



*The Baker mine site*



*Sandy McLean, senior geologist, examines diamond drill core samples at the mine site*

## Du Pont of Canada's major mining venture

Du Pont of Canada Exploration Limited is undertaking its first major mining venture as it begins development of its Baker gold-silver property 170 miles north of Smithers in British Columbia.

The Vancouver-based mining arm of Du Pont of Canada Inc will be joining producer ranks early in 1981. The 100 ton/day operation is expected to cost \$12-million and will include an open pit

and underground mine, a 120-ton conventional cyanidation mill, and will create 40 permanent jobs, rising to 80 during the peak construction period.

On-site work is already gearing up with about 12 people currently working to upgrade the Sturdee River airstrip and the eight mile road from the airstrip to the mine. The property is located in a relatively remote and mountainous

region and is entirely dependent on air support.

'Orders have been placed for most of the major equipment, some of which has already been delivered to the mine', reports David A Barr, vice-president, Du Pont of Canada Exploration.

Engineering and design work has been carried out by Kilborn Engineering and the contract to construct the mill buildings and tailings system has been awarded to Dillingham Corporation Canada Limited.

During the construction period, materials will be airlifted by Hercules and smaller aircraft from Smithers to the Sturdee Valley airstrip and transported by road to the mine.

Accommodation and camp facilities are presently being built at the Penticton plant of Atco Pacific Limited. Excavation and foundation work will begin early July and the pre-assembled camp will be airlifted to the site. The mill building is expected to be closed in by mid-September.

Du Pont of Canada Exploration has been exploring and developing the property since 1974 under an agreement with Kennco Explorations (Western) Limited which made the initial discovery in 1969. About \$2-million has been spent on diamond drilling and development work to date, according to Mr Barr.

*A 20-ton Mack truck offloading from the Hercules aircraft at Sturdee River airstrip*



## Gold and Silver

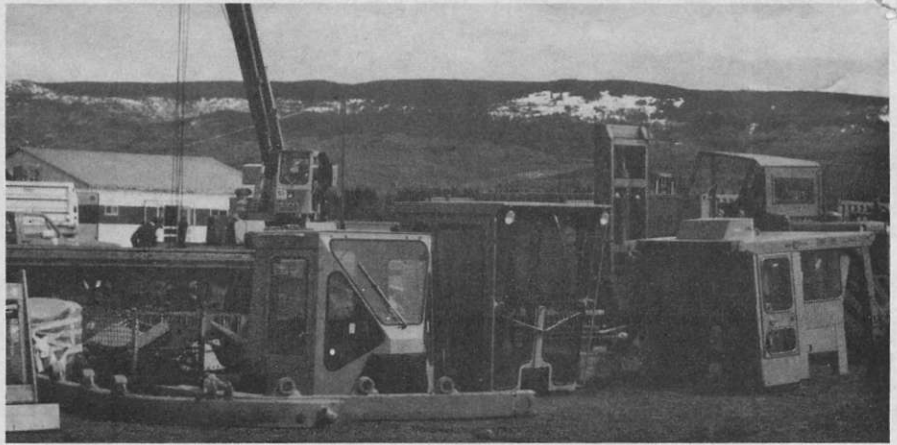
The property, which has been known as Black Lake or Toodoggone River and later as the Chapelle property, was recently renamed the Baker mine, in memory of the late Arthur H Baker, formerly a vice-president of Du Pont of Canada Inc and president of Du Pont of Canada Exploration Limited.

### Surface/Underground Mining

The mine is to be developed by a combination of surface and underground methods. The open pit will be partly mined out in 1980 and underground mining by cut and fill stoping will be under way by late October, Mr Barr reports. He estimates that about 75% of the mining will be underground, with the remainder coming from the open pit.

Adits have been collared at the 5420ft and 3538ft levels and some 325ft of drifting and raising has been completed. There is currently about 4000 tons of ore stockpiled ready to be put through the mill.

Mineable reserves are 100,000 short tons containing 0.9 oz/ton gold and 19 oz/ton silver, sufficient for a mine life of approximately three years.



Equipment is gathered at Smithers ready to be airlifted to the mine

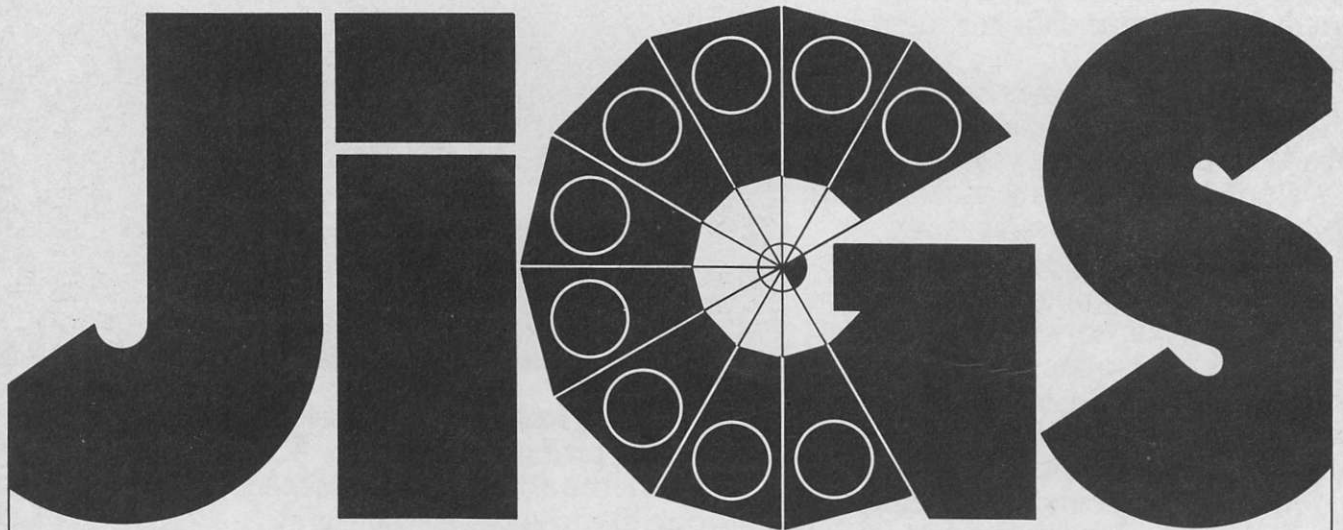
A total of seven quartz vein systems have been investigated on the property. Six of these lie within an area of 0.3 miles<sup>2</sup> and one lies about 1.5 miles east of the main vein A. Vein A is part of a quartz vein system composed of two or more subparallel veins which trend northeasterly, dip from 80° southeast to about 70° northeast. The quartz vein system has been traced for a strike length of 1400ft across a width varying from five to 25ft. Drilling indicates the vein system persists for at least 500ft vertically from

the surface.

Further exploration work will be carried out in conjunction with the mining operation, Mr Barr said. Work will consist mainly of diamond drilling and will be concentrated on the main vein and in the vicinity of the other veins.

### Milling

Milling of the ore, which is to begin in January 1981, will consist of crushing, grinding, cyanidation, filtration and



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Some of the 27 accommodation units being built at Atco Pacific's Pentiction plant



Inside one of the accommodation units

precipitation using conventional gold recovery techniques to produce bullion containing both gold and silver. The bullion will be sent to another refinery for separation of the metals.

Work on the tailings pond, located 1600ft southeast of the mill will begin in summer. The tailings pond and dam will cover about 5.5 acres and will be capable of storing 100,000 short tons of tailings.

The power generation equipment will be located in an annex to the mill building which will house the three

500 kW diesel electric generators, a standby heating boiler, vacuum pumps and air compressor.

The year-round operation will require some 400,000 gallons of diesel fuel annually. It is expected that four round trips a week by small aircraft plus 14 round trips every two months by Hercules for the transport of fuel oil will be carried out.

Employees will be flown in to work for 15 to 21 days and will be flown out for seven days time off. Living

accommodation will be provided for the full construction and operating workforce and it is proposed to have additional recreational facilities in the site.

Although there is no road to the site at present, the Ministry of Energy, Mines and Petroleum Resources has considered extending the road from Moose Valley, which could eventually provide access to the mine from Fort St James north to Germansen Landing in the Sturdee Valley.

WM

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