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# GEOLOGICAL REPORT AND OPINION OF VALUE

## HARRISON LAKE GOLD PROPERTY

Harrison Lake, B.C., New Westminster M.D.

**PROPERTY FILE**

Prepared for

## EAGLE PLAINS RESOURCES LTD.

2720 \_ 17th Street South  
Cranbrook, B.C., V1C 6Y6

Tel: 1\_250\_426\_0749

Fax: 1\_250\_426\_6899

E\_mail: [tjt@eagleplains.bc.ca](mailto:tjt@eagleplains.bc.ca)

by

### **B.J. Price Geological Consultants Inc.**

Ste 1028 \_ 470 Granville Street  
Vancouver B.C., Canada  
V6C 1V5

Tel: 604\_682\_1501

Fax 604\_684\_4297

[bpricegeol@msn.com](mailto:bpricegeol@msn.com)

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GEOLOGICAL REPORT AND OPINION OF VALUE  
**HARRISON LAKE GOLD PROPERTY**  
Harrison Lake, B.C.

Prepared for Eagle Plains Resources Ltd.

## SUMMARY

Eagle Plains Resources Ltd. owns a 100% interest in the Harrison gold property which was acquired in 2001 by staking. The gold property, situated 5 km north of Harrison Hot Springs, B.C., consists of 9 contiguous Modified Grid mineral claims totaling 76 units. Eagle Plains acquired Hot 4 claim and all the data files for the property from the previous owners; the property is subject to a 1% NSR and a 2% NSR to two individuals.

The Harrison gold property is located at the southeastern corner of Harrison Lake, 4.5 km northeast of the Village of Harrison Hot Springs, B.C., approximately 100 kilometers east of Vancouver B.C. The claims can be reached by a 2-3 hour drive from Vancouver. Access to the property is easily facilitated by a paved road connecting Harrison Village to the property, from which point a network of 4 wheel drive gravel logging and mining roads affords access to most of the claim area.

The property was originally staked as the RN claim in 1972. From 1972 to 1983, intermittent surface and underground high grade mining had produced 643 tonnes of ore from the Portal zone, from which 30,443 grams (979 ounces) of gold was produced along with a small amount of copper. Recovered grade from the mining was thus 47.4 grams/tonne gold or 1.38 ounces/ton.

In 1982, Abo Oil Corporation, (Later Abo Resources Ltd.) secured an option on the property, and by August 1983, had expended \$308,853.79 in drilling 27 holes totaling 2,488 meters, and additional surface and underground exploration. Soil sampling outlined a geochemical anomaly 600 meters long and up to 200 meters wide to the northeast of the underground workings, (the Portal Zone). The drilling resulted in discovery of numerous gold-bearing quartz veins over an area roughly 300 x 100 meters (the Jenner zone). The best drill intersection was 22 meters grading 0.14 ounces per ton, (4.8 grams/metric tonne). In 1984, Abo drilled an additional 7 holes totaling 753.7 meters.

Abo continued work on the property until November 1984, when Kerr Addison Mines Ltd. signed an agreement for an option to purchase and joint-venture the property. Kerr Addison Mines Ltd. agreed to spend \$1.75 million on the Harrison gold property over 5 years to earn a 60% interest. Kerr Addison completed at least \$670,000 work on the property which included considerable diamond drilling, both from surface and underground, and underground development, bulk sampling and test milling.

Bema International Resources Inc., (now Bema Gold Corp.) then agreed with Kerr Addison Mines Ltd. in

1987 to expend \$750,000 in exploration funds to acquire 55% interest in Kerr's 60% interest in the property from Kerr Addison. Subsequently, Bema purchased Kerr Addison's remaining 25% equity. Bema International Resources Ltd. then acquired control of Abo Resource Corp in 1987. Bema completed up to \$3.4 million in additional work.

Pacific Comox Resources Ltd. had an option in 1992 to earn from 49% to 76 % interest in 235 claims (1000 acres) RN or "Harrison Lake gold property from owners Bema Gold Corp. and Abo Resources Corp. by expending \$5 million over 5 years. Pacific Comox Resources Ltd. drilled 2 core drill holes in 1993 but failed to complete the work schedule, to complete a feasibility study or to secure financing to complete the purchase of the property, and in 1996, the property was returned to the original vendors.

In 1998, Global Gold Inc. purchased the property, intending to go public, but failed to maintain the option and the claims lapsed in 2001, after which Eagle Plains Resources Ltd. staked the property.

The Harrison Gold property is underlain by a stratigraphic succession of sedimentary and volcanic rocks of the Cretaceous Brokenback Hill Formation and Peninsula Formation (Fire Lake Group) bounded on the east by the major Harrison Lake shear zone, or fault, and intruded by various phases of the Tertiary granodiorite of the "Hicks Lake batholith".

The Brokenback Hill Formation comprising green crystal tuff, volcanic conglomerate and tuffaceous sandstone in the lower part of the section and volcanic flows, pyroclastics, argillite and sandstone in the upper parts. Pelites and limestones of the Devonian to Permian Chilliwack Group are in fault contact with the Brokenback Hill Formation in the southern parts of the property.

Gold mineralization occurs mainly as free visible flakes within quartz veins (approaching a weak stockwork system). The mineralized quartz veins are confined to quartz diorite intrusive bodies (Jenner, Portal, Hill and Lake stocks), or their immediate periphery. Gold mineralization is not known to occur more than 2 to 3 metres outside the quartz diorite intrusives. Gold also occurs in association with open-space sulphide fillings within a hydrothermally altered breccia pipe (Breccia zone).

The main deposit is the Jenner Stock zone. The Jenner stock is a small irregular plug or apophysis of quartz diorite which is comprised of two main intrusive phases: a medium to coarse-grained hornblende-biotite quartz diorite phase, and a fine-grained biotite (hornblende) quartz diorite phase found mainly in the lower portions. Numerous thin, high angle felsic and less commonly, mafic dykes are present throughout the stock. Disseminated and evenly distributed mineralization within the Jenner stock consists of 1-3 per cent pyrrhotite, minor pyrite and chalcopyrite, and traces of molybdenite. In its upper levels, the stock is roughly circular to elliptical (80-110 metres in plan) becoming more elongated (60 by 150 metres) with depth. It plunges 80-85 degrees to the east and its overall three dimensional shape can be described as pipe-like. Portions of the stock, mainly along its footwall contact, are occupied by a contact breccia phase which is transitional from a breccia, containing several large or roof pendants. Gold-bearing vein systems within the Jenner stock are predominantly low-angle structures. The quartz veins which contain gold mineralization are associated with gently dipping veins

which form a conjugate set; minor sub-vertical veins also contain gold.

The veins which contain the gold mineralization are comprised of a gangue of quartz with minor calcite, chlorite and sericite. The major sulphide mineral is pyrrhotite with minor to trace amounts of pyrite, chalcopyrite, molybdenite, scheelite, arsenopyrite, galena and sphalerite. Bismuth-silver tellurides are present and have been observed as intergrowths with native gold grains. The amount of native gold present in a given vein does not appear to correlate directly with the presence of any sulphide nor with its relative concentration. Veins are concentrated to such an extent that bulk mining methods would be possible. The highest gold concentrations are found along the mineralized western contact (Footwall zone) of the Jenner stock. Strong sericitic alteration envelopes with widths up to several centimetres are commonly developed around mineralized quartz veins.

The Portal stock is located 300 metres southwest from the Jenner stock. It is separated into two distinct domains; the western portion is a roughly circular body with an average diameter of 140 metres and smooth or regular contacts. The eastern portion is dyke-like, narrowing from approximately 100 metres in the west to 40-50 metres near the eastern contact, with irregular or bulging contacts. The entire stock is plunging approximately 70 degrees to the east. Gold-bearing quartz vein attitudes (gold zones) appear to be oriented horizontally to sub-horizontally within the Portal stock. One of these veins is seen at the portal; this discovery vein was mined by surface cuts and small underground stopes. Drilling to date suggests that gold grades within the zones improve towards the intrusive contacts, particularly the northern contact. One drill intersection of a well mineralized zone in the Portal zone averaged 3.17 grams per tonne gold across 30 metres

The Lake stock is located 1650 metres south from the Jenner stock and is the largest and best exposed of the gold-bearing diorite stocks. Quartz veins are not common, and are found predominantly near the margins of the stock. The occasional vein contains visible gold with grades up to 2.24 grams per tonne.

The Hill stock is located 700 metres south from the Lake stock. Gold-silver mineralization is associated with quartz +/- carbonate-pyrrhotite-pyrite, +/- molybdenite, +/- arsenopyrite veins. Grades range up to 23 grams per tonne gold and 57 grams per tonne silver across a 1 metre drill intersection

The Breccia zone is a sulphide-bearing (pyrrhotite-sphalerite-chalcopyrite) breccia pipe which is strongly sericitized, chloritized and silicified, on the west margin of the Hill stock. The zone has surface dimensions of 325 by 100 metres. A zone of 29 metres averaging 1.56 grams per tonne gold, 4.4 grams per tonne silver, 0.56 per cent zinc and 0.04 per cent copper, within which 7 metres averaging 3.56 grams per tonne gold, 9.3 grams per tonne silver, 1.2 per cent zinc and 0.049 per cent copper, occurs at the margins of the breccia pipe

Geological work and diamond drilling by the various companies has led to the outlining of the following mineral resources (Norman 1989) These resources would correspond to the CIM category of Inferred Resources.

Portal Stock	342,275 tonnes	3.70 grams/tonnes	1,266,316 grams
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Jenner Stock	1,801,134 tonnes	2.71 grams/tonne	4,876,632 grams
<u>Total</u>	<u>2,143,409 tonnes</u>	<u>2.87 grams/tonne</u> 0.084 oz/ton	<u>6,142,948 grams</u> 197,400 ounces

A number of other resource estimates exist which show up to 4.9 Million tons at 0.1 oz/ton gold or 4,459,000 tonnes grading 3.43 grams/tonne gold. or 490,000 ounces "in the ground".

Croome, (1987), based on plans and sections provided by Kerr Addison Mines Ltd., calculated "reasonably assured" and "drill\_indicated" geological reserves as follows:

Total Mineral Resource	Total Mining area	3,929,940 tonnes
Mineable Resource	Total Mining Area	3,550,660 tonnes.

The Harrison gold property has been explored by 149 drill holes totaling approximately 16,500 meters, (54,000 feet), resulting in the determination of indicated mineral resources of at least 3.5 million tonnes grading 3.2 to 4.1 grams per tonne, (or 360,000 to 461,000 ounces in situ) in two deposits, the Jenner deposit and the smaller Portal deposit. The gold is contained in mineralogically simple quartz stockworks from which acceptable gravity and flotation concentrates can be obtained. Approximately \$4.7 million has been expended by a number of major and junior mining exploration companies, and there is a considerable amount of geological, geochemical and geophysical data available for the project. A number of other exploration targets exist with a reasonable chance of discovering additional economic mineralization, either in stockworks, veins and/or skarn deposits.

The writer concludes that the Harrison Gold property is a property of merit, comparable in origin with intrusive hosted or intrusive\_related deposits such as those in the Tintina Gold Belt of the Yukon and Alaska. Additional exploration is warranted, with the goal of further defining and upgrading the known resource.

Subject to the availability of adequate financing, an exploration program of \$500,000 is recommended, to include data compilation, road repairs, refurbishing the grid, repair of the core logging facilities, preparation of drill pads, HQ size diamond core drilling and a scoping study.

respectfully submitted

**BJ.PRICE GEOLOGICAL CONSULTANTS INC.**

per:.....

Barry J. Price, M.Sc., P.Geo  
Consulting Geologist,

## VALUATION

In 1998, by several conventional methods widely used for valuation of mining properties which are not yet in production, the writer arrived at a set of values for the Harrison Gold property at between \$2,680,000 and \$10,500,000. Balancing the lapse of time from 1998 is a pronounced increase in the price of gold, particularly in 2002. For this reason the writer will maintain that the range of prices is still indicative of fair market value for the property. In a fair market transaction, the value obtained would likely be between these figures.

Considering the various positive and negative factors which might affect the value of the property, the writer sets, the value of the deposit at the lower end of the spectrum, at \$3,000,000. The writer concludes that the Harrison Lake property acquired by Eagle Plains Resources Ltd. is a property of considerable merit, which warrants additional work.

respectfully submitted

**BJ.PRICE GEOLOGICAL CONSULTANTS INC.**

per :.....

**Barry J. Price, M.Sc., P.Geo**  
Consulting Geologist,  
Qualified Person

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## GEOLOGICAL REPORT AND OPINION OF VALUE

## HARRISON LAKE GOLD PROPERTY

Harrison Lake, B.C.

Prepared for Eagle Plains Resources Ltd.

## INTRODUCTION

This present report was commissioned by the Directors of Eagle Plains Resources Ltd., who have acquired the Harrison Gold property by staking. In 1995, the writer was requested by the directors of Pacific Comox Resources Ltd. to review the considerable geological database for the property and prepare a geological summary and an "opinion of value" for the Harrison Gold property. The report was updated for Global Gold Inc. in 1998 but was never used by them.

The "Opinion of Value", in a subsequent section of this report, is based on the geology of the property, the characteristics of the gold resource outlined by drilling and underground work on exploration expenditures, exploration history of the property and the writer's opinion of the geological potential for increasing and upgrading the currently estimated resource.

The writer is very familiar with the Harrison Lake area, having worked on many mineral properties in the area from 1972 to the present. The property was visited briefly by the writer in February 1998. Mineral has been verified by reference to the Mineral Titles Branch on-line claim registry. Past work referred to in this report has been done by respected exploration companies under supervision of qualified geologists and engineers. The writer has no reason to believe that the past exploration and sampling was not done accurately and in a professional manner.

## LOCATION AND ACCESS

The Harrison gold property is located at the southeastern corner of Harrison Lake, 4.5 km northeast of the Village of Harrison Hot Springs, B.C. Harrison Hot Springs is a small seasonal resort community adjacent to the larger community of Agassiz B.C., approximately 100 kilometers east of Vancouver B.C. The claims can be reached by a 2-3 hour drive from Vancouver. The claims cover the northern part of Bear Mountain, and are bounded by Harrison Lake to the west, and by Hicks Lake to the east. Sasquatch Provincial Park, which surrounds three small lakes; Trout Lake, Hicks Lake and Deer Lake, adjoins the claims on the north. Access to the property is easily facilitated by a paved road connecting Harrison Village to the Park entrance. A network of 4-wheel drive gravel logging roads affords access to most of the claim areas. See Figures 1, 2, and 3). The main access road to the property is Rockwell Drive, which is blocked near the highway by a locked gate, controlled by the owners and by the Ministry of Forests. This road provides access to the Lower Portal and to other zones higher on the mountain.

At present, the road to the Upper or Jenner portal has been de\_commissioned; about one days bulldozer work would be required to regain this access.

Most supplies and services can be obtained in Agassiz or in the larger communities of Chilliwack or from Vancouver. Although Harrison Hot Springs is a resort community, for eight months of the year the economy is relatively depressed. The proximity to residential communities is a major economic benefit in the determination of mining economics.

## TOPOGRAPHY, VEGETATION AND CLIMATE

The property is located in the Coast Mountain physiographic province of B.C., with slopes varying from 10° to 40° (averaging 25°), and elevations from a few meters above sea level up to 1035 meters ASL on top of Bear Mountain. The area has been previously logged off, resulting in a thick cover of second-growth comprised of small (less than 20 cm. diameter) mixed deciduous and coniferous trees, as well as numerous patches of "devils club". The climate is essentially coastal with moderate to warm summers and cooler, wet winters. Snowfall can be appreciable at higher elevations, but near the lake, work can proceed year round. The mean annual precipitation for the area ranges from 1500 mm to 2500 mm per year. (60-100 inches).

## CLAIMS AND TENURE

The Harrison (RN or Abo) gold property at Harrison Lake, B.C., consisting of 9 contiguous Modified Grid mineral claims totaling 76 units is beneficially owned by Eagle Plains Resources Ltd. The claims are shown below in tabular form:

## Claim Data \_ Harrison Lake Gold Property

<u>Tenure</u>	<u>ClaimNo</u>	<u>MapNo</u>	<u>Expiry Date</u>	<u>Units</u>	<u>TagNumber</u>	<u>NSR %</u>	<u>To</u>
382167	ABO 1	92H032	2006DEC26	20	221001	1%	Kreft
382168	ABO 2	92H032	2006DEC26	9	221002	1%	Kreft
384241	ABO 3	92H032	2006DEC26	6	234658	1%	Kreft
384242	ABO 4	92H032	2006DEC26	20	234659	1%	Kreft
384243	ABO 5	92H032	2006DEC26	12	210556	1%	Kreft
384244	ABO 6	92H032	2006DEC26	1	702936M	1%	Kreft
384245	ABO 7	92H032	2006DEC26	1	702937M	1%	Kreft
383387	JILL	92H032	2006DEC26	1	698761M	1%	Kreft
235557	HOT 4	92H032	2006DEC26	6	4774	2%	Pincombe

Total	76 claims/units	approx 1900 hectares
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All claims are in the New Westminster Mining Division and 100% equity is owned by Eagle Plains Resources Ltd., subject to the above-noted Net Smelter Royalties. Individual claims or claim units are

500 meters square; each claim unit covers 25 Hectares

The north-trending claim block is roughly 5 km in length by 4 km wide. The geographic centre of the block is 45° 15' north latitude and 121° 41' west longitude. All claims listed above are in good standing until the stated expiry date. There are, to the best knowledge of the writer, no liens or encumbrances on the claims. The title was researched using the Mineral Titles Division on-line database. There may be reclamation bonds still outstanding on the property paid by Kerr Addison Mines Ltd. and/or Bema International Resources Inc., (now Bema Gold Inc.), and possibly by Pacific Comox Resources Ltd.

#### THE COMPANY

Eagle Plains Resources Ltd ("Eagle Plains") is a junior mining exploration company based in Cranbrook, B.C., and listed on the TSX Venture Exchange (previously known as the CDNX) with symbol EPL. Eagle Plains was incorporated under the Business Corporations Act of the province of Alberta and was amalgamated with Miner River Resources Ltd. on May 12, 1999. The company is principally involved in mineral exploration activities and acquisition of mineral claims, under the supervision of Tim Termuende, P.Geo., an experienced geologist. Registered address for the company is 1603 - 10th Avenue S.W. Calgary, Alberta, T3C 0J7. The exploration office is located in Cranbrook B.C.

As of September 2001, the company had 20,517,684 shares outstanding (un-diluted). The Company has outstanding stock options to its directors, officers and employees of up to 1,463,418 common shares at a price of \$0.25 per share, and warrants outstanding of 1,000,000 common shares at \$0.75 per share until June, 2002. The company has approximately 25 mineral properties in B.C. and the Yukon, and has expended approximately \$3,284,424 (including flow-through funding) on their exploration. The properties range from grass-roots exploration properties to development properties with recognized mineral resources (Harrison Lake, Gayna and Blende).

The company's objective is to develop cash flow by securing interests in producing silver, gold and base metal deposits. In pursuit of this goal, the Company relies on in-house research to generate exploration targets. Property acquisition is followed by initial exploration and subsequent optioning of properties of merit to major companies for advanced exploration and development. Since 1997, Eagle Plains has identified mineralogic potential which resulted in agreements with major mining companies including Kennecott, Rio Algom, Billiton Metals, and Viceroy Exploration. These agreements resulted in over \$3,500,000 in exploration spending and \$300,000 in cash payments directly to the company. During the year 2001 the Company expended \$419,177 on the exploration and development of their mineral properties, of which \$268,967 was expended in B.C. and \$150,210 was expended in the Yukon and the North West Territories. These expenditures were funded through the previous year's issuance of shares pursuant to flow through share agreements and through Mining Exploration Tax Credits and other government incentives totaling \$104,873. Total shares outstanding at the end of 2001 were 20,517,684 (25,801,102 fully diluted).

In the East Kootenay region of British Columbia, Eagle Plains owns a 100% interest in numerous mineral properties with Sullivan-type base metal potential. In the Yukon, the Company continues to search for economic gold and base-metal reserves, and holds a large portfolio of properties.

In May, 1999, Eagle Plains Resources merged with Miner River Resources, a process that resulted in Eagle Plains becoming the continuing company with a 100% interest in all their jointly owned properties. The Company continues to assess and obtain new properties while proceeding to advance and develop its existing interests.

#### **HISTORY OF THE PROPERTY**

At the time of the Fraser River and Cariboo Gold Rush, thousands of prospectors and miners passed through what is now the town of Harrison Hot Springs, en route, by boat and trail, to Port Douglas at the north end of Harrison Lake. This led to the discovery of gold in small amounts in Lillooet River and may have led to the discovery of quartz veins such as those at Fire Lake and the Money Spinner prospect a short distance to the north.

It is not known who discovered the gold mineralization at Harrison Lake. In 1975, the Geo property, as it was then, was owned by George A. Macdonald of Port Coquitlam. The property was restaked as the RN claim.

From 1972 to 1983, intermittent surface and underground selective mining had produced 643 tonnes of ore, from which 30,443 grams (979 ounces) of gold was produced along with a small amount of copper. Recovered grade from the mining was thus 47.4 grams/tonne gold or 1.38 ounces/ton. Additional claims were staked in 1979

#### **Abo Oil Corp. 1982\_1984**

In 1982, Abo Oil Corporation was encouraged to take an option on the property by A+M Geological, (Don Allen and Doug MacQuarrie), who had obtained a lease and had been working on the property. The owners at that time were Robert Pincombe, of Langley B.C., and Bruce Williams of Quesnel B.C. Under the terms of the original option agreement, Abo was required to pay the vendors \$75,000 down, \$25,000 per year for the period 1986\_1991, and a final payment of \$575,000.

By August 1983, Abo Oil Corporation had expended \$308,853.79 in drilling 27 holes totaling 2,488 meters, surface and underground exploration and related costs. Soil sampling outlined a geochemical anomaly 600 meters long and up to 200 meters wide to the northeast of the underground workings, (Portal Zone). The drilling resulted in discovery of numerous gold-bearing quartz veins over an area roughly 300 x 100 meters. The best drill intersection was 22 meters grading 0.14 ounces per ton, (4.8 grams/metric tonne). Additional claims staked in 1983 were the Abo 1\_7 and FF claims.

A recommendation was made for an additional \$753,000, comprising \$308,000 in drilling and \$445,000 in underground bulk sampling. In 1984, Abo drilled an additional 7 holes totaling 753.7

meters.

Up to 1985, Abo had paid the vendors of the property \$140,000 in cash and issued 200,000 shares valued at \$175,000.

**Kerr Addison Mines Ltd. 1984\_1987**

Abo continued work on the property until November 1984,

**Kerr Addison Mines Ltd.**

In 1984, Kerr Addison Mines Ltd. signed an agreement for an option to purchase and joint\_venture the property from Abo Oil. Kerr Addison Mines Ltd. agreed to spend \$1.75 million on the Harrison gold property over 5 years to earn a 60% interest. In 1988, Kerr Addison Mines Ltd. sold its oil and gas assets and consolidated most of its mining assets with those of its subsidiary, Minnova Inc. (50.2% owned), and Minnova became operator of most exploration programs and joint\_ventures, and effectively, Kerr Addison withdrew from exploration completely.

**Bema International Resources Inc. 1987\_1992**

Bema International Resources Inc., (now Bema Gold Corp.) agreed with Kerr Addison Mines Ltd. in 1987 to expend \$750,000 in exploration funds to acquire 55% interest in Kerr's 60% interest in the property from Kerr Addison. Subsequently, Bema purchased Kerr Addison's remaining 25% equity for 700,000 shares of Bema (Then Bema International Resources Inc.), and an additional \$600,000 as cash or equivalent shares. Abo Resource Corp. then had 40% equity, but this was reduced to 25% when Abo decided not to contribute to future work programs.

Bema International Resources Ltd. acquired control of Abo Resource Corp in 1987 by exchanging 1 million shares for 2.5 million shares of Abo and purchasing an additional 600,000 units \$.80 per unit. (Each unit consisted of one share and one warrant to purchase an additional share at \$.90 for a period of one year). Bema had in 1995 in excess of 51% equity in Abo Resource Corp., which changed its name in June 1996 to Puma Minerals Corp.

**Pacific Comox Resources Ltd. 1992\_1993**

Pacific Comox Resources Ltd. had an option in 1992 to earn from 49% to 76 % interest in 235 claims (1000 acres) RN or "Harrison Lake gold property from owners Bema Gold Corp. and Abo Resources Corp. by expending \$5 million over 5 years in staged bi\_annual payments continuing to February 1997, and completing a positive feasibility study. Bema Resources Corp. retained the right to back in for 51% interest if gold reserves outlined in the feasibility study exceed 1 million troy ounces.

On February 24th 1992, Pacific Comox Resources Ltd. entered into an agreement with the original property vendors, later amended April 24th 1992 and July 9th 1992, to extend the time of payment of the final payment under the agreement of \$575,000.00 by two years, (to July 9th 1994). For the extension, additional benefits required were:

1. Payment of \$50,000.00 on closing
2. Issuance of 200,000 shares of Pacific Comox Resources Ltd.



**3. Payment of an additional \$90,000.00 in two payments by April 30, 1994**

The lump sum payment of \$575,000 was to be secured by a convertible debenture in that amount. The face amount was to be convertible into common shares of Pacific Comox Resources Ltd. at \$0.7666 per share at any time after September 30, 1994., with a forced conversion if the market for the shares exceeds \$1.50 for a period of 20 consecutive trading days.

Pacific Comox entered into a tentative agreement on December 1, 1992, (extended to January 13, 1993) with Alaskon Resources Ltd. to form a joint venture to explore the property, but Alaskon failed to secure financing and relinquished the option.

Pacific Comox Resources Ltd. drilled 2 core drill holes in 1993 but failed to complete the work schedule, to complete a feasibility study or to secure financing to complete the purchase of the property, and in 1996, the property was returned to the original vendors.

**Eagle Plains Resources Ltd.**

In late 2001 some of the claims at the Harrison Gold property lapsed and were re\_staked by Eagle Plains Resources Ltd. The company completed a purchase agreement with an arms-length individual whereby EPL may purchase a 100% interest in the Hot 4 mineral claims located 130km east of Vancouver, near Harrison Lake. The 6-unit (364 acre) property is contiguous with EPL's 100% owned claims containing the Abo (Harrison Gold) deposit, and completes the property package. Terms of the purchase agreement consist of a \$10,000 cash payment, 200,000 voting class common shares of Eagle Plains (both of which terms have been completed) and a 2% NSR reserved for the vendors (1% of which can be purchased by EPL for \$1,000,000).

**EXPLORATION EXPENDITURES**

Eagle Plains has expended \$113,811 in acquisition and exploration of the property (to March 31, 2002). This amount includes

- Claim staking
- Option or purchase payment
- Airborne Geophysical Survey
- Data acquisition and compilation

**THE 2001 EXPLORATION PROGRAM**

Fugro Airborne Surveys Corp. successfully completed a 215 line-km airborne geophysical survey over the Harrison Gold property which included magnetometer, and radiometric survey instrumentation. A number of anomalous areas were outlined, and will be targeted by future exploration. The cost of the survey was approximately \$46,500, or about \$200 per kilometer.

## REGIONAL GEOLOGY

Regional geology of the Harrison Lake area has been studied by Monger, (1986), and Journeay and Csontos, (1989), for the east side of Harrison Lake, and Arthur, (1986) on the west side. The Harrison Lake Fault or Shear Zone is a major right\_lateral strike\_slip fault that appears to have acted as a conduit for both thermal hot springs and hydrothermal fluids along its trend.

The following discussion is compiled primarily from Monger's work. The geological Terranes have been discussed by Gabrielse and Yorath, (1992). They break the area into a number of separate terranes which include, from east to west, the Methow, Bridge River, Cadwallader, Shuksan, Chilliwack and Harrison terranes, each lithologically and structurally distinct. The accompanying figure shows the relationships of these terranes in the Harrison lake area.

The Harrison Gold Property lies near the junction of Coast Plutonic Complex and the Cascade Fold Belt, which correspond roughly with the Insular and Intermontane Superterrane. The Cascade Fold Belt consists of a high grade metamorphic and granitic core flanked on the east and west by weakly metamorphosed folded and faulted sedimentary and volcanic sequences. The Mesozoic metamorphism and intrusion has welded together a number of terranes and stratigraphic/structural packages of rocks. A later period of structural movement and intrusion in the Mid-Tertiary time, (19-26 Million years) is associated with thirteen or more gold showings or deposits and a number of porphyry molybdenum deposits in a north to northwest trending belt extending from Washington into the Harrison Lake area and beyond.

To the east of Harrison Lake, the regional north to northwest\_trending fabric formed within these rocks in Cretaceous to earliest Tertiary time was offset 80 to 100 kilometres in the Eocene by north\_trending Fraser River\_straight Creek dextral wrench fault system (Monger, 1985).

Within the Harrison Lake area are five major lithostructural packages which, in order of increasing metamorphic grade are called: Harrison Lake, Slollicum, Cogburn and Settler packages (north of the Fraser), and the Chilliwack\_Cultus and Darrington packages (south of the Fraser), as shown in the accompanying figure.

The Harrison Fault, one of the major strike\_slip faults in the region that largely governs the regional grain of the adjacent rocks, extends for more than one hundred kilometres north to south from the Lillooet River well into Washington State. The fault, or more properly, shear zone, is a one to two kilometer wide fracture zone with a well developed cleavage which dips 50° to 70° to the east. The age of the fault appears to be Late Cretaceous and/or Early Tertiary and clearly post dates regional metamorphism and intrusion of the mid-Cretaceous Spuzzum batholith.

The Harrison Lake lithostructural package ( mainly outcropping on the west side of Harrison Lake) has

been extensively studied by A.J. Arthur (1986) as part of M.Sc. research at U.B.C. The Harrison Gold property lies within the Harrison Lake lithostructural package which comprises a stratigraphic succession of sedimentary and volcanic rocks which range from Middle Triassic to Early Cretaceous, and includes the Middle Triassic Camp Cove Formation, the early to mid\_Jurassic Harrison Lake Formation, and overlying Mysterious Creek Formation, Bilhook Creek Formation, Kent Formation, Peninsula Formation and the uppermost Late Cretaceous Brokenback Hill Formation.

This package of rocks is bounded on the east side by the Harrison Fault. The gold deposits are hosted by small igneous stocks within what is thought to be the **Brokenback Hill Formation**. The deposits lie to the west of the Harrison fault but the area is cut by a number of possible splay faults.

The **Chilliwack Group**, oldest known layered rocks (Pennsylvanian \_ Permian), and the overlying Cultus Formation (Late Triassic\_Early Jurassic) consist of pelite, carbonate, mafic to felsic flows and volcanoclastic rocks, (Monger, 1970, 1977) are mainly exposed south of the Fraser River but also extend north of the Fraser River near the southern extremity of Harrison Lake, underlying the southern portion of the Harrison Gold property. Grey crinoidal limestone containing mid\_Carboniferous conodonts form conspicuous cliffs in this area.

The **Slollicum** package of rocks includes rocks mapped as Chilliwack by Lowes (1972) east of Harrison Lake, and mainly north and east of the Harrison gold property. Monger (1986) has given the term "Slollicum" to these rocks, since there appears to be little similarity between the Chilliwack and these mainly schistose basic, intermediate and locally felsic flows and volcanoclastics. The age of the unit is not known although in general the package closely resembles the Upper Triassic Cadwallader Group.

The **Cogburn** package lies north and east of the Slollicum rocks forming a distinctive package of bedded chert, argillite, basic volcanics, ultramafics rocks, and minor marble. These rocks were originally included with the Chilliwack Group by Lowes (1972) but was extracted by Gabites (1985) as the Cogburn Group. The intensity of metamorphism of these rocks grades from greenschist in the south to amphibolite grade in the north. The age of the Cogburn Group is not known but Monger (1986) suggests that the range of lithologies is similar to that of the Permian to Jurassic Hozameen and Bridge River groups.

The **Settler Schist** structurally overlies the Cogburn package and is structurally interrelated with Late Cretaceous granodiorite of the Scuzzy and Spuzzum plutons. The Settler Schist (Lowes 1972; Pigage, 1973, et al) comprises pelitic and quartzofeldspathic schist, amphibolite, minor quartzite and ultramafic rocks. Rb\_Sr isochrons dated at  $214 \pm 32$  Ma and  $210 \pm 27$  Ma by Bartholomew (1979) and Gabites (1985) indicate either a Triassic\_Jurassic age of deposition of the Settler package or partial resetting of the ages of these rocks by Mesozoic metamorphism (Gabites, 1985).

The rocks of the above packages have been intruded by Cretaceous and Tertiary granodiorite and quartz diorite stocks and batholiths including the Chilliwack batholith, Hicks Lake Batholith and the Spuzzum batholith. The relationship between the igneous plutons and gold deposits in the area is investigated by Ray, (1991). The accompanying figure shows some of the gold deposits in the Harrison Lake belt.

### MINERAL DEPOSITS IN THE BELT

The Cascade Belt, comprising the range between Harrison Lake and Fraser River, and the west side of Harrison Lake adjacent to the Harrison Fault zone, is a strongly mineralized belt which includes:

- numerous molybdenum-copper- gold porphyries (Gem)
- massive sulphide prospects (Seneca, Zeus)
- gold-quartz veins (Harrison Gold)
- Copper-gold veins (Fire Mountain)
- Polymetallic quartz-carbonate veins
- alpine type peridotite bodies (on the east of the Harrison Fault) with copper, nickel and platinum.
- Small to large clay-silica-pyrite (pyrophyllite) zones without apparent mineralization

In addition, continuing thermal activity is indicated by the number of active hot-springs along the Harrison Fault zone and Lillooet River Valley.

Some of the more significant deposits are described briefly:

#### The Gem molybdenum porphyry deposit

This molybdenum property has been well-explored by Utah Mines Ltd. and Canamax Resources Ltd. Published geological resources are 30 million tons averaging 0.20% molybdenite. This deposit also has values in copper, tungsten and bismuth. Several other molybdenum showings or deposits in this belt known to the writer are the Pipe, Scuzzy, and Honeybun properties. Farther south and east, the Giant Copper breccia pipe has published resources of 26.76 million tonnes grading 0.38 g/t gold, 12.34 g/t silver and 0.65% copper.

#### The Cataract property

The Cataract property at the headwaters of Stein River, explored by the writer in 1981 and later by Chevron Minerals is a large porphyry copper-molybdenum deposit in a sub-volcanic setting with accessory gold and base-metal zones. At the north end of Harrison Lake the Cu-Moly molybdenite porphyry deposit occurs adjacent to Lillooet River, and numerous other porphyry copper-molybdenum properties occur farther north in the Pemberton area.

#### Giant Nickel :

The Giant Nickel mine, situated north-east of the Harrison Gold property, produced 4.7 million tons of ore from 26 separate ore-bodies from which 59 million pounds of nickel and 28 million pounds of

copper were recovered ( recovered grades of 0.627% Ni and 0.30% Cu). Reserves were depleted in 1974 and the ground is now held by Homestake Minerals. The deposits were in a zoned mafic to ultramafic complex. Platinum palladium values are occasionally present in wallrock

#### Giant Copper :

The Giant copper deposit situated southeast of Hope B.C., has been explored intermittently since the 1930's. The AM zone, a pipe shaped breccia body adjacent to a diorite stock, was explored by underground workings. Originally, from drill programs, resources were 3.35 million tonnes grading 1.17% copper, 0.51 g/t gold and 20.6 g/t silver. It now contains an estimated open\_pit resource of 26.76 million tonnes grading 0.38 g/t gold, 12.34 g/t silver and 0.65% copper

#### Seneca:

The "Seneca" volcanogenic massive sulphide deposit, owned by International Curator Resources Ltd. has been explored since about 1968. Major exploration programs were completed by Noranda, Cominco Explorations, Chevron Minerals Ltd., and Inmet Mining Ltd. In 1988, indicated mineral resources<sup>1</sup> were stated by International Curator, (Ann Rept 1988) to be 1,660,500 tons grading 0.024 opt gold, 1.20 opt silver, 3.57% zinc, and 0.63% copper, based on engineering studies by Wright Engineers. Further work by Metall has located several new mineralized zones, some of which have returned promising drill intersections.

#### Doctors Point

At Doctors Point on the west side of Harrison Lake, Rhyolite Resources completed 60 diamond drill holes totalling 4,570 meters, from which mineral resources of 450,000 tonnes grading 3.1 grams per tonne gold were calculated. Later the resource estimate was reduced to 113,600 tonnes ( 125,000 tons) grading 0.063 oz/ton. (Fahrni, 1984). The deposit is similar to the Harrison gold deposits in age and association with an intrusive stock.

#### Carolin

The Carolin Gold Mine situated north and east of Hope B.C. had reserves in 1982 (at start of production) of 1.5 million tonnes grading 4.8 grams/tonne gold at a cut\_off grade of 2.7 grams per tonne gold. Earlier high grade production was achieved from the Aurum, Pipestem and Emancipation mines. Limited sub\_economic production of 1,354 kg of gold, (43,500 oz) from 800,000 tonnes of ore occurred at the mine before it was shut down in 1984. In 1990, remaining reserves (now more properly called ?resources were estimated by Anglo\_Swiss Mining Corp. to be 898,000 tonnes with an average grade of 4.3 grams per tonne gold. Considerable additional work has now been done by Athabaska Resources Ltd. from 1992 to the present. Estimated ?fully diluted mineable reserve at the mine (now more properly called a mineral resource) is estimated to be 1.63 million tonnes grading 4.01 grams per tonne gold. In addition there is a resource of uncertain viability in the tailings pond, which contains 600 000

<sup>1</sup> Note. In accordance with CIM definitions of reserves and resources

tonnes grading 1.75 gram per tonne gold. In a separate zone to the north, the McMaster zone contains an open pit resource of 186 000 tonnes grading 1.89 gram per tonne gold and an underground resource of 240 000 tonnes at a diluted grade of 4.42 grams per tonne gold.

### **Cogburn Creek**

Initially explored for copper and nickel, the Cogburn creek ultramafic body was found to contain extremely pure serpentine and has now been examined as a source of magnesium.

A large number of additional gold prospects such as Providence, 5 mile Bay, Hades\_Brimstone, Quet, Fire Mountain and Mayflower/Dandy occur farther north along the valley of Harrison Lake and Lillooet River as described by G. Ray in a number of publications. Numerous other porphyry copper\_molybdenum, intrusion related silver and gold and polymetallic volcanogenic massive sulphide showings are known in this strongly mineralized Cascade Range.

### **GEOLOGY OF THE HARRISON GOLD PROPERTY**

The following summary account of the geology of the Harrison Gold property is amended from the Minfile Capsule Geology, (Geological Survey Branch, MEMPR):

#### **Regional Geology:**

The Harrison Lake shear zone is a right\_lateral transcurrent fault which splays northward into an imbricate fan of high\_angle brittle faults. In part it passes along, and parallel to, Harrison Lake. The Harrison Gold property is underlain by a stratigraphic succession of sedimentary and volcanic rocks of the Cretaceous Brokenback Hill Formation and Peninsula Formation (Fire Lake Group) bounded on the east by the major Harrison Lake shear zone. or fault, and intruded by various phases of the Tertiary granodiorite of the "Hicks Lake batholith". The Harrison fault separates Fire Lake Group rocks from Cretaceous and/or Tertiary, mainly greenschist facies, mafic to intermediate volcanics and phyllite of the "Stollicum Schist". The Harrison fault is a 1\_2 kilometre wide fracture zone with a well\_developed cleavage dipping 50\_70 degrees to the east, but with no marked linear fabric within it. Several possible fault splays cut across the Harrison Gold property.

#### **Stratigraphy:**

The Harrison Gold occurrence is underlain by sediments and volcanics of the Brokenback Hill Formation comprising green crystal tuff, volcanic conglomerate and tuffaceous sandstone in the lower part of the section and volcanic flows, pyroclastics, argillite and sandstone in the upper parts. On the west side of Harrison Lake, this sequence conformably overlies a coquina bed of the Peninsula Formation.

## Intrusive Rocks

The sediments and volcanics have been intruded by numerous quartz diorite stocks which are probably related to the "Hicks Lake batholith" (or Chilliwack Batholith). The age of one such stock, the Jenner stock, has been dated at 23\_25 Ma. A feldspar porphyry dyke also intrudes the package. Pelites and limestones of the Devonian to Permian Chilliwack Group are in fault contact with the Brokenback Hill Formation in the southern parts of the property.

The Jenner stock is a small irregular plug or apophysis of quartz diorite which has intruded sedimentary and volcanic rocks of the Brokenback Hill Formation. It is comprised of two main intrusive phases: a medium to coarse-grained hornblende\_biotite quartz diorite phase which occupies the central and upper portions of the stock, and a fine-grained biotite\_(hornblende) quartz diorite phase found mainly in the lower portions. Numerous thin, high angle felsic and less commonly, mafic dykes are present throughout the stock. Disseminated and evenly distributed mineralization within the Jenner stock consists of 1\_3 per cent pyrrhotite, minor pyrite and chalcopyrite, and traces of molybdenite. In its upper levels, the stock is roughly circular to elliptical (80\_110 metres in plan) becoming more elongated (60 by 150 metres) with depth. It plunges 80\_85 degrees to the east and its overall three dimensional shape can be described as pipe\_like. Portions of the stock, mainly along its footwall contact, are occupied by a contact breccia phase which is transitional from a breccia containing both quartz diorite and country rock fragments in a quartz diorite matrix, to one containing only country rock fragments. Several large xenoliths (40 by 20 by 5 metres) or roof pendants are also found within the stock.

## Mineralization

Gold mineralization occurs mainly as free visible flakes up to 2 millimetres in size (generally 0.2\_0.6 millimetres or less) within quartz veins (approaching a weak stockwork system). The mineralized quartz veins are confined to quartz diorite intrusive bodies (Jenner, Portal, Hill and Lake stocks), or their immediate periphery. Gold also occurs in association with open\_space sulphide\_fillings within a hydrothermally altered breccia pipe (Breccia zone).

## Gold deposits

The main deposit is the Jenner Stock zone. Gold-bearing vein systems within the Jenner stock are predominantly low\_angle structures. The quartz veins which contain gold mineralization are associated with gently dipping (15\_40 degrees) veins which form a conjugate set and bisectrix; minor sub\_vertical veins also contain gold. In addition to these low\_angle veins, the dominant features are large, low\_angle, west and east dipping compressive reverse faults which cut both country rocks and the stock. These faults have resulted in thrust development, shearing and localized vein offsets. The higher grade portions of the Jenner stock tend to be at its margins.

A northwest trending, possibly post\_mineralization fault, the Jenner fault, passes through the stock. Shearing and faulting is commonly associated with an assemblage of pyrite, carbonate and chlorite. Weak to locally strong propylitic alteration of the stock is ubiquitous and consists primarily of chlorite and carbonate.

The veins which contain the gold mineralization are comprised of a gangue of quartz with minor calcite, chlorite and sericite. The major sulphide mineral is pyrrhotite with minor to trace amounts of pyrite, chalcopyrite, molybdenite, scheelite, arsenopyrite, galena and sphalerite. Bismuth\_silver tellurides are present and have been observed as intergrowths with native gold grains. The amount of native gold present in a given vein does not appear to correlate directly with the presence of any sulphide nor with its relative concentration. The highest gold concentrations are found along the mineralized western contact (Footwall zone) of the Jenner stock. Strong sericitic alteration envelopes with widths up to several centimetres are commonly developed around mineralized quartz veins.

**The Portal stock** is located 300 metres southwest from the Jenner stock. It is separated into two distinct domains; the western portion is a roughly circular body with an average diameter of 140 metres and smooth or regular contacts. The eastern portion is dyke\_like, narrowing from approximately 100 metres in the west to 40\_50 metres near the eastern contact, with irregular or bulging contacts. The entire stock is plunging approximately 70 degrees to the east.

Gold\_bearing quartz vein attitudes (gold zones) appear to be oriented horizontally to sub\_horizontally within the Portal stock. Overall, the zones appear to be dipping 15\_20 degrees to the west and 5\_20 degrees to the south. One of these veins is seen at the portal; this discovery vein was mined by surface cuts and small underground stopes.

Drilling to date suggests that gold grades within the zones improve towards the intrusive contacts, particularly the northern contact. One drill intersection of a well mineralized zone in the Portal zone averaged 3.17 grams per tonne gold across 30 metres (Assessment Report 19584). The sericite in these veins from the Portal stock adit gives a potassium\_argon age of 24.5 Ma +/- 1 Ma (Fieldwork 1984).

Gold mineralization also appears to be associated with the northern contact or footwall of a felsic dyke. The dyke is a quartz\_flooded granite or diorite with intense associated chlorite\_sericitic\_biotite\_silica alteration along internal fractures and quartz veins, and 2\_10 per cent disseminated pyrrhotite.

**The Lake stock** is located 1650 metres south from the Jenner stock and is the largest and best exposed of the gold\_bearing diorite stocks. It is massive in texture with little variation in composition from margin to margin except for local variations in the size of amphibole and the amount of biotite. The stock locally contains up to 3 per cent finely disseminated pyrrhotite. Quartz veins are not common, and are found predominantly near the margins of the stock. The occasional vein contains visible gold



with grades up to 2.24 grams per tonne (Assessment Report 19584).

The Hill stock is located 700 metres south from the Lake stock. Gold-silver mineralization is associated with quartz +/- carbonate\_pyrrhotite\_pyrite, +/- molybdenite, +/- arsenopyrite veins. These veins pass into the sedimentary country rock but the amount of gold and strength of veining generally decreases substantially and finally dies out within a short distance of the host quartz diorite. The mineralized zone containing the veins weakens laterally outward, is relatively flat-lying and controlled by low angle veining similar to the Jenner\_Portal style mineralization. Grades range up to 23 grams per tonne gold and 57 grams per tonne silver across a 1 metre drill intersection (Assessment Report 20144).

The Breccia zone is a sulphide-bearing (pyrrhotite\_sphalerite\_chalcopyrite) breccia pipe which is strongly sericitized, chloritized and silicified, is spatially related to the Hill stock. It occurs on the west margin of the Hill stock. The breccia contains fragments of the surrounding country rocks as well as occasional fragments of quartz diorite. Fragments are mainly 5-10 centimetres in diameter with some rotation but no apparent milling or grinding. Sulphide mineralization occurs as open-space fillings. The zone has surface dimensions of 325 by 100 metres. A zone of 29 metres averaging 1.56 grams per tonne gold, 4.4 grams per tonne silver, 0.56 per cent zinc and 0.04 per cent copper, within which 7 metres averaging 3.56 grams per tonne gold, 9.3 grams per tonne silver, 1.2 per cent zinc and 0.049 per cent copper, occurs at the margins of the breccia pipe (Assessment Report 20144).

Recent drilling has indicated that the strength of both hydrothermal alteration and grade of gold-silver-zinc mineralization has weakened downdip and laterally outward from the aforementioned 29 metre zone of mineralization.

#### PREVIOUS GOLD PRODUCTION

Between 1972 and 1982 a small tonnage (643 tonnes) was mined from a shallowly-dipping quartz vein with pyrrhotite and visible (native) gold. This was mined from surface cuts and from the Portal stock adit, which was 50 metres long and included 4 raises up to 15 metres long (Assessment Report 20144).

This material contained 30.44 kilograms (886 troy ounces) recovered gold, and recovered grade was 47.4 grams/tonne or 1.38 oz/ton gold and 15.8 grams/tonne or 0.46 oz/t silver, with small amounts of copper. The writer assumes that the material was hand cobbled and sorted. It is not known whether this production was economic.

During 1987, a 1000 tonne bulk sample was procured from the Jenner stock underground workings on the 187 level.

#### UNDERGROUND WORKINGS

In addition to the short adit at the Portal zone, the underground workings completed by Kerr Addison

Mines Ltd. in 1987-88 included 180 meters of cross-cutting, 82 meters of drifting, and 72 meters of raising along three drill holes: 86\_39, 86\_46 and 86\_52 respectively. From this work, a 1100 tonne bulk sample was extracted. Cost of this work budgeted in 1987 was \$750,000, but actual final costs are not known to the writer.

## MINERAL RESOURCES

One detailed study seen by the writer, of mineral inventory was that done by George Norman, P.Geo., in April 1989 for drilling done to 1988. His estimates are summarized as follows:

Mineral Resources<sup>2</sup> as calculated by G.Norman, (for Bema International):

Portal Stock	342,275 tonnes	3.70 grams/tonnes	1,266,316 grams
Jenner Stock	1,801,134 tonnes	2.71 grams/tonne	4,876,632 grams
<b>Total</b>	<b>2,143,409 tonnes</b>	<b>2.87 grams/tonne</b>	<b>6,142,948 grams</b>
<b>or:</b>	<b>2,355.394 tons</b>	<b>0.084 opt</b>	<b>197,170 ounces.</b>

Norman's study is described in more detail on the following pages; the writer has chosen this resource estimate to review and re\_calculate, although other resource studies may exist in the company files:

### Mineral Resources \_ Jenner zone

(summarized from Norman, April, 1989)

In 1989, an estimate of geological resources at the Harrison Gold property was prepared by George Norman of Norman Geological Services Ltd. for Bema International Resources Inc. The estimate for both the Jenner Zone was based on a total of 2,920 metres of inclined diamond drilling in 21 surface holes and 2,754 metres of vertical and inclined diamond drilling in 23 underground holes. The drilling was completed during the period 1983 to 1988. Drill holes are variously oriented east-west, north-south and at several off\_sectional azimuths. According to Norman, drill hole information is relatively sparse in the north half of the stock (north of 9500 N) and little drilling was done below the 50 metre level (ASL).

The previously described gold zones established the basis from which a mineral reserve estimate for the Jenner Stock could be carried out. The mechanics of mineral reserve block construction and other reserve estimation procedures are outlined in point form below: Parameters of the tonnage/grade calculation were as follows, as summarized by Norman, (1989).

<sup>2</sup> The stated resource is believed to conform with the currently accepted CIM definition of "Indicated Resource"

1. The sectional method of mineral reserve estimation was employed because of the predominantly low\_angle structural characteristics of the mineralized vein systems and interpreted gold zones.
2. Gold histograms, which show natural assay "breaks" down a drill hole, were relied upon for determining the length over which an average assay would be calculated.
3. In general, for averaging purposes, the minimum drill intercept considered was 3 metres at a 1.0 g/t Au cut\_off. In some cases, where immediately adjacent drill hole information indicated continuity, intercepts of less than 3 metres averaging marginally less than 1 g/t Au were used to delineate gold zone boundaries, (e.g. 0.94 g/t Au).
4. Zones of internal waste consisting of 5 or more consecutive one metre sample intervals, each assaying less than 1.0 g/t Au, were not included in reserve blocks.
5. All mineralized intercepts, including those encountered in north\_south and off\_sectional drilling (the latter included JNUG 84\_29 to 84\_30 and 88\_118) were accounted for on east\_west mineral reserve block sections. This was done by projecting the midpoint of the mineralized intercept to the appropriate section. In some cases, in order to preserve geological integrity intercept midpoints were projected to certain sections even though their location may have been up to as much as 5 metres beyond the "window of influence" for that section.
6. Reserve blocks containing more than one assay intercept, projected or otherwise, were assigned a grade equal to the weighted average of all included intercepts.
7. Probable resource blocks were established by projecting block boundaries a distance of 15 metres away from the mid\_point of the drill intercept. Direction of projection was parallel to the inferred contacts of the interpreted mineralized zones.
8. Possible resource blocks were established by projecting block boundaries an additional 30 metres beyond the outer limit of probable block boundaries. The grade assigned was the same as that of the adjacent probable block.
9. Where adjacent sectional information indicated the likelihood that a given mineralized zone would extend to the margins of the stock, possible resource blocks, (with no assigned grade) were established beyond the limits of those defined under paragraph 3. Similarly, where adjacent sectional information demonstrated continuity of a gold zone into a area with no drill hole information, a possible resource block (again with no assigned grade) was established.
10. The bisectrix of the angle between adjacent drill holes on the same section formed resource block boundaries.

11. The length of sectional projection was one\_half the distance between adjacent sections, except for the southern and northernmost sections (9450 N and 9575 N respectively), the distance of projection was limited by the margin of the stock.

12. Xenoliths were assigned as waste unless indicated otherwise by drilling.

13. Since there was no east\_west sectional information to the north of 9500 N, it was necessary to construct projected reserve block sections based on north\_south and off sectional drill hole information. The method of projection of assay intercept midpoints was as in that described in point 4.

The accompanying tables, only slightly modified from Norman's original tables show the geological or mineral resource estimate<sup>3</sup>. Geological resources in all categories (probable, possible and possible with unallocated grade) as calculated by Norman total about 2.2 million tonnes grading 2.71 g/t Au. Most of the resources lie above the 50 metre level. These tables prepared by the writer for the Jenner Zone omit the AUn\_allocated resource category used by Norman, which was 408,255 tonnes at unstated grade.

#### Mineral Resources \_ Portal Zone

The total amount of drilling to 1989 on the Portal Stock was 6,978 metres (22,895 feet) in 50 drill holes. (A complete list of drill holes, locations and assay data is given in an Appendix. .

In 1983, when most of the drilling was done on the Portal Zone, the geometry of the Portal Stock was not well known, and diamond drilling, exploratory in nature, produced a seemingly random drilling pattern. This random aspect created numerous interpretational problems on cross\_sections and level plans through the stock. Additional diamond drilling by Bema during the fall of 1988 concentrated on the eastern portion of the stock (east of 11040 E) which had produced the best gold mineralization intercepts to date.

According to Norman, (1989), geological level plans and surface mapping showed that the stock could be divided into two distinct geological domains. The western portion of the stock is roughly circular, with an average diameter of 140 metres and fairly smooth or regular contacts. The eastern portion of the Portal Stock is dyke\_like, narrowing from approximately 100 metres in the west to 40 to 50 metres near the eastern contact, and has irregular contacts. East \_ west oriented vertical geological sections constructed by Bema geological personnel suggest the entire stock is plunging approximately 70° to the east

Grade categories used in the reserve calculation were: 1.00 to 1.99 g/t Au, 2.0 to 2.99 g/t Au, 3.00 \_

<sup>3</sup> The terminology originally used by Norman has been changed to reflect the regulatory requirements of National Policy 43-101.

5.99 g/t Au. and >6.0 g/t Au

The separate category of > 6.0 g/t Au was extracted by Norman from the > 3.00 g/t Au data to determine the high grade potential of the Portal Stock. Similar Probable and Possible categories were calculated, as for the Jenner Zone, with probable reserves defined by projection of a known drill intercept up to 15 metres outward and possible reserves defined by projection of the probable block boundaries an additional 30 metres. b The resource parameters were identical to those used in the Jenner study.

Norman calculated that approximately 342,000 tonnes of probable\_possible material averaging 3.7 g/t Au. were present at the Portal Zone. (This is equivalent to 40,684 ounces of gold).

Only categories of > 2.00 g/t Au were used. Within this zone, approximately 34,000 tonnes of probable\_possible resources grading 7.48 g/t Au is present. The Aglobal geologic resource, using all categories is approximately 600,000 tonnes, averaging 2.67 g/t Au. It is interesting to note that the overall average grade is very similar to the Jenner Stock, which averaged 2.71 g/t Au.

The gold zones within the Portal Stock are relatively narrow, (usually less than 10 metres) and more widely spaced than within the Jenner Stock, where sub\_horizontal zones merge to form the sub\_vertical "Footwall Zone"

#### Other Mineral Resource Studies

The Bema Gold 1988 Annual report lists "mineable reserves" of 2,800,000 tons of 0.1 oz/ton gold, with additional "inferred" reserves of 2,100,000 tons of the same grade. This totals 4.9 Million tons at 0.1 oz/ton gold or 4,459,000 tonnes grading 3.43 grams/tonne gold. This resource works out to 490,000 ounces "in the ground".

The Canadian Mines Handbook, 1988\_89 lists reserves as 2,400,000 tons averaging 0.11 oz/ton gold. Exploration in B.C. for 1990 lists reserves as 2.2 million tonnes grading 4.1 grams/tonne gold.

In a prospectus for Bema Gold Corporation dated March 15, 1991, reserves were stated as follows: "Results of the 1987 program directed by Kerr and funded by Bema, combined with previous drilling, has outlined approximately 1.5 million tons of estimated probable reserves grading 0.1 oz per ton gold and approximately 950,000 tons of estimated possible reserves grading 0.1 oz/ton gold".

Croome, (1987), based on plans and sections provided by Kerr Addison Mines Ltd., calculated "reasonably assured" and "drill\_indicated" geological reserves as follows:

Geological Reserves	Selected mining area	2,407,650 tonnes
Mineable Reserves	Selected Mining Area	2,178,350 tonnes
Total Geological Reserves	Total Mining area	3,929,940
	tonnes	
Mineable Reserves	Total Mining Area	3,550,660 tonnes.

Croome assigned no definite grade to these reserves, recognizing that additional sampling was necessary to determine the grade accurately.

It can be reasonably assumed that additional reserves may be discovered at both Jenner and Portal deposits. Norman (1989) states: "Portions of the Jenner Stock have not been fully exploited (explored\_BP), particularly in the north half of the stock, and at depth below the 50 meter level. There remains some potential to expand the current reserve figure by additional surface and/or underground diamond drilling. Similarly, Norman states that there are areas within or near the Portal Stock that remain to be explored in more detail.

#### MINERAL RESOURCE GRADE

The presence of particulate gold in quartz veins in the mineralized zones has led to a strong "nugget" effect, (a standard engineering term meaning "erratic distribution of gold grades, generally caused by particulate native gold. This has led to a significant variability in estimates of "true" gold grades for the deposits.

A great deal of work has been done to determine correct gold grades at the deposits. It is beyond the scope of this study to describe this work in detail. The overall grade, estimated from drill intersections by Norman in 1988 was 3.0 grams/tonne calculated from all drill holes piercing the footwall zone. It was recognized that gold grains visible in the core added an element of uncertainty to the definition of actual gold grades because of "nugget effect". (Some drill intersections of up to 1 meter of 69 g/t or 2.01 oz/ton were recorded). Comparison of drill\_holes with underground exploration raises in the same area gave the following results:

Raise	Length	Average (Raise)	Average (drillhole)
9500N	24.2 m	4.095 g/t	2.309 g/t
9475N	24.3 m	4.054 g/t	3.788 g/t
9450N	20.8 m	2.385 g/t	3.145 g/t

The weighted average grade from these raises is 3.56 g/t. The results from raising vary from -24.2% (lower) to +77.3% (higher) than the corresponding drill holes, averaging 22% higher. Norman also compared the grades from raises with the grades from corresponding reserve blocks, and found an

"upgrade" of 48.7% was suggested.

The average of all underground samples was 3.2 g/t to 4.1 g/t. Processing the material through the pilot mill gave a grade estimation (calculated back from recoveries) as 2.2 g/t to 2.5 g/t. However, it was recognized by Kerr Addison that the pilot mill had recovery problems in the gravity circuit.

Norman states: "Kerr (Addison Mines Ltd.) concluded from the 1987 sampling program that the assay average computed from the extensive underground sampling program was the most accurate as compared to drill\_assays (3.0 g/t calculated from all holes piercing the footwall zone) and the pilot mill (2.2 \_ 2.5 g/t).

Additional testing was done on assay techniques: Metallic assaying, (separating out grains of metallic gold on screens, assaying this coarse fraction separately, and recombining the assays for both fine and coarse fractions), resulted in a 4% higher grade of gold in tested samples.

#### Laboratory Assay Checks:

Comparisons of 30 selected samples from one drill\_hole by Chemex Labs., using assays on 2 "assay\_ton" and 1 "assay ton" gave such variable results that Chemex declined to estimate a mean and variation for the samples. However, splits from these samples were tested by cyanidation leaching by Bacon Donaldson, and it was found that the cyanide leach average (3.89 g/t gold) was comparable to the average of the above 9 fire assays, (3.88 g/t).

Therefore, the averaging of a number of duplicate assays or a number of separate intervals, may provide a reliable estimation of true gold grades for the deposit, but Bacon Donaldson suggested that in the future, a cyanide leach assaying technique be done systematically to provide a reliable and cost\_effective estimation of grade.

From all work done to date, in the writer's opinion, the best estimate of the actual grade of the deposits is likely the results from underground sampling. It can be safely assumed by a prudent geologist or engineer that the material mined from underground will have a higher grade, (by some as yet unknown factor) than the grades obtained by the volumetrically smaller drill core assays<sup>4</sup>.

#### METALLURGICAL TESTS

Hawthorne's report on the pilot plant operation stated that approximately 1,000 tonnes of "low\_grade" material was mined and processed through a gravity/flotation pilot mill built by Coastech Research Inc., and operated by Coastech and Kerr Addison Mines Ltd. personnel. Nine batches of more or less 100

<sup>4</sup> Uncertainty concerning the grade of the deposit should not be construed as uncertainty concerning the reliability of the resource estimate, which was done by qualified and experienced personnel.

tonnes were processed separately, totaling 1052 tonnes. Average sampled grade was 2.40 g/t gold, and back calculated assay was 2.18 g/t gold.

Although the plant did not operate at the stated capacity, and did not work as well as hoped or expected, nevertheless, it provided an acceptable concentrate. Average weighted grade of the "tailing" was 0.477 g/t gold.

The gravity circuit recovered 2.01 tonnes of concentrate with a grade of 327 g/t gold for a recovery of 31.44% of the gold. The flotation circuit recovered 20.60 tonnes of concentrate with a grade of 49.9 g/t gold for a recovery of 49.16% of the gold. Combined recovery was then 80.61%, and 1685.29 grams of gold were obtained (54 ounces) (Dujardin 1988).

Dujardin further states:

*"In summary then, from 921 tonnes averaging 2.39 g/tonne gold (0.066 oz/ton), we recovered 1685 grams (54 oz) of gold in concentrates weighing 22.6 tonnes and assaying 74.5 g/tonne (2.16 oz/ton) Total recovery of gold was 80.6% but varied from 89.4% to 56.9%. As noted in the interim report under "Test Milling Results" the test milling part of the program did not live up to initial expectations and in the writers opinion this is reflected in the variable recoveries from sample to sample. One of the problems encountered in using a mobile plant of more or less fixed configuration for a small tonnage is that major operational problems cannot be solved by major modifications on site. With this in mind, the recoveries and concentrate grades can be viewed as most encouraging".*

#### CYANIDE LEACH TESTING

Dujardin summarizes the Cyanidation tests done by W.G. Bacon as follows:

*"In three tests, elevated cyanide levels of 2 grams/litre resulted in reasonable gold extraction in the 95% range in 24 hours at the expense of cyanide consumption. ....The purpose of these tests was to demonstrate that sulphide concentrates could be efficiently cyanided off\_site in a closed system to produce a high grade gold product. In so doing, the immediate environmental concerns regarding cyanide use near Harrison Lake would be removed".*

#### PRELIMINARY MINING STUDY

As noted previously, N.C. Croome, P.Eng. of L.J.Manning and Associates completed an engineering study of the mining potential at the Harrison Gold property, in consultation with G. Hawthorne, P.Eng, Mineral Processing Engineer. Capital cost estimates for mine and mill construction and ancillaries was in the order of \$25 million. Estimated operating costs for Sub\_Level caving mining technique, were as follows:



Category	\$ Per Tonne (Can.)
Mining	\$11.92
Milling	7.67
Administration	2.13
<u>Contingency (15%)</u>	<u>3.26</u>
TOTAL COST	\$24.98

Costs estimated for Block\_Caving were approximately the same. The mining and milling plan assumes an annual processing rate of 350,000 metric tonnes per year (1,000 tonnes/day), with an annual production of 927.5 kg gold per year (29,800 ounces) in gravity and flotation concentrates, from which cyanidation would recover 95% of the gold. The report concluded: "At this preliminary stage, it is our opinion that the operation of a mine and concentrator, as proposed, is technically feasible.

It should be emphasized that this conceptual mine/plant design was not a feasibility study, and the work done by L.J.Manning and Associates, although done according to directions had the following drawbacks:

1. No overall study was made of the geologic resource tonnage or grade.
2. No allowance for mine dilution was made.
3. No cash flow or profitability analysis was done and
4. Economic feasibility was not implied by the opinion of technical feasibility. (ie, the study was not a feasibility study, but only a mathematical calculation serving as a scoping study.

Nevertheless, the recovered grade used by Croome in the mine/mill model works out to 2.6 grams per tonne gold, for a net recovered value (prior to cyanidation and smelting) of \$32/tonne, versus a cost of roughly \$25/tonne. This recovered grade equates with a head grade of 2.94 grams/tonne gold. Any upgrade of the actual gold grade above this hypothetical figure would give a larger margin for operating profit.

Capital cost estimates for the mining project were between \$21 million and \$23 million, depending on the mining method used.

#### PRESENT DAY ECONOMICS

At present, gold prices are approximately \$325 US/oz and Exchange rate is approximately 0.65 US\$ per Can\$. The 1988 studies considered costs of \$25 Can per tonne, recovered grades (2.6 g/t or 0.76 opt), a gold price of \$290 US per ounce, and an exchange rate of 0.70 US\$ per Can\$. As the gold economics have improved since that time, a new Scoping Study is warranted.

## OTHER ZONES OF EXPLORATION INTEREST

Several other mineralized zones have been explored on the property but no geological reserves have been calculated for these, although significant drill intersections have been obtained:

**Bluff Stock** Although the overall potential of the Bluff and Bear Stocks are judged by Norman to be low, he indicates that an area within the northeast margin of the Bluff Stock has anomalous geology, soil and rock geochemistry, and needs to be explored in more detail.

**Bear Stock** An area within the Bear Stock explored by Bema in 1988 revealed an area with rusty weathering, quartz veining, and anomalous gold up to 930 ppb.

**Hill Stock** Five drill holes were completed in 1988; all had gold-bearing zones. The best intersections were from 156\_164 meters in Hole 88\_130 which contained 8.7 grams/tonne gold and 14.2 g/t silver, and from 155\_171 meters in the same hole which contained 4.9 g/t gold and 8.2 g/t silver, or 155\_182 m ( 27 m. ) containing 3.54 g/t gold and 6.3 g/t silver. Additional drilling of 3 holes was done in 1990. Two veins one meter wide each intersected in hole HI 90\_145 assayed 23 g/t gold and 4.56 g/t gold respectively. A "Jenner" style zone from 121\_158 meters (37 M WIDE) averages 1.0 g/t gold, with shorter sections up to 2.75 g/t gold over 5 meters. Other similar zones were encountered in the 2 other holes.

**Lake Stock** Outcrop samples from the margin of the stock contained up to 9.2 g/t gold in grab samples. In drilling, 8 holes returned sporadic drill-intersections with up to 2.24 g/t gold, although many other geochemically anomalous sections are present.

Both the Hill and Breccia zones were judged by Norman to have multi-million tonne potential with grades in excess of 3 grams/tonne gold.

**Breccia Zone** A conspicuous breccia zone mapped in the southwest part of the south grid has an associated gold geochemical anomaly down\_slope. Shape of the breccia as deduced from drilling is like a breccia pipe. Two drill holes were completed in 1988. Although surface samples were negative, a significant intersection from 109\_138 meters (29 meters) assayed 1.56 g/t gold and 4.4 g/t silver, (or from 127\_138 meters in hole BX\_88\_127 contained 2.3 g/t gold). Near massive sulphide over 3 meters in the second hole contained 0.5 g/t gold and 7.7 g/t silver.

Additional drilling in 1990 returned 32 m of 0.6 g/t Au and 2.41 g/t silver and a lower zone of 206\_242 m (36 meters) of 0.38 g/t gold and 2.6 g/t silver in hole BX 90\_141. An adjacent hole 40 m distant contained weaker gold values overall but 4 meters of semi\_massive to massive sulphides with copper, zinc and gold values of interest in limey beds, confirming the skarn model. Another drill\_hole to the north intersected the breccia, and within this, a massive pyrrhotite vein contained 1 meter of 21.4 g/t or 2 m of 14 g/t gold.

Clearly potential for an economic gold deposit exists at this zone; much additional drilling may be required to find such a zone.

**Other Areas** Additional stocks occur on the property. Two of these, named the Slide and Cliff stocks remain to be mapped. In addition, calc\_silicate hornfels with actinolite, chlorite, magnetite and garnet suggests that skarns may occur. Since many gold bearing skarns exist in other parts of BC and elsewhere in the world, this type of target should not be ignored.

Geochemical sampling in the south grid area outlined 26 gold anomalies that deserve to be examined in more detail. In addition, 6 rock geochemical anomalies were also found, with values up to 16.59 grams/tonne gold. The two strongest anomalies were drill\_tested, but others remain to be followed up.

#### TOTAL EXPLORATION EXPENDITURES

Total expenditures on the Harrison Gold property by Abo Resource Corp, Bema Gold Corp. and Kerr Addison Mines Ltd. are reported (Northern Miner March 9, 1992) to be in excess of \$7 Million. This figure includes diamond drilling of 147 holes, underground development, bulk sampling and test milling, metallurgical studies, geological mapping, geochemical and geophysical surveys, road\_building and drill\_pad preparation, and legal surveys and map preparation. The above figure may also include amounts for option payments, share allocations, office overhead and administration costs and possibly reclamation bonds.

An independent check of this figure by the writer, from public files in the B.C. Securities Commission office, indicates that Bema Gold estimated in 1991 that "To date, total expenditures of approximately \$4 Million have been spent by Bema, Abo and Kerr on the property". There was no listing of amounts or categories that were included in this figure. In addition, Pacific Comox expended from 1992 to 1995 approximately \$73,600. (D. Macquarie personal communication).

A table showing the immediately verifiable expenditures is given in an appendix. This table may be incomplete, and documents mainly amounts filed for claim maintenance. It should be noted that any records of expenditures examined by the writer did not include any amounts expended under Flow\_Through tax schemes, for which records are not immediately available. In addition, because claim

maintenance can be filed up to 10 years in advance, companies will not always file the total amount of exploration expenditures for assessment.

### **SURFACE RIGHTS**

Surface rights over part of the Harrison Gold property are owned by Victor Swiderski of Abbotsford, B.C. In the past, companies have obtained an agreement with Swiderski granting surface access to the property. A number of houses have been built in a small residential area near the lake, a short distance downhill from the Portal Zone. These are situated on lots 127, 1813, and 1835. At least one temporary water lease is in effect on Jenner Creek, and a number of water lines, (illegal or otherwise) were seen extending to small creeks near the Lower Portal.

### **ENVIRONMENTAL ASPECTS**

The property lies close to the recreational municipality of Harrison Hot Springs, and a portion of the claims surround a Provincial Park. Several preliminary environmental studies have been done by Norecol Consultants Ltd. A single acid generation test indicated acid generation would not be a problem.

In the past, both Bema Gold and Pacific Comox Resources Ltd. investigated the possibility of setting up a mill well away from the property on less sensitive land, south of the deposit. Considerable additional studies must be done prior to submittal for the governmental review process.

### **CONCLUSIONS**

The Harrison gold property has been explored by 149 drill holes totaling approximately 16,500 meters, (54,000 feet), resulting in the determination of geological resources of at least 3.5 million tonnes grading 3.2 to 4.1 grams per tonne, (or 360,000 to 461,000 ounces in situ) in two deposits, the Jenner deposit and the smaller Portal deposit. The gold is contained in mineralogically simple quartz stockworks from which acceptable gravity and flotation concentrates can be obtained. Approximately \$4.7 million has been expended by a number of major and junior mining exploration companies, and there is a considerable amount of geological, geochemical and geophysical data available for the project. A number of other exploration targets exist with a reasonable chance of discovering additional economic mineralization, either in stockworks, veins and/or skarn deposits.

The writer concludes that the Harrison Gold property is a property of merit, and that additional exploration is warranted, with the goal of defining and upgrading the known resource.

### **RECOMMENDATIONS**

Although it is not within the scope of this report to issue recommendations or to put forward an exploration budget, the following general recommendations can be made.

- There is a substantial amount of exploration data that has been generated for the project by Kerr Addision Mines Ltd. and Bema International Resources Inc. Eagle Plains has now acquired most of this data and is in the process of converting the data to more useful formats.
- the drill intercepts need to be reviewed and re-calculated to provide assurance of mineralized widths and grades, as the 1983\_84 drill assays are in oz/ton whereas many other assay programs used grams/tonne \_ all data needs to be converted in a systematic fashion.
- Presentation maps and must be generated from the material at hand, and geology should be reinterpreted with respect to drill intercepts. The Geolog system has been superseded by more modern geo\_statistical programs. The data compilation program is essential prior to any new geological resource study of tonnages and grades, from which pre\_feasibility or mining scoping studies will be derived.
- The primary necessity for further exploration will be the upgrading of "Inferred Mineral Resources" to Indicated Resources or Proven Reserves. This can be done by detailed drilling of fences of drill holes across the favorable intrusive hosts.
- Drilling should be done by large diameter coring or reverse circulation methods. Most geologists will prefer coring at least with HQ size core barrels. Where possible, the optimum orientation of drill holes should be determined from past drilling, a drill patterns prepared on a grid basis, except where exploratory holes are required
- Drill\_ spacing of holes should be in the order of 20\_25 meters.
- Modern geophysical methods, particularly IP, combined with re\_analysis of geochemical surveys from the past, may be suitable for definition of additional zones of interest.
- During or subsequent to the definition drilling, detailed cost estimates for pre\_feasibility can be compiled.
- As always, environmental and social aspects of possible production from the area have to be addressed. Consultation with the local native band or bands is required to avoid acrimony or delays.
- The possibility of an alternate road\_access route or underground access should be examined
- Strategic liaisons made with local business groups and native bands in the area prior to any

major exploration program.

- The roads will likely have to be repaired and new drill pads constructed
- The core logging building needs to be upgraded and repaired

It is expected that an exploration budget adequate to cover these recommendations would be in the order of \$500,000; this is subject to adequate funding. A tentative exploration budget is presented on the following page, but detailed costing should be done prior to the implementation of any program

#### SUGGESTED EXPLORATION PROGRAM

The following tentative budget has been prepared outlining an initial exploration program.

PHASE 1 PROGRAM DESCRIPTION	COST CANADIAN \$
Data Compilation, Drafting, Copying,	\$25,000
Re-examination of Drill Core	\$5,000
Check surveying	\$15,000
Road repairs, drillsite prep.	\$10,000
Geological Supervision	\$20,000
Vehicles, Fuel, Food and Lodging, telephone, fax, computer	\$30,000
Confirmatory Drilling, 2000 meters x \$120/m	\$240,000
Assays, 2000 m x \$15/m	\$30,000
Reports	\$15,000
Reclamation bonding	\$20,000
Legal/Administration	\$15,000
SUBTOTAL	\$425,000
GST @ 7%	\$30,000
Contingency @ 10%	\$45,000
TOTAL COST PHASE I	\$500,000

respectfully submitted

**BJ.PRICE GEOLOGICAL CONSULTANTS INC.**

per:-----

**Barry J. Price, M.Sc., P.Geo**

**Consulting Geologist,**

**May 20, 2002**

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# **OPINION OF VALUE**

## **HARRISON LAKE GOLD PROPERTY**

Harrison Lake, B.C., New Westminster M.D.

Prepared for

**Eagle Plains Resources Ltd.**

1040 – 999 West Hastings St.,  
Vancouver B.C., V6C 2W2

by

**B.J. Price Geological Consultants Inc.**

Suite 1028 – 470 Granville Street,  
Vancouver B.C.

V6C 1G8

Tel: 682-4488 Fax: 682-8728

**Amended and Updated May 20, 2002**

EaglePlainsHarrison2002WP.wpd

**OPINION OF VALUE**  
**HARRISON LAKE GOLD PROPERTY**  
Harrison Lake, B.C., New Westminster M.D.

Eagle Plains Resources Ltd.  
1040 \_ 999 West Hastings St., Vancouver B.C., V6C 2W2

## INTRODUCTION

In 1998, writer was asked to give an opinion on the value of the property for the purpose of validating the pay out of monies owing to the underlying property vendors. This report is the 1998 valuation updated for Eagle Plains resources Ltd. Since the 1998 valuation little has changed. The gold price has improved, and the current owners have applied assessment work which keeps the claims in good standing until 2006

For valuation of the Harrison Gold property I have:

- Reviewed Summary Reports and Assessment Reports prepared by A+M Exploration Ltd., Abo Resources Ltd., Kerr Addison Mines Ltd., and Bema International Resources Inc., and Pacific Comox Resources Ltd., and their consultants, prepared from 1983\_1993.
- Reviewed drill intercepts for many, but not all the drill holes. I have re\_calculated intercepts for the first 42 drill holes as a check on past calculations.
- Reviewed and Re\_calculated the block tonnage and grades as studied by G. Norman, B.Sc. in 1988\_89
- Reviewed the mining plan prepared by N.C. Croome for Kerr Addison Mines Ltd. and re\_calculated a number of Net Present Values, based on Croome's work.
- Talked with Douglas MacQuarrie and Marvin Mitchell, P.Eng., who worked at the property in 1992\_93.
- Checked claim title on the on\_line service of the Mineral titles branch.
- Compared purchase prices of a number of gold properties in the past 3 years.
- Compared price of purchased mineral acreage for a variety of deposits.

- Reviewed various methods of valuation of non-producing mining prospects as outlined by Glanville, Kilburn, Lawrence, Roscoe, Tingley etc.

#### FAIR MARKET VALUE

A reasonable definition of market value might be that used by Mason et.al., ("Condemnation valuation: the taking of mineral-bearing lands", Mining Engineering, November , 1989, pp.1096\_1099). This definition has been paraphrased by the writer as follows: "The highest estimated monetary price the property will bring if exposed to the market by a prudent seller who desires, but is not obligated, to sell, and is at liberty to fix the time and conditions of sale to a prudent buyer who is willing, but not obliged, to buy".

An alternate definition by Glanville (1990) is: "The highest price, expressed in money, obtainable in an open and unrestricted market, between knowledgeable, prudent, and willing parties, who are fully informed, and not under compulsion to contract".

METHODS OF VALUATION

Several methods of placing a value on a mining property have been used by geologists and engineers. A listing of these methods by R. Glanville, B.A.Sc.,P.Eng.,MBA.,CGA., includes:

1. Staking Costs (minimum value).
2. Premium or discount on expenditures to date.
3. Book Value from Financial Statements.
4. Statistic or probabilistic methods
5. Option Terms.
6. Market capitalization of a company.
7. Value of comparable properties.
8. Historical costs plus budgeted expenditures for the next exploration program. These may
9. (arbitrarily) be assigned a premium or discount based on results or stage of exploration. This method could also be termed the "Value Added" method.
10. Gross contained metal less a discount factor.
11. Value per ton of ore in the ground.
12. Discounted Cash Flow \_ Net present Value/Internal Rate of Return.
13. Adjusted Discounted Cash Flow method.
14. Price/Earnings Multiple.
15. Payback Period.

16. Replacement Value of Mine/Mill or other Infrastructure.
17. Dollars per ounce of Annual Gold Production.
18. Dollars per ounce of gold reserves.
19. 18. Options pricing models.
20. Assigning a staking cost per claim (unit) and multiplying this value by factors for geology, location, grade and anomalies.
21. Dollars per unit area of favourable ground.

The writer has examined the "value" of the property using a variety of these methods as follows:

#### A Staking Costs

The property has advanced beyond the grass\_roots level, and the method of staking costs is not particularly relevant. The cost of staking the property at present would be in the order of \$100/unit or \$8300, clearly well below the value of the property

#### B. Premium or discount on expenditures to date:

As stated previously, it has been estimated that Abo Resources Corp., Bema Gold Corp. and Kerr Addison Mines have expended from \$4 million to \$7 million on the subject property. The latter figure may include option payments and share allocations. The writer examined a large number of internal company reports, prepared by geological and supervisory personnel of Kerr Addison Mines and Bema International Resources Inc., (now Bema Gold Inc.) from which the following expenditure data was gleaned. The expenditures verified by the writer are over \$3 Million (Canadian \$). However, the cost items in documents seen by the writer are for amounts recorded for claim maintenance only and do not include all expenditures, particularly those amounts spent under flow\_through tax arrangements, internal costs such as legal, accounting and overhead.

Generally the expenditures are incremented by the amounts budgeted for future expenditures, and are discounted for programs which did not result in favourable results.



Although the 1990 reports from Bema, (the latest seen by the writer) indicate that the company contemplated spending up to an additional \$1 million, these funds were never expended. Bema became more involved in production from heap\_leach gold operations in Idaho, and exploration of world\_class copper\_gold porphyries in Chile. The property was farmed out to Pacific Comox Resources Ltd., who were not successful in raising the necessary financing to complete purchase of their equity. Later, after Comox returned the property to Bema, Bema returned the property to the original vendors. Although this should not be viewed as a completely negative action; the result was a 5 year delay in progress on the property. For this reason, the proposed \$1 million budget is discounted completely, and the value assigned by the writer based on expenditures is set at the \$3 million (minimum) expended to date.

The writer suggests that valuation of the property using this method would assign a value of at least \$5 million to the property.

#### C. Option terms

##### Abo Resources Option:

The writer has not reviewed the original option agreement between the original vendors and Abo Resources, but it has been briefly summarized in an Abo Resource Corp annual report and is described in the Kerr Addision/Abo Resources option\_joint venture agreement.

The option required payment of a total of \$700,000 Canadian, including payments of \$25,000 per year between 1986 and 1991, with a final payment of \$575,000. One or more payments were also required to amend and defer some of the payments, Up to 1991, Abo had paid, in cash and shares \$315,000. Presumably the end price or final option payment was the \$575,000 payment which Pacific Comox wishes to make at present. The combined payments in 1986 were as follows"

Value of cash and shares paid	\$315,000
Cash owing to 1991	\$150,000
Final payment	\$575,000
<hr/>	
Total	\$1,040,000

From the above, and using this method, the value assigned to the property by Abo in 1986 was at least \$1.04 million.

## OPINION OF VALUE

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### Kerr Addison/Abo Option and Joint Venture:

The Kerr Addison option from Abo Resource Corp. in 1984, involved Kerr Addison earning 60% interest in the property for expenditures of \$1.75 million. Because this expenditure was made, by 1988, it can be assumed that Kerr Addison assigned a value of at least \$2.90 Million to the property at that time.

### Bema International Resources Inc Option.

Bema, (later Bema Gold Corp.), farmed into the above option in 1987. Bema could spend \$750,000 in exploration funds to acquire 55% interest in Kerr's 60% interest in the property from Kerr Addison.

Thus for \$750,000, Bema was acquiring 33 % interest. This indicates that at that time, Bema felt that the value of the property was in excess of \$2.27 Million. (It should be noted that generally a company is willing to pay in excess of pro\_rata costs to acquire 100% equity in a property; for this reason the value assigned above represents a minimum value).

Subsequently, Bema purchased Kerr Addison's remaining 25% equity in the Harrison property for 700,000 shares of Bema, and an additional \$600,000 as cash or equivalent shares. The value of 25% of the property was, by this arrangement, at least as follows:

700,000 shares of Bema,	\$1.49	\$1,043,000
Cash payment		\$600,000

=====

Total value		\$1,643,000
-------------	--	-------------

This sets a value of at least \$6,572,000 for 100% of the property at that time. Bema must have thought that the property was of considerable merit at that time, because they made an arrangement to purchase controlling interest in Abo Resources Corp., and continued to increase their interest at later dates.

### Pacific Comox option:

In 1992, Pacific Comox Resources Inc. arranged an option to acquire up to 76 percent interest in the property. The financial requirements were as follows:

To Bema Gold Corp.:	Work required	\$5,000,000
To Underlying vendors:	Shares allocated, 100,000	\$ 32,000

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Cash Payments	\$ 90,000
Final Payment	\$ 575,000
<hr/>	
Total	\$5,697,000

Pacific Comox obviously set a value in 1993 in excess of this figure, (at least \$7,496,000) for 100% of the property.

#### D. Gross Contained Metal Less A Discount Factor

If the various estimates of resource tonnage and grade are calculated to give a figure, or range of figures for ounces of contained gold, this number will range from 197,000 to 490,000 ounces. Obviously the "Gross Metal Value" of this in\_situ resource at today's prices would be far in excess of that which could reasonably be recovered. The number therefore must be discounted for various factors, including dilution, mining, milling and smelting losses, cost of recoveries, administration, overhead environmental costs, reclamation costs etc. Positive factors might be recoveries of silver or other by product metals, reduction of costs by grants or other economic development assistance, profits from metal hedging etc. However, to be simplistic, assuming gold price of \$300 US, if the resource were discounted to 5% of its Gross Metal Value, that assigned "value" would range from Can \$4,221,000 (assuming 197,000 ounces) and Can \$10,500,000 (assuming 490,000 ounces).

#### E. Value Per Ounce Of Gold Reserves Or Resources

As shown in the Appendix, the number of property purchases for publicly\_listed companies in the United States and Canada has been monitored and tabulated by various groups over the years for comparative purposes. Some recent examples illustrate a broad range anywhere from \$0.17 to \$736 per ounce of gold reserves. The lower number probably relates to purchase of a relatively "grass\_roots" exploration property or of a small resource with some potential for incrementing resources by successful exploration, and the larger figures may represent purchase of a producing mining company with a portfolio of properties, some of which may be deemed to have significant possibilities for future production.

Mining Business Digest calculates that the average cost for gold reserves at the exploration stage ( in 1995) is up to about US \$10/ounce of gold. The cost of gold reserves for development stage projects are more variable, ranging from \$5 to \$63 per ounce. The cost of acquisition for producing properties ranged from \$13 (La Libertad, Nicaragua) to \$146 per ounce (Lac Minerals).

Independent of the afore\_mentioned calculation, the writer tabulated a number of property purchase transactions from 1995\_1998, as shown in the accompanying table. Confirming the Mining Business Digest, the grassroots projects and small or low\_grade resources were valued at \$0.51 up to \$13.68 per ounce of gold in the ground. More advanced projects, but with generally less than 1 million contained ounces, ranged in cost from \$15 to \$30 per ounce. Advanced projects including producing mines, large resources (over 1 million ounces) and higher grade deposits ranged from \$30.27 to \$168.14 per contained ounce of reserves or resources.

It should be noted that these numbers are somewhat inexact, as they do not include amounts for royalties, NSR's or non\_cash components or benefits. However they illustrate the wide variation in valuation of any resource, the absolute value of which can only determined after the resource is mined out and the overall profit can be calculated.

The average value from the writers tabulation is \$37.11 per contained ounce. s the Harrison Gold property lies between the upper mid\_point of the exploration stage and at the lower end of development stage, with some past production and partially drill\_defined resources in two zones, a value of \$5 to \$15 per contained ounce might be assigned, giving an estimated "value" ranging from \$1,225,000 (\$5/oz for 245,000 oz) to \$7,350,000 (\$15/oz for 490,000 oz.)

#### F. Value Added Method

This method of property valuation , essentially the same as category B, above, is one of the most often used methods for exploration properties; each property begins with the base value of a "raw", newly\_staked mineral property. An unexplored claim block may be expected to sell at a premium to the cost of staking, which is generally in the order of \$50 to \$100 per "unit" or 2\_post claim, or \$1,000 to \$10,000 total value (depending on the size of the block and its location in proximity to a current exploration target or play.

Each exploration stage, if successful, adds some tangible or intangible value to the property. Exploration stages after the basic costs of reconnaissance, research, and claim\_staking, may be:

1. Geological mapping may allow comparison with an established exploration model.
2. Geochemical or geophysical surveys may outline a drillable geologic target.
3. Successful drill programs may validate the geologic model, and lead to calculable geologic reserves.
4. Continued drilling or underground development may lead to definition of "mineable reserves"

5. Additional development may lead to a pre-feasibility or a full feasibility study, after which financing institutions may be willing to place a firm "net present value" on the reserves so outlined.

6. The final stages in the process are the completion of a producing mine and the realization of profits.

Each of the steps briefly outlined above may allow additional "value" to be placed on the mineral property.

The Harrison Gold property is currently at a stage approximating "4" above; considerable drilling has defined a geological resource of gold mineralization, but no formal pre-feasibility or full feasibility study has been done. Pacific Comox has suggested that \$1 million should be expended, primarily as drilling, followed by a pre-feasibility study.

The writer has compiled a table of purchases of exploration land, categorized broadly into the following categories:

1. Purchase of raw land for grass-roots exploration
2. Purchase of land with recognized mineral prospects, as yet not developed or mined. and
3. Purchase of land with mines or known resources.

The raw land is generally valued in the market by negotiation; often, prices may be inflated by hot exploration plays next door. Low prices may be paid for land from distressed companies with no alternative. The range in values for the various categories is as follows:

Category	Average Range	All items	Average Less Higher Values
1. Raw land for grass-roots exploration	\$0.88-\$280	\$47	\$4.91
2. Land with recognized mineral prospects	\$4.97-\$2590	\$258	\$25.22
3. Land with mines or known resources.	\$154-\$11000	\$5500	\$154

In the case of the Harrison Gold property, the writer would place the property at the upper end of the second category, as the land is clearly beyond the raw category, and has geological resources defined by drilling and past production. Although the table data is a bit limited in not having enough examples at the upper end of the spectrum, we might set the range at the two uppermost values - \$250 to \$2590 per hectare. The property has 83 claim units, each measuring roughly 25 hectares. for a total of 2075 hectares of land. This range would give a value added of \$518, 750, to \$5,375,640 for the Harrison property.

# SUMMARY AND CONCLUSIONS

A significant amount of detailed geological, geophysical, geochemical, surveying environmental and metallurgical work has been done on the property by competent exploration companies. Documented reserves and grades have been arrived at by qualified geologists and engineers by normal engineering methods. The replacement value of this work would be at least \$5 million.

The writer has concluded that the Harrison Gold property is a "property of merit". The writer judges that the property has significant geological resources of gold-bearing mineralization. The various methods noted above enable us to place our opinion of value for the Harrison property as follows:

Method	Range		Mid_point
Expenditures	\$3,000,000	\$7,000,000	\$5,000,000
Option terms	\$1,040,000	\$7,500,000	\$3,880,000
Gross metal less discount		\$4,220,000	\$10,500,000
\$ per contained oz	\$1,225,000	\$7,350,000	\$4,287,500
<u>Value Added method</u>	<u>\$518,750</u>	<u>\$5,375,640</u>	<u>\$2,680,000</u>
Average of methods			\$4,640,000

By several methods outlined above, the writer sets a value for the Harrison Gold property at between \$2,680,000 and \$7,360,000. In a fair market transaction, the value obtained would likely be between these figures.

Considering the various factors concerning the property, \_ the necessity for further validation and incrementation of the resource by data compilation and verification and drilling infill and step-out holes, the negative ambience for mining exploration and development in B.C in past years (now being favourably addressed by the government), the potential for delays with pending native land claims, balanced against the favourable results obtained to date, the metallurgical simplicity of the mineralization, (lack of environmentally unfriendly elements) and the favourable logistics, and currently improving gold prices, on balance the writer would estimate the fair market value of the deposit at \$3,000,000.

The writer concludes that the acquisition of the Harrison Lake Gold property by Eagle Plains Resources

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Ltd. should be favourably regarded

respectfully submitted

**B.J. PRICE GEOLOGICAL CONSULTANTS INC.**

PER: \_\_\_\_\_

**Barry J. Price, M.Sc. P.Geo.**

Qualified Person

May 20, 2002

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LETTER OF AUTHORIZATION:

**B.J. PRICE GEOLOGICAL CONSULTANTS INC.**

BARRY JAMES PRICE, M.Sc., P.Geo.,

Consulting Geologist

Ste 1028 - 470 Granville St. Vancouver B.C., V6C 1V5

TEL: 604-682-1501

Home 987-8950

FAX: 604-684-4297

e-mail: bpricegeol@msn.com

May 20, 2002

May 20, 2002

Directors,

Eagle Plains Resources Ltd.

Gentlemen,

With this letter is transmitted your signed and stamped copies of my report entitled GEOLOGICAL REPORT AND OPINION OF VALUE, HARRISON LAKE GOLD PROPERTY, Harrison Lake, B.C., New Westminster M.D., dated May 20, 2002

You are authorized to use this report for general corporate purpose, subject to keeping excerpts from the report in their proper context.

Yours sincerely.

-----  
Barry J. Price, M.Sc. P.Geo.

\_\_\_\_\_  
B.J Price Geological

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Ste 1028 - 470 Granville St, Vancouver BC

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CERTIFICATE: – B.J. PRICE, M.Sc., P.Geo.

I, Barry James Price, M.Sc., hereby certify that:

I am an independent Consulting Geologist and Professional Geoscientist residing at 820 East 14th Street, North Vancouver B.C., with my office at Ste. 600 – 700 West Pender St, Vancouver, B.C. (Telephone: (682-4488)

I graduated from University of British Columbia, Vancouver B.C., in 1965 with a Bachelors Degree in Science (B.Sc.) Honours, in the field of Geology, and received a further Degree of Master of Science (M.Sc.) in Economic Geology from the same University in 1972.

I have practised my profession as a Geologist for the past 30 years since graduation, in the fields of Mining Exploration, Oil and Gas Exploration, and Geological Consulting and Valuation of Mineral Properties.

I have worked in Canada, the United States of America, in Mexico, in The Republic of the Phillippines, Indonesia, Nicaragua, Ecuador, Cuba, The Republic of Panama, and the Peoples Republic of China.

I am registered as a Professional Geoscientist (P.Geo.) in the Province of British Columbia, (No. 19810), and I am entitled to use the Seal, which has been affixed to this report. I am a member of the Canadian Institute of Mining, and Society of Mining Engineers.

I have based this report on a review of data for the Harrison gold property and on other mineral deposits in the belt, on visits to the property, on a number of discussions with people who worked on the subject property, and on my knowledge of other mineral deposits gained from numerous property inspections and exploration seasons in the area. My experience in valuations includes approximately ten years of preparation of valuations for gold, copper, polymetallic, diamond and jade properties

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R.J. Price Geological

Ste 1028 – 470 Granville St, Vancouver BC

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I have no direct or indirect interest in the property which is the subject of this report. I do not hold, directly or indirectly, any shares in Eagle Plains Resources Ltd. or any related company, nor do I intend to acquire any such shares. I do not hold any mineral claims within the mapsheet.

I will receive only normal consulting fees for the preparation of this report.

Dated at Vancouver B.C. this 20<sup>th</sup> day of May, 2002

respectfully submitted

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Barry James Price, M.Sc., P.Geo.

Consulting Geologist. Qualified Person

\_\_\_\_\_  
B.J. Price Geological                      Ste 1028 - 470 Granville St., Vancouver BC

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APPENDIX I  
TONNAGE AND GRADE CALCULATIONS  
(After Norman, 1989)

APPENDIX II

TABLE OF EXPLORATION EXPENDITURES

APPENDIX III  
HARRISON LAKE DRILL DATA  
LIST OF DRILL HOLES

APPENDIX IV

DRILL INTERCEPTS AND ASSAYS

# PORTAL STOCK

DRILLHOLE	FROM	TO	INTERVAL	AU	Au
	m	m	m	g/t	opt
PT 86-45	7	13	6	2.48	
Incl.	10	11	1	5.42	
	45	46	1	3.29	
	50	51	1	3.29	
	54	55	1	6.24	
	122	123	1	19.70	
	180	181	1	3.84	
PT 88-85	No significant intersections				
PT 88-86	309	310	1	2.00	
PT 88-87	298	312	14	2.02	
incl.	303	312	9	2.79	
incl.	311	312	1	16.40	
	331	332	1	4.73	
	359	372	13	1.20	
PT 88-88	95	120	25	3.77	
incl.	95	101	6	8.07	
	108	111	3	1.83	
	115	120	5	7.60	
PT 88-89	91	99	8	2.90	
incl.	91	92	1	12.70	
	104	105	1	4.28	
	107	108	1	1.42	



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	139	148	9	2.16
incl.	147	148	1	7.56
JN 86-39	5	256	251	0.80 Global*
	5	7	2	5.11
	10	13	3	8.96
	24	28	4	7.30
	35	36	1	4.87
	53	55	2	4.19
	62	63	1	4.25
	65	66	1	5.83
	79	83	4	6.66
	110	112	2	4.11
	126	128	2	5.32
	158	160	2	4.22
	162	164	2	4.87
	177	180	3	5.63
	231	233	2	3.94
	243	245	2	4.24
	253	256	3	4.91

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DRILLHOLE	FROM m	TO m	INTERVAL m	AU g/t	Au opt
JN 86-43	7	244	237	0.72 Global *	
	7	14	7	9.78	
	36	38	2	4.12	
	45	47	2	3.53	
	64	65	1	5.83	
	117	119	2	3.88	
	126	128	2	12.44	
	140	141	1	5.35	
	154	156	2	8.33	
	185	186	1	3.63	
	209	210	1	3.43	
	212	214	2	3.81	
	227	228	1	4.53	
	234	235	1	3.89	
	243	244	1	4.05	
JN 86-44	6	12	6	4.64	
84-28	0	64	64	3.77	.110
84-29	0	40	40	4.56	.133
84-30	0	30	30	2.74	.080
85-35	0	16	16	4.70	.137
85-36	40	142	112	3.54	.103

# OPINION OF VALUE

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85-37	148	164	16	2.23	.065
85-38	151	189	38	1.41	.041
86-39	5	86	81	2.04	.060
86-40	87	104	17	2.01	.059
86-41	28	35	7	4.02	.117
86-42	27	50	23	3.71	.108
(source: Abo Res Ann. Repts.)					
JN 86-46	13	68	55	2.72 Global *	
or	10	52	42	3.52	.103
incl	13	30	17	4.45	
and	39	52	13	4.68	
and	65	68	3	4.41	

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DRILLHOLE	FROM	TO	INTERVAL	AU	Au
	m	m	m	g/t	opt
JN 86-47	0	167	167	1.19 Global *	
incl	0	7	7	5.44	
and	11	12	1	6.79	
and	18	19	1	3.98	
and	22	23	1	6.17	
and	25	26	1	4.32	
and	38	40	2	4.05	
and	43	60	17	3.20	.092
incl	43	46	3	4.18	
and	49	57	8	4.41	
and	69	70	1	4.11	
and	93	99	6	3.94	
and	103	104	1	4.25	
and	116	118	2	5.32	
and	126	129	3	4.57	
and	133	136	3	3.79	
and	151	152	1	6.65	
and	165	167	2	4.60	
JN 86-48	3	70	67	2.46 Global *	
	3	27	24	5.28	.154
	47	50	3	5.79	
	65	70	5	4.18	

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DRILLHOLE	FROM	TO	INTERVAL	AU	Au
	m	m	m	g/t	opt
JN 86-49	8	56	48	2.00 Global *	
OR	4	34	30	2.58	.075
INCL	8	9	1	3.29	
AND	11	16	5	7.03	
AND	33	34	1	31.95	
AND	42	43	1	3.15	
AND	46	47	1	4.66	
AND	48	51	3	4.22	
AND	55	56	1	5.21	
JN 86-50	5	58	53	1.25 Global *	
OR	37	58	21	2.91	.085
INCL	5	6	1	3.15	
AND	19	20	1	3.43	
AND	33	39	6	5.09	
AND	55	58	3	9.78	

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DRILLHOLE	FROM m	TO m	INTERVAL m	AU g/t	Au opt
JN 86-51	0	41	41	1.94	.057
OR	3	110	107	1.17 Global *	
INCL	3	6	3	4.27	
AND	9	11	2	4.19	
AND	18	29	11	3.57	
AND	50	51	1	3.50	
AND	81	83	2	4.11	
AND	89	92	3	3.15	
AND	93	98	5	2.91	
AND	107	110	3	9.68	
JN 86-52	1	85	84	3.32	.097 GLOBAL
OR	30	99	69	3.56 Global *	
INCL	30	48	18	10.27	
AND	66	67	1	3.50	
AND	80	85	5	7.92	
AND	98	99	1	17.60	
JN 86-53	6	11	5	5.27	.154
DRILLHOLE	FROM	TO	INTERVAL	AU g/t	

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JN 87-63	90	110	20	2.51
INCL	91	102	11	6.22

**UNDERGROUND DRILL HOLES**

JNUG 88-106	14	59	45	1.68
INCL	14	27	13	1.29
AND	32	41	9	2.18
AND	51	59	8	4.9

JNUG 88-107	7	48	41	2.74
INCL	7	26	19	3.41
	35	49	14	3.50

JNUG 88-108      Structural hole – not assayed

JNUG 88-109      Structural hole – not assayed

JNUG 88-110      Structural hole – not assayed

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DRILLHOLE	FROM m	TO m	INTERVAL m	AU g/t	Au opt
JNUG 88-111	2	19	17	1.02	
	28	33	5	4.19	
	52	64	12	3.19	
	98	108	10	3.11	
	128	149	21	3.13	
	142	176	34	2.02	
JNUG 88-112	0.6	65	64.4	2.30	
INCL	0.6	5	4.4	3.33	
AND	19	27	8	2.66	
AND	34	43	9	4.79	
AND	50	65	15	4.62	
JNUG 88-113	6	10	4	1.45	
	34	65	31	3.98	
	77	82	5	1.37	
	89	129	40	3.21	
	138	141	3	1.18	
	145	149	4	4.40	
JNUG 88-114	5	8	3	5.5	



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	46	47	1	8.2
JNUG 88-115	0.6	17	16.4	2.64
	22	44	22	2.65
INCL	35	44	9	3.86
	35	76	41	2.53
INCL	35	44	9	3.86
INCL	55	76	21	3.03
AND	61	76	16	3.92
JNUG 88-116	15	22	7	2.98
	37	62	25	3.18
JNUG 88-117	0	5	5	1.29
	20	21	1	2.52
	26	27	1	1.19
	32	46	14	5.84
	51	52	1	1.94
	57	58	1	1.22
	61	71.6	10.6	0.94

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DRILLHOLE	FROM	TO	INTERVAL	AU	Au
	m	m	m	g/t	opt
JNUG 88-118	0.6	36	35.4	1.92	
INCL	23	34	11	3.19	
	42	49	7	2.10	
	57	59	2	4.36	
	93	94	1	4.72	
JNUG 88-119	28	36	8	6.64	
	54	59	5	0.98	
	132	133	1	24.40	
JNUG 88-120	59	84	25	3.11	
	77	82	5	6.7	
	113	130	17	3.01	
	171	184	13	1.11	
	227	228	1	5.0	
JNUG 88-121	62	73	11	2.83	
	91	98	7	3.45	
	134	135	1	4.86	
	142	145	3	4.80	
	155	161	6	3.20	
	207	211	4	1.79	

# OPINION OF VALUE

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	226	263	37	3.20
INCL	226	233	7	2.49
AND	254	263	9	13.50
JNUG 88-122	15	20	5	12.4
	27	29	2	2.6
	46	51	5	3.07
	57	64	7	1.55
	76	93	17	6.81
INCL	92	93	1	69.00
JNUG 88-123	0	33	33	1.14
	39	42	3	8.68

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From Norman, 1990

## LAKE STOCK

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DRILLHOLE	FROM	TO	INTERVAL	AU
	m	m	m	g/t
LK 88-132	No significant intersections			
LK 88-133	Geochem Anomalous But No Significant Intersections			
LK 88-135	No Significant Intersections			
LK 88-136	Geochem Anomalous But No Significant Intersections			
LK 88-137	12	18	6	0.988
incl.	12	14	2	2.24
LK 88-138	76	77	1	1.70
	151	152	1	1.20
LK 88-139	47	49	2	1.5
AND	135	137	2	2.43
LK 88-140	15	17	2	1.58

From G.Norman, January 1990

## BRECCIA ZONE

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DRILLHOLE	FROM m	TO m	INTERVAL m	AU g/t
BX 90-141	29	30	1	1.7
	59	59.8	0.8	3.26
	76	77	1	4.11
	116.45	117.45	1	6.7
	127	172	45	0.51
	219	247.5	28.5	0.24
BX 90-142	73	77	4	1.86
	73.9	74.9	1	0.96
	74.9	75.6	0.7	8.64 + 29.5 g/t Ag+1.43% Zn
BX 90-143	18	24	6	1.55
	44	45	1	2.03
	142	143	1	1.37
	222	224	2	14.00
BX 90-144	21	28	7	3.52
INCL	21	22	1	18.00
	38	39	1	1.77
	79	80	1	1.31
	131.9	132.9	1	2.62
	154.6	155	0.4	5.2 +0.30% Cu

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	172	173	1	1.55
	246	262	16	1.01
INCL	246	247	1	3.29
AND	252	254	2	1.32
AND	256	257	1	3.84
AND	259	260	1	2.33
AND	261	262	1	4.11
	276	278	2	4.35
	300	301	1	12.30
	335	336	1	2.29
	373	374	1	1.36
	387	388	1	2.56

From Norman, 1990.

# HILL STOCK

DRILLHOLE	FROM	TO	INTERVAL	AU
	m	m	m	g/t
HL 90-145	30	31	1	23.0
	48	49	1	4.56
	121	158	34	1.00
INCL	153	156	3	3.27
HL 90-146	37	38	1	1.54
	51	58	7	2.28
	113	124	11	1.8
INCL	113	114	1	6.72
AND	123	124	1	13.4
	175	186	11	0.922
	235	237	2	11.86
	246	268	22	0.79
HL 90-147	173	174	1	1.27

\* Assuming that intervening grades are zero. Calculated by B.J.Price Geological on incomplete assays from company data

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LIST OF DRILL INTERSECTIONS

CHECKED BY B.J.PRICE GEOLOGICAL CONSULTANTS INC.

HARRISON GOLD PROPERTY

DRILLHOLE	FROM m	TO m	INTERVAL m	AU g/t
83-01	13.56	16	2.44	5.31
incl.	13.86	14.17	0.31	40.97
83-02	No significant intersections			
83-03	50.29	50.44	.15	8.23
83-04	0	178.91	178.91	0.46 Global
incl	12.8	17.16	4.36	1.53
	41.36	56.99	14.87	1.69
	102.71	105	2.29	7.41
83-05	0	122.52	122.52	0.55 Global
incl.	55.47	63.09	7.62	2.95
	66.75	74.4	7.65	1.75
83-06	0	95.09	95.09	1.01 Global



# OPINION OF VALUE

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incl.	26.51	28.43	1.92	5.36
	35.96	58.82	22.86	3.49
or	13.71	58.82	45.11	2.08
83-07	17.37	18.89	1.52	3.91
	(outside Portal Stock)			
83-08	0	148.13	148.13	0.545 Global
incl.	26.21	35.35	9.14	2.57
	39.92	49.77	9.24	1.34
	61.26	65.37	4.11	1.88
	71.93	76.5	4.57	1.85
or	26.21	76.5	50.3	1.06
	105.15	106.37	1.22	12.98
83-09	0	117.95	117.95	0.415 Global
incl.	20.42	50.53	30.11	0.86
incl.	20.42	21.94	1.52	11.12
	85.95	97.68	11.73	1.23
83-10	2.13	50.9	48.77	0.22 Global
incl.	36.81	38.7	1.89	2.67

# OPINION OF VALUE

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DRILLHOLE	FROM	TO	INTERVAL	AU
	m	m	m	g/t
83-11	0	2.13	2.13	9.44 short hole
83-12	No results			
83-13	Outside Portal Stock, no significant assays			
83-14	27.43	35.05	7.62	2.77
incl.	34.13	34.28	.15	127.52
83-15	71.26	75.28	4.02	0.71 Outside Jenner stock
	166.2	169.77	3.57	2.93
	223	224	1	1.54
	228.65	230	1.35	2.10
83-16	No significant intersections, outside Portal and Jenner Stocks			
83-17	No significant intersections, outside Portal and Jenner Stocks			
83-18	143	159.1	16.1	1.198 outside Jenner stock
incl	143.9	144	.10	114.15
	179	215	36	0.78
	225	236	11	1.94
incl	227	228	1	15.64
	261	267	6	0.98

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83-19	No significant intersections, outside Portal and Jenner Stocks			
83-20	53.64	65.83	10.67	0.44 Outside Jenner Stock
83-21	Very narrow high grade veins, up to .13 m x 51.42 g/t, No significant widths			
83-22	0	76.8	76.8	0.52 Global
incl.	5.56	5.71	.15	123.41
and	63.39	69.95	6.56	1.40
83-23	0	123.44	123.44	0.95 Global
incl	67.51	110.64	43.13	2.58 Outside Portal stock
incl	84.76	84.85	.09	52.11
and	86.25	86.41	.16	49.36
and	95.85	96.07	.22	393.19
and	106.55	106.67	.12	32.57
DRILLHOLE	FROM	TO	INTERVAL	AU
	m	m	m	g/t
83-24	18.28	19.81	1.53	3.56 Outside Portal stock
83-25	No significant intercepts, Outside Portal Stock			
83-26	0	125	125	0.69 Global
incl	71.5	78.5	7	1.66
	78.5	85.23	6.73	3.69

# OPINION OF VALUE

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	109.47	114.76	5.29	5.03
83-27	0	168.5	168.5	0.57 Global
incl.	17	36	19	1.19
	45	52	7	2.35
	60	75	15	0.73
	86	91	5	1.30
	99	111	12	0.79
	127	132	5	1.86
84-28 Jenner	0	99.5	99.5	3.154 Global
incl.	2	62.3	60.3	4.435
and	91.4	98	6.6	5.704
84-29 Jenner	0	122	122	2.35 Global
incl	12	39.6	27.6	8.02
	54	63.5	9.5	2.10
	81.5	90	8.5	2.60
84-30	0	140.7	140.7	1.10 Global
incl.	0	28.8	28.8	2.71
	57.8	62	4.2	1.63
	74	88	14	1.54
	108.9	114	5.1	4.27
84-31	91	106.6	15.6	0.60
	133	136.9	3.9	0.50
84-32	No significant intercepts			
84-33	No assays			
84-34	No assays			

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84-35

8

22

14

2.91 Short Hole

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DRILLHOLE	FROM	TO	INTERVAL	AU
	m	m	m	g/t
84-36	0	193.5	193.5	2.15 Global
	7	16	9	1.80
	26	31	5	2.05
	47	69	22	10.08
or	40	112	72	4.64
	112	187	75	0.65
85-37	148	164	16	2.26
85-38	0	138	138	0.65 Global
incl.	60	80	20	2.72
and	104	189	85	1.09
85-39	0	271	271	1.17 Global
incl.	5	179	174	1.52
and	231	255	24	1.44
85-40	0	121	121	1.12 Global
incl.	7	13	6	4.12
and	56	72	16	2.07
and	79	104	25	1.64
86-41	0	99	99	0.74 Global
incl.	14	16	2	13.7
or	14	52	38	1.53
86-42	0	81.5	81.5	1.33 Global
incl.	27	50	23.0	3.71
and	59	66	7	1.56

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86-43	0	256	256	0.935 Global
incl	7	17	10	7.02
and	126	128	2	12.14
86-44	6	11	5	5.39 Short hole.

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Intercepts as calculated by B.J.Price Geological.

## APPENDIX V

### COMPARABLE PROPERTY PURCHASES

#### Ladner Mine – Athabaska Gold Resources Ltd.

Athabaska purchased 100% interest in the the Ladner Creek mine from Anglo-Swiss Industries Ltd. for 125,000 shares on signing, expenditures of \$1 million per year until an option involving about 6 million shares is exercised.

The property had gold resources of about 130,000 ounces in the mineralized zones and 44,100 ounces in about 800,000 tonnes of tailings. Athabaska calculated a present value (1996?) of \$10 million (at \$380 US for Gold). This works out to \$57.44 per ounce of gold.

#### Nicholas Lake – Athabaska Gold Resources Ltd.

The company recieved \$3.8 million for the sale of the Nicholas Lake deposit in the Damoti lake area, NWT. , a small gold vein resource of about 149,000 ounces, from Royal Oak Mines Ltd. The purchase by Royal Oak is equivalent to \$US 19, or \$Can 26 for each indicated and inferred ounce of gold.

#### Damoti Lake:

Consolidated Ramrod Gold Corp, (now Quest International Resources Corp. optioned the Damoti Lake property, Quest held 51% interest in the JV. Quest purchased the remaining 49% interest in Damoti Lake from Athabaska Gold Resources Ltd. and Gitennes for cash and shares valued at \$4.5 million. Resources are 2.1 million tons grading 0.3 opt for 630,000 ounces. Effectively then the purchase was for \$7.14 per ounce of gold.



**Red Mountain, B.C.,**

Royal Oak Mines Inc. purchased the Red Mountain property for \$3 million in work commitments, , a 1% NSR, and royalty of \$10 per ounce on any production over 1.85 million ounces. Over \$30 M had been spent on the property, and resources are 3,053,000 tons averaging 0.262 opt, and an additional 525,000 tons at 0.203 opt, for gold resources of about 900,000 ounces.

**Mt Hamilton property**

Rea Gold Corp. purchased the Mt Hamilton property, 9.04 MM tons grading 0.052 opt gold and 0.37 opt silver ( 515,000 equivalent gold ounces), for 100 % interest. Cost was \$5.25 MM and 2.5% NSR capped at \$2.5 MM. Prior expenditures were \$9.25 MM (Mining Business Digest Nov 1993).

**Kinsley Mountain gold property**

Alta Gold Corp. purchased 100% of the Kinsley Mountain gold property for \$2.0 M cash and \$1.0 M in shares. Reserves are 145,700 ounces (geological) or 108,000 ounces (recoverable) at 0.047 opt gold.

**Costa Rica**

Ariel Resources Ltd. purchased properties in Costa Rica with 11 M tons grading 0.057 opt (627,000 oz) for \$320,000

**Lobo deposit in Chile**

Teck paid \$5/oz for the Lobo deposit in Chile from Cominco.

**Grouse Creek property**

Great Lakes is paying \$33/oz for 20% of Heclas' Grouse Creek property.

**Equinox merger with Hecla**

The Equinox merger with Hecla worked out to \$55/oz gold (reserves plus production.

**Soledad Mountain gold deposit**

Glamis Gold Ltd. purchased 100% of Golden Queen Mining Company Ltd. for shares with value of \$25 Million. The chief asset is the Soledad Mountain gold deposit of 15.6 MM tons averaging 0.029 opt gold and 0.532 opt silver. (563,000 equivalent ounces).

**San Lazarus property, New Mexico**

BMR Gold sold 30% of its San Lazarus property near Albuquerque, New Mexico to Sterling Pacific Resources Inc. (40,200 ounces) for \$165,000 or \$4/ounce in the ground.

**Victoria Mine in Lawrence Co., South Dakota**

Naneco Minerals Ltd. purchased the Victoria Mine in Lawrence Co., South Dakota, with reserves of 96,000 tons at 0.078 oz/ton (7,500 oz) for \$27,000 in cash and shares. (\$3.60/oz).

**Nukay deposit in Guerrero, Mexico**

Teck Corp. is getting 50% of at least .5 Million ounces at Nukay deposit in Guerrero, Mexico for 3.75 Million, which works out to \$15 per ounce.

**Long Valley deposit, California**

Royal Gold optioned 50% of the Long Valley deposit, California 49.54 million tons at 0.018 oz/ton

gold, (893,500 OUNCES GOLD) , or 11.825 Million tons at 0.035 oz/ton gold (449,500 ounces) (.5 Million ounces) for \$1 Million, or \$2 per ounce. from Standard Industrial Minerals Inc.

**Talapoosa deposit, Nevada**

Miramar Mining Corp. acquired 100% of Athena Gold Corp. for 4.64 Million shares valued at \$us 19.4 Million. The chief asset is the Talapoosa deposit in Nevada with Open Pit Heap Leachable gold reserves of 1,555,000 ounces of gold (proven and probable). This works out to \$12.48 per ounce of gold.

**Santa Gertrudis gold mine in Sonora, Mexico**

Campbell Resources acquired 100 % interest in the Santa Gertrudis gold mine in Sonora, Mexico for approximately \$9.5 Million. The reserve at Santa Gertrudis is 1,562,000 tons averaging 0.050 oz/ton gold (78,100 ounces) but a total of 17 gold deposits were identified.

**MK Gold**

Viceroy's 46.4% acquisition of MK Gold for \$45.25 million, (failed) was for 580,000 ounces of gold or \$78 per ounce of gold. MK gold also has considerable potential in several other properties in various parts of the world, and the above purchase price in terms of dollars per ounce of reserves would have to be reduced by some unknown amount.

**Aldebaran deposit, Chile**

Bema acquired 49% of the Aldebaran deposit (2 million oz.) for \$4 Million or \$4 per ounce.

**Lihir deposit in Papua/New Guinea**

Vengold is acquiring an indirect 10% interest in the large Lihir deposit in Papua/New Guinea for \$50

Million. Reserves are stated to be 98.4 million tons averaging 0.139 ounces gold per ton. This 10% equity works out to 1.367 million ounces for \$50 million or \$36.58 per ounce in the ground.

**Filon Sur, in Spain**

Caledonia Mining bought an additional 15.2% interest in a producing gold mine, Filon Sur, in Spain for \$1.3 million. Reserves are 5.3 million tons proven and probable reserves grading 0.058 opt gold and 0.84 opt silver, with an additional inferred reserve of 3.3 million tons grading 0.23 opt gold and 0.84 opt silver. Based solely on the contained gold, the price paid was \$1.3 million for 147,000 oz or \$8.84 per ounce.