WMINER FEB 1983

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Production starts from Cominco's Lake Zone deposit

[redacted]

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Production started mid-January at Cominco's Lake Zone deposit in the Highland Valley, BC. The Cominco Copper Division was formed by the amalgamation of Bethlehem Copper Corporation and Valley Copper Mines Ltd with Cominco Ltd. The amalgamation took place 31 Dec 1982.

092ISE001

Cominco's Pine Point lead-zinc mine closed indefinitely 2 Jan'83. The operation had a $7-million loss in the first nine months of 1982 due to high operating costs and the low metal prices. It is seeking concessions from its unionized workers, as well as from CN Rail, the federal government and from Northern Canada Power Commission in an attempt to reduce costs. The company's 150 salaried employees have agreed to a 15% cut in wages and benefits worth $500,000 and the company wants its 450 unionized employees to take an equal percentage cut worth $2-million. United Steelworkers of America has offered instead a $2-million loan, at 7% interest, if the mine reopens immediately.

14

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"Reliable Reporting"

NO.114(1970)
JUNE 1,1970

092ISE001

NO.114(1970)
JUNE 1,1970

WESTERN CANADIAN INVESTMENTS

BETHLEHEM COPPER CORPORATION LTD.

Year Ended Feb.28,	1970	1969
Concentrate Revenue	$30,928,697	$24,817,860
Prod., Admin. Exp.	11,564,452	10,836,064
Interest Income	941,795	408,533
Depreciation	1,202,409	1,094,468
Exploration	1,410,068	545,569
Debenture Interest Etc.	-	357,711
Inc. & Mining Taxes:		
Current	7,226,649	4,886,811
Deferred	441,316	705,926
Net Income	$10,025,598	$6,799,844
Income per Share	$1.58	$1.27
Shares Issued	6,360,293	5,346,343
Current Assets	40,667,428	11,030,770
Current Liabilities	8,927,298	6,509,350
Long-Term Liab.	395,808	561,300
Deferred Taxes	2,914,742	2,473,426
Investments	*2,276,123	2,301,435

*Including 513,358 shares Valley Copper Mines with market value 28Feb70 $8,213,728 and 157,750 shares Fonarc with market value of $583,675.

Patrick M. Reynolds, president of Bethlehem Copper Corp. Ltd., states in the annual report that, since the sale in Jan.1970 of 1,000,000 shares to Grangesberg Company of Sweden that the company through the open market has increased its holding to 24.5% of the issued shares. This is equal to the position held by Sumitomo. He also states that exploration of the Lake Zone orebody, which lies mainly in the property owned by Valley Copper Mines Ltd. and which extends into Bethlehem's property, was carried to the point where ore reserves could be calculated and an open pit planned. Various pit designs are being engineered in order to arrive at one which will be the most advantageous. For example, minable reserves, in a pit designed to produce 100,000 tons of ore per day grading 0.48% copper for a twenty-year life, would be 755 million tons at a cut-off grade of 0.30% copper with a stripping ratio of approximately 1:1.

The feasibility study, which will be completed in May, indicates an all-inclusive cost of approximately $240 million to bring the property into production. Of this amount, Bethlehem will supply 20% or about $48 million. Included in the total cost is pit development, mine equipment, crusher and concentrator equipment, buildings, pipelines, tailings, disposal dams, water and power supply, roads, housing, equipment installation costs, and all the other items necessary to complete the project at the designed capacity. Agreements are being prepared which will provide for Cominco to be the operator of the mine and mill, and Bethlehem, by providing 20% of the operating costs, will receive and market 20% of the concentrates produced. Bethlehem plans to sell one-half of its portion of the concentrates to the Grangesberg Company of Sweden and the other half to Sumitomo Metal Mining Co. Ltd. of Japan.

During the past year, most of the exploration effort was directed towards outlining the Lake Zone orebody. An active exploration program in other parts of British Columbia is planned for 1970. Bethlehem also has a 20% interest in an exploration syndicate in Australia, managed by McPhar Geophysics Limited of Toronto. Special reports will be issued to shareholders when anything of interest is discovered.

VENUS MINES LTD.

MINE DEVELOPMENT PROCEEDING
MILL CONSTRUCTION ON SCHEDULE
AND WITHING BUDGET

- J.M. O'Brien, president, told the annual meeting that things at the Venus Mines Ltd. property located 60 miles south of Whitehorse, Yukon are right on schedule and within budget. The mill will start operating 8Aug70 and is expected to be up to capacity of 300 tons per day within about six weeks and that the cyanide circuit will take a little longer. The mine now has four levels developed with raises, waste & ore passes and it is planned to have a minimum of 27 working places on these level ready to produce ore on a continuous basis by the time the mill starts production. At present the ore stockpile is substantial and it will be increased to a minimum of 30,000 tons or about, 90 days will capacity, by production date. This mining plan will give about one years underground stopping places developed at startup. Plans are to proceed with the development of a fifth level as soon as possible. The recent development work has given some unexpected encouragement in that the percentage of ore on the levels has been higher than originally anticipated. This gives a greater number of tons per foot of underground development.

As to cash flow and profits projections, the president stated that this is radically changed by the prices of the metals but, with silver at $2.00 per ounce, the cash flow is anticipated to be between $24 and $25 per ton or about 85¢ per share per year. The net profit on these results would be some 40¢ per share per year on the maximum 3,100,000 shares possible to be issued.

FOR THE RECORD

Trans Canada Glass Ltd. will pay a semi-annual dividend of 12½¢ per share on 30Jun70, record 15Jul70.

Ocean Cement & Supplies Ltd. will pay a quarterly dividend of 25¢ per common share on 2Jul70, record 9Jun70.

92HSE001-03 PROPERTY FILE

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WESTERN CANADIAN INVESTMENTS

NO.128(1970)
JUNE 19,1970

BETHLEHEM COPPER CORPORATION LTD.

Featuring the 15th annual meeting of Bethlehem Copper Corporation held at the mine near Ashcroft, B.C. were: 1. Confirmation of a 15¢ p/s per quarter dividend for the year ahead. 2. Modest addition to mill grinding capacity to improve metallurgical recovery and a modest increase in tonnage. 3. A review of B.C. & Australian programs. 4. Bad effects on mining of the White Paper tax proposals. 4. Steps taken by Bethlehem to provide long-term recreational use of the mine area with the related pollution control and environment protection.

P.M. Reynolds, president, told the meeting after reviewing the recent announcement by Valley Copper Mines Ltd. regarding its 4 months study on initial production from the Lake Zone orebody at daily rates below the 100,000 tons p/day upon which the feasibility study had been carried out, that, depending upon what initial rate is determined by Valley, Bethlehem may participate in the new mill or it may take its share of mine production and process it in the existing mill after a tonnage capacity increase.

The 3 ways that Bethlehem will benefit from the Valley Copper operation are: 1. By receipt of 20% of the ore produced from the Lake Zone. 2. By ownership of about 5% of the authorized shs. of Valley Copper. 3. And by receipt of a 2½% net smelter return royalty on 75% of the ore produced.

The president, in reply to questions, said that while the meeting had approved dividends of 15¢ a share per quarter for the next year, "this is a minimum and dividends will not be less than 15¢ per quarter".

After another query - "did the company have an agreement covering the Indian Reserve on the east side of Divide Lake?" - Mr. Reynolds stood and thought for some time, before saying: "No doubt considering the number of times in the past agreements have been reached on this Indian reserve and then not ratified or carried to completion....yes, I think you are correct".

Mr. Reynolds also told the meeting that since the termination of the E & M J price for copper an agreement had been reached with the Japanese firms for settlement on the basis of the L.M.E. price.

Thomas P.Liss, vice-president of Highland Valley operations, told the meeting at some length that steps taken by Bethlehem to improve the recreational facilities around the mine are: by fish stocking of barren lakes, an improvement of road access to various camps and recreational facilities and the contribution of considerable cash to the B.C. park and recreation department to build facitities in the area. He mentioned a number of mining areas which had developed into tourist areas following completion of mining. Bethlehem, he said, spends a good deal of money, time and effort to building and maintaining a reputation of being a good neighbor in all respects.

About the mill, Mr. Liss said the increased grinding capacity now contemplated will provide the basis for significant overall capacity increases as conditions warrant.

The company held cost increases to just 2% in 1969 for direct operation costs per ton of ore milled, up 4¢ p/ton from $2.13 in 1968 to $2.17 in 1969. Costs will increase more quickly in 1970 as the stripping of the Huestis zone accelerates. It is anticipated the Huestis Zone will be producing ore within the year. This will give the company alternate ore supply areas since there is still 3 years' reserves in the Jersey pit. Eventually the Iona and other zones will come into production.

Robert Anderson, manager, exploration, told the meeting that the company holds some 6 properties on which exploration will not be undertaken this year, but where farmouts will be considered. Four projects in B.C. are: Tatsa Lake, Smithers, where a preliminary program will follow up on low grade copper-silver showings in a good geological setting; Taseko Lake where mapping and drilling will follow up on 1969 drilling results which showed sub-commercial copper in a large potential area; the old Maggie property,Cache Creek area, where the company and many others have worked for many years and which was explored by some 20 percussion holes to about 300 ft. each and by an additional hole to some 600 ft. The assay results on the last named property are not provided. They are repoted encouraging and the second phase of drilling is to include some 20 further percussion holes and a possible diamond drilling follow up with work to start within a month. The fourth B.C. project is a grass roots program covering 700 sq. miles of favorable geology. Bethlehem has 4 partners in this project but will hold a large majority position (in the 30 to 40% range). Details of the syndicate interest have not yet been settled.

In Australia, Bethlehem has interest in 5 projects, 3 of which have been advanced to the drilling stage.

In stressing the adverse inpact Canada's White Paper proposals could have on the future of the mining industry, Mr. Ryynolds said that countries with which Canada competes for mineral investment capital offer incentives to attract capital. These take the form of reduced tax rates, depletion allowance, tax exempt income or a combination of these. He said if Bethlehem projects its present operations for 20 years, it would pay 15% less tax if the mine were located in Australia and 20% less if it were in the United States.

(CONTINUED ON PAGE THREE)

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WESTERN CANADIAN INVESTMENTS

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SUBSCRIPTION RATE
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NO. 280(1969)
DECEMBER 22,1969

NO. 280(1969)
DECEMBER 22,1969

B.C.SUGAR REFINERY, LIMITED

YEAR TO SEPT.30:	1969	1968
Sales	$45,784,890	$39,969,550
Investment Income	131,822	103,683
Total Revenue	$45,916,712	$40,073,233
Cost of Sales,etc.	36,553,161	32,148,567
Depreciation	1,232,000	1,212,000
Interest on Term Bank Loan	240,000	180,493
Income Taxes	4,039,000	3,271,000
Net Earnings	$ 3,852,551	$ 3,261,173
Per Share	$1.52	$1.28
Dividends:		
Pref. & Common	2,356,250	2,360,000
Investment in Fixed Assets	1,329,966	1,240,759
Increase in Non-Con-current A/Receivable	503,028	12,179
Redemption of Pref.Shs.	300,000	----------
Current Assets	16,507,181	13,167,194
Income Taxes Payable	6,159,806	4,021,285
Term Bank Loan	3,000,000	3,000,000
Common Shs. Issued	2,400,000	2,400,000
Preferred Shs.Issued	$3,700,000	$4,000,000

Forest Rogers, president of B.C.Sugar Refinery, Limited, states in the annual report that the company's operations for the year ending 30Sept69, resulted in increased profits over the preceding year. This was brought about by an increased volume of sales of sugar and by-products and an improvement in sugar prices.

At the beginning of the year under review, world sugar prices remained depressed. However on January 1,1969, the International Sugar Agreement came into effect, and as a result, world prices advanced. The price increases were not large and, in fact, hardly achieved the lower limit of prices sought by the agreement. Nevertheless, the agreement had a healthy effect on the beet sugar operations. The ban on the use of cyclamates for the artificial sweetening of beverages, foods and drugs caused a slight upward movement in world sugar prices since certain quarters assumed that the volume of sugar consumption would increase, but it remains to be seen if this will be the case. It is not expected that the ban will result in any noticeable increase in sales, for the company.

During the year, the company completed arrangements for disposing of its interest in World Seeds, Inc., to the company's former American partners.

Directors have continued to explore the possibility of diversification of the company's activities, but to date no acquisition that would be beneficial has been found.

In July,1969, the Tariff Board gave notice that they had been instructed by the Minister of Finance to make a study of all tariffs relating to sugar.

The company has prepared a brief for submission to the board.

This year's crop of sugar beets in Manitoba and Alberta is turning out to be somewhat larger than expected and comes on top of the good production of the previous year. The company may be obliged to reduce acreage in 1970.

B.C.Sugar will pay dividends of 20¢ per common share plus an extra dividend of 20¢ per share for a total of 40¢ per common share, and a dividend of 25¢ per preferred share, all payable 30Jan70,record 9Jan70.

BETHLEHEM COPPER CORPORATION LTD.

9 MOS. TO 30NOV69:	1969	1968
Mill Feed(dry) Aver. Per Day	14,680	14,218
Grade of ore-copper	0.52	0.59
Recovery	83.09	84.84
Concentrate Grade	37.23	34.24
Concentrate Revenue	$21,576,819	$17,756,006
Prod.,Admin.,etc.	8,476,556	7,856,408
Deprec. & Interest,etc.	1,782,555	1,440,580
Prov. For Inc.& Mining Taxes	4,882,400	3,818,570
Net Income	6,435,308	4,640,448
Earnings Per Share	$1.20	$0.87

P.M. Reynolds, president of Bethlehem Copper Corporation Ltd., has reported that the price received for copper remains favorable and the net earnings for the fiscal year, which will end on February 28,1970 are expected to be substantially higher than last year.

Bethlehem has signed a letter of intent with Valley Copper Mines Ltd.(controlled by Cominco) providing for joint mining of the Valley Copper-Bethlehem orebody in the Highland Valley, with costs shares on a 80-20 basis and a division of ore at the primary crusher of 80% to Valley, 20% to Bethlehem. Bethlehem plans to process its portion of the ore through a new mill which will result in probably at least doubling the present rate of daily throughput by late 1972. Feasibility studies by both Valley Copper and Bethlehem are in progress.

In order to provide a substantial portion of the money which will be needed to finance Bethlehem's share of the mining project to construct a new mill and to provide the services required, directors approved the sale of 1,000,000 treasury shares to the Grangesberg Co. of Sweden for $21,000,000. The closing date for the sale and receipt of the money is 5Jan70.

The Grangesberg Company will purchase, at competitive prices, half of the concentrates to be produced by Bethlehem from the Lake Zone orebody. Mr. E.Waldenstrom, the president of Grangesberg, will join Bethlehem's Board of Directors in January.

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NO.62(1970)
MARCH 19,1970

NO.62(1970)
MARCH 19,1970

WESTERN CANADIAN INVESTMENTS

BETHLEHEM COPPER CORPORATION LTD.

9215000

Year Ended Feb.28	1970	1969
Mill Feed -t/p/d.	14,625	13,920
Copper Grade	0.52%	0.58%
Recovery	83.37%	84.83%
Lbs.Copper Produced	48,609,230	50,499,680
Concentrate Revenue	$29,703,444	$24,817,860
Average Copper Price	64.4¢	49.1¢
Production Expenses	$11,145,211	$10,427,531
Deprec.Explor.Inter.	2,211,046	1,997,748
Taxes Inc.& Mining	7,046,971	5,592,737
NET INCOME	$ 9,300,216	$ 6,799,844
Income Per Share	$1.46	$1.27

The 19¢ per share increase in per share income of Bethlehem Copper Corp.Ltd. for the year ended Feb.28,1970, over the previous year is after allowing for the 1,000,000 treasury shares sold during the year to Grangesberg Company of Sweden. The final settlements on the shipments in transit may result in a fractional upward adjustment in earnings when the statements are audited.

P.M.Reynolds, president, states that the feasibility study and negotiations with Valley Copper are continuing and it is believed that, about mid-May, there will be progress to report. It is planned to hold the annual meeting at the mine in Highland Valley on 18June70.

TRANS MOUNTAIN OIL PIPE LINE COMPANY

Year Ended Dec.31	1969	1968
Revenue	$41,847,028	$36,777,495
Operating Exp.	6,496,732	5,355,339
Taxes(not Income)	1,867,126	1,806,940
Depreciation	5,268,650	5,260,135
Debt Interest Exp.	1,954,249	2,178,736
Debt Retirement Loss	251,384	203,461
Income Taxes	13,894,000	11,516,000
Minority Interest	125,314	14,568
Pipe Sale Loss	774,238	- -
NET INCOME	$11,465,863	$10,471,452
Income Per Share	$1.52	$1.39
Working Capital	$ 4,938,231	$4,923,309
Term Debt	35,070,075	41,547,853
Deferred Income Tax	9,762,537	10,983,237
Minority Interest	352,188	477,432
Plant at Cost +	80,477,017	86,868,209
+After Accum.Deprec.	70,731,203	67,529,921

Operating expenses of Trans Mountain Oil Pipe Line Company in the year ended Dec.31,1969, increased over 1968 by 21.3% as a result of increased costs of fuel for higher throughput, expenditures in excess of $300,000 in connection with Mackenzie Valley pipe line research, the inclusion of the first full year's operating costs of Central Heat Distribution Limited and the continuing rise in costs of materials, wages and benefits. Capital additions to plant amounted to $2,285,000 and capital expenditures for 1970 are now expected to be about $750,000

At 31Dec69, Central Heat Distribution Ltd. was supplying steam heat to 33 customers' buildings. A third boiler was installed during the year to accommodate additional buildings now under contract or in negotiation. The jet fuel pipeline to the Vancouver airport has been completed but completion of terminal facilities has been delayed and operation is now expected in April 1970. Preliminary study of the large diameter oil pipe was encouraging and work is continuing on the tests until mid year.

BUTTLE LAKE MINING CO. LTD. / SILVER ARROW EXPLORATIONS LTD.

RIGHTS TO CARBON DEPOSIT AND A NEW POLLUTION CONTROL DEVICE ACQUIRED - Buttle Lake Mining Co.Ltd. and Silver Arrow Explorations Ltd. have announced acquisition of rights to earn a 32.5% interest in a large B.C. carbon deposit and in a new carbon process effective in laboratory tests in the purification of pulp mill wastes, city effluents and other industrial wastes. The carbon deposit exhibits high absorptive characteristics which appear to be comparable to those of activated charcoal. Research on the carbon deposit and its uses in pollution control are being concluded by Kates, Peat, Marwick and Company, consultants. If this research is favourable, the company have the right to exercise options.

BALCO FOREST PRODUCTS LTD.

Year to Nov.30,1969	
Sales	$6,414,902
Cost of Sales	4,998,170
Other Income	81,280
Admin.Exp.	220,795
Mortg.Inter.Exp.	38,681
Logging & Incom,tax	664,000
Subsid.Sale Gain	364,875
NET INCOME	$ 939,411
Income Per Share*	$1.97
*Including Extraordinary gains	
Shares Issued	478,000
Working Capital	$679,012
Mortgages Payable	379,238

In its first year of operations, Balco Forest Products Ltd. spent about $1,750,000 for timber, roads, property, equipment and plant, including the start of a plywood mill and earned $1.20 per share, before extraordinary gains.

President, A.H.Balison states that, despite the nine months of poor prices, some the lowest in three years, net profit was equal to 9¢ per dollar of sales. The $750,000 plant improvement completed in mid 1969 resulted in higher productivity and greater recovery per tree. The phase one of the $4,000,000 plywood mill started in November at a site 12 miles north of Kamloops. The green veneer mill is expected to start in April 1970. Feasibility studies show that, on a two shift basis, a 22.5% return may be anticipated on capital after depreciation. New truck service stops are being established with Standard Oil.

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NO. 4(1970)
JANUARY 6,1970

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JANUARY 6,1970

DAWSON DEVELOPMENTS LIMITED

PERIOD ENDED OCT. 31:	12 Mos.1969	8 Mos.1968
Operating Revenues	$12,656,627	$ 6,328,564
Operating Costs	$10,857,265	$ 5,404,606
Gain on Sale of Inc. Properties	$ 415,450	----------
Sell.,Gen.,& Admin.	572,597	293,349
Depreciation	132,900	75,569
Earnings of Affiliate	13,230	45,000
Interest Income	54,395	21,790
Prov. for Income Taxes	795,000	298,000
Net Income	$ 781,940	$ 323,830
Earnings Per Share*	78¢	43¢
*As adjusted for share split of 187,500 for 1 on December 12,1968.		
Shares Issued	1,000,000	750,000
Current Assets	$ 8,323,648	$ 3,737,180
Current Liabilities	6,990,162	3,312,832
Affiliates Advances,etc.	64,539	50
Agreement Receivable	372,351	282,421
Mort.& Agreements For Sale	$ 2,673,782	$ 1,951,864
Inc.Prop.Under Const.	2,056,645	----------
Deferred Income Taxes	365,000	160,350
Income Properties,Net*	$ 1,410,318	$ 1,878,496
*After Acc.Deprec.	$ 5,200	$ 146,363
Long-Term Lease Obligations	477,000	----------
Leasehold Interests	$ 488,000	----------

G.R.Dawson, chairman of Dawson Development Limited, states in the annual report that the company recognizes that the provision of adequate housing for citizens in the lower income range is one of the most significant challenges of the next decade, and is dedicated to the task of meeting this need. The company is convinced that, through the utilization of modern skills and technology, and with proper planning and control, good quality low cost housing can be produced consistent with a fair rate of return for shareholders.

J.W.Poole, president states in the report that net profit after full provision for deferred income taxes was $781,940, or 78¢ per share. This compares to $323,830 or 43¢ per share for the previous year. At $12,977,451 total assets increased by $7,012,838 or 118% over 1968. Land held for development(at cost)increased by $2,253,604 and income properties(at cost) increased by $1,588,467.

Significant progress was made during the year in assembling the land bank in anticipation of increased activity from the land development division. He expects land sales this year to exceed by a substantial amount the figure of $300,000 recorded in 1969.

Increased sales income is forecast from public housing, condominiums, resource industry communities and mobile home parks,

Construction will begin in 1970 on 535 dwelling units to be added to the portfolio of income properties.

Mr. Poole states that the company's approach during these times of tight money is to offer equity participation to lending institutions in return for lower rates of interest and lower equity requirements.

The business of Dawson Developments fits into five basic divisions: Resource industry, communities, condominiums, income properties, public housing, and land development.

BETHLEHEM COPPER CORPORATION LTD.

CASH RECEIVED FOR 1,000,000 SHARES AT $21.00 PER SHARE - On January 5,1970, Bethlehem Copper Corporation Ltd. received, deposited and started collecting interest, at the rate of 7½%, on $21,000,000. The interest income will be equal to $1,575,000 per year or about $4,300 per day. The Grangesberg Company of Sweden has received 1,000,000 treasury shares of Bethlehem Copper for the investment giving it about 15% interest in Bethlehem and bringing the issued shares of Bethlehem to 6,382,075 of the 10,000,000 shares authorized.

At the indicated regular dividend rate of 50¢ per share or at the 1969 rate of 60¢ per share, including a 10¢ per share extra payable January 22,1970, the bank interest on the $21,000,000 will be more than adequate to cover dividend payments on the 1,000,000 shares.

The $21,000,000 will be used to assist in the placing of the Lake Ore Zone on the Bethlehem Copper property into production. Bethlehem has an agreement with Valley Copper whereby the ore on the adjoining properties will be mined on a joint basis and would be supplied to two separate and independent concentrate facilities. Eighty percent of the ore mined would be milled in a Valley Copper plant and 20% would be milled in a Bethlehem Copper concentrator. Valley Copper will operate the pit and each of the companies will operate its own concentrator.

Grangesberg will purchase on a competitive basis one-half of the concentrates to be produced from the Bethlehem Lake Zone.

Production at the Bethlehem present operation is proceeding in a very satisfactory manner. The stripping program on the Huestis zone has reached the point where ore is open for the first time. Production from this zone will start in the next few months.

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NO.112(1976)
JUNE 11, 1976

NO.112(1976)
JUNE 11, 1976

WESTERN CANADIAN INVESTMENTS

BETHLEHEM COPPER CORPORATION

* Valley Copper Plans - Extensive Exploration -
* Acquisition Possibilities Highlighted the Discussion at the Annual Meeting

Optimism for the short and long term was the key note at Bethlehem Copper Corp. annual meeting held 10Jun76 at the mine in Highland Valley, 250 miles north of Vancouver, B.C.

J.A.McLallen, chairman, told the meeting that in the recent past the company has been concentrating on the conservation of capital through the period of uncertain commodity prices and government policies. He said, "I hope we have past the worst of these and are ready now to take off again."

Thomas P.Liss, vice-president of operations, told the annual meeting that mining of the Huestis pit will end in the fall and that mining has started from the Iona pit. This will supply ore for about 20 months from the end of mining in the Huestis pit. Resumption of mining from the Jersey pit will follow the Iona and preparation of the Jersey for this resumption of mining will start in the fall of 1976. The Jersey pit will supply ore for 6 or 7 further years. Production will continue at 18,000 to 20,000 tons per day of a grade of 0.45% copper to produce between 50 and 55 million pounds of copper per year. Inflation has had a dramatic effect on operations, particularly for fuel and power, with total costs now approximately 40¢ per pound laid down at the Vancouver dock. The concentrating plant has been modified slightly to permit continuation of the production level with the harder ores to be mined in the future. Reclamation programs are continuing and expanding with planting of grasses and trees.

H.G.Ewanchuk, vice-president of exploration, outlined the $750,000 program for the current year by stating that the company is involved in 16 projects, of which it is operator on 10. Six are managed by others. With partners' contributions, the company manages in excess of $1,400,000 in exploration funds. Current projects in B.C. include: programs in the Tahtsa Lake area near Smithers and the Missezula Lake area near Princeton, Maxwell Creek, Blue River area and Princeton coal as well as in the Highland Valley. Each of these projects is operated by Bethlehem and will be tested by exploratory drilling this season.

Participating interests are held in the Rainbow and Capoose Lake syndicates which are presently conducting exploratory programs through geological mapping, soil sampling and trenching programs near Northair - Pemberton and Houston areas respectively.

In Washington State, the company is conducting reconnaissance mapping and soil sampling. From the Reno,Nevada, office, drilling investigated 3 properties which were dropped. In Colorado, New Mexico and Utah, the company is exploring for uranium, this is one of the few projects in which Bethlehem has 100% interest. Preliminary results are encouraging with more definitive results expected soon. In Arizona, a promising silver property has yielded 5 good grade holes. Additional early drilling is planned. In Mexico exploration is continuing. In the NWT Bethlehem retains a participating interest in the Arctic Red Syndicate which in addition to its general reconnaissance and mapping programs, will undertake detailed investigations in several base metal properties which were discovered during the Syndicate's earlier program in this area. The Bear Twit Syndicate operated by Bethlehem will start exploratory drilling about June 20 in a base metal project located in the Twitya River area.

In eastern Canada, the company is participating in exploratory programs in north central Ontario and in Newfoundland. - Continued on page two -

CANADIAN HIDROGAS RESOURCES LTD.

SIX MONTHS ENDED FEBRUARY 29,	1976	1975
Sales & Operating Revenue	$1,969,358	$11,388,576
Cost of Sales & Oper.Exp.	981,648	10,304,785
Selling,General & Admin.Exp.	312,477	559,594
Interest Expense	283,360	193,149
Deprec'n, Depl'n. & Amortiz'n.	114,381	85,245
Total Income Taxes	86,774	91,729
Minority Interest	2,460	2,713
Net Income	$188,258	$151,361
Earnings Per Share	6.9¢	5.6¢

Canadian Hidrogas Resources Ltd. president Evan W.G.Bodrug says in the six month report that the cash flow from oil and gas operations was $455,193 or approximately 16.7¢ per share. The similar period in 1975 reflected the propane, butane and special product operations as well and, therefore, the comparative figures are not relevant.

During the 1975 fiscal year the propane and butane operations were discontinued. The phase-out of the special products operations which began in the first quarter are continuing. The resulting gain or loss on the disposal of this portion of the operation will not likely be determined until the final quarter of this fiscal year.

The North Coleman gas field commenced production in late November 1975 and after experiencing the normal start-up difficulties with an operation of this nature it is now making a regular contribution to revenues. The properties in the Princess gas field were put on stream in late December 1975 and are now contributing to cash flow.

Revenues from heavy oil production at Lloydminster have continued at approximately the same level experienced in the first quarter.

Recently the company entered into a Farm-out Agreement with a major utility company who, in a series of options, will drill up to twenty wells on the company's properties. Upon the anticipated successful completion of these wells the proven reserves of the company in these areas will be enhanced.

Over 12,000 Tons Daily N.M. Nov 2nd '67.

Bethlehem Expansion Program To Be Complete By Month End

ASHCROFT, B.C. (Staff)—Bethlehem Copper Corp. is rapidly completing the final phases of its current expansion program, the most recent undertaken by British Columbia's pioneer large tonnage, low grade mining operation.

The concentrating plant during the first 22 days of October turned out an estimated 2.4 million pounds of copper. In September, output was approximately 3.2 million lbs.

Milling rate during the first three weeks of October exceeded an average of 11,000 tons per day. On some days, the mill handled over 12,000 tons with satisfactory recovery and concentrate grade.

A new ball mill, a primary grinding unit, has been installed and was being run in when The Northern Miner was on the property. This unit is expected to start full-time service this week. It is expected to aid in increasing overall recovery to the 88%-90% range.

In addition to the alterations and additions to the milling circuit, Bethlehem is making a complete switch in its method of operating its open pits. Formerly carried out under contract, all mining will be done, from Nov. 1, with the company's own crews and equipment. The changeover, it is anticipated may result in a net reduction of 10¢ per ton moved. When it is considered that Bethlehem moves some 8,000,000-10,000,000 tons of material (ore and waste) per year, this becomes an important factor.

Capital cost of the new mining equipment, together with the necessary stores and shop facilities, is estimated at approximately $2.8 million.

The expansion program is to be completed during November and then production is to be stabilized at better than 12,000 tons per day. Just how much over the 12,000 tons will be treated daily will depend on economics, T. P. Liss, general manager, remarked to The Northern Miner.

Establish Targets

Bethlehem aims to produce a specific quantity of copper each quarter, Mr. Liss explained. For instance, an output of 8.5 million pounds was set as the target for the first quarter of the current fiscal year and during the second quarter this target was increased to about 9,000,000 lbs. Both these figures were exceeded, with output during the three months to May 31, 1967, amounting to 8,610,417 lbs., while second quarter production was 9,210,832 lbs. An increase in milling rate together with improved recoveries were credited with the better than target production rates. Recovery in the first quarter was 78.59% and in the second quarter this was raised to 84.60%.

Net profit in the first quarter was $789,748, or 15.1¢ per share, while in the second quarter, net profit was estimated at $1,014,557, or 19.3¢ per share.

Target production for the third quarter has been set at 10 million pounds of copper. It appears that this mark will be reached without difficulty for September's output was approximately 3.2 million pounds and during the first 22 days of October the concentrator turned out some 2,400,000 lbs.

On completion of the mining and milling alterations and expansion in November, it is expected that a quota of 11,000,000 lbs. will be set for the quarter starting Dec. 1 and for the next fiscal year it is hoped that output will remain in the range between 11,000,000-12,000,000 lbs. per quarter.

Alterations to the milling circuit have been continuing without disruption to production. The new ball mill, 12.5 ft. by 15 ft., has been turned over. It duplicates a similar mill and one of the present small ball mills will be converted to rod mill service. A total of 1,250 h.p. is being added to the grinding circuit; with the changeover of milling practice, a net increase of 350 h.p. will be in rod mill capacity.

Pump capacity has been increased throughout the entire grinding circuit to permit handling of greater volumes, with increased dilution, resulting in more efficient classification. The end result is an increase in tonnage through the circuit and grinding will be improved to give an even better recovery.

Flotation capacity has also been increased through the addition of more cells. A scavenger circuit is treating sands and slimes separately for better recovery of middling products from the sand fraction. A new regrind mill has been placed in service to handle the coarse fraction after initial flotation.

In other changes in the milling circuit, Bethlehem is phasing out the large thickeners used to reclaim process water. Tailings are now allowed to settle in a rock-fill enclosure, with the water portion of the effluent pumped directly back up to the concentrator area.

Ultimate tonnage through the expanded concentrator may well be in the 14,000-ton-per-day range. Initial experimental work by Milltronics Ltd. of Peterborough, Ont., suggests that automation, controlling grinding circuit loading, may, if installed, permit further increases in throughput.

Jersey Zone Pit

During the past 13 months, some 1,750,000 tons of marginal grade ore stockpiled during earlier operations has been fed to the mill. This material was accumulated by stockpiling East Jersey Pit ore running between 0.4%-0.7% copper. The policy of using the stockpile at this time permitted an increase in the volume of waste that could be removed within budgetary limits. The stockpile was exhausted in mid-September. It was found to run between 0.5%-0.55% copper but resulted in higher grade tailings. Operations moved back to the open pit in September when grade and recovery were increased.

The additional stripping possible during the period when stockpiled ore was milled has put the Jersey zone open pit into excellent shape. The rim of the open pit is at an elevation of 4,930 ft., while the current bench has a floor at 4,700 ft. The opening will ultimately be 3,200 ft. long, 3,200 ft. in width and will go to a depth of 1,000 ft. Overall waste to ore ratio has been estimated at 1:1. This, of course, has been higher in recent months but for the next 18 months it will not be necessary to strip any waste.

Pit Changeover

To undertake its own mining operation, Bethlehem has purchased new equipment including: three 88B, 5½-cu. yd. diesel shovels; one crane; twelve 50-ton Haulpak trucks; one 45R drill; one 988 front-end loader; two D-8 bulldozers (one of Japanese manufacture); a grader; a D-4 bulldozer; and about a dozen pickup trucks. Total capital cost of the equipment, together with spare parts and modification to the shops (including an addition) is estimated at about $2.8 million.

To break in the new equipment and to train operating crews, some 500,000 tons of stripping has been completed on the Iona zone, east of the Jersey open pit. This has resulted in the removal of overburden and establishment of one bench in the zone.

Ore from the Jersey pit is hauled about 2,700 ft. to the primary crushing installation. Waste requires a haul of about 4,500 ft. The crushing plant has been modified to handle increased tonnage and will operate on a 7-day week basis. To overcome any possible risk of interruption to production through mechanical or other failures in the open pit and crushing procedures, a stockpile of crushed ore is being built up in the yard adjacent to the mill. To date, some 100,000 tons has been accumulated; about one-half of the target of 200,000 tons.

Possible Moly Recovery

Consideration is being given to possible recovery of some of the molybdenum content of Bethlehem's ores. A process has been developed in the laboratory which it is believed could be profitable. It was developed by J. Shirley, consulting metallurgist of Tucson.

It appears that Bethlehem copper concentrate contains 6-8 lbs. molybdenum (Mo) per ton. Under the proposed plan, this concentrate (some 200 tons per day) would be treated by further flotation in the hope of recovering about 70% of the contained molybdenum.

Many other changes in the plant and facilities were noted. The warehouse has been removed from the lower storey of the 2-storey main office building to provide room for additional mine and plant engineering facilities. A new warehouse has been erected and a new combined assay office and metallurgical laboratory has been built and is in service. In fact, Bethlehem is now in the business of conducting customs assay and metallurgical testing.

Exploration

In addition to the preparatory work on the Iona zone, Bethlehem has continued to use two surface diamond drills throughout the year. These currently are engaged in definition drilling on the Iona and Huestis zone.

Ore reserves were estimated at the end of the last fiscal year (Feb. 28, 1967) at: 134,500 tons grading 1.06% copper in the East Jersey pit (now covered by slide material); 1,435,600 tons of 0.79% in the East Jersey extension; 37,376,000 tons in the Jersey open pit; 10,000,000 tons grading 0.55% in the Iona zone; and 15,500,000 tons of 0.66% copper in the Huestis zone. 20·60%Cu

Additional zones have been indicated but insufficient work has been completed to determine their size and grade. The exploratory work to assess these zones will be carried out over a period of years, especially as there is no immediate need for further tonnage.

Townsite

To accommodate the larger crew working at the property, Bethlehem is constructing two large housing units at opposite end of the community of Ashcroft, some 25 miles from the plant site. These are a 16-unit town house complex for married personnel and a 40-unit apartment building for single status personnel.

Concentrates from the operation are trucked under contract to Vancouver, a distance of about 250 miles. The contractor has developed a unique unit for this purpose, consisting of a concentrate compartment for the haul to Vancouver (self-dumping) and tankage for petroleum products to be distributed en route on the back haul.

Bethlehem, once the mining operation is absorbed by the company, will employ a total of approximately 250 people. In overall direction of the operation, Mr. Liss is ably assisted by: Clifford W. Overton, manager of milling; Henry J. Ewanchuk, manager of mine production; Donald C. Stevens, manager of plant engineering and planning; Joseph Mazurkewich, office manager; Cecil Bradley, mill superintendent; Ian Callow, metallurgical coordinator; L. Archibald, superintendent of production; W. Dundas, chief plant engineer; and A. Maxey, personnel manager. Bethlehem is also dependant on a number of consultants, including R. M. Belliveau, open pit mining consultant of Long Beach, Calif.; the Galigher organization of metallurgical consultants of Salt Lake City; D. [illegible] of Tucson, Ari[illegible]

BETHLEHEM COPPER CORPORATION LTD.

THREE MONTHS TO FEB. 28:	1968	1967
Mill feed (dry) aver/day-tons	12,875	9,950
Grade of ore - copper %	0.62	0.58
Recovery - %................	85.06	81.31
Average grade of tailings - %	0.093	0.108
Concentrate grade - %	35.23	31.40
Copper produced-pounds	12,423,506	8,407,725
Aver. copper price/lb -(U.S.¢)	56.5	49.9
Market Value of Production...	$8,047,404	$4,027,903
Prod.admin.trans.mkting costs	$3,118,603	$2,632,936
Depr.explor, deb. interest...	401,665	242,703
	$3,520,268	$2,875,639
Profit before taxes	$4,527,136	$1,152,264
Prov. for inc. & mining taxes	2,025,000	101,670
NET INCOME	$2,502,136	$1,050,594
Shares issued	5,261,250	
Earnings per share	$0.474	$0.20

P.M. Reynolds, president of Bethlehem Copper Corporation Ltd., states in the fourth quarterly report ended February 29, 1968, that the most significant factor, as shown in the adjoining table, is the approximately 136% increase in Net Profit for the fourth quarter.

He comments the new records were set in this final quarter with regard to daily average tonnage of ore treated, in pounds of copper produced and in gross sales. These factors, combined with favourable copper prices, resulted in record after tax profits. The mill stabilization programme commenced in mid-1966 was completed in November 1967 contributing in large measure to the reduction in unit costs.

In calculating net income for the year, income and mining taxes are provided for at full rates. A year ago, the company was still enjoying the benefits of preproduction costs which had been carried forward from previous years. (For details of the year end,(12 months) see GCNL NO. 57, March 21, 1968)

Up until October 31, 1967, Bethlehem had its mining and transportation of ore to the mill done under contract. From November 1st,the company has done this work with new equipment purchased by the company. Substantial savings are being effected as a result of this change.

A stripping ratio of 1.75 to 1 is being maintained. As a result, by mid-1969, the stripping ratio for the balance of the life of the Jersey pit will only be less than ½ to 1. It is planned to continue moving material at the 1.75 to 1 rate throughout, but to apply the excess capacity to preparation of the Huestis zone which will be the next one to be mined.

The annual report will be mailed June 3, 1968. The annual meeting will be held in Vancouver on June 20, 1968. A regular ¼ly dividend of 10¢ is payable March 21, 1968.

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NO. 129(1968)
JUNE 21,1968

NO. 129(1968)
JUNE 21, 1968

WESTERN CANADIAN INVESTMENTS

BETHLEHEM COPPER CORPORATION LTD.

+ Annual Meeting Approved Increased Dividend Rate and an Increase In Shares Authorized

+ Work Emphasis For Next Two Years Will Be OreBody Delination and Reserve Increase

Bethlehem Copper Corporation Ltd. annual meeting approved an increase in authorized capital from 6,000,000 shares to 10,000,000 shares following assurance from the chairman, J.A.McLallen, that, at this time, the company has absolutely nothing planned which would require the issue of further shares in the near future.

The meeting also approved dividend payments for the balance of the fiscal year in the amount of 12½¢ per quarter starting with the September payment. This represents a 25% increase to an annual rate of 50¢ per share from the previously paid 40¢ per year.

Ore reserves at the mine in Highland Valley, near Ashcroft, B.C., were reported to the meeting as being 75,000,000 tons, an increase of 5,000,000 tons over the figures given in the annual report. The copper grade given in the annual report was 0.6% copper. These reserves reserves, at the present rate of production of 14,000 tons of ore per day, are sufficient to sustain the mine for 15 years, that is until 1983.

The program started over two years ago to stablize the daily production at 12,000 tons was completed in November at a cost of about $4,000,000 and resulted in the concentrating plant now being able to produce 14,000 tons per day on a sustained basis. The peak days have been 15,600 dry tons. The machinery in the plant has been worked as sustained rates well in excess of the manufacturers rated capacity.

The meeting was told that the plant is working well and that further modest improvements are being sought. The production objective of 50,000,000 pounds of copper in the current fiscal year is likely to be exceeded.

There are no major capital expenditures forecast for the next few years, the meeting was told. All of the emphasis will be on the bringing into production of the Huestis and Iona ore zone to give the company flexibility in sources of ore. The waste stripping program on the Jersey Pit, now in production, is nearing completion and as this work is completed and machinery is released the stripping and mining of the other ore zones will be undertaken. The ore reserves in the Jersey Pit, under the pit design in effect as at Feb.29,1968, were 33,255,000 tons of 0.6% copper, sufficient for about six years production.

A budget of $250,000 has been approved for the detail and exploration drilling programs on five targets. This targets are: The Huestis zone, drilling to delineate the ore zone to permit pit layout; Tailings Dam zone, a new discovery just to the west of the tailings dam where percussion drilling has intersected some interesting grades of copper; Third target is to the east of the Iona and White zones where limited work has indicated some very interesting grades; Snowstorm zone is to be further explored as is the Hank zone upon both of which very little work has as yet been done. In addition to these five targets, there are a number of other areas of the property where work is planned with a detail geological program planned for the entire property as conditions permit.

One of the points brought out by T.P.Liss, general manager, was the fact that for the $4,000,000 spent over the past two years, the company increased its daily capacity by 4,000 tons or a cost of $1,000 per ton day of capacity. This is a very low capital cost figure, he stated and ranks with anything in the world. New milling capacity is budgeted at $2,500 per ton day capacity.

Outside interests were reviewed including, Bethex, Ionarc and coal at Morice River. The company is constantly on the lookout for new projects the meeting was told.

M.S. Hedley
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J.T. Fyles
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4-6

News Letter
Reporting"
IAN INVESTMENTS

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JUNE 4, 1969

BETHLEHEM COPPER CORPORATION LTD.

YEAR TO 28FEB:	1969	1968
Concen. revenue	$24,817,860	$19,871,214
Prod.,admin.,etc.	10,836,064	9,462,988
Invest. income	408,533	256,657
Depreciation	1,094,468	841,605
Exploration	545,569	390,760
Interest	20,967	229,777
Deben. dis. & prem.	336,744	31,080
Income Mining taxes:		
Current	4,886,811	2,818,000
Deferred	705,926	847,000
Net income	$ 6,799,844	$ 5,506,661
Earnings per share	$1.27	$1.05
Dividend per share	47.5¢	45¢
Shares Issued	5,346,3	5,261,250
Total current assets	$11,030,770	$10,857,913
Total current liab.	6,509,350	6,280,225
Long-term debt	561,300	4,444,793
Def. income	2,473,426	1,767,500
Investments	2,301,435	1,093,022
Tons milled	5,080,664	4,136,167
Revenue p/t milled	$4.88	$4.80
Dir. costs p/t milled	$2.13	$2.29
Lbs. of copper prod.	50,499,680	40,143,527
Ore reserves	65,000,000	70,060,772

Net profit of Bethlehem Copper Corp.Ltd. in the year ended Feb.28,1969, was $6,799,844 and total taxes paid in the same period were $5,642,000. Patrick M.Reynolds, president, details taxes payable in cash during the year as follows: income taxes, excluding deferred portion $3,500,000,B.C.Mining taxes $1,375,000, local taxes $101,000,provincial taxes paid on equipment and supply purchases $186,000, income taxes remitted on behalf of employees $480,000. He notes that these items total more than twice the dividends paid in the year.

About the mine,the president states that all the ore processed was from the Jersey orebody with a stripping ratio of 2:1 and the waste ratio to ore remaining in the Jersey pit is 0.2:1. The mining department moved 5,922,000 tons of ore and 11,359,000 tons of waste at the lowest unit cost to date. Waste removal from the Huestis orebody will start this year to prepare it for mining in two to three years.

With regard to the Valley Copper Mines Ltd. orebody and program, Mr.Reynolds states that the indicated and possible tonnage of approximately 200,000,000 tons grading 0.45% ? copper is on the Bethlehem Copper property which adjoins the Valley Copper property.

He states that Bethlehem will participate in the development of the Valley Copper Mines Ltd. in three ways: first- by the 200,000,000 tons of ore which extends on to the Bethlehem property, second-by the 513,358 shares of Valley Copper Mines held by Bethlehem Copper, and any dividend which may be paid on these shares and third- by the ownership by Bethlehem Copper of a 2½% royalty of the net smelter return before freight charges on more than 75% of the ore which will be mined from the Valley Copper property. Assuming anoperation processing 25,000,000 tons of ore annually, and based upon the 1968 operating results, the royalty, along, from Valley Copper would add approximately $2,000,000 to Bethlehem's annuam income for upwards of 40 years.

In the current fiscal year, exploration will be concentrated in the general area of the Jersey and Huestis orebodies with the object of adding to the reserves of proven ore.

The president states that exploration will be carried out on properties in the following areas:Taseko Lake, Topley, Ox Lake, Cinnabar Basin and Pitman. The properties held in the Atlin and Mamit Lake area will be retained but not explored this year.

T.P.Liss,general manager, states in his forecast for fiscal 1969-70 that,"We expect that production during the 1969-70 fiscal year will be about the same as in the year just concluded. Operating costs will probably escalate to some degree because of gradual increases being experienced in operating supplies and due to an anticipated higher labour rate when the new labour contract is finalized."

CAPTAIN INTERNATIONAL INDUSTRIES LTD.

SALES FIGURES REPORTED- Capitan International Industries Ltd. recorded monthly shipments in April,1969, worth $232,349. Keith Baldwin, president,stated that the 'Bell Captains' and 'Captain Communicators' where shipped to customers during the month.

Shipments totalling $220,000 were made from the company's plant at Montgomeryville, Pennsylvania, during the first three months of 1969.

Signed orders received in April had a total value of $440,300, leaving orders booked, but not delivered, of $3,210,000 at the end of April. The majority of the machines booked in April will be installed in U.S.hotels/motels this year.

The 'King of the Road' group has purchased "Bell Captains" for its first installation in Nashville, Tennessee. This motel is just one of many planned by this new organization which is controlled by many show business personalities.

The company is now making its first installation in a Sheraton Hotel. Both Bell Captains and Captain Communicators are being installed in the franchised 'Villa's Sheraton' in Fort Myers, Florida.

EXECUTIVE OFFICE
SUITE 1825-355, BURRARD ST., VANCOUVER 1, B.C.

Bethlehem Copper CORPORATION LTD NPL

P.O. BOX 520
ASHCROFT, B.C.

May 26, 1965

Department of Mines & Petroleum Resources,
Victoria, B.C.

Attention: Mr. J.M. Carr

2505

Dear Mike:

I am shipping under seperate cover a surface map of the Bethlehem Property 1" = 200' along with an up to date claim map.

The contour map was just received from Hunter in early May.

If this 200 surface map is to be re-drafted to either 1" = 500' or 1" = 1000', I would very much like to get a copy if possible.

I thought the claim map would be useful to you.

I hope to see you either June 1 or 2 when you pass through Cache Creek.

If possible give me a call - 457-6259.

Sorry about the delay.

Yours very truly,

H. Ewanchuk,
P. Geologist.

HE/wjnl
encl.

DEPT. OF MINES
AND PETROLEUM RESOURCES
Rec'd MAY 27 1965
JMCarr

Rotary Holes

To obtain old (adjusted) Bell. coords.
For Eastings, subtract 1297'
" Northings, " 1774'

HOLE LOCATIONS & ELEVATIONS

OUTSIDE PROPERTIES

…of Lodge #12)

-OR

ELEV	DEPTH	O.B.	DATE STARTED	DATE FINISHED	REMARKS		
1654.758	240	195	July 18 1957	July 19 1957	Beaver Lodge	Surveyed	
1700.584	115	85	" 19	" 21	" "	"	
641.269	515	470	" 21	" 24	" "	"	
620.454	280	210	" 24	" 28	" "	"	
668.751	200	155	" 28	Aug 1	" "	"	
	245	205	Aug 8	" 9	" "	Brunton & Tape	
	645	545 ?	" 10	" 15	" "	"	"
	300	275	" 1	" 2	North Lodge	"	"
	245	225	" 3	" 4	" "	"	"
	150	90	" 7	" 8	" "	"	"
	140	115	" 15	" 16	" "	"	"
	270	175	" 16	" 18	" "	"	"
	90	65	" 18	" 19	" "	"	"
	50	5	" 19	" 20	" "	"	"
	90	65	" 20	" 21	" "	"	"
	65	30	" 21	" 22	" "	"	"
	37	10	" 22	" 22	" "	"	"
	75	10	" 22	" 23	Hat Group		
	70	10	" 23	" 24	" "		
	75	30	" 24	" 25	" "		
	105	45	" 25	" 26	" "		
	70	20	" 26	" 28	" "		
	100	22	Dec 1	Dec 1	South Group (IDE)		
	80	7	" 1	" 2	" "		
	80	6	" 3	" 3	" "		
	70	20	" 3	" 3	" "		
	70	0	" 5	" 5	" "		

GR-11	Lodge #1 M.C.	15394 N	12732E	depth 40'	OB 25'
GR-12	" " "	15584 N	12477E	40'	35'
GR-13	" #3 M.C.	15564 N	13062 E	38'	—
ER-8	[illegible] of KB7 & DM-1.	19609 N	1352E	300	—
GR-9	DM #2	20504 N	113 W	95	85'
CP-10	Beaver #2 Fr.	20184 N	618 E	80	—

Coords. approx: pace & compass survey; no elev^{s}. Coords are on new Bell. system

Rotary Holes

TEST HOLE LOCATIONS & ELEVA

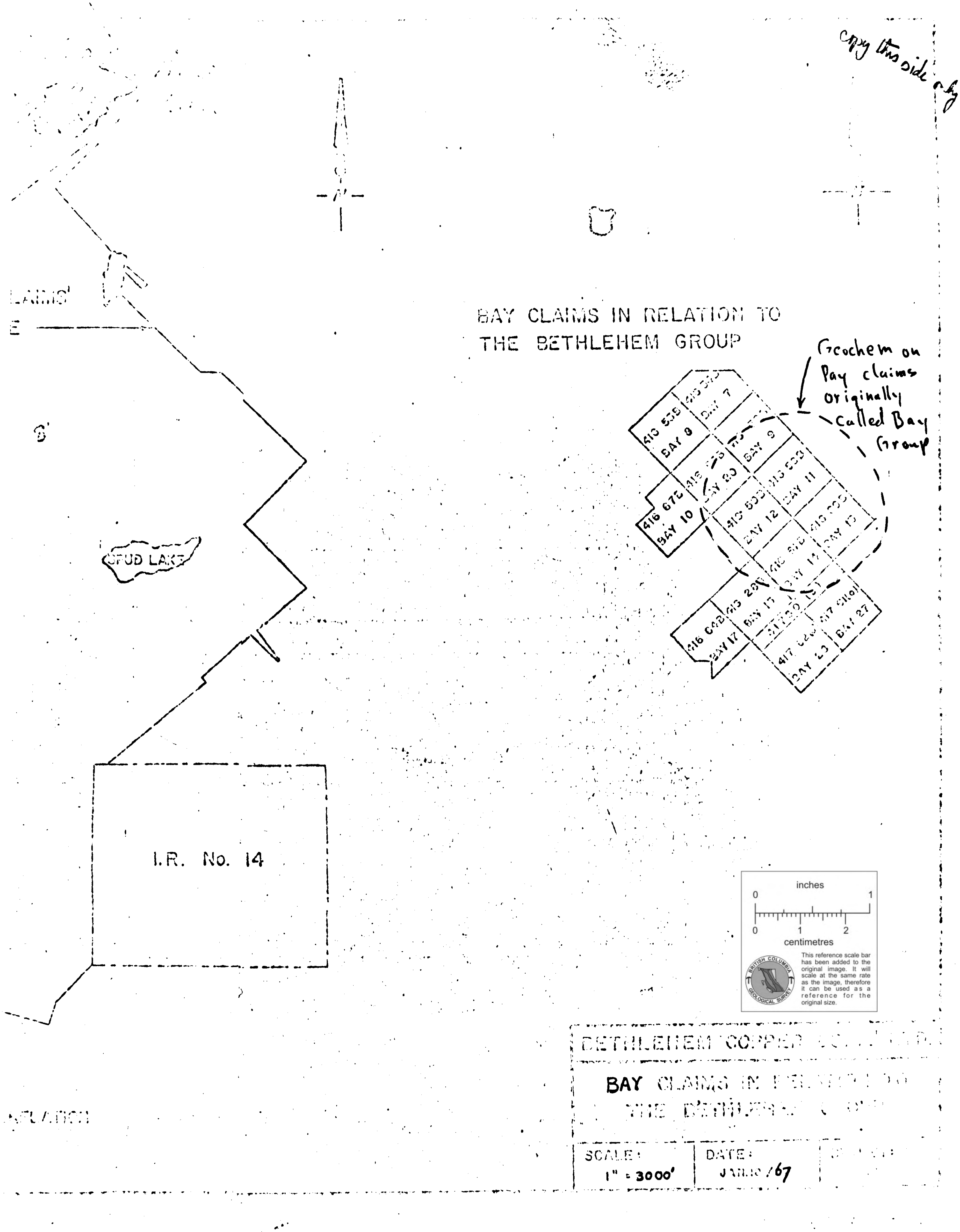
OUTSIDE PROPERTIES

S. end Lodge B/L: N16530 E 3100 (SW of Lodge #12)

		CLAIM SURVEY CO-OR (New Bdk. coords.)						
YEAR	HOLE	LAT (N)	DEP (E)	ELEV	DEPTH	O.B.	DATE STARTED	DATE FINISHED
1957	ER-1	18971.149	2601.867	4654.758	240	195	July 18 1957	July 19 1957
"	ER-2	19883.503	2692.439	4700.584	115	85	" 19	" 21
"	ER-3	18956.059	2215.339	4641.269	515	470	" 21	" 24
"	ER-4	18970.787	1835.251	4620.454	280	210	" 24	" 28
"	ER-5	18961.498	3030.897	4668.751	200	155	" 28	Aug 1
"	ER-6	22273	2297		245	205	Aug 8	" 9
"	ER-7	22248	1902		645	545 ?	" 10	" 15
"	GR-1	22293	2678		300	275	" 1	" 2
"	GR-2	20547 22321	2131 3428		245	225	" 3	" 4
"	GR-3	22283	3045		150	90	" 7	" 8
"	GR-4	22600	3547		140	115	" 15	" 16
"	GR-5	24555	2651		270	175	" 16	" 18
"	GR-6	22023	4529		90	65	" 18	" 19
"	GR-7	17311 19085	6999 8293		50	5	" 19	" 20
"	GR-8	19093	9848		90	65	" 20	" 21
"	GR-9	19023	9095		65	30	" 21	" 22
"	GR-10	19058	7446		37	10	" 22	" 22
"	GR-11				75	10	" 22	" 23
"	GR-12				70	10	" 23	" 24
"	GR-13	15			75	30	" 24	" 25
"	GR-14	Hat gp			105	45	" 25	" 26
"	GR-15				70	20	" 26	" 28
"	SR-1				100	22	Dec 1	Dec 1
"	SR-2				80	7	" 1	" 2
"	SR-3				80	6	" 3	" 3
"	SR-4				70	20	" 3	" 3
"	SR-5				70	0	" 5	" 5

ER- Beaverlodge
GR- Northlodge
SR- South Group (IDE)

GR-11	Lodge #1 M.C.	15394 N	12732 E	depth 40'	OB 25'
GR-12	" " "	15584 N	12477 E	40'	35'
GR-13	" #3 M.C.	15564 N	13062 E	38'	—
ER-8	[illegible] of KB7 & DM-1.	19609 N	1352 E	300	—
ER-9	DM #2	20504 N	113 W	95	85'
ER-10	Binna #2 Fr.	20184 N	618 E	80	—



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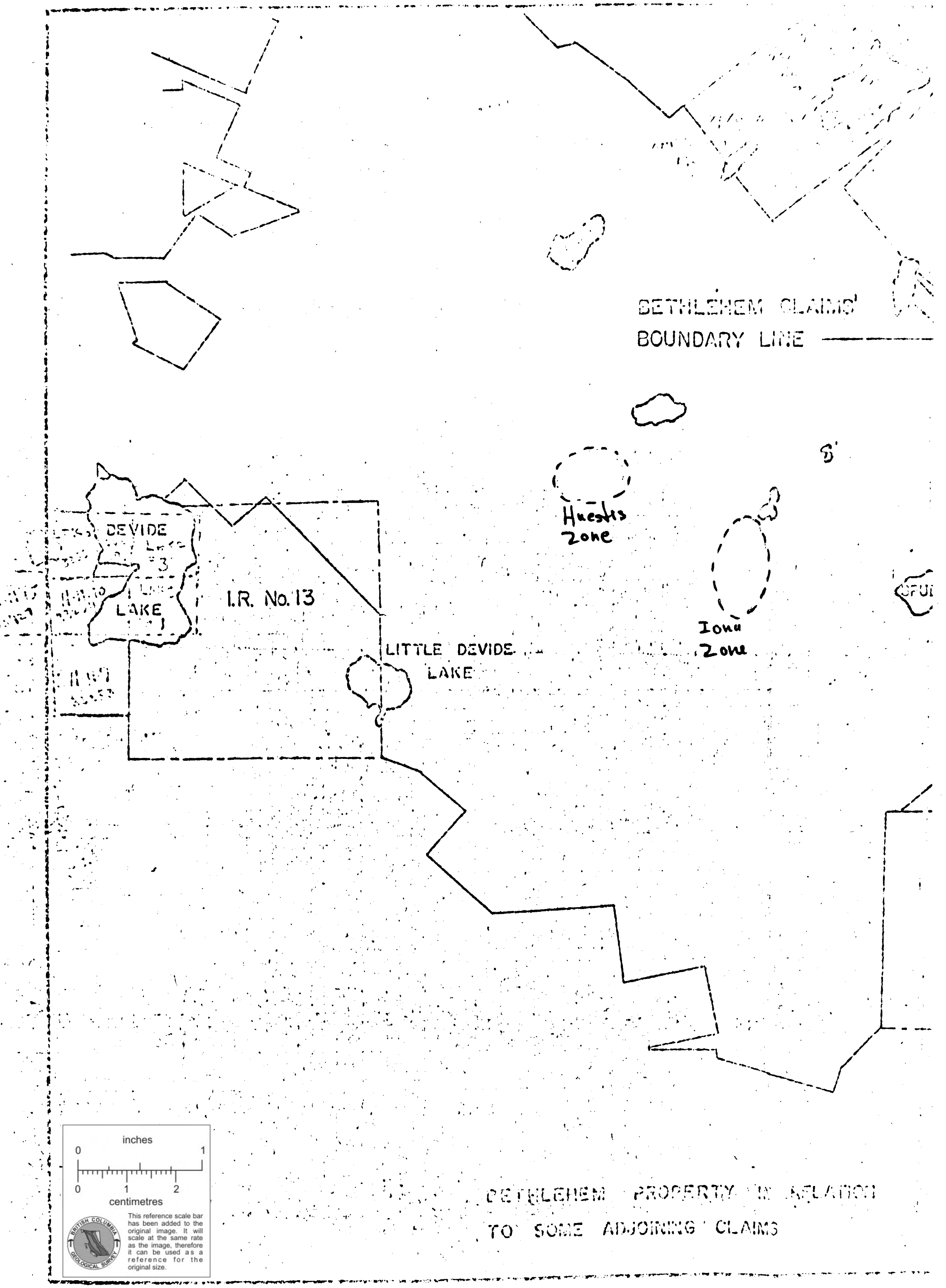
BAY CLAIMS IN RELATION TO
THE BETHLEHEM GROUP
Geochem on Pay claims originally called Bay Group
BAY 7
416 558
BAY 8
BAY 9
BAY 20
416 559
BAY 11
416 67
BAY 10
BAY 12
BAY 27
417
I.R. No. 14
inches
0
1
0
1
2
centimetres
This reference scale bar has been added to the original image. It will scale at the same rate as the image, therefore it can be used as a reference for the original size.
BRITISH COLUMBIA GEOLOGICAL SURVEY
BETHLEHEM COPPER
BAY
SCALE:
1" = 3000'
DATE:
/67



BETHLEHEM PROPERTY IN RELATION

TO SOME ADJOINING CLAIMS

Intended for general use in briefing visitors to Bethlehem.

Bethlehem Copper Corporation Ltd N.P.L.
Box 520 Ashcroft, B.C.

The main copper minerals at the Bethlehem Mine are bornite and chalcopyrite. Bornite is the purple coloured mineral and chalcopyrite the yellow. Bornite, when free of impurities, contains about 64% copper and chalcopyrite about 34%.

The Bethlehem Mine belongs to a class of mineralized deposits known as the Porphyry Coppers. Most Porphyry Coppers are in the southwest United States principally in Arizona. About 80% of the free world's supply comes from the Porphyry Coppers.

What then is a Porphyry Copper Mine? Actually, there is no clear definition. The name originated from the fact that the rock containing the copper minerals in the first four mines of what is now known as the Porphyry Copper occurred in a rock which geologists called a Porphyry. These first four mines were Utah Copper (1905), Morenci (1907), Nevada Consolidated (1908), and Braden (1910). The Braden mine is in Chile and the others in the United States. All are still producing. As other deposits of the porphyry class were discovered, it was found that the copper minerals occurred in other rocks besides a Porphyry. Nevertheless, all these areas have certain features in common, and it is these similarities that decide whether a copper mine belongs to the Porphyry Class. These common features are:

(1) Low grade copper mineralization. That is, the mining grade would be around 1% copper.
(2) Large tonnage (millions of tons).
(3) Can be mined on a large scale low-cost basis--- such as open pit.
(4) The rocks in which the minerals occur are altered, shattered, and broken.
(5) The minerals occur like " salt and pepper" and as tiny hairlike filled fractures.

Since Bethlehem has all these characteristics, it is classified as belonging to the Porphyry Class of Mineral Deposits.

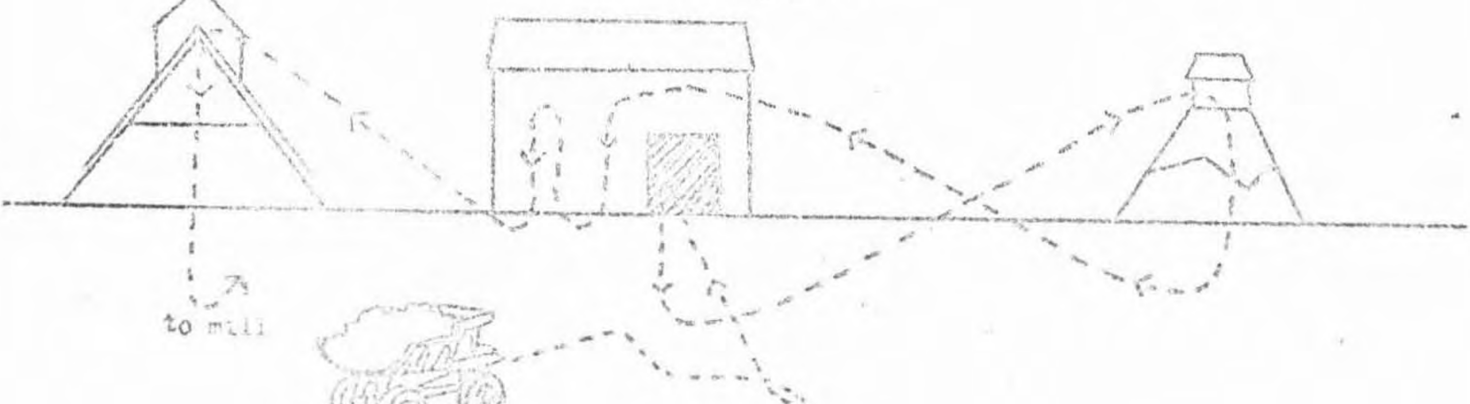
Bethlehem mining is done by open pit and we mine over a million tons of ore a year. First, to determine the value of the rock diamond-drilling is done (this is drilling with a diamond-tipped drill-bit). Drill cores are removed from the rock and analyzed. Then more exploration underground is done in favorable areas. Next, the overburden or waste above the ore bearing rock is removed. Now the mining can begin. Open pit mining is in four stages: drilling, blasting, loading, and hauling.

The rock in the pit is drilled with a machine that makes a hole 9-inches in diameter; they are about 25 feet apart. After a number of holes are drilled they are filled with an explosive mixture (ammonium nitrate sensitized with diesel fuel or Hydromex) which breaks the rock into pieces about 18-24 inches in diameter.

[illegible] shown:

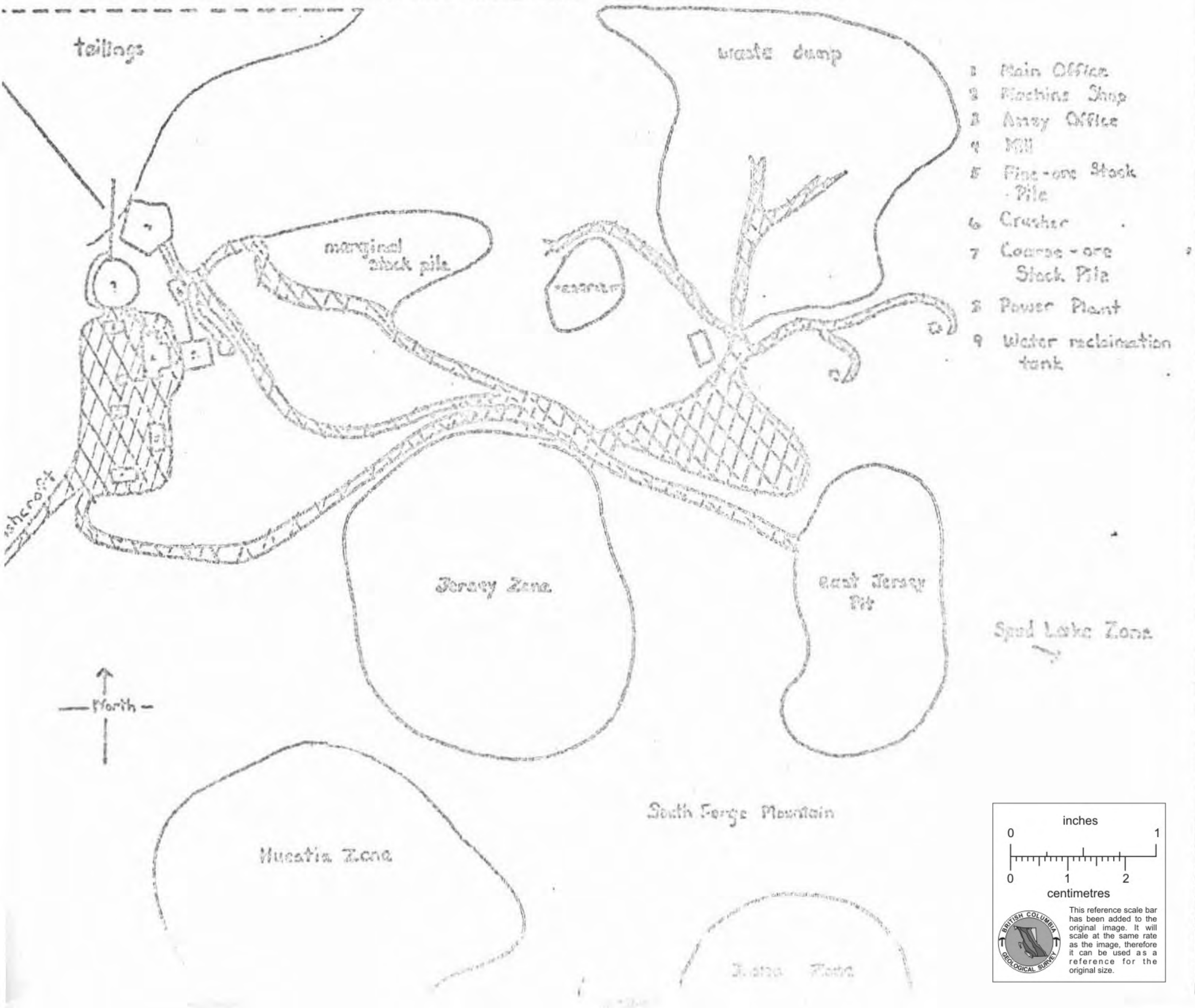
[illegible] onto trucks [illegible] truck size and [illegible] will go to the waste dump; material between 0.40% and [illegible] area for future mill feed; and material assayed [illegible] directly to the crusher.

The [illegible] into an Allis Chalmers gyratory crusher which takes rock up to three feet and crushes it to minus 6 inches. The rock then moves on a conveyor to a live-storage coarse-ore dump. From the bottom of the pile it is conveyed to the crushing plant, through sorting screens and other crushers which further sort and grind the material. The rock, then minus 5/8 inch, goes to a live-storage fine-ore stock pile which is covered.

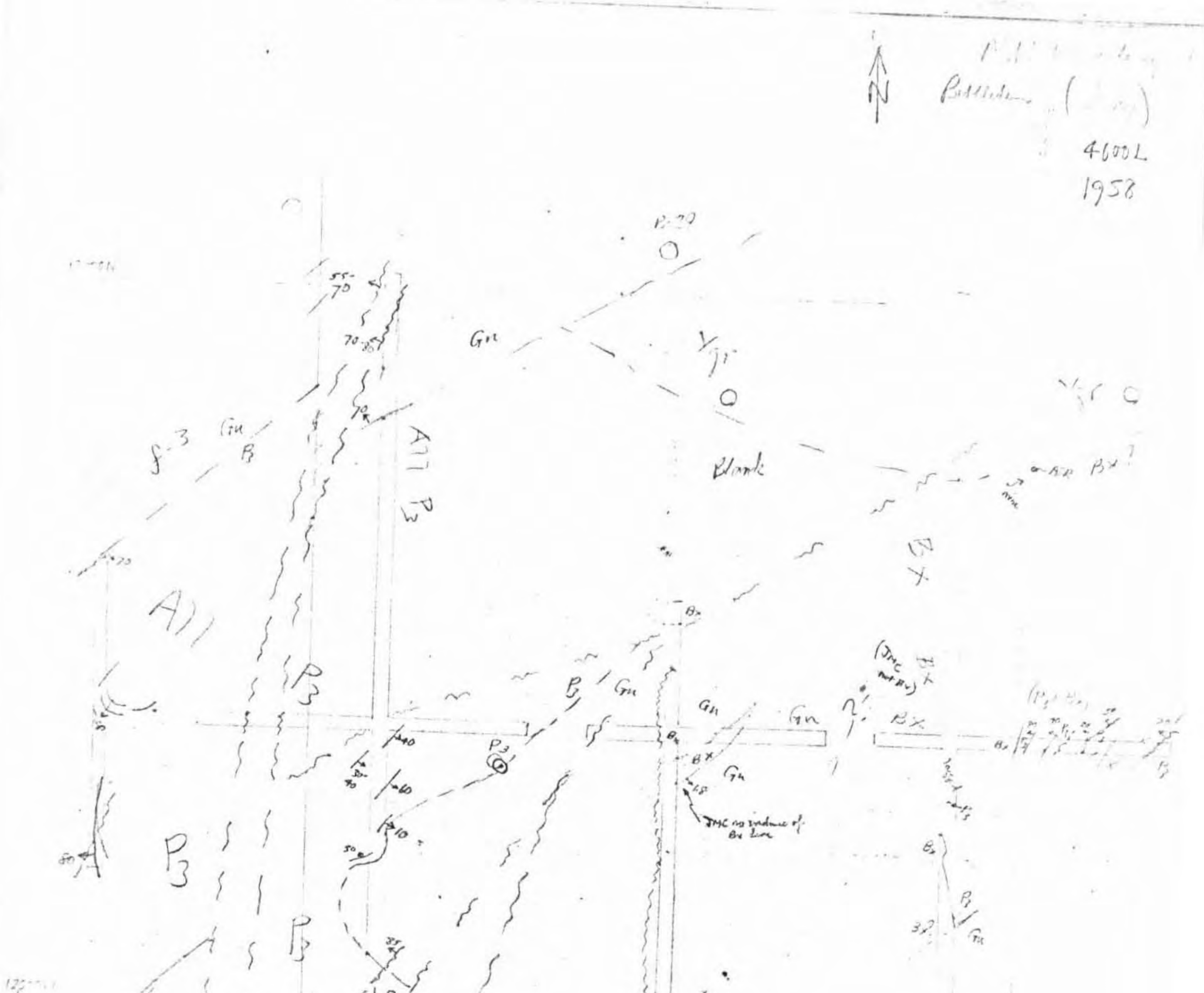


From the fine ore pile the ore falls through to a conveyor in an elliptical tunnel beneath the pile. The ore moves along the conveyor to the mill (which will have a 4000 T per day capacity in November, and a 6000 T per day capacity in December of 1964).

All ore material contains a certain amount of waste which must be removed before the final product is ready for shipment. This separation of ore and waste is accomplished by a process known as flotation. Before chemicals are added to separate the copper minerals from the waste, the fine-ore material must be reduced to very fine particals, so that a chemical action can take place. This job is performed by rod and ball mills. When sufficiently fine, chemicals are added to the slurry form. The chemical action results in the copper minerals floating to the surface and the waste material dropping to the bottom. The froth containing the copper is skimmed off and known as the concentrate. The concentrate now contains a considerable amount of water which is removed by a thickener, a filter and a dryer. The final product is a copper concentrate containing about 6% moisture and about 44% copper or 880 lbs. of copper per ton which is ready for shipment. The concentrate also contains gold, silver, and molybdenum. A separation of the "moly" from the copper concentrate is also handled by the flotation process. The "moly" concentrate runs around 50-55% Mo. or 1000-1100 lbs. Mo. per ton. This is shipped in drums of about 500 lbs. total weight. The copper concentrate goes from the mill to a storage tank, to trucks which are weighed and then driven to Vancouver. The concentrate is there loaded aboard freighters for shipment to Japan.



Belle Copper property: sketch of I.P. anomalies. (ca. 1959)


4600L
1958
Gn
All P3
All
P3
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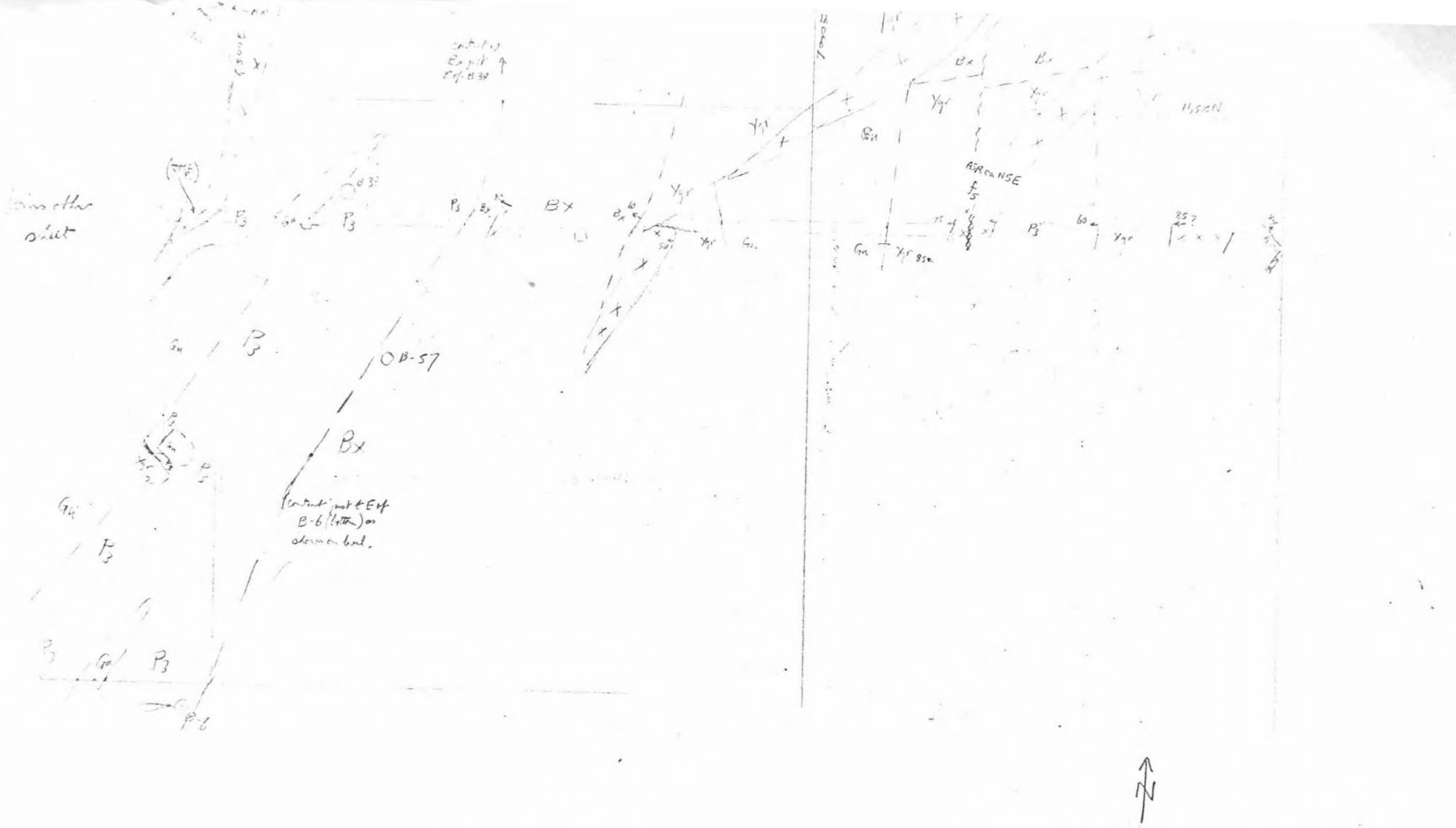
(joins other sheet)



ASR 100 scale

Bethlehem 4600

(1958)