George Cross News Letter Relide Reporting

NO.104(1990) MAY 30, 1990

# MORAGA RESOURCES LTD. (MGO-V)

RECENT "ORE GRADE" HOLES ADD TO RENEWED EXPLORATION INTEREST IN THE ISLAND COPPER / PORT HARDY AREA

The current diamond drilling program is successfully testing extensions on the Hushamu zone of the Expo property of Moraga - BHP Utah, 30 miles west of Port Hardy, and 15 miles north of the Island Copper mine, Vancouver Island, B.C. (SEE AREA LOCATION AND COMPANY HOLDING MAP OVERLEAF.)

The importance of the new holes is demonstrated by: hole No. 171 which extended the known depth or thickness of the deposit by 300 feet or a 30% increase and hole No. 173 which is 1,000 feet south of the previous mineable reserve boundary adding substantail potential tonnage to estimates.

The property is owned 100% by BHP Utah Mines Ltd. owner and operator of the 45,000 tonnes per day Island Copper Mine. Moraga has an agreement to earn a 45% interest in the Expo property and intends to carryout sufficent exploration and development work to increase the reserves on the property to justify their being mined and perhaps processed through the Island Copper plant. The production threshold can be achieved by adding a large tonnage to reserves or by finding near surface mineralization either of which will reduce stripping ratios to profitable levels. A potential advantages of having BHP Utah Mines as a senior partner with plant facilities, infrastructure, all the established work force and permitting in place could reduce the capital costs of a possible operation.

The most recent hole No.173 has cut 660 feet of copper in chalcopyrite and bornite from 830 feet to the toe of the hole at 1,497 feet. Assays are awaited but indications are that much of the hole will make ore grade and will add both depth and a south eastern extension of the reserve tonnage. Drilling 15 continuing with hole No.174 lost above the ore horizon and No.175 just started May 25,1990, from a location 130 meters southeast of No.154.

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#### MORAGA RESOURCES LTD. (MGO-Y) CONTINUED FROM PAGE ONE - Maurice J. Young, president,

reports Moraga Resources objectives of the current drill holes on the Hashamu zone are:

- to confirm tonnage and grade previously estimated as 100,000,000 tons of geological reserves including 57,500,000 mineable tons grading 0.32% copper, 0.012 oz.gold/t, available to a 2.2 waste to one ore ratio;

- extend the assured tonnage with holes to the southeast and northwest where the zone remains open to extensions; - in-fill some of the gaps in the drill pattern to increase the confidence level on the tonnage and grade estimates:

- perhaps define one or more zones of higher grade within the Hashamu where early mining could provide above average grades for quick capital cost pay back.

The most impressive result to date is hole No.171 which cut from 23 to 834 feet an 811 foot section assaying 0.36% copper, 0.015 oz. gold/t, 0.008% Mo. The importance of this long "ore grade" hole is the location near the southern limit of the reserve calculation. The hole indicates additional holes are required to the south since the ore grades are open to extension in this direction. It will require at least three follow up holes to determine the extent of the additional "ore" indicated by this intersection. The second important point is that there are two and possibly three such holes now drilled or drilling on the property. The program was planned as five holes in this series and now it looks like it will require 12 to 15 holes to define the extent of the additional mineralization.

One of the next phases of drilling, planned to start in the next two weeks, is a minimum of five holes on the Red Dog property, see map, which is 2 km west of the Hushamu. The reserves in the Red Dog are reported at 50,000,000 tons grading 0.32% copper, 0.012 oz.gold/t available to a 0.36 waste to one ore stripping ratio. The drilling to date has left several extension possibilities to the north, west, south and to depth. The initial holes will test several of these possibilities. If the initial holes are successful there are a number of adjacent targets with strong, geological, geochemical and geophysical targets yet to be tested. One of these has a geophysical signature very similar to that over the Island Copper mine located some 17 miles to the east.

One other of the advantages of Moraga is Hr.Maurice Young, P.Eng., president, formerly exploration manager, North America for Utah International Inc. He worked on or managed the programs which discovered the Island Copper Mine as well as both the Hushamu and Red Dog deposits. D.Neil le Nobel, P.Eng., is now exploration manager for western Canada for BHP and is a man who worked on the crew which carried out the exploration programs and made the discoveries. Each of these men are involved in formulating and directing the current exploration programs.

# ISLAND COPPER MINE DISCOVERED BY BHP UTAH

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In 1966 BHP Utah optioned the a block of claims from a prospector. Over the next few years the company explored the original showing which contained a small tonnage of high grade copper. Then during a very detailed regional exploration program BHP-Utah exploration geologists discovered through through locating and drilling a coincident, copper in soil, a magnetic high and an induced rolorization anomaly, about 1 mile from the original showing. a blind deposit which developed into the Island Copper mine. The Island Copper mine has been in operation since

1971. The plant has an original designed capacity of 33,000 tons per day with six semi-autogenous grinding mills. The plant currently operates at a consistant 45,000 tonnes of ore per day and has achieved peak day

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through-put of 70,000 tons. The mine, using a fleet of 170 ton capacity trucks, is producing 130,000 to 180,000 tons per day. That is less than a two waste to one ore stripping ratio. The Island Copper mine has produced to date 267,000,000 tons of ore with an average grade between 0.4% and 0.45% copper. Total production has been 630,000 tonnes copper, 15.3 tonnes molybdenum, 23,100,000 grams gold, 168,000,000 grams silver. The remaining reserves are 130,000,000 tons grading 0.35% to 0.36% copper. Of this a total of 80,000,000 tons of mineralized rock were converted into ore by the construction of a concrete slurry wall, 36 inches thick, to a maximum 105 feet deep and 4,000 feet long. The wall was constructed to retain tidal water from Quatsino Sound in the Sound and out of the open pit. As presently planned the open pit, when completed, will be 1500 feet below the pre-mining or original ground surface and about 1200 feet below sea level. A unique construction technique made construction of the wall possible at a cost of about \$15,500,000. To access the reserves some 30,000,000 tons of waste is to be removed at a cost of slightly more than \$30,000,000. The total cost to access the additonal reserves is estimated at \$45,000,000 to \$50,000,000 or 37.5¢ per ton of ore added to reserves. This new reserve is expected to keep the mine operating into 1996 or 1997. A number of other areas close to the mine are being explored in an effort to add further to reserves. Several of these area have good potential and are forecast to add a further few years to operations, depending, always, upon copper prices, stripping ratios.

#### EXPLORATION INTEREST RENEWED

In the last ten years the exploration potential for the Island Copper/ Port Hardy area has largely been ignored. Now with the recent success at the Moraga exploration program activity in the area has increased. One of the recent moves has been the staking of a large block of about 10 square miles near Cape Scott by Placer Development. One of the reasons for the renewed interest in the area is the very much improved infrastrucure in the area. The Island Highway was paved from Campbell River to Port Hardy several years ago. The drive from Victoria to Port Hardy now takes 7 hours while 20 years ago you needed special forest company passes to use the private road and some 15 to 20 hour to complete the drive. Much of the area between Port Hardy and Holberg Inlet is now laced with access roads used for logging. All of this access, in a forest you couldn't walk through at the rate of one mile an hour, and the increased geological knowledge gained by the Island Copper mining and the interest in the gold content of porphyry copper deposits has added to the interest. The market success of the Continental Gold/ BP, Ht.Milligan copper gold project and the technical progress at the Imperial Metal/ Corona Mt, Polley copper gold project have also added to the search for 'look-alikes'.

FUNDING FOR THE CURRENT EXPLORATION PROGRAMS

All of the fundings for the current exploration programs have been initiated by Robert Sibthorpe and Frank Guistra, of Yorkton Continental Securities, Vancouver.

On April 19,1990, Moraga received regulatory approval to the sale of 2,000,000 units at 35¢ each, for proceeds of \$700,000, with warrants to buy a further 2.000.000 shares at 50¢ each for two years. A finders fee of 150,000 units is payable to Yorkton Continental Securities Ltd. All subject to a 45 day closing. On April 17,1990, Moraga reported an agreement to sell by private placement of 385,000 units at \$1.00 each. Each unit consists of 1 flow-through share with a warrant to purchase 1 further flow-through share at \$1.25 each for one year. On a fully diluted basis following this private placement Moraga has 9,999,015 shares issued.

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CONTINUED FROM PAGE TWO - Moraga is in detailed advanced negotiations for substantial

additional fundings. Moraga retained Euro-Pacific Capital Group Inc. to conduct investor relations.

In mid April Crew Natural Resources agreed to a private placement, brokered through Yorkton Continental Securities, of 1,000,000 units at 52¢ each for proceeds of \$520,000. Each unit consists of one share and one warrant to purchase a further share at 52¢ in year one and at 60¢ in year two. Prior to this financing Crew Natural Resources had 5,428,815 shares issued. On May 4, 1990, Dr.Gerald Wright and Crew Holdings Ltd. gave notice of intention to sell 650,000 shares of Crew Natural Resources held by insiders.

AREA OF PROPERTIES AND OPTION AGREEMENTS: FIRST PROPERTY OPTIONED

Moraga on April 13,1987 signed a letter of intent to earn a 45% interest in the 527 claim, 576 unit, 42 square miles, Expo property from BHP Utah Mines Ltd. To exercise the option Moraga is to spend \$2,700,000 on exploration of the property by April 1, 1994, followed by a US\$260,000 payment to BHP Utah. Exploration expenditues by Moraga has been \$650,000 to May 28,1990. Since 1967 BHP-Utah has spent over \$5,000,000 exploring the Expo property.

SECOND PROPERTY OPTIONED

On April 1990, Moraga signed a letter of intent to acquired an option to earn a 50% working interest in the 28 claim Red Dog property from the 100% owner,

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recent results include:

HOLE	INTERVAL	LENGTH		COPPER	GOLD	MOLYB
NQ.	METERS	ETERS	FEET	X	<u>0Z/T</u>	ž
EC 171	6.71 - 254.02	247.31	811	0.36	0.015	0.008
Incl.	6.71 - 242.02	235.31	772	.37	.016	.008
EC 154	164.90 - 259.0	94.1	30 <b>9</b>	.26	.008	.015

Diamond drill hole EC 171 was drilled on the southern edge of the Hushamu deposit as an infill hole midway between holes EC 69 and EC 75 which are 400 feet apart. This hole is the most northern hole of a planned fence of holes which will be spaced over a 2,900-foot interval between EC 171 and previously drilled EC 154.

EC 172, located about 350 feet north of EC 154 on the fence of holes, has been completed to a depth of 1,507 feet. An additional hole on this fence of holes is planned and will be located about 400 feet south of EC 154. This hole is being collared near surface samples that returned 0.06 oz.gold/ton.

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