REPORTS ON INDUSTRIAL MINERALS AND STRUCTURAL MATERIALS

BARITE

By J. W. McCammon

OMINECA QUEEN PROPERTY (93N/9E)

The Omineca Queen (latitude 55° 31.6'; longitude 124° 06.4') is a barite property situated 600 metres south of Manson Creek, at 823 metres elevation on the east bank of a small tributary stream, about 3 kilometres east of the bridge where the Omineca Road crosses Manson Creek. The property consists of the Omineca Queen 3 and 4 claims, located in 1966 and still held by R. Bjerring of Manson Creek.

From the creek bed the bank rises steeply for about 6 metres in elevation and then flattens off to a gentler slope. The ground is completely drift and bush covered. The only bedrock exposed is the original discovery outcrop of barite in the creek and in areas stripped by bulldozer.

The barite lies conformably between slate walls in an area of rocks mapped as part of the Pennsylvanian (?) and Permian Cache Creek Group (*Geol. Surv., Canada,* Map 907A).

Barite is exposed in the creek and in strippings for 75 metres northeasterly to a small gully. More barite has been uncovered in strippings 120 and 156 metres southeast of the gully. West of the gully the strike of the rocks is north 75 degrees east and the dip is generally vertical but in places the rock is contorted and sheared. The visible barite forms a single 4 to 7-metre-wide zone of fine-grained dark material that is striped parallel to foliation in the slates. It does not contain much impurity other than the dark colouration. At the gully there is much contortion and shearing and in stripping along the east side, the barite appears to be offset a few metres southward. In the stripped area 120 metres southeast of the gully the barite and enclosing slates are near vertical and strike south 55 degrees east. Two mineral zones are exposed here. A 3-metre-wide band of white barite on the north is separated from a 5-metre-wide band of dark striped material by 3 metres of slate. Analyses of the barite are reported to show high purity.

NIOBIUM

By J. W. McCammon

VIRGIL PROPERTY (93N/9W)

The Virgil property (latitude 55° 42.7'; longitude 124° 24.6'), consisting of the Virgil 1 to 6 and 45 surrounding claims, is on the west flank of the Wolverine Range. The main showing is on the Virgil 3 and 4 claims. It is at 1,625 metres elevation, 7 kilometres northeast of Manson Creek settlement. It can be reached by helicopter or on foot by following a rough tractor trail 4.8 kilometres long that leads north from the Omineca Road at a point 1 kilometre east of the bridge over Wolverine Creek. The original discovery was made in July 1971 by Ernie Floyd, of Manson Creek, who located and recorded the six Virgil claims in September of that year.

The showing is on the top of a small hump at the west end of a ridge. Trees are abundant but underbrush is thin. The only bedrock seen was in cuts opened up by bulldozer and in one small bluff.

Interesting niobium assays have been reported on samples taken from the showing. The exposures reveal a syenite-carbonate complex in schists of the Precambrian-Lower Cambrian Wolverine Complex. The general geological setting appears to be the same as that at the Lonnie property (*Minister of Mines, B.C.,* Ann. Rept., 1955, p. 30) which is 4 kilometres to the southeast.

The present workings consist of two main northwest-trending cuts about 90 metres apart. A heliport has been established 30 metres east of the centre of the west cut.

Rocks of the syenite-carbonate complex are exposed in the southern two-thirds of the east cut, at the heliport, along most of the west cut except at the southeast end, and in the upper part of the west limb of the west cut. Schist can be seen in the lower part of the west limb of the west cut, in the southeast end of the west cut, in a bluff 30 metres southeast of the heliport, and in float at the northwest end of the east cut. Foliation in the rocks strikes north 20 to 45 degrees west and dips about 55 degrees southwest. The outcrop distribution and rock attitudes suggest the presence of a band of the complex about 50 metres wide on the west separated by 40 metres of schist from a second band of complex at least 20 metres wide on the east. The exposed length along strike of the west band is at least 250 metres and of the east band, about 60 metres.

SAND AND GRAVEL

By J. W. McCammon

SAND AND GRAVEL DEPOSITS ON THE SUNSHINE COAST PORT MELLON TO POWELL RIVER (92F/9, 16; 92G/5, 12)

During the 1974 field season two months were spent on a reconnaissance survey of the surficial geology of the Sunshine Coast area between Port Mellon and Powell River (latitude 49° 22' to 46'; longitude 123° 25' to 124° 20'). The object of the survey was to study the sand and gravel potential of the region. In brief, it would appear that small to moderate supplies of sand and gravel are available but, except possibly at the Chapman Creek delta, no large recoverable reserves are present in the area examined.

Bare bedrock is exposed over much of the area. A relatively thin mantle of glacial till or till covered by a thin layer of marine lag sand, lag gravel, clay, or stoney clay forms the surface layer over most of the remaining area. In a few places sand and gravel alluvial fans or deltas constitute the uppermost deposits. Bog and swamp deposits are minimal. Marine deltas and deposits containing marine fossils extend upward to elevations of between 170 and 200 metres above present sea level.

Sand and gravel are found in recent stream and beach deposits, in post-glacial deltas, fans, and veneers, in kames and ridgelets, and in outwash deposits older than the latest till. Most of the deltas and pre-till deposits observed have been or are being worked.

The recent stream deposits are all fairly small and most, if not all, of the beach deposits are along residentially developed seafront so it is unlikely either type can offer commercial possibilities.

Raised deltas and alluvial fans occur up to 185 metres above present sea level along the sides of most streams. These have provided much of the sand and gravel produced to date. The largest reserve of this type is contained in the wide delta complex at the mouth of Chapman Creek, just east of Sechelt. Several small pits have been operated in this delta in the past and two are now worked periodically. Unfortunately much of the deposit consists of sand or very sandy gravel. Other deltaic and fan deposits are relatively small although they now provide material for at least 12 operating pits.

Small irregular kames and ridgelets, along the upper reaches of some of the main streams at elevations above the delta deposits, contain poorly sorted sand and gravel. One or two had provided small amounts of aggregate, probably for logging roads.

The sub-till sand and gravel deposits underlie undefined but perhaps sizeable areas between Highway 101 and Gower Point, on the high land east of Northwest Bay Road 3.5 kilometres northwest of Sechelt, and at Powell River. Pits operate in all of these deposits now, but further development is confined to a large extent by residential subdivisions.

TALC

By J. W. McCammon

J&J PROPERTY (92I/4E)

Pacific Talc Ltd., of 404, 604 Columbia Street, New Westminster, owns 10 claims, J&J 1 to 10 inclusive (latitude 50° 00.1'; longitude 121° 34.6'), on a talc deposit situated between 227 and 308 metres elevation on the south bank of Nahatlatch River, 4.3 kilometres west of Fraser River and 18.7 kilometres north and west by gravel road from North Bend. The two original claims, JJ 1 and 2, were recorded by J. Massey in March 1970. Visible exposures of talc all appear to be on the JJ 1 claim.

Talcose rock is exposed just east of a small creek, down the wooded, steep, bluffy northwest end of a low hill. Outcrops are scarce. The best talc showings are visible in cuts on the road and at the base of a bluff 60 metres south of the road.

The talc rock forms a band 35 to 45 metres wide in phyllite. A strongly developed schistosity strikes northwest and dips vertically to steeply east. The band is revealed by intermittent outcrops from the road at 227 metres elevation southeasterly for 190 metres to a trench at 308 metres elevation. None was seen between the road and Nahatlatch River at 205 metres elevation 100 metres to the north, nor in the drift-covered area within a 150-metre diameter semicircle south of the trench at 308 metres elevation. Map 1010A (*Geol. Surv., Canada,* Ashcroft Sheet, 1951) shows the rocks to be Triassic or earlier in age and Map 737A shows them as Carboniferous and later.

The rock containing the talc consists essentially of talc and carbonate (probably mainly magnesite), with lesser chlorite, limonite, magnetite, and pyrite. Analyses quoted by the company show the talc content to range between 30 and 50 per cent. The rock varies from light to dark greyish green and weathers buff to brown stained. It is schisted and platey. Composition and texture vary considerably and rapidly from place to place.

Development work at the end of August 1974 consisted of an east-west cut 45 metres long parallel to the road along the base of a knoll at the south edge of the road, an east-west cut 40 metres long across the base of the main bluff at 245 metres elevation 60 metres south of the road, a northwest-trending cut 70 metres long at elevation 308 metres 120 to 190 metres south of the road, and a pit 3 metres diameter halfway between the second and third cuts.

Extraction and beneficiation tests are being done on a bulk sample of material from the cut 60 metres south of the road.

Printed by K. M. MacDonald,
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1974