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Moraga Resources Prespectus March 6, 1991

Group III Other presently held properties upon which the Issuer's acquisition and exploration costs to date exceed \$100,000.

Property Group Name		Issuer's Acqui- sition and Ex- ploration Costs to November 30, 1990 (in \$)	Planned Expendi- tures from Funds Available upon Completion of the Offering			
I						
II	Expo Property Red Dog Property	\$ 1,273,143 291,075	Nil Nil	\$ 500,000 \$ 160,000		
III	Wan '90 Property House/Lynch Property	\$ 134,085 123,775	` Nil Nil	Nil Nil		

GROUP II

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A. EXPO PROPERTY

By Agreement dated May 29, 1987 (the "Utah Agreement") with BHP-Utah Mines Ltd. ("Utah"), the Issuer was granted the right to acquire an undivided 45% interest in the Expo Property. To acquire the interest the Issuer is required to expend a total of \$2,700,000 over the seven-year period ending April 1, 1994 and to pay to Utah the sum of US\$260,000.

Pursuant to the Utah Agreement, the Issuer has carried out exploration expenditures required to have been completed by May 28, 1991, totalling \$1,000,000, including a minimum of 5,000 feet of diamond drilling. The Issuer is required to expend additional exploration funds as follows: \$450,000 by May 28, 1992, of which \$55,650 remains to be spent, \$550,000 by May 28, 1993 and \$700,000 by April 1, 1994.

Upon earning its 45% interest in the Expo Property, the Issuer and Utah will enter into a formal Joint Venture Agreement whereby Utah shall have the right to elect to become operator of the project.

Engineering Report

The company has engineering reports on this property prepared by Harold M. Jones, P.Eng., Consulting Geologist, dated January 21, 1988 and revised July 11, 1988; by Peter G. Dasler, Geologist for Daiwan Engineering Ltd., dated April In late 1987, Moraga Resources Ltd. contracted a reconnaissance pulse electromagnetic (PEM) survey on Pemberton Hills over an area of possible massive sulphide mineralization. A PEM survey was also run down one drill hole. Results indicate a flat-lying conductive zone, possibly reflecting a sulphide zone, and several parallel vertical conductors, some which may represent mineralized fault zones. This area is awaiting further field work.

In late 1988, Moraga Resources Ltd. conducted regional geological mapping, sampled road cuts, made a computer study of the 1963 airborne geophysical data and drilled four holes totalling 762 metres. These holes tested the copper-gold mineralization in the northwestern part of the Hushamu zone. In addition to the above, a number of Utah's soil samples taken from McIntosh Mountain area were retrieved from storage and analyzed for Au, As, Se, Fe, Bi and Sb. They had previously been analyzed for Cu, Pb and Zn.

During April - July, 1990, Moraga Resources Ltd. conducted an eleven hole diamond drill program. All but one hole were drilled in the McIntosh Mountain area testing the southern extension of the Hushamu zone. One hole was drilled at the northwest end of the inferred limit of the Hushamu zone. Minor geological mapping, prospecting and sampling was also conducted on the property at this time.

The company conducted a second phase of drilling during November - December 1990. Five holes continued testing the southern extension of the Hushamu zone, three tested its northwestern end and extensions of it.

Geology and Mineralization

The Expo group is underlain mostly by volcanic sediments, pyroclastics and flows of the Lower Jurassic-aged Bonanza Volcanics, which are intruded by a belt of Jurassic and Tertiary granitic stocks, dykes and sills. Associated with the intrusive belt are a number of silicified breccia zones, some with pyrophyllite, which are very pyritic and marked by strong gossans. These alteration zones are located at or in proximity to volcanic vents in the Bonanza Volcanics.

The Hushamu copper-gold deposit, located during the BHP-Utah copper exploration program, underlies one of these alteration zones. It contains a drill indicated mineable reserve of 57,500,000 tons averaging 0.32% copper, 0.008% Mo and 0.012 oz./ton gold (private report - Utah Mines Technical Services, 1982). Geological reserves are estimated to be over 100,000,000 tons of the same grade.

The silica-argillic-pyrophyllitic-pyritic volcanic breccia alteration zones on the Expo property have similarities with those capping Pueblo Viejo-type bulk tonnage gold deposits. Utah Mines Ltd. explored several of these for their gold content. On McIntosh Mountain, rock geochemical assays were significantly anomalous in gold, arsenic and molybdenum; those from a second area were anomalous in arsenic. Two drill holes which tested the Au-As-Mo anomaly also returned anomalous values in gold. The holes drilled to test the arsenic anomaly failed to intersect any significant mineralization.

One hole was drilled in West Pemberton Hills to test for massive sulphide mineralization, which was indicated from surface mapping of road cuts, quarries and exposures in one creek. Three sections of bedded sulphide formation, totalling 57 feet, were intersected. These beds contained from 50% to 70% pyrite.

The main areas of interest on the Expo Property are:

(a) Hushamu Zone

Since Moraga Resources Ltd. acquired the property, most of their exploration was directed to testing the copper-gold content of the Hushamu zone and exploring for extensions of this zone. Work was conducted on McIntosh Mountain, which lies immediately south of the inferred limits of the Hushamu zone. Moraga Resources Ltd. were encouraged to explore this area since the mountain hosts a large gossanous area of pyrophyllitic alteration enclosing a slightly smaller zone of siliceous breccia and pyrophyllite. The alteration zone caps the southern side of the Hushamu zone.

Interest in this large alteration zone was also reinforced by the results of BHP-Utah's hole EC 154 which tested this area. It intersected, from 164.9 to 259.1 metres, a 94.2 metre section averaging 0.26% Cu, .015% Mo and 0.0085 oz./ton Au. Mineralization terminated five metres from the bottom of the hole. It clearly demonstrated that significant Cu-Au mineralization was present beneath the altered cap rock.

During the period April to July, 1990, the company drilled eleven holes totalling 3,823 metres. These included the deepening of the above mentioned hole EC 154. Five holes were drilled as a fence across McIntosh Mountain, five were drilled as fill-in holes to the south of the inferred limit of the Hushamu zone, and one was drilled to test the northwest end of the Hushamu zone, and one was drilled to test the northwest end of the Hushamu zone just beyond its inferred limit (see Figures 4 and 5).

The following is a list of significant intersections in the above holes:

Assays

Hole <u>No.</u>	Interval (m)	Length (m)	Cu <u>*</u>	МО <u>%</u>	Au Oz/ton	Remarks
EC 154	164.9-284.4	119.5	0.23	0.013	0.008	new data added to that of BHP- Utah
FC 171	6.7 - 242.0	235.3	0.37	0.008	0.016	
EC 172	247.5-253.5	6.0	0.14	0.005	0.004	main zone pos- sibly dis-
	262.5-274.5	12.0	0.20	0.013	0.007	placed by faulting(?) & is missing
EC 173	326.0-456.3	130.3	0.22	0.012	0.010	-
EC 175	126.0-162.0	36.0	0.22	0.021	0.008	
EC 176	15.2-234.0	218.8	0.27	0.010	0.010	
includi	ng 78.0-189.0	111.0	0.36	-	0.014	
EC 177	6.1-231.0	224.9	0.27	-	0.004	
includi	ng 102.0-168.	0 66.0	0.43	-	0.007	
EC 178	65.0-77.0	12.0	0.16	-	0.004	drilled NW end
	89.0-114.0	25.0	0.155	-	0.060	Hushamu zone
	126.0-155.0	29.0	0.28	-	0.008	interpreted to
	221.0-242.0	21.0	0.148	-	0.007	have just skimmed upper part of miner- alized zone
EC 179	246.0-496.0	250.0	0.33	-	0.013	
EC 180	290.0-306.0	15.0	0.19	0.006	0.005	
	329.8-449.9	120.1	0.20	0.008	0.007	
incl.	329.8-401.7	71.9	0.24	0.009	0.009	

Hole EC 174 was abandoned in a fault at 87.5 metres. No samples were taken.

The April - July, 1990 drilling demonstrated that the main Hushamu mineralized zone extends at least 200 metres beyond its southern limit as defined by BHP-Utah. It underlies the northern part of McIntosh Mountain adding significantly to this already large mineral resource.

Hole EC 177 indicates that copper-gold mineralization extends to the northwest beyond the inferred limit of the BHP-Utah's Hushamu zone ore reserves.

The November - December 1990 drilling consisted of five holes testing the southern extension of the Hushamu one and three testing its northwest end and extensions. Significant intersections in these holes were: . . .

As	S	а	y	S
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Hol <u>No.</u>	е	Int (erva m)	al 	Le	ength (m)	C %	!u	M <u>8</u>		<u>o</u>	Au z/ton	Remarks
EC	182	238	.0-:	367.0	12	29.0	0	.19	0	.002	0	.011	
EC inc inc	183 1. 1.	34 78. 78 224 257	.1-4 0-11 .0-9 .9-3 .8-3	46.0 17.0 99.1 893.2 820.9	11 39 21 16 63	.9 .00 .1 8.3	0 0 0 0 0	.23 .25 .32 .27 .39	0 0 0 0	.005 .003 .003 .011 .017	0 0 0 0	.005 .007 .008 .013 .018	hole lost at 393 m, still in mineralization last sample assayed 0.28%
													Cu, 0.016 oz/t Au
EC] inc]	L84 L.	16. 16	8-11 .8-4	4.9	98 26	.1 .1	0	.19 .28	0 0	.006 .009	0	.006 .010	on edge SRK pit*, inferred mineral not intersected, possible fault displacement(?)
EC 1	.85	10.7	7-16	3.1	15	2.4	0	.07	0	.002	0	.006	<pre>weak mineraliz- ation through- out, mod. alt'n, on edge of significant mineralization (?)</pre>
EC 1 inc. incl		3.7- 3.7 3.7-	-194 7-89 -120	.1 .9 .1	19 86 11	0.4 .2 6.4	0.0.0.	23	0.0.0.	003	0. 0. 0.	006 011 010	from 120-165 m grades low, avg approx 0.06% Cu from 165-194 grades increase to approx 0.10% Cu
EC l incl	87 •	68.9 84.1 132. 228.	0-11 -11 0-18 0-3	4.0 4.0 39.0 32.2	45 29 57 104	1 9 0 1.2	0. 0. 0.	18 22 30 13	0. 0. 0.	017 020 019 005	0. 0. 0.	008 008 009 003	
EC 1	88 •	3. 95.1 224. 224.	0-20 -189 0-37 0-26).1 5.0 72.1 59.1	17. 89. 148 45.	.1 .9 .1	0.0.0.	12 22 23 25	0.	009 019 010	0. 0. 0.	001 012 012	
incl	•	302.	0-37	72.1	70.	1	0.	31	0.	004	0.	016	
* :	SRK sect	- ion.	Stef	fen,	Rc	berts	on	an	d	Kirst	en	- see	following this
I	EC	181	was	s poor	ly	miner	al	ized		T+ i	nt	arsact	ed a small sone

of alteration adjacent to a quartz feldspar porphyry dyke

which returned low but elevated values in cooper, gold and molybdenum. This may indicate it is near a mineralized zone.

Holes EC 154, 172, 173, 180, 182, 183, 187, and 188 were all drilled beneath McIntosh Mountain. They intersected significant mineralization at depth, adding significantly to the mineral resource in this area.

Hushamu Zone - Estimate of Mineable Reserves

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Moraga Resources Ltd. contracted the firm of Steffen, Robertson and Kirsten (B.C.) Inc. to estimate the mineable resources on the Expo project and to evaluate the potential of other mineralized areas. They utilized all Utah Mines and Moraga drill data and assays and cost data supplied by Island Copper Mines personnel.

Their study incorporated the following costs and estimates:

Minina	\$1.00 per	ton	Cu Recovery	85%
Processing	\$2.70 per	ton	Au Recovery	70%
Overhead	\$1.00 per	ton	Mo Recovery	70%
Transportation	\$0.10 per	ton	Gold price(Cdn/oz)	\$397.73
-			Mo price (Cdn/lb)	\$3.00

Three pit plans were studied based on the price of copper per pound as U.S. \$0.90, \$1.00 and \$1.08 (Cdn \$1.023, 1.136 and 1.227, exchange rate Cdn\$/US\$ 0.88) less all estimated smelting, refining, transportation, etc. charges (NSR). The NSR charges were estimated to be \$0.35 per lb. copper, reducing the value of contained copper in their studies to Cdn \$0.68, 0.78 and 0.88 per lb.

Significant gold grades may be accompanied by copper grades which fall below the cut-off grade. Copper equivalent values were used to bring some of these situations into the mineral resource.

Based on the above data, they calculated the following optimum pit resources for two zones:

(i) Main Zone (includes a small north pit)

Cu Equiv Cdn Ş	Cut-off Grade %	Resource* tons	Cu Equiv %	Cu %	Au oz/ton	Mo	Strip Ratio
\$.68 Cu	0.42	61,700,000	0.67	0.31	0.01	0.01	0.6
equiv \$.78 Cu	0.36	76,700,000	0.60	0.30	0.01	0.01	0.7
\$.88 Cu equiv	0.32	107,000,000	0.53	0.29	0.01	0.01	0.7

classified by SRK as possible to probable.

(ii) South Zone

Contiguous with the Main Zone, located under McIntosh Mountain. Based on grades of 0.25% Cu, 0.014 oz/ton Au and 0.008% Mo, they calculated a potential mineable resource of 386,000,000 tons with a strip ratio of 1.5:1 using \$.88 Cu equivalent as above. This did include some mineralization from the Main Zone since the larger pit expanded into it. This calculation indicated that the mineralization at depth under McIntosh Mountain should be explored since it is potentially economic.

SRK also made semi-variograms of the drill data. They concluded that 400 foot drill hole spacing was adequate for calculating copper reserves but too widely spaced for gold and molybdenum.

(b) South McIntosh Zone

This zone is centred on an area of intense kaolinization, sericitizaton, carbonitization, and pyritization three kilometres southeast of McIntosh Mountain. While only a few anomalous gold assays were obtained from here, this alteration zone requires further examination.

(c) Pemberton Zone

This area is of interest because geology and alteration is similar to that in the Hushamu zone and because of the bedded pyrite-silica horizons outcropping to the south of the main siliceous breccia zone. This exhalative-style mineralization is closely associated with siliceous sinter cones along a recognized northwest-trending zone of clay and silica alteration.

It is also of interest because of the multiple sections of bedded pyrite intersected in BHP-Utah's drilling. The sulphides appear to be chemical sediments deposited in a small depression. Down hole pulse EM surveying in this area suggests several areas of thickening of the sulphide horizon.

(d) Red Dog Zone

The Red Dog claims, which form an "island" within the Expo property hosts two significant Cu-Au zones currently being explored by Moraga Resources Ltd. The western zone - Red Dog Hill zone - extends to the west onto the Expo property. Also, to the east of the Red Dog claims, Utah's hole EC 119 intersected 70 feet averaging 0.36% Cu. Both of these areas warrant additional exploration.

(e) Other Areas

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Moraga Resources Ltd. conducted reconnaissance geology and soil sampling on some of the new logging roads on the property. Areas of anomalous gold and copper assays were discovered which require additional follow-up work. One of these areas is on the northwest extension of the Hushamu zone.

Discussion

Previous exploration on the Expo property was primarily oriented toward locating and defining large tonnage porphyry-type copper deposits. The Hushamu zone resulted out of this work. Present exploration is following the same direction, but putting emphasis on copper with associated values in gold.

Geology, alteration and structure on this large property are also favourable for hosting bulk tonnage, low grade gold mineralization; small tonnage, higher grade structurally controlled gold mineralization, and massive sulphide mineralization. All of the above types of mineralization must be considered when analyzing exploration data.

Exploration to date on the Hushamu zone clearly demonstrates that a large copper-gold low grade mineral resource is present. Drilling to date has been a series of small footage programs, consequently the limits of the zone are not defined nor are its tonnage and grade. This deposit requires diamond drilling on a grid pattern over the entire area of interest to provide the coverage necessary to permit an acceptable ore reserve calculation.

Reserves at BHP-Utah's Island Copper Mine are expected to be exhausted by the mid-1990's. Significant mineralization developed on the Expo property could be potential feed for the Island Copper mill.

Conclusions

It is concluded that the Hushamu zone hosts a mineral resource estimated to contain 107,000,000 tons grade 0.29% Cu. 0.01 oz/ton Au and 0.01% Mo (copper equivalent 0.53% Cu). Extensions to this zone are estimated to have the potential for hosting at least 300,000,000 tons of similar grade. It is also concluded that the south McIntosh Mountain, Pemberton Hills and other areas with strong alteration be further explored but secondary to work on the Hushamu zone.

Recommendations

A grid pattern of diamond drill holes, spaced at 400 foot (122 metres) centres, is recommended to test the Hushamu zone

and its extensions in detail. Fill-in holes will be required in some areas to give better information on the gold and molybdenum content.

Of secondary priority, the Pemberton Hills area warrants additional geological mapping, sampling and limited drilling to test significant geology, alteration and mineralization in this area. Drilling is also warranted to test the west extension of the Red Dog Hill zone and the known mineralization to the east of the Red Dog claims.

Cost Estimate

Daiwan Engineering Ltd., manager of the exploration program on the Expo property, prepared a drill plan to test the main Hushamu zone, its southern extension under McIntosh Mountain and its northern extension. The writer concurs with this planned program. The purpose of the proposed drilling is to confirm the estimated tonnage and grade in the Hushamu zone as indicated in the SRK study; define the limits, tonnage and grade of the South zone - extension of the Hushamu zone to the south; and define the northwest end of the Hushamu zone and its extensions in this direction.

The magnitude of the exploration - development drilling on the Expo property is large, consequently it was divided in a number of stages. This cost estimate supercedes that in the writer's report dated August 23, 1990.

Stage I - Drilling and Assaying

*	Includes fill-in drilling on Hushamu zone and drilling on South zone - extension of Hushamu zone to south, approximately 13,150		
	feet at \$35/ft	\$	460,000
*	Re-assay of Utah drill core, now in storage		40,000
		\$	500,000
Stac	ge II - Drilling of South zone - continuation of	Sta	age I
	Drilling, to complete drilling of South zone and define limits of mineralization, say 35,000 ft at \$35/ft	\$1,	,225,000
Stag	e III - additional drilling of areas not defined	l	
(a)	North zone: northwest extension of Hushamu zone, to give better definition of zone, say 5,000 feet at \$35/ft	\$	175,000
(b)	North zone: contingent on North zone drilling above perimeter drilling of North zone, say 1,500 feet at \$35/ft		52,500

(c) South zone - contingent on South zone drilling in Stage II perimeter drilling to test outer limits of minoralized area defined in Stage II	E
say 6,350 feet at \$35/ft	222,250
	\$ 449,750
Say	\$ 450,000
Total Stages I, II & III - estimated cost to fully assess Hushamu and its extensions, say	\$2,175,000

Notes:

- (1) Above cost estimates include built-in 7%-10% contingencies.
- (2) Stage I, Stage II, Stage III(a) are not contingent but represent the amount of drilling to adequately define the Hushamu zone and its north (North zone) and south (South zone) extensions on a 400 foot grid drilling pattern plus fill-in holes. If funds are available, the above stages can be blended into one continuous on-going program.

*The Issuer will be proceeding with the drill program recommended above for the Hushamu zone, at an estimated cost of \$500,000. Subject to the availability of working capital, the Issuer may thereafter undertake one or more of the other work programs recommended for the Expo property.

B. RED DOG PROPERTY

Pursuant to an agreement with Crew Natural Resources Ltd. ("Crew") dated May 31, 1990 (the "Option Agreement"), the Issuer was granted the right to earn a 50% working interest in the Red Dog Property.

Upon execution of the Option Agreement, the Issuer paid Crew the sum of \$50,000. The Issuer will be granted an option to earn a 45% working interest in the Red Dog Property by incurring exploration expenditures in the amount of \$450,000 before April 30, 1991. Under the option, the Issuer may incur a total of \$2,500,000 of expenditures on the Red Dog Property make cash payments to Crew in lieu thereof as follows: or \$750,000 by April 30, 1992, \$1,000,000 by April 30, 1993, and \$750,000 by November 30, 1993. Provided these payments have been made within the time required, the Issuer will then have earned a 45% working interest in the Property. These amounts include option payments to be made to the original owners of property, W.G. Botel and H. Veerman, except that, after the the payments due to Botel and Veerman in the year will 1992, be the greater of \$75,000 and 3% of the net smelter returns from the sale of ores and concentrates produced in the preceding year.









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EC-49

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