

MEMORANDUM

003326

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TO J. W. McCammon,
Mineral Engineer,
Dept. of Mines.

FROM THE

DEPARTMENT OF MINES

VICTORIA, B.C., March 28, 1956

Property File

WHEN REPLYING PLEASE REFER TO FILE NO.....

082 F SW 292

Re: Limestone and Quartzite Samples taken in the Salmo area in 1955.

Samples of limestone and white quartzite were taken during the summer of 1955 at several places in the Salmo area to provide data on the chemical composition of these rocks and hence to give a preliminary indication of their usefulness as sources of lime and silica. Samples were taken at readily accessible places where there are no obvious major difficulties in quarrying. The locations are shown on the accompanying map and the analyses are in the tables. The rocks were sampled by collecting fresh rock chips at intervals across a series of beds. The rocks sampled appeared to be of uniform composition and the samples are thought to be representative.

The limestones belong to the lower Cambrian Reeves member of the Laib formation, except for No. 9230 and No. 9231 which were taken from a limestone of uncertain age and correlation. The quartzites are parts of the Quartzite range formation which conformably underlies the Laib. The Reeves limestone is fine-to medium-grained crystalline, grey or black and white thinly banded rock. The quartzites are hard and fine-grained. They break on cleavage planes parallel to the bedding and on widely spaced cross joints. In the purest quartzites cleavage planes and cross joints are spaced a few feet apart.

Samples 9228 and 9229 were taken from the lowest bluffs of limestone north of the Salmo River and east of Wallack creek between 200 and 300 yards north of the logging road in Salmo Valley. Each sample was taken across 40 to 50 feet of beds along a single section.

Samples 9230 and 9231 were taken from the limestone bluffs north of Pend d'Oreille River close to the Nelway-Waneta road between Ninemile and Charboneau creeks. The limestone shows no banding and the samples were taken at random over an area several tens of feet square.

Sample 9265 was taken on the road north of South Salmo River at intervals, for 300 feet east along the road from the first rock bluff east of the Salmo-Nelway highway.

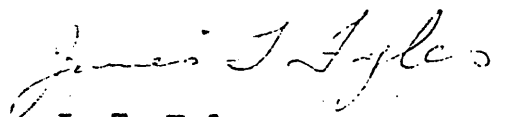
Sample 9266 was taken from the same bluff as 9265 but chips were taken at intervals, for 400 feet north of the road.

Sample 9267 was collected from the rock bluff about 400 feet south of the old highway bridge over South Salmo River. Chips were taken for 120 feet east up the bluff.

Sample 9273 was taken from diamond drill core dumped at the collar of a vertical hole which went completely through the limestone, a distance of about 1,200 feet.

Samples 9225, 9226, and 9227 were taken from the base of the bluffs north of Salmo River, a few hundred feet west of Shenango Canyon. They are within 100 yards of the logging road in Salmo Valley. In 9225 chips were taken every foot across 15 feet of white quartzite with thin grey-green micaceous beds. In 9226 chips were taken every foot across 12 feet of beds of blocky white quartzite. Sample 9226 is characteristic of beds totalling about 40 feet thick. Sample 9227 is characteristic of about 40 beds belonging to a member about 100 feet higher in the section than 9226. In this area the beds dip 55 to 60 degrees southeast and are cut across by the Salmo River Canyon which trends northwestward.

Sample 9238 was taken near the logging road on the north side of South Salmo River across about 50 feet. The quartzite member from which it was taken is 300 to 400 feet thick and occurs in this locality on the crest of an anticline plunging southward parallel to the slope of the hill. Hence, this type of material outcrops over a relatively large area and may extend to depths of 300 to 400 feet.



J. T. Fyles,
Associate Geologist.

JTF:GD

| Quartzites Sample Number | <u>ASSAYS</u> | | |
|--------------------------------|------------------------------|---|-------------------------------------|
| | <u>Total Fe Per Cent</u> | <u>Al₂O₃ Per Cent</u> | <u>SiO₂ Per Cent</u> |
| 9225 | 0.80 | 3.88 | 92.07 |
| 9226 | 0.07 | 1.40 | 96.19 |
| 9227 | 0.14 | 1.81 | 96.39 |
| 9238 | 0.13 | 1.17 | 97.47 |

Sample
Number

| | | |
|------|---|---|
| 9231 | Al: 0.3-3% Fe: 0.01-0.1% V: 0.003-0.03% | Sr: 0.1-1% Pb, Cu, Mn, Ti, Cr, Ba: Traces. |
| 9265 | Al: 0.3-3% Fe: 0.07-0.7% V: 0.003-0.03% | Sr: 0.01-0.1% Pb, Cu, Mn, Ti, Cr, Ba: Traces |
| 9266 | Al: 0.3-3% Fe: 0.01-0.1% V: 0.008-0.08% | Sr: 0.01-0.1% Pb, Cu, Mn, Ti, Cr, Ba: Traces. |
| 9267 | Fe: 0.003-0.03% Sr: 0.01-0.1% | Al, Cu, Mn, V, Cr, Ba: Traces. |
| 9273 | Al: 0.3-3% Fe: 0.005-0.05% V: 0.003-0.03% | Sr: 0.01-0.1% Ba: 0.02-0.2% Pb, Cu, Mn, Ti, Cr: Traces. |

NOTES:

1. Since the samples were pulverized in a steel-disc pulverizer, the reported iron content probably exceeds that actually present.
2. The lower limit of detection of Na and K by the method used is about 0.2 per cent.
3. Samples Nos. 6772M, 6773M, 6774M, and 6779M are being assayed for iron, aluminum, and silicon, and the results are to follow.

Limestones

| Sample Number | | <u>ASSAY</u> | | |
|---------------|---------------------|-------------------------|-------------------------|------------------|
| | | <u>Acid-Soluble CaO</u> | <u>Acid-Soluble MgO</u> | <u>Insoluble</u> |
| 9228 | } WALLA WA | 52.4% | 1.71% | 3.28% |
| 9229 | | 42.2% | 5.09% | 14.3% |
| 9230 | } PERRY ORVILLE | 52.9% | 2.36% | 0.84% |
| 9231 | | 53.8% | 1.83% | 0.56% |
| 9238 | | - | - | - |
| 9265 | } SOUTH SALMO RIVER | 52.0% | 1.92% | 3.28% |
| 9266 | | 53.9% | 0.86% | 2.06% |
| 9267 | | 54.5% | 0.94% | 0.96% |
| 9273 | | 50.1% | 2.96% | 4.86% |

Handwritten notes:
 082F1W 292 (near 9228-9229)
 082F262 (near 9231)
 SOUTH SALMO RIVER (near 9265-9273)

SPECTROCHEMICAL ANALYSES

In addition to Ca, Mg, and Si, the following constituents were found to be present, most probably within the quoted percentage ranges:

| | | |
|------|-----------------|----------------------|
| 9228 | Al: 0.2-2% | Sr: 0.01-0.1% |
| | Fe: 0.003-0.03% | Cu, Mn, Ti, Cr, |
| | V: 0.005-0.05% | Ba: Traces |
| 9229 | Al: 0.2-2% | |
| | Fe: 0.02-0.2% | Pb, Cu, Mn, V, Ti, |
| | Sr: 0.007-0.07% | Cr, Ba: Traces. |
| 9230 | Al: 0.5-5% | Sr: 0.1-1% |
| | Fe: 0.02-0.2% | Ba: 0.07-0.7% |
| | Pb: 0.007-0.07% | Cu, Mn, Ti, Cr: Trac |
| | V: 0.007-0.07% | |