.8 km from the limestone at the highway, a minor ridge in a clearcut is most likely a subcrop of the limestone marker. All these outcrops of slate and limestone define a six km long trend of slate measures. In a 4.5 km long part of it the presence of slate is demonstrated by several geological control points and the core hole. Dome Creek structural Slate Company's mineral claims that have been optioned by RJZ control the western 3.5 km of this trend (see Figure 2).

Approximately 250 m southwest of the slate and limestone trend is a ridge of quartzite and quartzitic sandstone. This ridge marks the base of the Yanks Peak Formation which overlies the slate measures of the Yankee Belle Formation. The ridge runs in a south-easterly direction more or less parallel with the highway at a distance ranging from 200 to 1000 m from it. Together with the slate's strike, the ridge defines a southern boundary of a south-easterly trend for a future extension of slate resources. The trend is terminated 6 km southeast of the Dome Creek Property by five small peaks formed by quartzite, quartzitic sandstone and quartz. The peaks are located where continuation of limestone and slate would be expected but no slate was found there. It appears that the slate measures and the Yankee Belle Formation are truncated by a fault crossing the strike.

Another prominent unit in the area is a massive layer of quartz, quartzite, quartzitic sandstone and phyllite which outcrops in the Dome Creek valley 2 km downstream from the Dome Creek bridge and stratigraphically below the slate measures and the Yankee Belle Formation. Similar rocks form a ridge that crosses the highway at a point 1.5 km east of the highway limestone outcrop and goes on parallel with the highway for over 3 km. Geological affinity of this unit is uncertain. It has the appearance of rocks of the Yanks Peak Formation. In that case there would have to be a thrust-fault below the slate measures. In fact a sheared black shale, interpreted as a fault zone, was found below the limestone bed at the end of the core hole DC 99-1C, at a depth of 224 m. Normally the stratum underlying the Yankee Belle Formation is a 237 m thick limestone of the Cunningham Formation. The nearest location where it is exposed is a limestone quarry in the lower Ptarmigan Creek valley four km east of the Dome Creek Property.

#### NATURE OF THE DOME CREEK SLATE

The Dome Creek Slate is a hard, green slate. More accurately its colour ranges between jade green, moss green, greenish gray and grayish green. In terms of appearance and splitability it can be broadly subdivided as follows:

- Clean slate: Grayish green, evenly coloured, uniform throughout, smooth slate of roofing quality. It is non-calcareous and has no (or very few) visible impurities. Clean slate is easily or very easily splitable. Its cleavage planes are smooth, straight and are sometime silky to the touch.
- Speckled slate: Grayish green, non-calcareous slate with dark gray lenses, laminae or bands. It contains variable amounts of dark matter deposited along bedding planes. The dark matter shows as darker spots or ribbons on the split slate. Speckled slate is moderately to easily splitable and is readily suitable for tiles and flagstone. When the number of bands increases above a certain level the slate becomes poorly splitable. Cleavage planes of speckled slate are slightly uneven, textured, wavy to rough, depending on the intensity of lamination. Microscopic examination of the laminae (at 40x magnification) does not reveal their nature. They look similar to clean slate except for the dark gray, in places almost black, colour. Traces of hematite and rare grains of pyrite are associated with the dark laminae.
- Calcareous slate: This slate is of similar appearance to the two types of slate above but testing with hydrochloric acid reveals the presence of calcium carbonate. It is slightly gritty and often contains thin laminae, bands or lenses of limestone. Calcareous slate does not split as easily as non-calcareous slate, but a 10 cm core segment can be split into five 2 cm thick plates with somewhat harder chisel impact; i.e. such a rock may be useful for 1 to 2 inch flagstone or for thick dimensioned products (e.g. steps). Most of calcareous slate has been graded as poorly splitable. It often grades into non-splitable limestone.

#### CORE HOLE DC-99 1C

Core hole DC-99 1C was drilled to 226 m. The hole was drilled by J.T. Thomas Diamond Drilling Ltd. of the Major Drilling Group. It was completed in two and a half days (working two 12 hour shifts per day). The core is BQ-TK type which is 42 mm in diameter.

The size of the core was sufficient for comfortable core description and for testing the splitability of the slate. Splitting was done with a sharp 3 cm wide chisel and geological hammer. Eight of the total of 24 boxes of core obtained are shown on Plate 2.

#### Slate splitability classification

The following classification of splitability was used:

Not Splitable: Grade NS Code 0

The rock does not split at all or the core breaks.

Poorly Splitable: Grade PS Code 1

The rock splits only with extra force and can not be split into not even medium thin plates (30 to 50 mm thick). The cleavage plane is very rough.

Moderately Splitable: Grade MS Code 2

The cleavage plane is not smooth but it is not very rough. Often it contains gray to dark gray laminae and lenses. Such slate was described as speckled slate.

Easily Splitable: Grade ES Code 3

The slate core splits easily with a light tap of a hammer on the chisel, down to 5 mm thick plates. The cleavage ranges from fairly smooth to partly uneven, wavy or, locally, somewhat rough.

Very Easily Splitable: Grade VES Code 4

The slate core splits very easily with a very light tap of a hammer on the chisel, down to 3 mm thick coin-like plates, see Plate 3. The cleavage plane is straight and smooth to silky smooth.

In this report the term "good slate" refers to intervals of predominantly ES and VES slate.

#### Core summary

Bedrock was reached at a depth of 46 m. The unconsolidated overburden was clay and silty clay. Since the hole was drilled at 50 degrees, the true depth of the overburden at the point of bedrock penetration is 40 m. Right below the drill site it may be 65 m thick. The first rock encountered was a 5.2 m thick interval of green and grayish-green, rusty stained weathered slate. The colour combination of the green with orange, rusty stains could make an attractive flagstone product.

In the rest of the hole the core included two slate zones with nine potentially mineable intervals of good grade slate, gray limestone and black shale at the end of the hole. The two zones, designated as the Upper Slate Zone (89 metres thick) and the Lower Slate Zone (19 m thick) are separated by 40 metres (true thickness) of calcareous slate, lime-stone, phyllitic shale and structurally disturbed rocks. Both zones include intervals of good grade slate separated by layers of interburden ranging in thickness from 0.8 m to 4.1 m.

The 89 m thick Upper Slate Zone contains 65.3 m of slate classified as Easily Splitable and Very Easily Splitable. When combined with the 5.7 m of Moderately Splitable grade, it can be expected that fully 73% of the Upper Slate Zone has a potential for production of marketable slate products. Similarly, 55% (11 m) of the 19 m thick Lower Slate Zone is Easily Splitable and Very Easily Splitable, potentially commercial grade slate.

In general the good slate intervals are mainly ES and VES slate with lesser amounts of moderately splitable slate and thin, poorly splitable or non-splitable calcareous slate or limestone partings. In both zones most of non-slate material is found in the interburden intervals.

The table on the following page is a summary of slate intervals and interburden. A detailed core description and core evaluation are attached as Appendix 1 and Appendix 2. The thicknesses of the slate intervals intersected in the hole are reported as:

- 1. Gross thickness (apparent, including slate and partings).
- 2. Net thickness (slate only, partings excluded).

Net slate is reported by two numbers. The upper number is VES plus ES slate and the lower number is the MS slate. The overall content of the net slate in the Upper Slate Zone is 73% but within the individual slate intervals the average is 86%. Corresponding values for the Lower Slate Zone area 56% and 83%.

The best slate in the core hole was found in the lowermost part of the Upper Slate zone. The very bottom interval includes 4.2 m of VES smooth slate followed upwards by 1 m interburden and 12 m of ES and VES slate. Above this best interval is ES speckled slate which may prove very marketable because of its texture.

Summary of slate and interburden intersections in Core Hole DC-99-1C:

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Rock type	Interval [m]	Thickness Gross Ne	
Weathered slate	45.7-50.9	5.2 5.2	Grayish-green slate with rusty stain on cleavage planes. Flagstone material.
Good grade slate	50.9-59.7	8.8 7.8 0.9	
Interburden	59.7-63.1	3.4	Calcareous MS, some PS to NS slate.
Good grade slate	63.1-74.7	11.6 9.8 0.2	
Interburden	74.7-76.4	1.7	Interbedded limestone and slate. There is 1.2 m of core loss or missing. Description in this interval will be clarified later when the author returns to McBride.
Good grade slate	76.4-79.9	3.5 1.9 1.0	
Interburden	79.9-84.2	4.3	Interbedded slate, calcareous slate and minor limestone.
Good grade slate	84.2-108.1	23.9 21.7 0.4	
interburden	108.1-111.8	3.7	This interval is all slate but it is de-formed due to a fault. There is a 45 cm zone of fractured non- splitable slate containing dark laminae parallel with core axis. Outside of this zone the slate in is moderately splitable to not splitable.
Good grade slate	111.8-135.7	23.9 20.0 3.25	•

Rock type	interval [m]	Thicknes Gross	half there are 12 m of ES and VES slate roofing quality. <u>This is the upper part of the best slate</u> interval on the property. is of slate [m] Description Net
Interburden	135.7-136.	5 1.0	This thin interburden could easily be combined with the good slate zones above and below and considered a parting. It consists of waste-rock of interbedded slate and limestone with traces of chalcopyrite.
Good grade slate	136.5-143.2		<ul> <li>6.1 At the top of this interval is a 4.2 m thick</li> <li>0 layer of VES slate. It is the bottom part of the best slate interval on the property. It is followed by a fault zone and ES slate with two thin partings</li> </ul>
SUBTOTAL OF TH	E UPPER SLAT	IE ZONE	
Gross interval Thickness of good ( Net slate	45.7-143.2 m grade slate VES & ES: MS:	78.4 m 67.3 m 5.7 m	True thickness 76.1 m 65.3 m 5.5 m
	Combined	73.0 m	70.8 m
Core summary cont	inued		
Rock type	Interval ⊺ [m]		of slate [m] Description Net
Major interburden	143.2 197.7	54.5	This interval separates the thick Upper Slate Zone from the thinner Lower Slate Zones. A large part of it is phyllitic shale interbedded with limestone bands.
Good grade slate	197.7-200.8	<b>3.1</b> 1	<ul> <li>1.7 Mineability of this slate interval is rather</li> <li>0 questionable since it is quite thin and includes a thick parting. There is 90 cm of VES and ES slate above the parting and 80 cm of ES slate below.</li> </ul>
Interburden	200.8-202.4	1.6	This interval is all slate. It is moderately to poorly splitable.
Good grade slate	202.4-208.6	6.2 5	<ul> <li>5.4 This interval is also all slate but unlike the</li> <li>0 slate above it is easily and partly very easily splitable slate. It includes a 45 cm thick poorly splitable parting.</li> </ul>

Interburden	208.6-213.7	5.1	In addition to non-splitable, stressed and slicken-sided slate this interval includes two fracture zones: 58 cm thick and 10 cm thick. One them may be a fault.
Good grade slate	213.7-217.5	3.8	This is the lowermost unit of mineable slate in the core hole. It is rather thin but it is all slate of good quality, including 1.3 m of

Slate in the core hole. It is rather thin but it is all slate of good quality, including 1.3 m of very easily splitable slate at the top and 75 cm of easily splitable, beige coloured slate at the bottom. This slate has a soapstone-like feel

## SUBTOTAL OF THE LOWER SLATE ZONE

Gross interval	197.7-217.5 i	m	True thickness
Thickness of goo	d grade slate	13.1 m	12.7 m
Net slate	VES & ES	10.9 m	10.6 m
	MS	0 m	

# TOTAL OF BOTH ZONES

Thickness of g	ood grade slate	91.5 m	True thickness
Net slate	VES & ES	78.2 m	75.9 m
	MS	5.7 m	5.5 m
	Combined:	83.9 m	81.4 m

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Rock type	Inter	val	Length	Slat VES+ES		Partings	Brief description.
	[m]			[m]		[m]	
Weathered good slate	45.7 -	50.9	5.2				Slate with attractive rusty stains on cleavage planes. Flagstone slate.
Good grade slate	50.9 -	59.7	8.8	7.8	0.9	0.1	Mainly roofing and tile material.
Interburden	59.7 -	63.1	3.4				
Good grade slate	63.1 -	74.7	11.6	9.8	0.2	1.6	At least 50% of this interval is of roofing quality.
Interburden	74.7 -	76.4	1.7				
Good grade slate	76.4 -	79.9	3.5	1.9	1.0	0.7	Mainly speckled slate, best suited for tiles and flagstone.
Interburden	79.9 -	84.2	4.3				
Good grade slate	84.2 -	108.1	23.9	21.7	0.4	1.8	A thick interval of good grade slate. Mainly ES and some VES.
Interburden	108.1 -	111.8	3.7				
Good grade slate	111.8 -	135.7	23.9	20.0	3.3	0.6	The best interval; includes 12 m of roofing and tile grade slate.
Interburden	135.7 -	136.6	0.9				
Good grade slate	136.6 -	143.2	6.7	6.1	0	0.6	At the top of this interval is 4.2 m of VES slate.
SUBTOTAL OF THE		<b></b>		VES+ES	MS	Partings	
UPPER SLATE ZONE:	50.9 -	143.2	92.3	67.3	5.7	5.4	
True thickness:			89.2	65.0	5.5		VES+ES+MS SLATE COMBINED: 70.5 m
Interburden	143.2 -	197.7	54.5				phyllitic shale interbedded with limestone bands.
Good grade slate	197.7 -	200.8	3.1	1.7	0	1.4	Includes a 1.27 m thick parting.
Interburden	200.8 -	202.4	1.6				This interval is all slate but it is moderately to poorly splitable.
Good grade slate	202.4 -	208.6	6.2	5.4	0	0.7	All slate, mainly ES but also 0.45 m PS slate.
Interburden	208.6 -	213.7	5.1				Includes two fractured fault zones.
Good grade slate	213.7 -	217.6	3.8	3.8	0	0,0	Includes 75 cm of easily splitable, beige coloured state at the bottom.
SUBTOTAL OF THE	• • • • • • • • • • • •			VES+ES	MS	Partings	
LOWER SLATE ZONE:	197.7 -	217.6	19.8	11.0	0		
True thickness:			19.1	10.6	0.0		VES+ES+MS SLATE COMBINED: 10.6 m

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#### SLATE RESOURCES

The cross-section on Figure 4 shows three geological control points, the highway outcrop, core hole and the trench, all located on the line of cross-section. A fourth point, an outcrop of slate, is located 300 m west of the cross-section. Since only the Upper Slate Zone is controlled by these points the resource calculation has been done for the Upper Slate Zone only. Resource calculation has not been done for the Lower Slate Zone since it is controlled by only one single geological point, the core hole. Presence of the Lower Slate Zone near surface has not been confirmed in the area of the cross-section.

Figure 5 shows the resource portion of the Upper Slate Zone. It is a 30 m thick part of the zone found under less than 20 m of clay overburden.

Calculation of the slate tonnages and volumes of waste material is presented below.

In this calculation the gross thickness is the total thickness of a slate interval; the net thickness is slate only, excluding any partings. Slate and interburden thicknesses are from the Core Evaluation of Hole DC 99-1C (Appendix 1). Width of slate and of interburden was measured on the cross-section. The length of 454 m represents 274 m long outcrop of slate at the highway and an outcrop of slate found 200 m west of the highway outcrop. Combined, the two outcrops demonstrate presence of the 454 m long resource block.

Indicated resource of potentially mineable slate in the Upper Slate Zone

	Bulk de	nsity c	of slate: 2.8	tonnes	s/m³		
	Area	Thick gross	ness Widtl s net	٦	Lengt	n Volume	Tonnage gross net
	[m²]	[m]	[m]	[m]	<b>[</b> m]	[M m³]	[Mt] [Mt]
Clay overburden	996				454	0,452	
slate (the top interval)	63				45 <b>4</b>		0.080 0.079
Interburden		3.4		6	454	0.339	
Slate		11.6	10.0	20.5	454		0,516 0.26
Interburden		1.74		31	454	0.371	
Slate		3.4	2.8	38	454		0.233 0.189
interburden		4.3		46.5	454	0,105	
Slate		23.1	21.5	46	454		1.350 1.256
Interburden		3.6		42	454	0.686	
Slate		23	22.5	37	454		1.082 1.060
Interburden		0.8		46	454	0.167	
Slate (the bottom intervi	al)	6.4	5.8	47	454		0.382 0.348
Slate under highway	1160				454	0.527	1,500
Clay overburden	0.26 M	m³					
Interburden	0.21 M	m³	Gross slate	e 3.	3 Mt	Potentially	
Partings	0.22 M	m³	Net slate	3.	1 Mt	Mineable sl	ate: 1.6 Mt
<u>Total waste</u>	<u>0.70 M</u>	m³	Sterilized *	<b>1</b> .	5 Mt	Stripping ratio:	0.23 m³/t

\* sterilized by the highway

#### Resource classification

The Dome Creek slate deposit can be described as a massive sedimentary resource of simple geology. Since it originated from a marine shale, it is expected to be laterally continuous unless structurally disturbed. It is part of the Yankee Belle Formation which is widespread in the McBride - Dome Creek area. Mapping of the slate bearing trend from the Dome Creek Property to the east confirmed continuity of slate measures for at least six kilometres with no indication of structural disturbance. However, since the deposit is located in the Rocky Mountain belt it would be prudent to reclassify the local geology of slate measures from simple to moderately complex.

If a thick coal seam occurred in the Dome Creek slate measures it would be classified as measured resource up to 450 m from the nearest data point. This is according to A Standardized Coal Resource/Reserve Reporting System for Canada (Geological Survey of Canada and Coal Association of Canada, 1988).

Accordingly, classifying the 1.6 million tonnes of Dome Creek slate in a 454 m long block controlled by four geological data points as an indicated resource (quantity is known within 20% assurance) should be considered quite conservative.

#### SLATE QUALITY

All tests, analyses and other slate quality parameters conducted on Dome Creek slate to date are provided in Appendix 4.

Laboratory testing, study of 1999 core and observation of slate outcrop at the highway indicate that the Dome Creek Slate Property contains slate of very good quality with excellent potential for manufacturing of various slate products.

In 1988 a series of tests and analyses were performed on samples of Dome Creek slate by Hardy BBT Limited, Chemex Labs Ltd. and by CANMET (Canada Centre for Mineral and Energy Technology). Samples were excavated by Dome Creek Structural Slate Company from behind the highway outcrop, a weathered interval close to surface.

According to these tests, the Dome Creek slate qualifies as grade S1 or S2 roofing slate and as grade I Exterior slate of ASTM. But some important test have yet to be done and all tests must be repeated when fresh slate from below weathering zone becomes available.

The Dome Creek slate has a density of 2.8 t/m<sup>3</sup> which is quite dense, slightly heavier than most of American slates, also an indication of good quality. In comparison to slates of the Eastern United States the Dome Creek slate is relatively low in silica content, high in alumina and high in iron. Its composition is similar to dark grey Monson slate from Maine, one of the highest priced US slates in the beginning of this century when slate production, mainly for roofing purposes, was very large.

# RECOMMENDATION OF FUTURE WORK - CORE DRILLING, TRENCHING AND TEST PIT IN THE DOME EAST AREA.

In light of the very encouraging results of core hole DC 99-1C and the geological model developed from the available data the following work is proposed:

- 1. Trench at two or three sites near the eastern end of the area of interest and at the proposed test pit site. The objective of these trenches will be to confirm the location of the marker limestone and the overlaying slate of the Lower Slate Zone and to expose slate at the location of the proposed test pit to fine tune the pit location. All the trenches are accessible in an existing clearcut or on an existing trail.
- 2. Drill one or two core holes on a diactivated forest access trail in the area of the new claims (Dome East). This coring must be done so as to penetrate strata above those intersected in the first core hole. Presence of the Upper Slate Zone and additional slate is expected and slate of a different colour above the presently known slate measures may be found.
- 3. Evaluate the results, select the zone of best slate and conduct a shallow seismic survey in the area of its projected subcrop to determine the depth of overburden. Select a test pit site in the area of least overburden.
- 4. Construct access road to the site of the proposed test pit.
- 5. Excavate a test pit to produce about 1000 tonnes of flagstone slate.

The test pit will be located at a site located approximately 350 m from the highway. The overall size of the test pit area may be as much as  $8000 \text{ m}^2$ . Plan to excavate approximately 1000 m<sup>3</sup> of slate which will yield at least 1000 tonnes of 40 to 50 mm (1.5-2 inch) thick flagstone. The flagstone will be loaded in crates and stored in McBride warehouse. From there it will be shipped to various stone-yards in Western Canada and US Northwest.

5. Consider an option to excavate initial 60 to 70 m<sup>3</sup> of slate, to produce the first two truckloads (about 80 tonnes) of flagstone from the western end of the highway outcrop. This excavation can be done any time except in the winter. On this site it may be necessary to waste the uppermost layer of slate which may be damaged by blasting at the time of highway construction.

14

REFERENCES

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e.

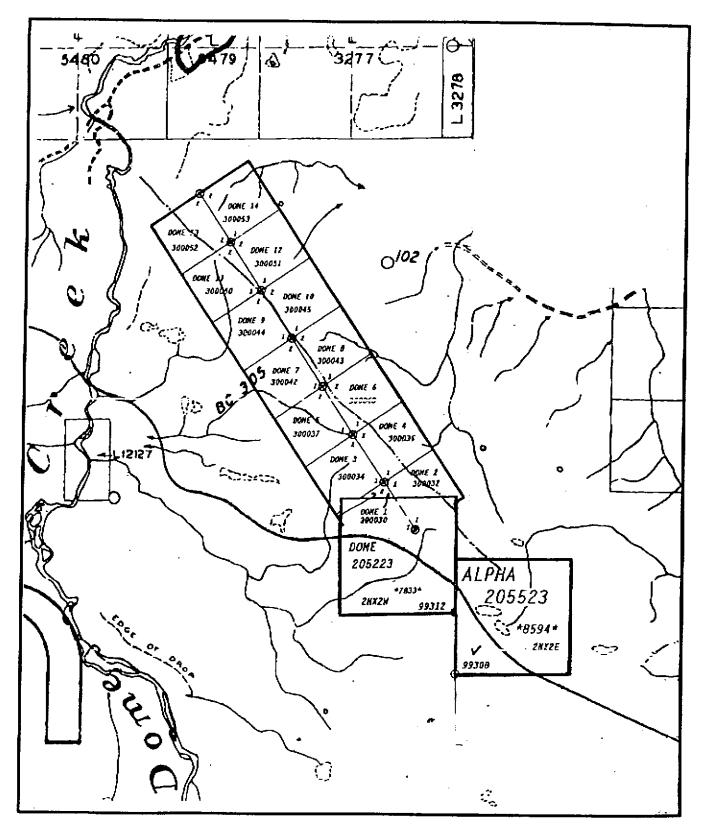
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R.B. Campbell et al. 1972: R.B. Campbell, E.W. Mountjoy, and F.G. Young: Geology of McBride Area, British Columbia (93H), GSC Paper 72-35).

**ILLUSTRATIONS** 

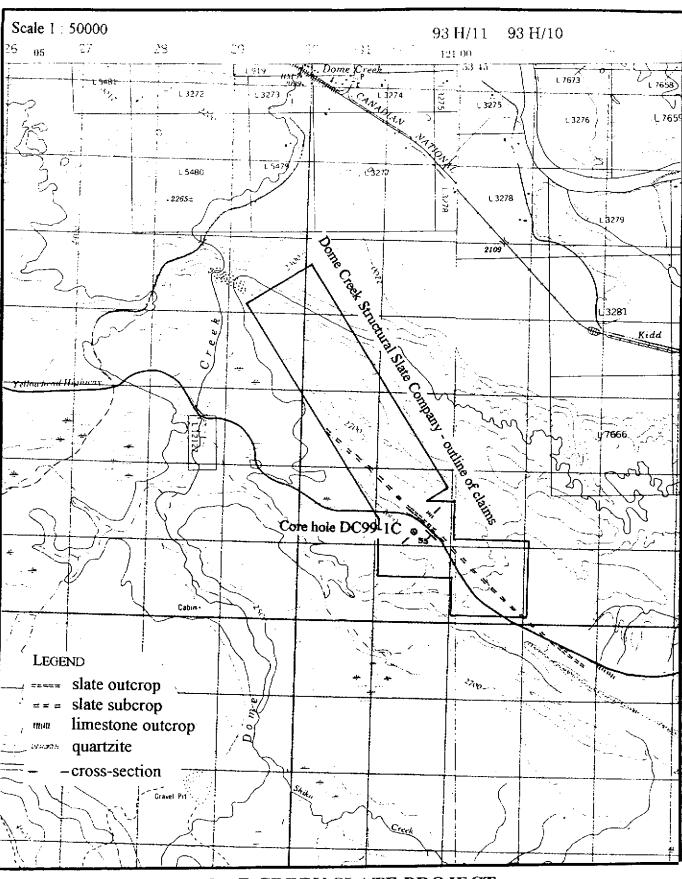


Dome Creek Structural Slate Company

# LOCATION OF MINERAL CLAIMS

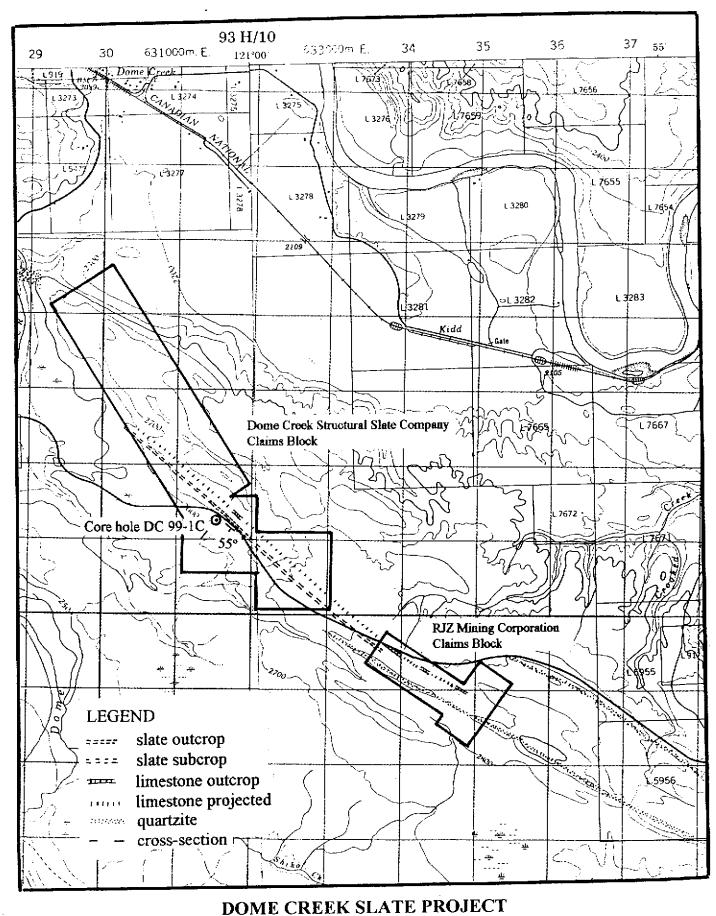
NTS 93H11E & 93H10W

1:31680



DOME CREEK SLATE PROJECT LOCATION MAP NTS 93H11E & 93H10W Figure 2

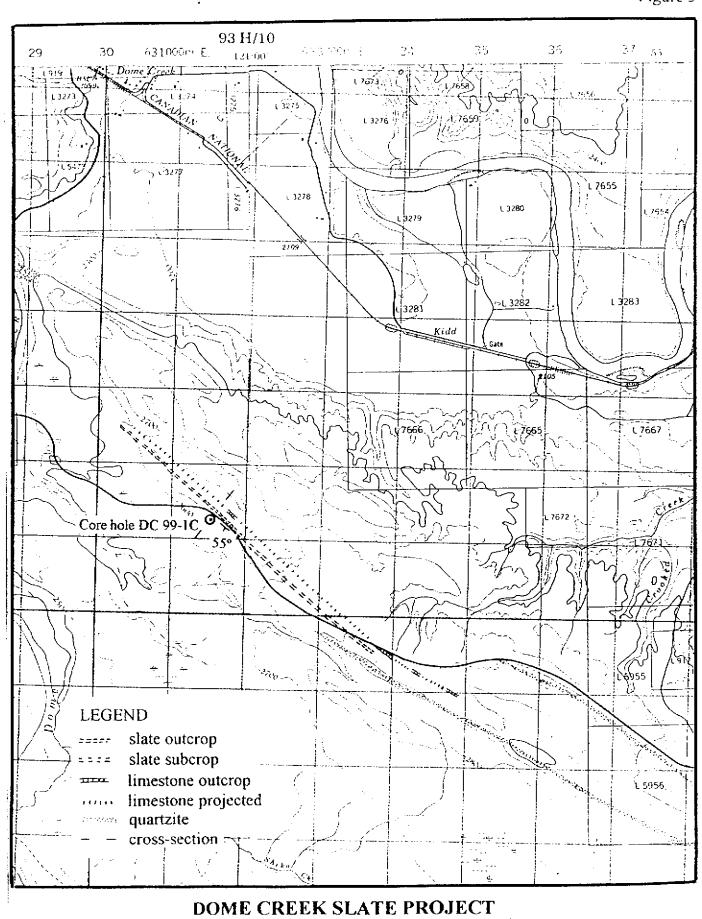




MINERAL CLAIM BLOCKS =

scale 1 : 50 000

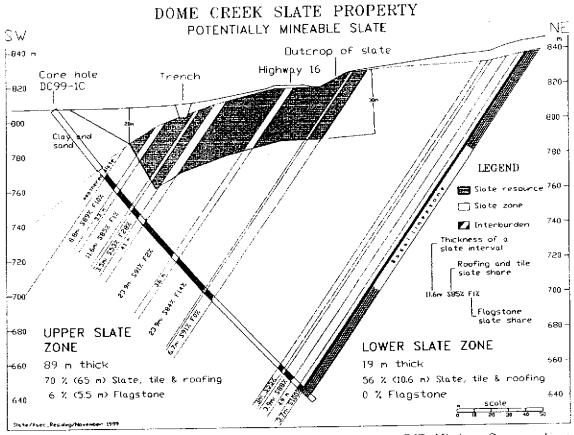




LOCAL GEOLOGY

scale 1 : 50,000

Figure 4



GEO -ING Resource Consulting Ltd.

**RJZ** Mining Corporation

# **APPENDIX** 1

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# **CORE DESCRIPTION**

#### DOME CREEK SLATE

#### CORE DESCRIPTION HOLE DC 99-1C

Core: 42 mm Drilled by J.T. Thomas Diamond Drilling Ltd. of Major Drilling Group

Recovery: Overall recovery was nearly 100 %. No significant interval was lost.

Storage: The core, in wood core boxes, is stored in Rex Hatchard's shop in McBride.

Slate quality classification:

<u>Grade</u>	<u>Code</u>	<u>Grade</u>
0	NS	not splitable
1	PS	poorly splitable
2	MS	moderately splitable
3	ES	easily splitable
4	VES	very easily splitable

The slate found in the core hole can has been be broadly categorized as follows:

- Clean slate: Grayish green, evenly coloured, uniform throughout, smooth slate of roofing quality. It is non-calcareous and has no (or very few) visible impurities. Clean slate is easily or very easily splitable. Its cleavage planes are always smooth, straight and are sometime silky to the touch.
- Speckled slate: Grayish green, non-calcareous slate with dark gray lenses, laminae or bands. It contains variable amounts of dark matter deposited along bedding planes. The dark matter shows as the dark bands on slate split along its slaty cleavage. Speckled slate is moderately to easily splitable and is considered suitable for tiles and flagstone. When the number of bands increases above a certain level the slate becomes poorly splitable. Cleavage planes of speckled slate are slightly uneven, textured, wavy to rough, depending on the intensity of lamination. Microscopic examination of the laminae (at 40x magnification) does not reveal their mineral nature. They look similar to clean slate except for the dark gray, in places almost black colour. Traces of haematite and rare grains of pyrite are associated with the dark laminae.
- Calcareous slate: Slate of similar appearance to the two types of slate above but testing with hydrochloric acid reveals the presence of calcium carbonate. It is slightly gritty and often contains thin laminae, bands or lenses of limestone. Calcareous slate does not split as easily as non-calcareous slate, but a 10 cm core segment can be split into five 2 cm thick plates with somewhat harder impact of hammer on a chisel, i.e. such a rock may be useful for 1-2 inch flagstone or for thick dimensioned products (e.g. steps). Most of calcareous slate has been graded as poorly splitable. It often grades into non-splitable limestone.

NOTE: Testing with hydrochloric acid was the first step in physical examination of the core, following initial visual examination and preceding test of slate splitability.

## THE CORE

Intervals typed with bold characters are easily and very easily splitable slate.

<u>Box No. Interval</u>		
Thickness Rock	Description	
[m] 45.7	Clay Cased hole.	
Box 1 150 - 167 ft	45.7-50.9 m 5.2 m of core cut	5.2 m recovered
5.2 Slate	Grayish-green, weathered, with rus partly ES; interbedded, non-calcareou induced splits range from 3 cm to 20 c	is with calcareous bands, drilling
Box 2 167 - 184 ft	50.9-56.1 m 5.2 m of core cut	5.1 m recovered
5.1 Słate	<b>grayish-green</b> , VES, mainly non-ca rusty stained cleavage; <b>roofing slate</b> . The core in this interva 15 mm to 50 mm long pieces. W calcareous bands: 15 cm, 20 cm, 14 non-calcareous gray-green slate wh coin-like plates. Cleavage to core axis: 50° Apparent dip: 45° to core axis.	al was segmented by drilling into ithin the interval there are few 5 cm and 10 cm thick; the rest is
0.1 Core loss	Apparent dip. 40 to core axis.	
Box 3 184 - 202.5 ft	56-61.7 m 5.6 m of core cut	5.7 m recovered
1.81 Slate	grayish-green, MS to ES with parts roofing slate, splits down to 3 mm p NOTE: this interval was segmented segments.	plates.
0.30 Slate	with calcareous bands 10 - 40 mm the non-calcareous to calcareous ratio is	
0.92 Slate	greenish-gray, VES, non-calcareou roofing slate, silky lustrous, smooth	s, 15 - 30 cm core segments;
0.60 Slate	similar to above with few almost whit flagstone slate: the cleavage planes of uneven, but locally it is easily splitable	e limestone bands, MS to ES; f moderately splitable stone are
0.15 Sheared zone.		
0.09 Core loss 1.53 Calcareous sla	e medium-gray, interbedded calcareou slate dominates (70/30); the calcareou the core splits where there are non-o	ous rock is harder, NS or PS;
0.3 Calcareous sla	e with very small lenses of limestone (	

Box 4 202,5 - 220.5 ft 61.7 - 67.2 m 5.5 m of core cut 5.5 m recovered 0.3 As above. 0.52 Slate non-calcareous with minor calcareous laminae, the interval includes a vertical calcite healed join; the core split along the joint. 0.55 Calcareous slate & limestone bands, interbedded rock, medium gray, PS to NS; the non-calcareous bands split easily, calcareous bands and limestone split poorly or not at all. 4.1 grayish-green, ES to VES, mostly clean and even colour, few thin Slate limey bands at the top and occasionally up to 4 cm thick bands in the rest of the interval, locally there is a darker, thin trace along bedding

> plane. Bedding to core angle = 55°

Box 5 220.5 - 239.5 ft 67.2 - 73.0 m 5.8 m of core cut 5.8 m recovered

0.18 Slate grayish-green, ES.

0.08 Limestone gray, microcrystalline to very fine crystalline, hard, NS.

0. 63 State VWS, core with a rusty vertical joint, non-calcareous.

0.12 Limestone & slate 60/40, hard, NS.

0.14 Slate grayish-green, VES, with 6 thin limestone bands (more or less 1 cm thick).

- 0.03 Limestone light gray
- 0.17 Slate grayish-green, MS.

0.06 Limestone & slate, 50/50

0.60 Slate grayish-green, VES.

- 0.23 Limestone & slate, 40/60
- 0.20 Slate grayish-green, VES.
- 0.05 Limestone

**1.0 Slate** grayish-green, as above, VES.

- 0.15 Limestone & slate, 30/70
- 0.30 Slate grayish-green, VES.
- 0.19 Limestone & slate PS
- 0.27 Slate grayish-green, as above, ES.
- 1.40 Missing core description or core loss; assumed 1 m of slate and 0.4 m of limestone. This interval must be re-examined.

Box 6 239.5 - 257.5 ft 73.0 - 78.5 m 5.5 m of core cut 4.3 m recovered

- 0.26 Slate grayish-green, ES.
- 0.31 Limestone & slate, poorly splitting, PS to NS.
- 0.12 Limestone & calcareous slate
- 1.13 Omitted description or missing core. This interval must be re-examined.
- 0.06 Slate grayish-green, ES.
- 0.06 Limestone
- 0.09 Slate grayish-green, ES.
- 0.21 Limestone & calc. slate, interbedded, MS to PS.

				Hole DC 99-1C
0.50	Slate	with few "speckl	ed" bands. PS to ES in	iterval.
				ainy bands, laminae, causing
	<u>opeoned</u> side	harder & unever		
		natuel à unevei	r spatalig.	
	<b>•</b> • • • • •			
0.60	Speckled slate		artly MS, common speci	
		moderately splita	able intervals have, wa	vy, uneven cleavage planes.
0.36	Interbedded	speckled slate -	slate - limestone: poor,	interbedded interval.
0.32	Interbedded			th minor limestone, PS to MS
0.23		eckled, MS to ES		
0.20	State - party spe	Sonieu, Ma to La.		
		70.5.04.4	5.0	
Box /	257,5 - 276 ft	78.5 - 84.1 m	5.6 m cored	5.6 m recovered
0.53	Slate	grayish-green, '	VES, smooth split plar	ie.
0.24	Speckled	& partly speckle	d slate, MS, partly unev	en split plain
0.20	Slate	gravish-green, l		•
0.30			e, PS, partly turbated.	
0.23	Slate	grayish-green,		
0.20		& limestone - PS		
0.91	Slate			cleavage plane, splits either
		perpendicularly	to the core or along	bedding, i.e. not so good
		cleavage.		
0.23	Slate	similar to above	partly speckled, few li	mestone bands, last 20 cm is
0.20	0.0.0	turbated.		,
0.27	Slate	gravish-green, M	IS to ES	
	-			ES clote
0.24	Interbedded		us slate, PS, with minor	LO Slate.
0.16			ystal lined fracture.	
0.44				tite healed fractures, PS.
1.60	Interbedded	slate & speckled	slate with occasional	calcareous bands, MS, partly
		ES, the split plar	he is partly uneven with	fine striations.
Box 8	276 - 295,7	84.1 - 90.1 m	6.5 m of core cut	6.0 m recovered
0.07	Slate	an about		
~ ^ /	-	as above		
0.04	Limestone		Mines Science and a dealer de	
0.04 <b>0.49</b>	-	grayish-green v	vith minor to rare dark la	
	Limestone	grayish-green v somewhat unevo	en split plane, two thin l	imestone bands near end,.
	Limestone	grayish-green v somewhat unevo		imestone bands near end,.
<b>0.49</b> 0.14	Limestone Slate Limestone	grayish-green v somewhat uneve 4 cm, calc. slate	en split plane, two thin l - 2 cm, limestone and s	imestone bands near end,. slate - 8 cm, PS.
0.49	Limestone Slate	grayish-green v somewhat uneve 4 cm, calc. slate grayish-green, e	en split plane, two thin l - 2 cm, limestone and s clean, smooth cleavage	imestone bands near end,. slate - 8 cm, PS. e, VES,
0.49 0.14 0.64	Limestone Slate Limestone Slate	grayish-green v somewhat uneve 4 cm, calc. slate grayish-green, e	en split plane, two thin l - 2 cm, limestone and s	imestone bands near end,. slate - 8 cm, PS. e, VES,
0.49 0.14 0.64 0.22	Limestone Slate Limestone Slate Limestone	grayish-green v somewhat uneve 4 cm, calc. slate grayish-green, e	en split plane, two thin l - 2 cm, limestone and s clean, smooth cleavage	imestone bands near end,. slate - 8 cm, PS. e, VES,
0.49 0.14 0.64 0.22 0.08	Limestone Slate Limestone Slate Limestone Slate	grayish-green v somewhat uneve 4 cm, calc. slate grayish-green, e	en split plane, two thin l - 2 cm, limestone and s clean, smooth cleavage	imestone bands near end,. slate - 8 cm, PS. e, VES,
0.49 0.14 0.64 0.22 0.08 0.05	Limestone Slate Limestone Slate Limestone Slate Limestone	grayish-green v somewhat uneve 4 cm, calc. slate grayish-green, o minor limestone	en split plane, two thin l - 2 cm, limestone and s clean, smooth cleavage traces at the end, within	imestone bands near end,. slate - 8 cm, PS. e, VES, n a 6 cm thick zone.
0.49 0.14 0.64 0.22 0.08 0.05 0.05 0.56	Limestone Slate Limestone Slate Limestone Slate	grayish-green v somewhat uneve 4 cm, calc. slate grayish-green, o minor limestone	en split plane, two thin l - 2 cm, limestone and s clean, smooth cleavage	imestone bands near end,. slate - 8 cm, PS. e, VES, n a 6 cm thick zone.
0.49 0.14 0.64 0.22 0.08 0.05	Limestone Slate Limestone Slate Limestone Slate Limestone	grayish-green v somewhat uneve 4 cm, calc. slate grayish-green, o minor limestone grayish-green, l	en split plane, two thin I - 2 cm, limestone and s clean, smooth cleavage traces at the end, within ES to VES, traces of sp	imestone bands near end,. slate - 8 cm, PS. e, VES, n a 6 cm thick zone. beckled
0.49 0.14 0.64 0.22 0.08 0.05 0.56	Limestone Slate Limestone Slate Limestone Slate Limestone Slate	grayish-green v somewhat uneve 4 cm, calc. slate grayish-green, o minor limestone grayish-green, l	en split plane, two thin I - 2 cm, limestone and s clean, smooth cleavage traces at the end, within ES to VES, traces of sp	imestone bands near end,. slate - 8 cm, PS. e, VES, n a 6 cm thick zone.
0.49 0.14 0.64 0.22 0.08 0.05 0.56 0.11 0.90	Limestone Slate Limestone Slate Limestone Slate Limestone Slate Limestone Slate	grayish-green v somewhat uneve 4 cm, calc. slate grayish-green, o minor limestone grayish-green, l	en split plane, two thin I - 2 cm, limestone and s clean, smooth cleavage traces at the end, within ES to VES, traces of sp	imestone bands near end,. slate - 8 cm, PS. e, VES, n a 6 cm thick zone. beckled
0.49 0.14 0.64 0.22 0.08 0.05 0.56 0.11 0.90 0.09	Limestone Slate Limestone Slate Limestone Slate Limestone Slate Limestone Slate Limestone	grayish-green v somewhat uneve 4 cm, calc. slate grayish-green, o minor limestone grayish-green, l grayish-green, V	en split plane, two thin l - 2 cm, limestone and s clean, smooth cleavage traces at the end, within ES to VES, traces of sp /ES, clean, with one par	imestone bands near end,. slate - 8 cm, PS. e, VES, n a 6 cm thick zone. beckled tly speckled 8 cm thick band.
0.49 0.14 0.64 0.22 0.08 0.05 0.56 0.11 0.90	Limestone Slate Limestone Slate Limestone Slate Limestone Slate Limestone Slate	grayish-green v somewhat uneve 4 cm, calc. slate grayish-green, o minor limestone grayish-green, l grayish-green, v grayish-green, k	en split plane, two thin l - 2 cm, limestone and s clean, smooth cleavage traces at the end, within ES to VES, traces of sp /ES, clean, with one par	imestone bands near end,. slate - 8 cm, PS. e, VES, n a 6 cm thick zone. beckled

				Hole DC 99-1C
0.34	Slate	gravish-green, ra	ther uneven split plane	, MS.
0.12	Limestone & cald	<b>v</b> · ·	Bedding to core angle:	
0.12		5, <b>State</b> , 1 G.	Cleavage to core angle	
0.26	Slate	araviah araan		6. 10
	••••	grayish-green, o	aean, ES.	
0.05	Limestone.			
0.11	Slate	grayish-green, a	is above, ES.	
0.02	Limestone.			
0.59	Slate	gravish-green, v	vith traces of dark spec	ks, ES.
0.15	Calcareous slate			
0.22	Slate	grayish-green, E		
0.02	Limestone.	grafion groon, -	-0.	
		marriah areas D	10	
0.58	Slate	grayish-green, E	-5.	
				<b>F A</b>
Box 9	295.7- 314.7	90.1 - 95.9 m	5.8 m of core cut	5.8 m recovered
0.26	Slate	gravish-green, E	ES	
0.19	Calcareous slate	- NS		
0.20	Slate		S, with a 3 cm PS ban	4
0.02	Limestone	grayish-green, c		<b>u</b> .
			Constant (COntraction)	10
1.13	Slate	grayisn-green, c	S, partly VES, locally N	13.
	Limestone			
3.97	Slate	grayish-green, E	S to VES, partly speck	led, partly clean,
Box 10	314′9″ - 333 ft	96.5 - 101.5 m	5 m of core cut	5 m recovered
	01 4 TC			C. designed planes of the
5.0	SLATE			E <b>S</b> ; cleavage planes of the
		speckled slate an	e slightly uneven;	
Box 11	333 - 351.5 ft	101.5 - 107.1 m	5.6 m of core cut	5.6 m recovered
5.15	SLATE	gravish-green k	cally speckled ES, par	tly MS. Core splits easily to
0.10			less easily to 5 mm plat	
0 4E	Eault zana		healed slate, NS to PS	
0.45	Fault zone	crushed & calcile	nealed slate, NS to PS	•
Box 12	351.5 - 370.5 ft	107.1 - 112.9 m	5.8 m of core cut	5.6 m recovered
0.51	Slate	as above, ES, si	ightly uneven split plan	e.
0.08	Calcareous slate	with calcite veins	- PS.	
0.97	Slate		ocally speckled, ES, loc	cally MS:
0.01	Sidto		•	
		NOTE: The spec	kled substance influence	ces splitting. Small amounts
				easily splitable to easily or
				n cleavage plane. Increased
		dark material resu	ilts in poorly splitable slat	te. Speckled state is heavier.
0.58	Speckled slate	dark imagularly	shaned laminae distrib	uted roughly along the core
0.00	chervien sigle	aan, megulany		
		avia ananalata i	his intonyal may be and	Fof a folded strate
0.05	Clata		his interval may be part	t of a folded strata.
0.25	Slate	axis, poor slate, t partly speckled, l		t of a folded strata.

F

		Hole DC 99-10
0.95	Slate	with several joints, few thin calcite bands, dark hard laminae, PS to MS
0.42	Slate	with traces of dark laminae, ES.
0.45		Fault fractured zone, PS to NS
0.31	Speckled slate	laminated, laminae to core angle 15° (i.e. steep), NS;
	•	the rock breaks along coarse planes;
0.60	Slate	with laminae nearly parallel with core axis, MS to ES;
		splitting this rock requires a harder hit on the chisel.
0.30	Slate	with abundant dark laminae nearly parallel with core axis, MS;
	0.000	surface of the split planes is rather rough, uneven;
0.20	Slate	as above, fragmented core.
0.17	Core loss	MS slate assumed.
0.17	00101000	
Box 13	370.5 - 390 ft	112.9 - 118.9 m 6 m of core cut 6.0 m recovered
6.0 m	Slate	grayish-green, ES, speckled to laminated slate;
		roofing and tile slate, it splits fairly easily down to 10 mm plates and
		even 5 mm plates, but the plane of the split is not as smooth as it is
		in clean, non-laminated (non-speckled) slate.
Box 14	390 - 409 ft	118.9 - 124.7 m 5.8 m of core cut 5.8 m recovered
		Top segment of the core is solid, unbroken, 1.1 m long,
2.15	Specked slate	greenish-gray, ES, moderately laminated;
2.70	opeoned shall	slightly uneven cleavage;
0.61	Specked slate	greenish-gray, ES, slightly laminated, speckled,.
1.38	Specked slate	greenish-gray, ES, locally MS, moderately laminated, speckled;
(.90	Sherved state	locally PS, at places of increased lamination.
0.48	Calcareous slate	locally FS, at places of indeased latimation.
	Slate	greenish-gray, ES, moderately to less laminated, partly clean,
1.17	Sidle	roofing slate.
		rooning state,
Dav 4E	100 100 E H	124.7 - 130.6 m 5.9 m of core cut 5.9 m recovered
BUX 15	409 - 428,5 ft	124.7 - 130.6 m 5.9 m of core cut 5.9 m recovered.
A 99	Olata	ware wish every close, broken core
0.23	Slate	greenish-gray, clean, broken core
	Slate and	greenish-gray, ES to VES, moderately & slightly laminated,
	Speckled slate	locally MS;
		includes 7 bands of increased lamination (up to 15 cm thick).
Box 16	428.5 - 448 ft	130.6 - 136.5 m 5.9 m of core cut 5.9 m recovered
1.50	Slate	greenish-gray, ES to VES, clean and slightly laminated,
		roofing slate, with locally increased laminations.
	Slate	moderately laminated, with 2 joints which disturb splitting, PS
0.80	Slate	greenish-gray, VES, clean & slightly laminated, speckled;
		roofing slate, the core splits down to 3 mm plates.
0.02	Limestone	band, white.
0.98	Slate	grayish-green, VES, clean, with traces of laminae at 60" to core axis;

# Hole DC 99-1C

		Hole DU 99-10
		roofing slate, cleavage is perpendicular to core; a 20 cm interval of
		core splits into 30 plates, average thickness of split plates is 6 mm.
0.07	Slate	with dense laminae, PS.
0.60	Slate	greenish-gray, roofing slate, clean, VES
0.33		greenish-gray, speckled, ES.
1.06		slate and limestone, a poorly splitable interval, PS to NS.
1.00	mabeuded	includes: 0.22 m Slate & limestone
		0.15 Slate laminated, speckled.
		0.02 Limestone and chalcopyrite.
		0.08 Slate
		0.03 Limestone and chalcopyrite.
		0.24 Slate
		0.05 Limestone and slate.
		0.17 Slate
		0.08 Limestone and slate
Box	17 448 - 467.7 in	136.5 - 143.0 m 6.5 m of core cut 5.93 m recovered
4.24	Slate	grayish-green, ES to VES, almost clean, dense, fairly hard;
		roofing slate, slightly laminated, few bands of dark laminae nearly
		parallel with cleavage.
0.32	Fractured slate	, fault zone.
0.07	Core loss	
0.03	Limestone	gray, shaly, NS.
0.53	Slate	grayish-green, ES, as above the fractured zone, clean.
<b>0.1</b> 1	Calcareous sla	te & limestone, NS.
0.63	Slate	grayish-green, ES, clean.
0.05	Limestone	grayish white, NS.
0.02	Slate	
Box	18 467.7 - 483 ft	142.6 - 147.2 m 4.6 m of core cut 4.6 m recovered
	-	· · · · ·
0.66		grayish-green, clean, ES.
0.17	Slate	grayish-green, clean, NS due to 2 cm thick, steep calcite-filled joint, at
		10° to core axis; elsewhere, where joint not present, undoubtedly ES.
0.14	Limestone	shaly, NS.
0.41	Slate	grayish-green, with tight joints, PS
0.70	Slate	grayish-green, partly calcareous and with 5 limestone bands, NS.
1.41	Slate	fragmented core, jointed rock, partly calcareous, PS to NS.
0.27	Limestone	and slate, NS.
0.90	Slate	fragmented core, partly speckled, with several joints nearly parallel
		with case axis and 2 limestone bands, PS to NS.
Box	19 483 - 502 ft	147.2 - 153 m 5.8 m of core cut 5.8 m recovered
	_	
2.32	Slate	gravish-green, locally jointed, partly calcareous, several irregular
		calcite-filled fractures, several limestone bands NS
0.58	Slate	gravish-green, with few hairline calc. traces, hard PS

		Hole DC 99-1C							
0.56	SHALE	grayish-green, calcareous, partly turbated, with few shaly limestone bands, NS. The core of this rock displays quite pretty, interesting, wavy to curly texture, combining gray with off-white and grayish- green bands. If this rock could me excavated in solid blocks it would have a potential as attractive dimension stone.							
0.40	Slate	rayish-green, non-calcareous and slightly calcareous, ES to MS rading to PS.							
1.90	Calcareous & lim	bey shale with few limestone bands INS; the carbonate is finely disseminated in the calcareous rock while in the limey rock it is present as thin limestone veins & small (7 mm) blobs. This interval is also potentially attractive for dimension stone if it sufficiently competent.							
Box 20	502 - 521.5 ft	153 - 158.9 m 5.9 m cored 5.9 m recovered							
5.9 m	Shale	calcareous & limey with frequent limestone bands up to 16 cm thick. Part of this interval is a rock with interesting playful texture of grayish-green and white. The core is 80% solid; there are few calcite-healed hairline fractures.							
Box 21	521.5 - 540.5 ft	158.9 - 164.7 m 5.84 m of core cut 5.84 m recovered							
0.84	Phyllitic shale	PS to NS. Massive rock, solid core; steep calcite-filled fracture, 20 cm thick, at the end.							
5.0	Phyllitic shale	calcareous with frequent light gray limestone bands and common white calcite filled fractures. Texture of this interval is not as attractive as that described earlier.							
Box 22	540.5 - 559 ft	164.7 - 170.4 m 5.7 m of core cut 5.7 m recovered							
5.7	Phyllitic shale	calcareous & limey with common limestone bands 1.5 to 7 cm thick and abundance of wavy, thin (<1 cm) laminae of limestone and very calcareous shale. The texture is playful, grayish-green, gray and some white waves and curls. The core is mainly solid, except for a fractured, 20 cm thick interval is at 169 m. The rock is not-splitable. Its colour gradually changes from grayish-green to greenish-gray.							
Box 2	559 - 578 ft	170.4 - 176.2 m 5.8 m of core cut 5.8 m recovered							
1.50	Phyllitic shale	as above.							
0.46	Phyllitic shale	gray, partly calcareous, PS.							
1.43 0.30 0.15 1.15 0.80	Phyllitic shale Slate Phyllitic shale Phyllitic shale, m Phyllitic shale	gray, laminated, wavy texture medium gray, smooth, ES fractured, healed calcite zone ed. gray, locally calcareous, PS. as above, calcareous to limey, PS to NS; sheared 30 cm zone at 176.5 m.							

Box 24	578 - 596 ft	176.2 - 181.7 m 5.5 m of core cut	Hole DC 99-1C 5.5 m recovered
0.55 0.25 0.77 0.60 3.32	Phyllitic shale Slate Phyllitic shale Slate Interbedded	gray, calcareous, limey at the end, PS. gray, partly calcareous, MS to ES. calcareous & limey with minor state calcareous, laminated, MS partly NS. gray state and gray calcareous phyllite v several calcite-filled fracture zones; loca	
Box 25	596 - 615 ft	181.7 - 187.5 m 5.8 m of core cut	5.8 m recovered
5.8	Phyllitic shale	gray, calcareous, laminated (shale & lim to 186.8 m (1.3 m). Local fracture zones bands of splitable slate interbedded with interval of flagstone slate is at 187 m.	. The interval includes
Box 26	615 - 633 ft	187.5 - 192.9 m 5.4 m of core cut	5.4 m recovered
1.75	Phyllitic shale	gray, thinly laminated calcareous and no calcareous and limestone laminae are 2 calcareous, slaty bands are 1 to 7 cm th moderately splitable into 2 to 4 cm segm	mm to 2 cm thick; non- ick flagstone rock,
0.40	Fracture zone	calcareous shale and calcite.	
1.40	Phyllitic shale	similar to one above the fracture; MS to	1.5 to 4 cm segments.
0.49	Fracture zone	broken core of the rock above.	
1.45	Phyllitic shale	gray, calcareous with thick limestone ba	ngs, PS to NS.
Box 27	633 - 651 ft	192.9 - 198.4 m 5. 5 m of core cut	5.5 m recovered
2.25	Phyllitic shale	gray, as above.	
1.15	Phyllitic shale	greenish-gray, broken core at top, calca and calcite healed fractures across bedo	ling; PS to NS.
0.20	Slate	grayish-green, ES, interbedded non-ca	
1.20	Slate	grayish-green, interbedded non-calc. &	
0.60	Slate	due to fractures casing weakness across grayish-green, ES to VES, mainly non- cleavage planes are somewhat less eve includes traces of pyrite.	calcareous, hard;
0.12	Limestone	grading to calcareous slate, NS.	
Box 28	651 - 670 ft	198.4 - 204.2 m 5.8 m of core cut	5.8 m recovered
<b>0.30</b> 1.27	Slate Slate	<b>grayish-green</b> , <b>ES</b> , split planes are une green, calcareous with local shaly limest PS.	
0.80	Speckled slate	green, ES to VES, moderately laminate cleavage planes are uneven, dark lamin cleavage, traces of pyrite;	

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		Hole DC 99-1C
0.32	-	Slate green, fragmented core.
0.38	Slate	green, non-calcareous, moderately laminated (speckled), MS to PS;
0.46	Slate	this slate is brittle, it tends to break, not split.
0.45	Slate	green, interbedded calcareous & non-calcareous, MS to PS; calcareous bands are up to 10 mm thick.
0.50	Slate	green, non-calcareous, lightly speckled, brittle, PS to NS;
0.00	Olate	the rock breaks along invisible fractures perpendicular to bedding.
0.30	Slate	green, ES to VES, hard, very lightly speckled.
0.45	Slate	green, ES, as above, bedding is parallel with cleavage.
		bedding and cleavage angle to core axis is 70°.
1.0	Slate	green, ES, but breaking due to a steep joint in this location;
		the joint caused part of the core to split along its axis; the core is
		fragmented at the end of the interval. good slate can be assumed
		away from the joints.
Poy 20	670 - 688.5 ft	204.2 - 209.8 m 5.6 m of core cut 5.6 m recovered
D0X 29	070 - 000.5 H	204.2 - 209.8 m - 5.6 m of core cut - 5.6 m recovered
0.1 <del>6</del>	Slate	green, ES to VES, speckled (dark laminated).
0.45	Slate	green, as above, but with steep hairline joints causing it to break;
		calcareous near end; good slate can be assumed away from the
		joints
2.34	Slate	green, grading to very dark laminated and back to slightly
		laminated; part of the interval contains thin calc. laminae (< 3 mm
4.00	<u>.</u>	thick), ES; local vertical joints at 207. 2 m disturbs good splitting.
1.20	Slate	as above, but the interval is poor due to presence of steep joints
		casing the rock to break instead of to split. This interval is influenced by the fault below.
		by the radit below.
Box 30	688.5 - 705.5 ft	209.8 - 215.0 m 5.2 m of core cut 5.2 m recovered
2.90	Slate	stressed, slickensided, the rock breaks easily but does not split.
0.30	Fault	fractured zone, the core is solid but the rock is brecciated mass of
	-	slate and calcite.
0.28	Fault	fractured zone, similar to above with less calcite.
0.12	Slate	green, MS fractured zone of slate & calcite.
0.10 1.30	Fault Slate	green, clean, non-calcareous, ES to VES but partly breaking along
1.50	Siale	invisible stress-lines.
Box 31	705.5 - 723 ft	215.0 - 220.4 m 5.4 m of core cut 5.27 m recovered
4.07	Olata	when NEO sleep, smapth approximations like sleepings plans
1.37 0.40	Slate	green, VES, clean, smooth, soapstone like cleavage plane. green, VES, grading to pale buff-green.
0.40	Slate Slate	buff, ES, soapstone like cleavage plane.
2.75	Limestone	moderately massive bed, light gray, cryptocrystalline, grading to
2.70		very light gray, the rock is pelletoidal at top 35 cm.
0.13	Lost	

Hole DC 99-1C

Box 32  723 - 740 ft	220.4 - 225.6 m	cut 5.18 m of core	4.88 m recovered
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- 1.70 Limestone as above, the bottom 40 cm is shaly
- 1.90 Shale black, fairly hard, with common calcite healed, white fractures.
- 0.53 Shale black, as above, stressed, slickensided,
- 0.45 Shale fine, flaky shale, fractured, black, slickensided.
- 0.30 Core lost
- T.D. 225.6 m

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#### **APPENDIX 2**

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### **CORE EVALUATION**

APPENDIX 3

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Description of the highway outcrop.

#### DESCRIPTION OF THE HIGHWAY OUTCROP

The outcrop, see Plate 1, was surveyed from the west to the east end.

Segment 1. Length: 34 m Interval: 30 to 34 m Height of slope: 6 m Angle of slope: 45° These is at least 1 m of slote exervatable at this legation

There is at least 1 m of slate excavatable at this location. Volume: 204 m<sup>3</sup> Slate is well exposed with patches of soil settled on the ledges of slate layers; 60 % is exposed rock, 49 % patches of soil. The slate is of good quality and is partly orange stained on cleavage planes.

Cleavage dip:	78°		
Cleavage direction:	220°		
Cleavage strike:	315°		
Cleavage plane:	smooth		
Joints: 1.	340°/85°	2.	35°/80°
Spacing of joints: 5 to	6 per 5 m		

Large areas of slate are with no joints. There is a 4 m wide block with no joints at all at the foot of the slope.

Segment 2. Length: 15 m Interval: 34 to 49 m

The upper two thirds of this segment of the outcrop has been excavated. The slate remaining is 1 m high above the road level and about 3 m thick. It is slate is of good quality. Volume: 45 m<sup>3</sup>

Segment 3. Length: 15 m Interval: 49 to 64 m Angle of slope: 45°

Height: 3.5 m in the front and 5 m at the back.

This is the best slate at the outcrop (it is the slate with white letters on its front, see Plate 1, top photograph). The slate appears fresher than in segment 1. Segment 3 is opposite to the drill site of hole DC 99-1C.

Measured from the face (stratigraphically downwards):

50 cm thick, 80 cm high

front bench of clean, smooth slate:	Volume: 6 m <sup>3</sup>
90 cm thick, 3-3.5 m high main bench of good slate;	Volume: 4 m <sup>3</sup>
18 cm thick slate with 4 calcite layers in bedding planes:	Waste: 8 m <sup>3</sup>
75 cm thick, 3.5 m high bench with a sheared zone at 25°	to cleat;
assuming 50% loss due to the sheared zone:	Volume: 20 m <sup>3</sup>
•	Waste: 20 m <sup>3</sup>

4.5 m of slate of uncertain quality;

3.5 to 5 m of slate which is not well exposed. On the side where it can be observed it is less smooth but not too coarse. No more thickness can be measured. The underlying rock is covered in the forest above the outcrop.

Hole	DC	99-1	IC.
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Segment 4. Length: 5 m Interval: 64 to 69 m

This segment is a gradually stepped back into the hillside towards the forest. It is 5 m wide and has five shear zones running through it. The shear zones are 20 cm to 30 cm wide. True thickness of this block of rock is 1 m and includes 90 cm of good slate which is disturbed by the shears. It is followed by a layer with a quite coarse front cleavage plane. The rock is probably poorly splitable.

Segment 5. Length: 21 m Interval: 69 to 90 m Height: 6.5 m

This segment consists of stepping back benches similar to segment 4. Measured from the face (stratigraphically downwards):

25 cm thick slate of good quality, rusty weath	iering: Volume: 34 m <sup>3</sup>
25 cm thick rough slate (coarse cleavage):	Volume: 34 m <sup>3</sup>
50 cm thick good slate, rusty weathering:	Volume: 68 m <sup>3</sup>
180 cm thick rough, rusty weathering slate:	Volume: 246 m <sup>3</sup>

There are four large blocks of slate laying at the toe of the slate outcrop in this area. Three are of smooth slate which would make very good flagstone. One of them was split by the author and it split quite well except for sharp edges of the split plates, see Plate 4. The fourth block is irregularly shaped and rough slate.

Segment 6.	Length: Height:	10 m 4 <i>m</i>	Interval:	90 to 100 m	

This segment is of rough, probably poorly splitable, weathered slate with 4 joints.

Segment 7.Length:60 mInterval:100 to 160 mHeight:6.5 m

This segment is a large face of slate with 20 to 25 major joints and some additional lesser joints. Measured stratigraphically downwards there is: 2.8 m thick layer of slate with smooth face: Volume: 1092 m<sup>3</sup>

2.5 m of slate not visible below the one above Volume:  $975 \text{ m}^3$ Part of this segment (1 x 0.6 x 0.3 m block) is of rough, poorly splitable slate. Most of the rubble below the exposed rock is also rather rough slate but there are large,

smooth cleavage planes on the face of the outcrop.

- Segment 8. Length: 17 m Interval: 160 m to 175 m This segment is of disturbed, cross-faulted and sheared rock.
- Segment 9. Length: 27 m Interval: 175 to 202 m Disturbed rock similar to segment 8.
- Segment 10. Length: 7 m Interval: 202 to 209 m Densely jointed rock. Joints are running across the strike. Some are calcite filled and up to 30 mm thick. Spacing of joints is 4 to 40 cm, exceptionally 90 cm. The slate is fairly smooth.

31 m Segment 11. Length: 209 to 240 m Interval: Height: 5 m in the front 6 m in the back at the edge of the forest This is a stepping back outcrop which includes the following two intervals: 1 to 1.5 m thick layer of good, smooth slate Volume: 194 m<sup>3</sup> 5.5 m thick layer of rough, iron rich, silty rock Segment 12. Length: 22 m Interval: 240 to 262 m The rock has been excavated for construction of a road leading into a clearcut where hole DC 99-1 was drilled. 262 to 302 m Segment 13 Length: 40 m Interval Height: 5 m on the left, western side, and 1 m on the right hand side. 312 m<sup>3</sup> There is a 2.6 m thick layer of good slate. Face of this outcrop shows two northerly dipping joints and a second set of joints almost perpendicular to the cleavage (their orientation is 310°/48°N).

TOTAL LENGTH OF THE OUTCROP 274 m

Conclusion: There is about 3200 m3 of slate available from the highway outcrop; Several hundred cubic metres of this volume is slate of good quality, especially the clean, probably VES slate in segment 3. **APPENDIX 4** 

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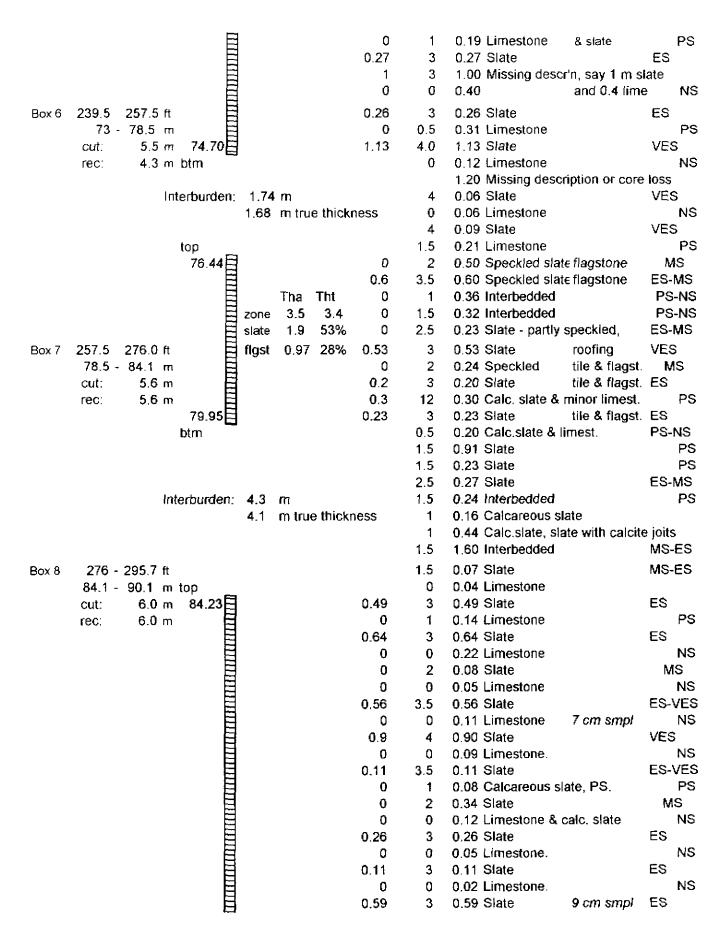
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# DOME CREEK SLATE QUALITY

## DOME CREEK SLATE

### CORE EVALUATION HOLE DC 99 - 1C

		•	r cl	assificat	ion		0.1	1		<b>*</b> 1 -	Thisksson		
	Grade						Subgr		-	Tha		apparent [m]	
	D	NS		not splital			0.5			Tht	Thickness t	rue [mj	
	1	PS		poorly spl			1.5	PS - M				-1	
	2	MS		moderate		able	2.5	MS - E		-	grade interv		·
	3	ES		easily spl			3.5	ES - V	ES	Eslate		nd MS grade wi	Ith
	4	VES		very easil	y split	able					with minor	partings.	
Beddin	g to cor	e angle	:	75 c	legree	S			-	Thickne	ess		
			S	in75deg =	0.966			Slate		[m]	Desc	ription	Quality
	Cored i	nterval						[m]	Grad	le			
										45.7	Casing,		
Box 1	150 -	- 167	ft	tan					2	5 20	Slate	flagstone	MS
		- 50.9		45.72		Tha			<b>A</b> -1	0.20	Clato	nagotorio	
	cut:	5.2		+0.7L		5.2	m						
	rec:	5.2		50.90		5.0							
	100.	0.2	•••	btm		0.0	•••						
Box 2	167	184	ft										
Don 2	50.9 -			50.90				5.1	4	5,10	Slate		VES
	cut:	5.2				Tha	Tht	0	•		Lost core		
	rec:	5.1			zone	8.8	8.5	Ō					
Box 3	184	202.5			slate	7.8	89%	1.81	3	1.81	Slate	roofing & tile	VES
00/ 0		61.7	m	H	figst	0.9	10%	0	2		Slate	flagstone	MS
	cut:	5.6			1900			0.92	4		Slate	roofing & tile	
	rec:	5.7		59.73				0.01	2.5		Slate	flagstone	ES-MS
	100.	0.7	,,,,	btm				Ū	0		Sheared zo	-	NS
											Core loss		
			Int	erburden:	34	m			0.5		Calcareous	slate.	NS-PS
				orouraon.			e thickr	iess	2			with limestone	MS
Box 4	202.5	220.5	ft				•		2		As above.		MS
OUN I		67.2							0		Slate		
	cut:	5.5		top					0.5			& limest bands	PS-NS
	rec:	5.5		63.10日			67.20	4.1	3.5		Slate roofin		
Box 5		239.5					67.20	0.18	3		Slate	7 cm smpl	
DUX J	67.2						67.20	0.10	ő		Limestone		NS
	cut:	., 5.8	m	E			67.20	-	4		Slate	roofing	VES
	rec:	5.8		E			01.20	0.00	0		Limestone	looning	NS
	160.	5.0						0.14	4		Slate	roofing	VES
								0.14	1		Limestone	roomig	NS
						Tha	Tht	Ő	2		Slate		MS
				Ħ	zone	11.6		Ö	0		Limestone		NS
					slate	9.8	85%	0.6	4		Slate	roofing	VES
					figst	0.17		0.0	0		Limestone	i o o ning	NS
				Ħ	ngat	0.11	1 10	0.2	4		Slate	roofing	VES
								0.2	0		Limestone		NS
								1	4		Slate		VES
				Ħ				, 0	1			& slate, 30/70	PS
				Ħ				0.3	4		Slate		VES
								4.¥			- • • • • • •		-



Box 9       295.7       314.7 ft       state       21.3	9 23.1 0 0 7 91% 0,58 3	0.15 Calc.slate & limest. laminae, N0.22 SlateES0.02 Limestone.0.58 SlateES0.26 SlateES0.19 Calcareous slate - NS0.20 SlateES0.02 Limestone1.13 SlateES0.02 Limestone3.97 SlateES5.00 SLATEES5.15 SLATEpartly speckl ES0.45 fault - crushed & calcite healed0.51 SlateES0.08 Calcareous slate with calcit0.97 SlateES	NS NS NS NS S-VES S-VES
Interburden: 3.7 m 3.6 m tro top 111.83 Box 13 370.5 - 390.0 ft 112.9 - 118.9 m Box 14 390 409 ft 118.9 - 124.7 m cut: 5.79 m	1 2 1.5 2 1.5 3 0 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0 2 0 2	0.95 SlateMS0.42 SlateES0.45 FaultES0.31 Speckled slateES0.60 SlateES0.30 SlateM0.20 SlateM0.17 Core loss, slate assumedM6.00 Slateroofing & tile ES2.15 Speckled slate, tileES0.61 Speckled slate, tileES1.38 Speckled slate, tileES	NS NS -MS VIS VIS VIS
Box 15 409.0 428.5 ft 124.7 - 130.6 m Box 16 429 448 ft 130.6 - 136.6 m cut: 5.94 m rec: 5.94 m 135.69 btm Interburden: 0.9 m	rval 1.5 3.5 )m 0 2.5	0.48 Calcareous slate 1.17 Slate roofing ES 0.23 Slate roofing ES 5.67 Speckled slat roofing ES 1.50 Slate roofing ES 0.60 Slate tile ES- 0.80 Slate roofing VES 0.02 Limestone 0.98 Slate roofing VES 0.07 Slate ES 1.04 Interbedded 0.22 Slate & limestone 0.15 Slate 0.08 Slate 0.03 Limest. & chalcopy	-MS S NS S PS S

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		top _	Lower part of best inter						0.24 Slate 0.05 Limestone 0.17 Slate 0.08 Limestone		
Box 17			Tha 4.2		4.24	4	4.24	Slate	12 cm smpl	ES-	VES
	136.6 - 142.6 п	H	Tht 4.1		0						
	cut: 6.00 n				0				slate, fault zone.		NS
	rec: 5.93 m	י 14		Tht	0	_		Core loss			NS
		目	zone 6.7	6.4	0	.0		Limestone			NS
		E	slate 6.1	<b>9</b> 1%	0.53	3		Slate	12 cm smpl	ES	
		目	flgst 0	0%	0	0			& limest., NS.		NS
					<b>0</b> .63	3		Slate		ES	
					0	0		Limestone	9		NS
		H			0.02	3	0.02	Slate		ES	
Box 18	467.7 483 ft	143.2∐ btm			0.66	3	0.66	Slate		ES	
	142.6 - 147.2 m	ז				0	0.17	Slate			
	cut: 4.66 m	l				0	0.14	Limestone	<del>}</del>		
	rec: 4.66 m	ı				1	0.41	Slate			
		Upper slat	te zone totals		True Th	0	0.70	Slate			
		Zone:	92.3 m		89.2 m	1.5	1.41	Slate			
		Slate:	67.3 m VES	6 + ES	65.0 m	0	0.27	Limestone	<del>;</del>		
		1	5.7 m MS		5.5 m	1.5	0.90	Slate			
Box 19	<b>483 - 502</b> ft					0	2 32	Slate			
DUX 13	147.2 - 153.0 m					1		Slate			
	cut: 5.79 m					0 0		SHALE			
	rec: 5.76 m					1		Slate			
		1				ò		Calc. shal	ρ		
	500 504 6 W					-			•		
Box 20	502 - 521.5 ft					0		Shale			
	153.0 - 159.0 m					<u>^</u>	- • • •	Dhullitia el			
Box 21	521.5 - 540.5 ft					0		Phyllitic sł			
	159.0 - 164.7 m					0		Phyllitic st			
Box 22	540.5 - 559.0 ft					0	5.7U	Phyllitic sl	lale		
	164.7 - 170.4 m	1				•	-	Distantia de			
Box 23	559.0 - 578.0 ft					0		Phyllitic sh			
	170.4 - 176.2 m					0		Phyllitic sl			
	cut: 5.79 m					0		Phyllitic sl	naie		
	rec: 5.79 m	1				0		Slate	1 -		
						0		Phyllitic st			
						0		Phyllitic sl			
						0		Phyllitic sl			
Box 24	578.0 - 596.0 ft					1		Phyllitic st	lale		
	176.2 - 181.7 m					2.5		Slate			
	cut: 5.49 m					1		Phyllitic st	lale		
	rec: 5.49 m	ו				1		Slate	*		
						2		Interbedde			
Box 25	596.0 - 615.0 ft					1	5.80	Phyllitic st	nale		
	181.7 - 187.5 m							<b>.</b>			
Box 26	615 633 ft					1		Phyllitic sh			
	187.5 - 192.9 m					0		Fracture z			
	cut: 5.49 m	rec:	5. <b>49</b> m			2		Phyllitic sh			
						0		Fracture z			
						1	1.45	Phyllitic sh	ale		

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			Fla	gstone	:	0.0	m MS	<u> </u>	0.0 m		0.30	Core lost		
			Sla					5 + E\$	10.6 m					
			Zor	ne:		19.8	m		19.1 m					
				Lower	slat	e zon	e total	s Tru	e thickne	ss				
	100.	4.00								v	0.40	onalo		
	rec:	4.88								ñ		Shale		
	220.4 Cut:	- 225.0 5.18								0		Shale		
Box 32		740 - 225.6								0		Shale		
Dev 22	rec: 723	5.3 740		btm						0 0		Limestone		
	cut:			217.56 htm	Ч	figst	0	0%	0.75	3		Slate Limestone	3 cm smpi	<b>L</b> O
		- 220.4		747 60		slate	3.8	100%		4		Slate Slate	16 cm smpl	
Box 31	706	723			目	zone	3.8	3.7	1.37	4		Slate	3 cm smpl	
D. 01	700	700		213.74	目	_	Tha	Tht	1.3	3.5		Slate	6 cm smpl	
				top						0		Fracture zone		
										2		Slate		MS
	rec:	5.2	m				4.9	m true	e thicknes			Core loss		
	cut:			Interbu	rde	n:	5.1			0		Fracture zone		
	209.9	- 215.0								0		Fracture zone		
Box 30		- 705.5								0		Slate		
	rec:	5.64	m	otm						0		Slate		
	cut:			208.63	日				2.34	3		Slate		ES
		- 209.9			目	flgst	0	0%	0	0		Slate	14 cm smpl	PS
Box 29		- 688.5			目	slate	5.4	88%	1.65	3.5		Slate	13 cm smpl	ES-VES
					目	zone	6.2	6.0	1	3		Slate		ES
					目		Tha	Tht	0.45	3		Slate		ES
				202.44	旧				0.3	3.5		Slate		ES
				top	_	1.6	m tru	e thick				Slate		PS-NS
			Inte	erburde	en:	1.62	m					Slate		MS-PS
												Slate		MS-PS
	rec:			btm	Ы				0.0			Slate		PS
	cut:			200.83	目	nyət	U	0.10	0.8	3.5		Speckled slate	1	ES
Box 28	651 198.4	670 - 204.2			目	slate flgst	1.7 0	55% 0%	0.3 0	3 1.0		Slate Slate		ES PS
0 30	<b>664</b>	670	<i>E</i> 4		E				_					
				197.7-	目	zone	3.1	3.0	0.0	0		Limestone		NS
	TEC.	0.0	111	197.74	ı۲		Tha	Tht	0.6	3.5		Slate		ES-VES
	cut: rec:	5.5		top						3 0,5		Slate Slate		
		- 198.4								1		Phyllitic shale		
Box 27		- 651								1		Phyllitic shale		
	~~~~	054	<b>r</b> .								0.05			

Total Depth: 225.6 m

#### UPPER AND LOWER ZONES COMBINED

Slate:	75.6 m (true thickness)
Flagstone:	5.5 m (true thickness)
Combined:	81.1 m

THE BEST INTERVAL (Lower part of the Upper Slate Zone): 16 m of clean ES and VES slate

	4 44 5		4.00
box 5 top part		box 6 top part:	1.82
addition	0.34 new description	addition:	0.17
	0.04		0.39
	0.39		0.22
	0.16		0.38
	0.35		0.08
	0.05		0.34
	0.08		0.24
	0.04		0.18
	0.47		0.37
	0.24		0.25
	0.2		0.16
	0.02		0.06
	0.58		0.38
	0.15		0.47
	0.31		0.75
	0.12		0.47
	0.11		0.13
	0.23	Total rock	5.04
Total rock	5.29	Core cut: 5.5	5
Cut: 5.5			

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#### DOME CREEK SLATE QUALITY

Certain properties of the Dome Creek Slate were tested in 1988 by Hardy BBT Limited, Chemex Labs Ltd. and by CANMET (Canada Centre for Mineral and Energy Technology). Some additional properties not tested by these labs are described by the author (indicated by YARO HORACHEK). Tests not yet conducted are also listed and should be done in the next stage of the property exploration and evaluation. The 1988 samples were excavated and cored by Dome Creek Structural Slate Company from behind the Highway Outcrop. It should be kept in mind that this slate came from an interval very near surface and must have been at least partially weathered.

Based on 1988 testing, study of 1999 core and observation of the slate outcrop at the highway it can be stated that the Dome Creek Slate Property contains slate of very good quality with excellent potential for manufacturing of roofing slate, tiles, flagstone and dimension stone products.

Property Value & unit Tested by and Note Colour: gravish green YARO HORACHEK Colour durability: unfading YARO HORACHEK (slate on the outcrop) clear, semi-vitreous ring YARO HORACHEK Sonorousness (resonance): YARO HORACHEK Cleavability: good to excellent Based on core splitability. Larger block of fresh slate must be tested fresh slate from a test pit becomes available. Cleavage surface: Very fine to coarse YARO HORACHEK Cleavage surface of slate layers ranges from silky smooth through very fine and fine to roughish and coarse. 2800 kg/m<sup>3</sup> Density: Hardy BBT (ASTM C97) The slate is slightly heavier than most of American slates. 0.17 % wt Hardy BBT Water absorption: (ASTM C121) Oualifies as grade S1 roofing slate for which the ASTM C406 maximum is 0.25% and as grade I Exterior (ASTM C629 maximum is 0.25%). Not determined, by extrapolation from very low Porosity: n.a. absorption the porosity must be very low as well. Three-Point bend test Hardy BBT parallel to grain: 60.1 MPa Building stone minimum is 49.6. (Modulus of rupture ASTM C120)

Results of testing and analyses are tabulated below:

Three-Point bend test	n.a. ASTM C120)				Hole DC 99-1C Only dry slate was tested. Test of soaked slate and test after repeated freezing need to be done.							
across grain: (Modulus of rupture A					This important test is yet to be done. ASTM 406 minimum for roofing slate is 62 MPA As above, only dry slate was tested. Tests of soaked and repeatedly frozen slate need to be done.							
Weathering test: 0.017 (ASTM 217)			l	Hardy BBT Considerably less than maximum of 0.05 mm allowed for the best roofing slate grade S1.								
Wear index, abrasion to (ASTM C501)	Wear index, abrasion test: 11.3 (ASTM C501)				irdy BI	BT						
Grindability	Ň	ot tested	1.	n.a	ł.							
Thermal expansion	n	a.		No	ot tested	1.						
Chemical resistance, corodibility:	·			Not tested.								
Chemical composition:				Mio	Chemex Labs Ltd. MgO CaO Na <sub>2</sub> O K <sub>2</sub> O TiO <sub>2</sub> P <sub>2</sub> O <sub>5</sub> MnO LiO							
	-	Al <sub>2</sub> O <sub>3</sub>	ге <sub>2</sub> О <sub>3</sub> 8.32	•	0.36	-	к <sub>2</sub> 0 4.81	-	• •	0.05	LiO 3.98	
	is rel simil	atively l ar in co	n to slat ow in sil mpositio	es of the lica con n to dar	of the Eastern United States the Dome Creek slate a content, high in alumina and high in iron. It is to dark gray Monson slate from Maine, one of the s in the begining of this century.							
Mineral composition:							Unive	ersity o	f Calga	ry		
				ns were	24% 6% 20% 48% 2% /ere studied to determine hydrite or gypsum were				sence of	f		
Presence of sulphate		<በ	01%	2								
Presence of calcium		< <u>0</u> .										

PLATES

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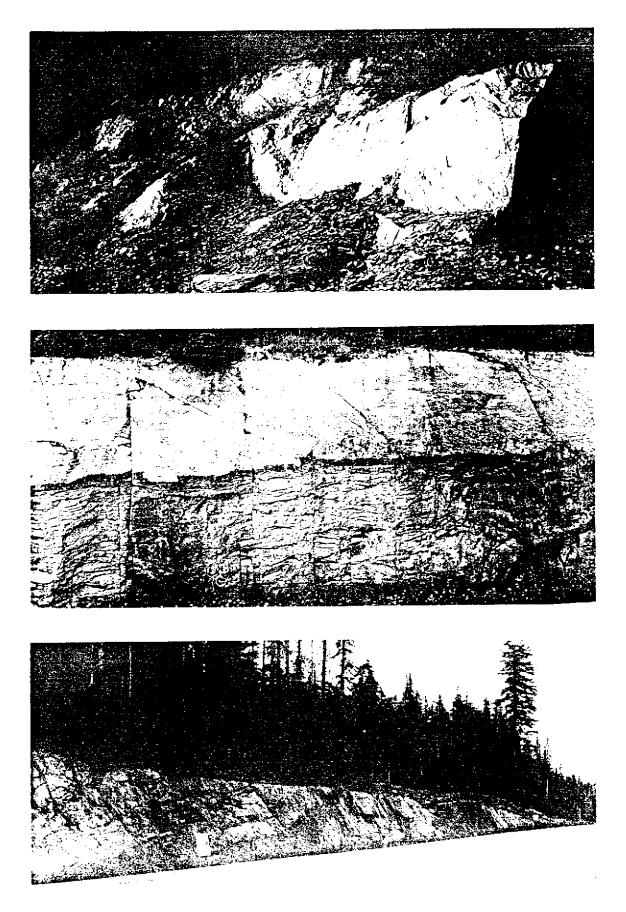


Plate 1. Outcrop of state on the Yellowhead Highway From top to bottom; western end, middle segment and eastern end.

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Plate 2. Core from hole DC 99-1C.

Top: The uppermost art of the Upper State Zone (core before splittability testing) Bottom: The lowermost part of the Lower State Zone, including the limestone marker and underlaying black shale (core after splitability testing).

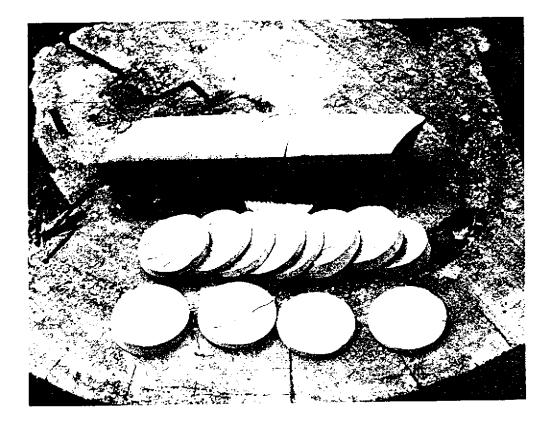


Plate 3. Core of the very easily splitable (VES) slate

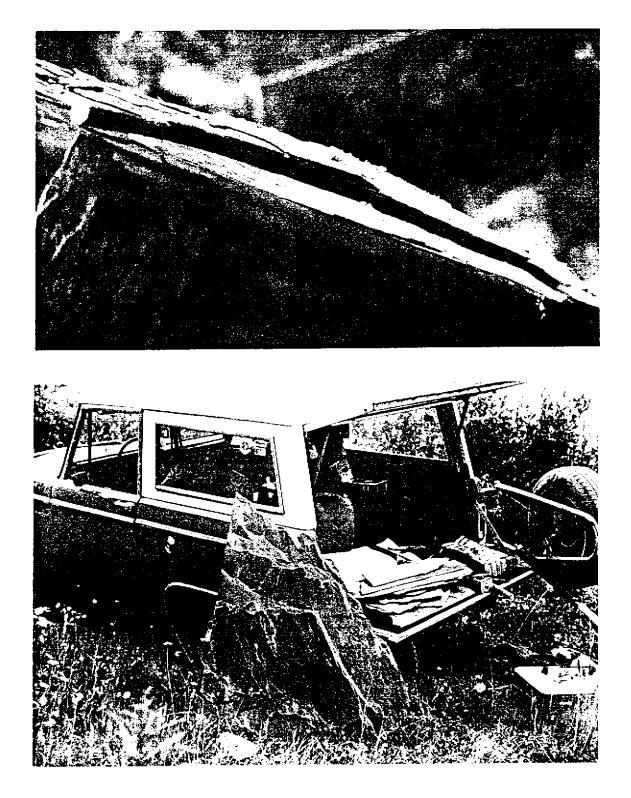


Plate 4. Splitting slate at the highway outcrop

Freshly excavated slate splits best because it still contains original formation moisture. Although the outcrop at the highway was exposed in 1967 it was not difficult to split several large blocks into thin plates.

COST STATEMENT		Supplement to ASSESSMENT DOME CREEK				IT & GEOLOGICAL REPORT K SLATE PROPERTY, July 2000			
	PROPERTY NAME:	DOM		K SI	ATE	Fi	le: Cos	tSt99.xls	
	CLAIM NAME	DOM	E 205 2	223					
	PERMIT NUMBER: YEAR OF WORK: STATEMENT OF WORK:		MX-11 1999 18-05-		), Aprìl 17 0	, 19 <del>9</del> 9			
Owners:	Tony Rojac (90%) DOME (					E LTD. n Road, Abbotsfo B.C., V2S 4N			
	Rex Hatchard (10%)	Mc Br	ide, B.C.			·			
Operator:	RJZ MINING CORPORATI		lawkside	Mev	vs NW, C	algary AB T3G 3	R9		
PHASE 1	Core Drilling, mapping and r	eport pr	eparation	l.					
Field operations:		from from			6-Jul-99 4-Sep-99				
Drilling	Diamond drill coring (travel and meals included)	Major 226			(invoice N \$ 100.00	o. 99-1) per m	\$	22,600.00	
Excavator	Rig support	Rex H	atchard C	Const	ruction Lto	L	\$	860,00	
	equipment mob and demob, u	nload tl	te rig, pre	epare	access and	drill site, load the	rig		
Consultant	Field work on site Rig supervision and	Yaro I	Iorachek,	, <b>P.E</b> :	ng., GEO-]	ING Resource Con	sulting	Ltd.	
	core description	7.5	days	@ :	\$5,000.00	per month	\$	1,744.00	
	Mapping, visit government	7.5	-			per month		1,744.00	
	Meals	15		@ !		per day		600.00	
	4x4 to site & back	1213		$\overset{@}{\stackrel{?}{\stackrel{?}{_{_{_{_{_{_{_{_{_{_{_{_{_{_{_{_{_{_{$		per km		739.81	
	4x4 at site:	2925		$\sim$		per km		1,784,13	
	Toyota on Sep. 23 & 24:	1390	-		to Prince C § 0.16	to Dome Cr. & bac	k \$	222.00	
EXPENSES	Accommodation Telephone & fax			9	<b>\$ 262.78</b> \$ 40.00				
	Field supplies and consumable	es			\$ 530,49		\$	833.00	
Office work	(report & misc.)	from	1-Nov	to 1	0-Nov-99				
						per month	¢	2,326.00	
	Consultant	10	days	a s	\$3,000.00			2.520.00	

TOTAL COSTS & EXPENSES

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