milled heretofore, management is hopeful that the present plant may be able to handle as much as 600 tons daily when it is treating 100% underground ore.)

Open pit mining, which had been on a seasonal basis, has already been phased out, but prior to closure last fall, 120,000 tons of skarn ore grading about 1.5% was stockpiled. (None of the lower grade chert ore was put into the stockpile.) This stockpile is deemed sufficient to feed the mill till the end of March at which time ore from the new underground mine will take over. The latter, of course, will be a year-round operation.

Mr. Hall declined to estimate second half earnings other than to

gamma ray spectrometer survey carried out by the Geological Survey of Canada. The survey, which covered the province from 53°N-60°N, was performed on a shared cost basis with the Saskatchewan government.

The area in question is about 20 miles east of Carrot River, near the Pasquia Hills, with farmland to the east and the occasional road through some cleared bush.

Rio Tinto Canadian Exploration (Riocanex), the exploration arm of Rio Algom Mines, has picked up a sizable block of ground that covers the actual anomaly picked up in Cretaceous rocks during the survey. (The survey flown in a Skyvan aircraft with flight lines 30 miles

been carried out by Rio, although the company will likely be drilling this uranium prospect in a few weeks.

Studer Mines is believed to hold claims adjoining to the northeast of Rio Tinto's property. The company cannot comment officially as it currently is in primary distribution not connected with this prospect. **Wollex Exploration,** Calgary, subsidiary of **Comaplex Resources International,** holds claims adjoining the Rio property on the east. Others understood to be in the area include Cor Investors, Regina, Surjick and Associates, consultants, Superstar Petroleum, Calgary, Lew Parres, and Dan Melsyck, Edmonton.

About 55,000 acres are believed taken up in claims and claim blocks which in Saskatchewan can cover 960-15,360 acres.

(See property map, page 23.)

Jordan River Mines mill reaches 90% capacity

VANCOUVER — Jordan River Mines, which commenced commercial production Jan. 1, 1973, is producing an operating profit with the mill running at about 90% of design capacity.

The mill, rated at 1,200 tons per day capacity, currently is treating 1,050 tons daily, Mine Manager Edward Bettiol recently told The Northern Miner. Grade of mill feed approximates 1% copper (Cu) and recovery averages about 94%.

For October the mine had an operating profit of $49,000 based on 75¢ a lb. copper. In that month the plant treated 28,387 tons of ore and produced 885 tons of concentrate, averaging 27% Cu, and containing 487,137 lb. Cu.

As at Nov. 26, 1973, the mine in November had exceeded the October output, which, of course, should show in higher earnings. The output for November was forecast at 30,000 tons of ore and approximately 1,100 tons of concentrate, grading 27% Cu.

Jordan River Mines is owned 60% by **Pechiney Development,** wholly-owned subsidiary of Pechiney Ugine Kuhlmann, France, and 40% by **Dison International,** formerly Crownex International. The property, a former copper producer, is leased from **Sunro Mines,** 36% owned by Cominco and 48.5% by Sunloch Mines, which, in turn, is 84% owned by Cominco. André Haillot, president of Pechiney Development, is president of Jordan.

The Sunro property, 20 miles north of Sooke and 31 miles west of Victoria, Vancouver Island, is underlain by Eocene volcanic rocks consisting mainly of basalt, which have been intruded by several sill-like bodies of gabbro of Oligocene age. Mineralization occurs as fracture-filling and replacement in shear zones close to the intrusive contacts. The main mineralization is chalcopyrite with lesser amounts of pyrrhotite.

Ore reserves at June 1973 are reported at 20,335 tons, broken, averaging 1.52% Cu; 1,136,240 tons, proven, averaging 1.47%, and 467,184 tons, probable, averaging 1.33% for a total of 1,623,759 tons of 1.43%, before diluting. After allowing 20% dilution, reserves become 1,948,551 tons of 1.22%.

See Page 15

Deeper drilling by Roya shows improvement in

Recently completed deeper drilling on the Lynn Lake gold property of Royal Agassiz Mines in Manitoba has unquestionably improved its mine making potential. This work has not only established continuity of the main H zone to a depth of 1,000 ft. (still open), but strongly indicates an increase in width with depth and a possible improvement in grade. Too, it has outlined a new parallel zone that could add significantly to overall tonnage.

As of the first of the year, the company is turning the development of the property over to **Bulora Corporation** under a joint venture agreement under which Bulora can earn a 50% interest by spending $1 million in preparation for a production decision.

The latest program included the drilling of seven holes from the 450-ft. level totalling 5,958 ft. Prior to this, a total of 94 shorter holes (10,591 ft.) had established continuity and grade to a depth of 450 ft., and included some holes into the new zone which is now being called the H-1 zone.

Jordan near capacity

Continued from Page 1

Commenting on the ore outlook for the mine, Mr. Battiol noted that there are 16 known surface showings with four of them having excellent potential for new ore. However, he added, some of the mineral rights have not yet been obtained from the landowners. Also, there is excellent potential of increasing the reserves in the orebodies being mined. Exploration in 1974 will be confined mainly to prove up the latter, which, he said, could possibly add 1,000,000 tons of similar reserve grade.

The mine is serviced by a number of adits, the main one at elevation of 5,100 ft. on which the mill is located. Other adits are at elevations of about 5,200, 5,300, 5,400, 5,500 and 5,600 ft. A decline ramp runs from the 5,670 ft. elevation to the 5,500 level, and a 20% inclined ramp connects the 5,100, 5,200, 5,300 and 5,400 levels.

Currently, production is from the Cave A orebody, situated about 800 ft. from the mill. The orebody, proven over a strike length of 600 ft. and average width of 40 ft. and to vertical extent of 500 ft., lends itself to long hole mining methods.

Long holing is conducted from 100-ft. sub-level intervals with 40-ft. upholes and 60-ft. downholes drilled on a parallel 5-ft. x 4.5 ft. pattern. The sublevels to date have been silled to conform to ore widths. As mining progresses upwards variations of this method will be incorporated due to weaker ground conditions.

Slot raises are driven 5 ft. x 5 ft. conventionally ahead of the preceding breaking of muck. Two Scooptrams are employed mucking from draw points on the 5,200 level.

Developing Cave A zone

Development at present is confined to preparing the Cave A orebody for mining, which involves driving 8 ft. x 12 ft. headings and silling ahead in preparation for long holing.

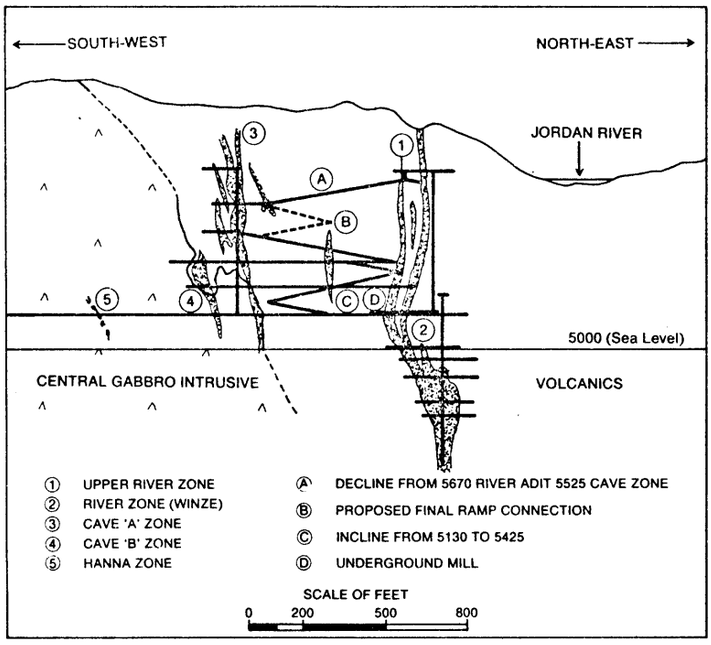
In order to facilitate the mining of this block of ore and to make available the bulk of the proven ore reserves, plans are being prepared to connect the upper level ramp to the ramp serving the lower levels (see diagram). This will entail driving about 600 ft. a 9 ft. x 13 ft. decline at a —20% grade. The connection of these two ramps, which should be completed in the first quarter of 1974, will serve as the main ventilation and as the emergency exit.

Conventional milling and concentration processes are used in producing the copper concentrate, which is sold under a 5-year sales contract to Sumitomo Metal Mining Co., Japan. The ore travels from the 1,200-ton coarse ore bin to the jaw crusher, then to screening and crushing and on to flotation to recover the copper concentrate. Tailings presently are discharged 1,000 ft. out in the ocean. By Apr. 30, 1974, a new system is scheduled to be in operation for pumping the tailings in stages a distance of 16,700 ft., the last 3,000 ft. under water, discharging tailings in a depth of 40 ft.

The newly obtained permit requirements, Mr. Bettiol explained, calls for discharging in the ocean in 40 ft. of water. This was tried when the mill was placed into production last year, he said. Problems were encountered when piling of tailings plugged the line.

There is no guarantee this will not recur, he said. However, extra outlets on the end of the main line will enable additional hookups and change direction of tailings disposal.

The operation employs 110 mine workers and 21 in office and administrative work. Bruce Benson is treasurer. Department heads assisting Mr. Bettiol are Roland Starkland, mine superintendent; Eric Zwick, mill superintendent; Rudy Skowaisa, master mechanic; Joe Kereszti, chief electrician; Robert Bada, assayer; Gerard Meusy, mine geologist, and Marjorie LeBlanc, accountant.



Royal Agassiz results

Continued from Page 1

depth from the surface drilling. Surface hole No. 65-44, for instance, showed an intersection at a depth of 1,000 ft. that averaged 0.28 oz. gold and 0.27 oz. silver over a true width 45 ft. This is roughly 50 ft. below an intersection in underground hole No. U73-101 which showed a true zone width of 27 ft.

Below are listed details of the seven holes put down on four sections in the latest underground drilling program:

		"H" ZONE					"H-1" ZONE				
Section	Hole No.	Au Oz./ ton	Ag Oz./ ton	Core Length (ft)	True Width (ft)	Vert. Depth (ft)	Au Oz./ ton	Ag Oz./ ton	Core Length (ft)	True Width (ft)	Vert. Depth (ft)
3+70W	U73-102	0.14	0.64	8.9	7.5	800	0.06	0.25	3.2	3.0	800
	U73-103	0.24	0.93	5.1	4.5	950	0.22	0.24	7.0	6.1	1,000
	or	0.14	0.41	18.5	16.0	950					
1+17W	U73- 78	0.06	0.09	10.0	9.0	690	0.15	0.49	10.0	8.5	750
	U73- 79	1.89	0.56	18.8	16.5	800	1.39	0.30	5.0	4.0	890
	or	0.40	0.48	106.2	95.0	800					
0+79E	U73-100	0.27	0.53	14.5	12.0	750	0.28	0.25	8.3	7.9	830
	U73-101	0.16	0.67	33.0	27.0	950	0.20	0.04	3.2	2.6	1,025
						or	0.10	0.30	8.9	8.0	1,025
3+27E	U73-105	0.11	0.39	20.2	15.0	750	0.14	0.08	16.7	13.0	765

Ipsco expands

Continued from Page 1

The Ipsco expansion program, to extend over a four to five year period will include a 400,000-ton a year iron reduction plant near its present ingot producing facilities at Regina, Sask., to cost about $25,000,000. It also will see establishment of at least two new spiralweld mills, galvanizing, and cold-rolling installations near its current plants in the Edmonton area of Alberta.

The ultimate expansion will increase Ipsco's annual ingot capacity from 600,000 tons to about 1,000,000 tons, and its steel products capacity from 800,000 tons to a million or more.

Premier Allan Blakeney of Saskatchewan welcomed in-

for the Alberta Dept. of Industry and Commerce said, in an intensive feasibility study of the large, low-grade Peace River iron ore deposits in Northwestern Alberta.

Ipsco itself will join in the Alberta research, and may be expected to carry on investigation of iron ore deposits in Saskatchewan, such as those of the Choiceland deposit, as the company, according to an Ipsco executive, is anxious to get away from dependency on steel scrap as a source of raw material for its ingot production.

The company is Western Canada's largest steel produc... is equipped to produce steel ... diameters from 0.5 to 56 inches.