

115-0

004684

BLACK HILLS CREEK PLACER GOLD

PROSPECT, DAWSON AREA, Y.T.

DECEMBER 1982

KERR ADDISON MINES LIMITED

(FOR INTER-OFFICE USE ONLY)



To..... I. D. Bayer From..... D. A. Lowrie
Subject..... Black Hills Placer Gold, Dawson Area, Y.T. Date..... December 6, 1982
Submission

Yukon Consolidated Gold Corp. drilled 327 holes and held the property until 1955.

- Page 2 In a report by Paul S. White the last sentence on page implies that YCGC dropped all leases, this is not true. YCGC continued to hold all leases which were considered by them to be of possible economic value after 1955. //
- Page 2 White also says that "one-2 mile section returned an estimate" ---but he does not say whose estimate it was.
- Page 4 The paragraph on topography gives one the impression that White never saw a placer valley in the Yukon and in fact does not know what a "bench" is. //
- Page 6 The first paragraph shows the writer is not knowledgeable on placer sampling. ✓
- Page 6 Last paragraph is nonsense.
- Page 7 The bench^s cannot be mined or stripped until the "black
Page 8 muck" is removed and a one year thawing period is completed. //

Full production in 1983 is unlikely unless all thawing necessary is completed. His schedule is thus questionable.

Ace Parker Report 1981

His conclusions are absolute nonsense based on data which is extremely thin.

This report is not worth reading.

Conclusion

There is so much misinformation and possible subterfuge in these reports that one cannot evaluate the deposit with the data submitted. The likelihood of the existence of an economic deposit on the claims and lease appears to be remote. No further interest is

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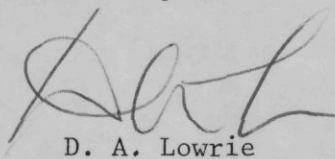
To.....From.....

Subject.....Date December 6, 1982.....

- 2 -

recommended.

The program proposed is not acceptable.


D. A. Lowrie

DAL/sm

*Taken to
Aucutt - Decker
& Turner property
done.
DL*

NOV 26 1982

YJ

204, 1324 - 11 Avenue S. W.
Calgary, Alberta T3C 0M6
November 23, 1982

Mr. Ian Byer
President
Kerr Addison Mines Ltd.
P. O. Box 91
Commerce Court West
Toronto, Ontario
M5L 1C7

Dear Ian:

Enclosed are the engineering reports as per our phone conversation on November 23rd on the Black Hills Gold prospect.

The partnership involved is willing to enter into negotiations for the sale of this prospect and/or joint venture it.

At the present time, it is set up with a 10% override and a 90% net profits interest, these items will have to be dealt with individually should negotiations commence.

The 10% override is held by W. A. Peters, a participating partner, who has indicated that 100% of the prospect will be up for negotiations.

They have indicated to me that the selling price is to be \$5,500,000 Canadian for 100% of the prospect; as a joint venture to be worked out based on a 100% of production costs for an earned interest of 50% in the total venture. Production costs estimated between \$2,000,000 to \$3,000,000 Canadian.

The partners are willing to entertain any proposals you may have in regards to financing the sale including take back of debt, or shares as part of the selling price.

At this time the partnership has debt on its books of approximately \$650,000 Canadian and investors injection of \$500,000 for a total of \$1,150,000 which will be totally relieved if the prospect is sold outright.

There is also a \$2,500,000 credit lined up with the Royal Bank of Canada from the Global Energy Group (contact: Mr. Braithwaite, Vancouver) which is available to be drawn down for production financing.

If you have any questions, I can be reached at 403-245-0410, (business) or 282-5334 (home). I will be happy to provide information you may require.

Yours truly,

A handwritten signature in dark ink, appearing to read 'John Rucci', with a long horizontal flourish extending to the right.

John Rucci

is

Q. There are lots of groups referred to is this properly any of them.

what is recovery in other operations.

They have indicated to us that the selling price is to be \$2,500,000 Canadian for 100% of the prospect; as a joint venture to be worked out based on a 100% production costs for an earned interest of 2% in the total venture. Production costs estimated between \$2,000,000 to \$3,000,000 Canadian.

The partners are willing to entertain any proposals you may have in regards to financing the sale including take back of debt, or shares as part of the selling price.

At this time the partnership has 50% of its books of approximately \$650,000 Canadian and investors injection of \$200,000 for a total of \$1,150,000 which will be totally relieved if the prospect is sold outright.

There is also a \$2,500,000 credit lined up with the Royal Bank of Canada from the Global Energy Group (contact: Mr. Braishwalde, Vancouver) which is available to be drawn down for production financing.

If you have any questions, I can be reached at 401-242-0410 (business) or 242-2324 (home). I will be happy to provide information if you may require.

Yours truly,

[Handwritten signature]

John Maciel

$$1,000,000 \text{ b.c.} @ .03 = 30,000 \times 75\% = 22,500$$

$$@ 500 = \$11,250,000$$

$$\$5 \text{ op} = \$5 \text{ m} = \$6,250,000 \text{ y. profit.}$$

$$= \$2,083,333 \text{ / yr.}$$

$$\begin{array}{ccc} \downarrow & \downarrow & \downarrow \\ & 1.24 & 1.51 & 1.32 & = 4.57. \\ \downarrow & & & & \\ 4\% & & & & \end{array}$$

$$= \$570,000 \text{ P.V. @ } 15\%$$

or 22% ROA.

sell price, $\$5\frac{1}{2} \text{ m}$

cap. could be lot more.

Cost Dodge cost $\$1\frac{1}{4} \text{ m}$ in 64

07005 \$1,788.957

$$64 = 37¢/yd^3$$

$$61 = 44¢/yd^3$$

63/yd.

61

68 x

75 x

82 x

\$4.00

looks like about 75¢ recovery.

SUMMARY REPORT ON THE BLACK HILLS PLACER GOLD PROPERTY

DAWSON MINING DISTRICT

YUKON TERRITORY

FOR

W.A. PETERS

Lat. $63^{\circ}18'N.$ -Long. $138^{\circ}45'W.$

N.T.S. - 115-0-7

Paul S. White P. Eng.

Calgary, Alta.

10 July 1982

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Appendices:

Alternative budgets for 25,000 cu. yd. test and 50,000 cu. yd. test.
Location Map.....(From A.R. Parker Nov. 1980 Preliminary Report)

SUMMARY REPORT ON THE BLACK HILLS GOLD PLACER PROPERTY
DAWSON MINING DISTRICT
YUKON TERRITORY

SUMMARY REPORT
ON THE
BLACK HILLS GOLD PLACER PROPERTY
DAWSON MINING DISTRICT
YUKON TERRITORY

INTRODUCTION:

The following report summarizes the known information on the Anne 1-51 placer claims and Placer Prospecting Lease No. 5051, being the downstream nine miles of Black Hills Creek, N.T.S. 115-0-7, Klondike Area, Yukon. The report makes recommendations for test mining and subsequent full scale mine production. The recommendations are based on the writer's experience over 15 years involvement as engineer, explorationist and producing miner in the district, and his association with the property as an advisor in 1981, and as the consulting engineer in 1982. Up dating of the long history, (1898 - 1982), of the subject creek is based on previous engineering and geological reports, non-published data from adjoining property exploration and mining records, from personal interviews with creek miners of the district and exploration personnel experienced on Black Hills Creek, and from various visits to the property in 1981 and 1982 by the author.

LOCATION:

(Latitude 63°18'N; Longitude 138°45'W).

The property consists of the downstream nine miles of Black Hills Creek, adjoining a producing mine property to the north, and trending southerly for 5 miles of placer claims and 4 miles of placer lease to the confluence of the creek and the Stewart River.

The property can be serviced from Whitehorse, Yukon, by air, from various points on the Yukon's river system by boat or barge, but chiefly by road or air from Dawson City, Yukon via Hunker Creek. Seventy miles of secondary gravel roads connect Dawson City, Y.T. to the adjoining mine property operated by Territorial Gold Placers Ltd. from 1975 - 1981. The Black Hills Gold camp is located on the Anne 30 placer claim, approximately 8 miles downstream from the Territorial Gold camp and connected by a winter tote trail. The Black Hills property is commonly serviced by charter or contract helicopter from a charter base at Dawson City, and by road on a seasonal basis. A gravel airstrip on the adjacent mine property is also useable by arrangement. The property is located on the route of the historic Whitehorse-Dawson winter road.

PROPERTY:

The property consists of 51 placer claims and 4 mile placer prospecting lease, located under the Yukon Placer Mining Act as follows:

| <u>PLACER RIGHTS</u> | <u>DIMENSIONS</u> | <u>EXPIRY DATE</u> |
|-----------------------------------|-----------------------------|--------------------|
| ANNE 1-51 Placer claims | Each 500' long X 2000' wide | 6 March 1983 |
| Placer Prospecting Lease No. 5051 | 4 miles long X 2000' wide | 11 March 1983 |

The property was obtained by purchase by two numbered corporations 243023 Alberta Ltd., and 245688 Alberta Ltd. respectively, both companies wholly owned by W.A. Peters, businessman, of Calgary, Alberta. The property requires \$10,400 of acceptable work (\$200/claim) to be performed on the Anne claims, and \$4000 (\$1000/mile) to be performed on the P.P. Lease No. 5051, prior to the 6th and 10th of March, 1983 respectively.

\$14,400 by 6/11/83

PROPERTY HISTORY:

Gold was discovered on Black Hills Creek by Klondike Stampeders in 1898, re-staked in rushes of 1906 and 1920, and sporadically hand mined with some reported success from discovery through 1935. Prospectors Carpenter and Marsh lease/options a sizeable claim block (120 claims[±]) to the Yukon Consolidated Gold Corporation for a reported \$120,000 sum. Y.C.G.C. drilled 327 drill holes to evaluate the creek's potential for dredging. The most favourable ground drilled was reported to have been on or near the Discovery claim NO. 42547 located approximately 1 mile upstream from Dome Creek. One 2 mile section of the creek, centred on the Discovery claim returned an estimate of \$0.65/yd³ for 1,209,000 yd³ @ \$35.00/oz. of gravel from 79 drill holes. Churn drill values are reported as generally lower in the lower part of the creek, but large sections of the creek bottom and benches were then and are now unexplored.

in bench?

In 1939, Dr. Ernest Patty explored the Y.C.G.C. drilled ground by shaft-sinking to determine the feasibility of drag-line stripping and mining a higher grade narrower limit of the Y.C.G.C. higher grade zones, but abandoned the project after the death of his son in a plane crash and the onset of World War II.

Y.C.G.C. reportedly retained the property until 1955, awaiting a price for gold that would justify the development of hydro-electric power to service the proposed dredging of the creek, but abandoned the project and the ground finally when the company elected to phase out their Yukon dredges.

*22452.86 ozs Au in 1,813,500 yd³ @ 500 = \$6.20/yd³
= 9.30/yd³
x recovery*

From 1955 to 1974, the creek activity is summarized as follows:

- 1955 - Y.C.G.C abandoned holdings on decision to phase out Yukon operations.
- 1955-56 - La Cross and Whitehead conducted limited hydraulic operations on creek bench.
- 1958 - Ayles and Smith conducted stripping operations near Child's Gulch, but no mining performed.
- 1971 - Murdochs of Whitehorse located two 5 mile Placer Prospecting Leases.
- 1972 - Black Creek Mining Ltd. initiated development of leases (optioned) and stripped and constructed bedrock drain near Larsen Gulch.
- 1973 - Kelmout Explorations Ltd. conducted stripping, draining and excavation one mile northerly from Child's Gulch, for representation work.
- 1974 - Founders of Territorial Gold Placer Ltd. acquire rights to 60 claims over best Y.C.G.C. drilled zone-leased from Murdoch's.
- 1975-81 - Territorial Gold Placers Ltd. actively mine, acquire more claims and leases including upstream Shatzko-Kelmout property from Goldmark Minerals Ltd. Territorial Gold commenced mining and operated

successfully until 1982. Production averaged 3000 ounces per season of "fine" gold at an approximate grade of 0.024 oz/cu.yd. Volume production figures are not known to the author, but are believed to be 100-150,000 cu.yds/120 day season. Ore reserve estimates for the Territorial Gold Black Hills property are reported by Ray Jury P.Eng. (Nov. 17, 1981) as:

| | | | | |
|-------|--|-----------|---------------------|------|
| | 3,182,000 cu.yds @ 0.024 oz/yd. ³ | 76368 oz. | Drilled | 38 m |
| | 4,000,000 cu.yds @ 0.017 | 68,000 | Partially drilled | 34 = |
| Total | 7,182,000 | 0.020 | Proven and probable | 72 m |

(Drilled zone - \$10.00/cu.yd. at \$415 Can./oz, current).

The company's operations are temporarily suspended at Black Hills Creek due to current financial problems related to the over-all expansion of the operations to 5 creeks by 1981, with attendant cash flow problems. It should be noted that the relationship between drill results and mining recovery is not known. The company reports 1981 bench drill results which make the benches as attractive as the "rich" creek bottom gravels.

(The bench drilling was performed after the 1981 spring drilling of the subject property -downstream- of this report, which established probable economic

*Not less than 25,000 yds
= 104 yds/day
12/3 = 48/5
0.16 a/s*

~ 2000 tpd.

?

?

- values in the right limit -westerly- bench of Black Hills Creek.)
- 1979 - W.A. Peters acquires lower 9 miles of leases of creek.
 - 1980 - Ace R. Parker P.Eng. recommends \$300,000 drill program on leases 5040 and 5051.
 - 1981 - Drill program performed on right limit bench of creek on Lease 5040 and permanent camp, lab. and fuel storage established. Drill results provide wide variety of gold results which establish economic mining potential. Royal Bank of Canada (Global Energy Dept.) examines property, program and adjacent producing mine, and conditionally offers \$2,500,000 development production Loan. \$500,000 drawn down to cover extended program and pre-production costs.
 - 1982 - Peters group seeking equity development financing. Lease 5040 converted to Anne 1-51 placer claims.

TOPOGRAPHY:

This writer is confused

The property is nine miles long on the Black Hills Creek base-line and 1000' on either side of the broad river valley. The bottom is generally wider (some hundreds of feet) than most Klondike gold creeks, and is covered with gold bearing gravel, 0-15 feet thick of frozen silt ("black muck"), moss and sparse spruce and poplar in a vertical section from bedrock upwards. The black muck tends to be thicker on the right limit bench -10-60' in depth, averaging 20'± for mining purposes. The left limit bank tends to be steeper than the right bank, which has a gently sloping bench 1000 - 1500' wide. Sufficient creek water exists for conventional mining or dredging for the normal May-October mining season at any practical production volumes. The banks are more heavily forested than the bottom.

Relief is from 2000ft. at the creek level to 3500' maximum on the adjacent ridges and the rounded hills caused the prospectors to name the "Black Hills" in their resemblance to the South Dakota mining district.

GEOLOGY:

Black Hills Creek flows through an unglaciated area of Pre-Cambrian gneisses, schists, slates and shales. The true source of the Black Hills placer gold is not yet known, but is believed

to be from staged gold concentration of auriferous quartz veins. The gold veins were eroded, the area uplifted, the gold reconcentrated in overlying gravels which were apparently reconcentrated by erosion and gravity to the creek benches and stream bottom. Rock outcrops are rare and confined to the ridges or to bedrock exposed by mining. The bedrock on the subject property has not been examined by the author.

The bedrock creek bottom is apparently covered by 15 - 30' of gold bearing gravel, overlain by 2 - 10' of frozen black silt and sphagnum moss. The benches tend to be covered with increasing depth of both gravel and frozen muck overburden as the bench gains altitude away from the creek, as determined by bench drilling in 1981 by Black Hills Gold. X

The bench and stream gravels contain some clay-like material which indicates the necessity for adequate gravel washing in any gold recovery system.

EXPLORATION RESULTS - 1981:

The Black Hills Joint Venture performed exploration work on the property during the 1981 season, at a cost of \$900,000⁺ as follows:

- Tote trail construction, 7 miles.
- Camp establishment.
- Field laboratory establishment.
- Fuel tank and diesel storage.
- Clearing of drill access strips and drill lines.
- Drilling of 4000'+ of 6" diameter Becker drill holes.
- Concentration and amalgamation testing and drill samples.

The 1981 program was performed under the management of Industrial Economics(H.R.A.)Ltd, and under the supervision of A.R. Parker P.Eng. Reports dated Nov. 8,1980; 26 Nov. 1980; 8 May 1981; June 8, 1981 and later up-gradings were prepared by Mr. Parker, and were available for review.

Reconnaissance drill lines ^{1 mile} were established transverse to the creek, approximately 6000 ft. apart, and drilling results were used to establish an area of P.P.L. 5040 on the right (west) limit bench as demanding more detailed drilling. This zone "A" was drilled with 120 holes of which 85% carried significant visible and measurable gold values over a bench area adjacent to the creek. The zone is approximately 7000' long by an average 500' wide and reportedly averaged 15' in gold gravel depth.

No but has 6000' apart!

This refers to detail area or appear to do so

The author of this report prefers, from experience, to limit drill hole results to the following useable functions:

- a) Determination of overburden depth and type. ✓
- b) Determination of gravel depth and type. ✓
- c) Determination of bedrock depth. ✓
- d) Determination of the presence of gold sufficient to justify test mining.

What is wrong with the sampling?

The Becker drill reportedly gave good sample recovery. The material was screened to $-\frac{1}{4}$ ", sluiced, shaker tabled and then amalgamated with mercury, refined and weighed. Both Mr. Parker and the field assayer reported significant losses during the concentration and amalgamation stages of assaying, visual inspection of table concentrated gold resulted in amalgamated gold values weighing which were much lower than expected by the operators.

??

This traditional problem of relating specific drill results to mineable potential of placer deposits has oriented the author of this report to using such drill results as a limited encouragement to actual mine testing, without ascribing ore reserve grades or volumes to drill returns. Nevertheless, the values reported in zone "A" were sufficiently high (1-500 mg. Au/hole), distributed in 3 layers vertically, appear to justify both the initial recommended program and a future program of test mining on a production scale. Gold was observed in nuggets, flakes and colors, and in sufficient quantities to compare favorably with the known values of the producing mine upstream.

?)

The drill results were thus positive and worthy of test mining over a plan area of 6000' X 400'± and a variable depth of 15'-20'. This zone "A" thus has a potential mineable volume of 1,500,000 cubic yards of gold bearing gravel. Values returned from drilling were both erratic and well distributed, as expected from the reported drill and production records from the mine upstream.

The object of test mining would be to strip, mine and sluice 25-50,000 cu.yds of gravel from benches on various drill lines of zone "A", to recover sufficient gold to establish \$10+/cu.yd. reserves at \$325 U.S./troy oz. The 1981 drill results support the possibility of establishing proven reserves in the order of 1,000,000 cu.yds.±, which would justify large scale production mining. Careful treatment of test mining recovery could be used to up grade the erratic drill results to a useable quantitative level. The property has the potential for zone "A" reserves of 1-2,000,000 cu.yds averaging \$12.50 cu.yd. at \$450 Can./troy oz. Au. This estimate is similar to the grades of the adjacent producing mine. Some high grade sections can be expected, but should not be the base for large scale mining feasibility.

.03/yd³
↑ ↓
??
-.0278



RECOMMENDATIONS:

Test mining of zone "A" is recommended for 1982 performance. Selected portions of Lines 3, 13, 12 and 14 should be stripped and sluiced through a conventional Pearson type 3 Run Box. Concentrates from the box should receive screen analysis, meticulous "clean-up" and weighing, and fines fire assayed under the most controlled conditions commercially available.

A program of this type can be expected to cost a minimum of \$250,000 (\$10/cu.yd.) and a maximum of \$400,000. Some of the costs (stripping and construction of water retention works and settling ponds) can be a benefit to future mining, but the location and ground surface of the property make such test mining programs 2-4 times the cost of normal production mining.

The program should be conducted with rented equipment for the most part, and should be treated as a final verification of potential mine values before large scale production is undertaken.

Production rates of 5000 cu.yds/day minimum, for a 120 day ^{600,000 by} mining season, with 3 years reserves are desirable. Unit costs of \$5-7.50/cu.yd. are the known facts of the district. Gross profit figures of \$5.00/cu.yd. are required to justify the establishment of plant and equipment sufficient to attain a total gold recovery value of \$18,000,000 with a gross profit of approximately \$5,000,000 for 3 years of production. *Are they saying from plant?*

*\$3m/yr -
6m/yr -*

The finding of some "bonanza" high grade sections, significant coarse nugget fractions of higher sale value, and a possible substantial increase in gold price over the 1982-1986 period, will render a production operation more rewarding. No estimate of returns from the balance of the property is made here, but testing of unexplored zones should be conducted concurrently with any future mining operations. Should the test mining program demonstrate economic feasibility, there is a potential long life for the property, 5-20 years.

SUMMARY:

The object of this report is to recommend a program of mining of drilled gold gravels on Black Hills Creek, to verify drill indicated economic feasibility. The encouraging drill results of 1981, were accompanied by an on site inspection by a mining representative of a major Canadian chartered Bank, who recommended and obtained approval for a major development loan for the property.

This author recommends a mining program of \$250,000-400,000 for 1982, using conventional bulldozer - sluice box technique to establish cost data, recoverable gold values and a practical mining rate. Klondike area deposits require high production rates (200,000 - 500,000+ cu.yds/season) to keep unit costs to safe levels, and it should be noted that Black Hills Creek has all the conditions suitable for dredging or drag-lining in addition to normal bulldozer - scraper mining. The program is designed to enable selection of proper mining method and production rates.

The subject property includes extensive volumes of potentially mineable gold bearing gravels which are largely unexplored. This report confines itself to the zone on which reasonably detailed drill results warrants bulk mining over an area which is apparently suitable for future production mining, but which requires some specific grade, volume and material analysis data before the most economic treatment of the zone can be undertaken.

The bulk mining program is scheduled for late summer or early autumn of 1982, to verify previous estimates of the net worth of the drilled Zone "A". Previous estimates have indicated a possible or probable net worth of \$ 10,000,000 - \$ 20,000,000 for the drilled zone, which if verified would warrant a 5000 - 10,000 cu. yd./day full scale production operation in 1983, assuming gold at \$450/oz. (Can.).

Detailed production plans are dependent on the findings of the bulk mining project, and a preliminary cost estimate places the capital cost at \$ 2,500,000- \$ 4,000,000 varying in accordance with the method of extraction and recovery selected. Such a program would involve a minimum of 3 years mining at the proposed rate with total capital recovery in the first 18 months of operation. The project would sustain itself on an operating basis from cash flow from gold produced, and exploration of the potential of the balance of the property would be carried out concurrently with the Zone "A" production mining operations.

Respectfully submitted

10 July 1982

Paul S. White P. Eng. (Mining)
Yukon & Alberta

$776 = 1,000,000 \text{ lbs} @ .03 \text{ tops}$
 $= 30,000 \times 70\% \text{ rec} = 27,000 \text{ oz}$
 $@ \$500 = \$13,500,000$
 $\$5 \text{ op} = \$5,000,000 = \$8 \frac{1}{2} \text{ m. op profit.}$

| | | | | |
|-----|------|------|------|--------|
| | 2.87 | 2.83 | 2.83 | |
| | 2.46 | 2.14 | 1.86 | = 6.46 |
| 4 = | | | | 20 15% |

 $3 \text{ yrs} = \$2.83 \text{ m. / yr. profit.}$
 $\$2.46 \text{ m.} = \text{profit value}$
TOPS.

Appendix 1.

BUDGET FOR 1982 BULK MINING TEST OF ZONE "A"- BLACK HILLS CREEK

A) 25,000 cu. yds.-stripped, trenched, mined and sluiced.

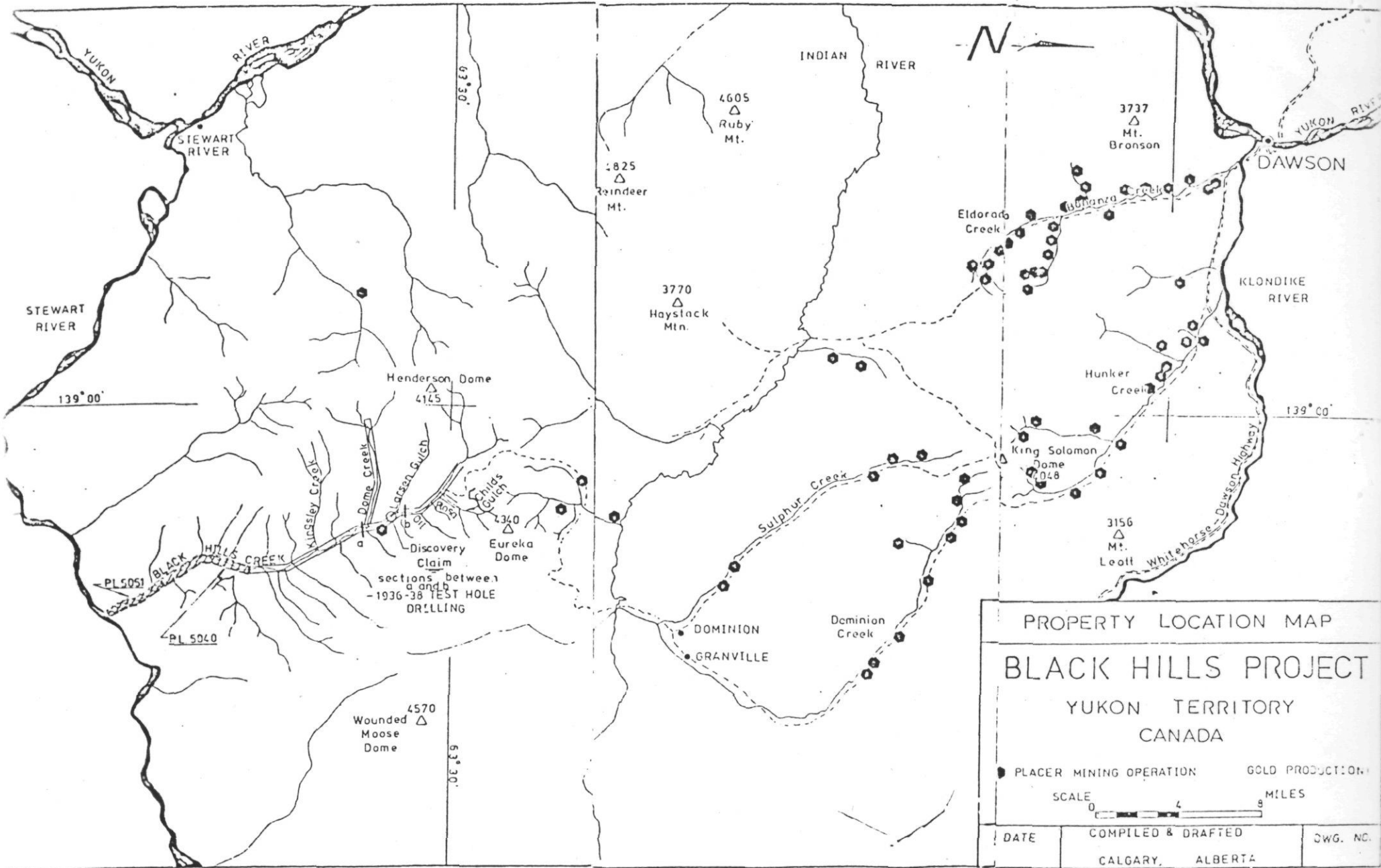
| | | |
|--|------------|------|
| Mobilization of Sluice Box & pumps, fuel, | \$ 50,000 | }? |
| Mobilization of crew and camp supplies | 15,000 | }? |
| Bulldozer rental (D8 and Ripper) | 50,000 | ✓ |
| Loader or backhoe rental | 30,000 | ✓ |
| Labor | 20,000 | ? ✓ |
| Engineering, assaying, supervision | 35,000 | |
| Allowance for contingencies (Access or unforeseen) | 50,000 | 2% ✓ |
| | | |
| TOTAL BUDGET FOR 25,000 cu. yd. program | \$ 250,000 | ✓ |

B) 50,000 cu. yds.- stripped, trenched, mined and sluiced.

| | |
|--|-------------|
| Mobilization of Sluice Box, Pumps, fuel | \$ 75,000 |
| Mobilization of crew and camp supplies | 25,000 |
| Bulldozer rental-2 D8 with ripper | 100,000 |
| Loader or back hoe rental | 50,000 |
| Labor | 40,000 |
| Engineering, testing, assaying, supervision | 60,000 |
| Construction of permanent earthworks | 50,000 |
| Allowance for road upgrading and contingencies | 100,000 |
| | |
| TOTAL BUDGET FOR 50,000 cu. yd. program | \$ 500,000* |

Note: The \$ 100,000 estimate for road upgrading is not essential to the Program B) but is desirable if three items of heavy equipment are on site.

+ 100,000 only
 say \$600,000



PROPERTY LOCATION MAP

BLACK HILLS PROJECT

YUKON TERRITORY
CANADA

● PLACER MINING OPERATION GOLD PRODUCTION

SCALE 0 4 8 MILES

| | | |
|------|--------------------|----------|
| DATE | COMPILED & DRAFTED | DWG. NO. |
| | CALGARY, ALBERTA | |

INTERIM REPORT II
PILOT PLAN & BULK SAMPLING
ON
PROSPECTING LEASES
#5040 & #5051

BLACK HILLS CREEK
DAWSON MINING DISTRICT
KLONDIKE REGION, YUKON TERRITORY
CANADA

FOR
BLACK HILLS GOLD LTD.

BY
ACE PARKER MINES & MINERALS CORPORATION LTD.
"CONSULTING GROUP"
CALGARY, ALBERTA

JUNE 8, 1981

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INTRODUCTION

The Black Hills Project has progressed to the point where a decision must be made either to place the property into production, or continue exploration of the various types of auriferous deposits known to exist on the Leases. An additional possibility would be to "farm out" the property to another operator or simply abandon the project. These alternatives are all relative to financial considerations.

Because of the peculiarities unique to the evaluation of any placer gold property, an attempt should be made to calibrate the results of a placer exploration program with the gold recovery of an actual mining operation. This is a necessity for the current project and should generate a profit provided a bulk sampling program is conducted which simulates an actual mining operation. (scaled down)

This report presents our considered opinion on the quantities and eventually recoverable gold values that may be expected in one small portion of Bench Area A (Area A-1). A pilot mining operation in this area, consisting of the recovery of gold from various trenches cut across the pay streak with bulldozers, would provide a calibration between drill results and the true gold content of the gravels. These results would serve as a "yard stick" with which to evaluate most of the auriferous bench gravel and allow proper planning of a full scale mining operation. A final report on exploration can best be prepared after the bulk sampling program has been completed.

SUMMARY

Five drill lines across Bench Area A-1 (refer to DWG. 80-110-6, herein), namely lines No. 13A, 13, 3, 12 and 14, and indicate uncorrected (unfactored) gold values (amalgamation results) ranging from trace amounts up to \$40 per cubic yard across a 200-foot mining width (Drill Line No. 3). *\$20 over*

After applying various experience-based Correction Factors to this 200-foot wide zone on line #3, an 85% probability exists that this particular portion of the pay streak contains \$150.00 worth of gold per cubic yard, (gold priced @ \$500 per troy ounce). This probability can be verified only by bulk sampling conducted in a manner which simulates an actual mining operation.

A detailed geologic study of drill cuttings and contained gold particles, observed on a shaking table during sample concentration, indicates that the following quantities of auriferous gravels are probably present in Area A-1.

| <u>MAP CONTOUR ZONES</u> | <u>UNIT VALUE (GROSS \$/YD.³)</u> | <u>VOLUME (CUBIC YARDS)</u> | <u>GROSS VALUE OF INDIV. ZONES (Cdn.\$)</u> | <u>COMULATIVE FACTOR-CORRECTED GOLD VALUE W/I CUMULATIVE ZONES</u> |
|--------------------------|--|-----------------------------|---|--|
| I | \$250. <i>.502</i> | 32,000 | \$8,000,000 | \$ 8,000,000 |
| II | \$150. <i>.32</i> | 65,000 | \$9,750,000 | \$ 17,750,000 |
| III | \$ 50. <i>.102</i> | 51,000 | \$2,550,000 | \$ 20,300,000 |
| IV | \$ 15 <i>.03</i> | 222,000 | \$3,330,000 | \$ 23,630,000 |

(The gross unit values shown above are "unfactored" up to compensate for the normal discrepancies between drill results and mining recovery.)

Regardless of the absolute amount of gold that is eventually recovered from Bench Area A, a bare minimum of 75,000 cubic yards of \$40.00 gravel is probably present in Area A-1 for a gross value of \$3,000,000. *= .08 oz/yd.*

Thus, it is recommended that \$2,500,000 be made available during 1981 for a pilot mining plant and the bulk sampling program. Three D-8

bulldozers, working 20 hours each day, could remove the overburden and produce an average of 300 cubic yards of gravel per hour for sluicing.

This program would allow bulk sampling of the entire bench area during 1981 and generate a significant cash flow ranging between \$3,000,000 and \$13,000,000.

COMMENTARY ON EXPLORATION,
DRILLING, GOLD CONTENT, AND GOLD
PLACER GEOLOGY OF BENCH AREA A

Drilling has successfully defined, on a limited quantitative basis, an auriferous zone on Bench Area A but a critical inspection of all aspects of the project indicates that numerous corrections must be applied to the amalgamation assays of this zone before the true gold content of the area can be established.

Human error and subsequent loss of gold during numerous stages of sample handling (revealed by comparing assay values with observed gold particles during sample concentration), appears to be the greatest direct error during exploration of the property.

The immediate geologic environment, along with the distribution and size of gold in the deposits, are all significant factors that must be assessed in the overall exploration evaluation process relative to this property.

Certain subsurface geologic features such as barrier "reefs" and faults, in addition to changes in the grade of bedrock are also very important factors influencing the local concentration of gold.

The distribution and size of gold particles in any particular sample appears to be the best indicator of overall tenor of the auriferous deposits. Particles of gold are disseminated throughout the vertical extent of the paystreak and into bedrock.

All material greater than 1/4 inch in diameter (including probable gold nuggets) was screened off (wasted) during the concentration process. Very coarse gold particles (small nuggets, plus 1/8 inch to minus 1/4 inch in diameter) were found at two locations on Bench Area A (drill

lines No. 3 and No. 26). The presence of these particles alone change the calculated values from 80 to 500 percent without making an allowance for other losses.

CORRECTION FACTORS FOR GOLD CONTENTS
 OF BENCH AREA A-1, PL #5040
 (Estimated from observations on
 the Property and General Operating
 Experience)

| <u>Factor Name & Descriptive Remarks</u> | <u>Estimated Values</u> |
|--|--|
| 1. Sample Recovery - losses during drilling and sample recovery. | + 20% <i>usually approx. core of core.</i> |
| 2. Sample Concentration - losses during screening, tabling, bagging and general handling of samples (cleaning of bags). | + 30% <i>wow!</i> |
| 3. Sample Assaying - losses during preparation, handling, amalgamation, and weighing of gold values | + 30% <i>some assay offset</i> |
| 4. Placer Considerations - losses due to gold unaccounted for in bedrock crevices and general scattering in the deposit. <i>and the they'll stay.</i> | + 60% |
| Sub-Total | +140% |
| 5. Sizing - losses due to rejection of coarse colours (+ 1/4 inch diameter) and larger nuggets during screening of samples. (This is a 25% multiplier factor for items #1, 2, 3, and 4 noted above.) | + 35% |
| 6. Geologic Traps - losses due to gold unaccounted for in <u>special local</u> faults, "reefs", and at changes in the slope of bedrock. <i>and 60% - #4!!</i> | +200% |
| 7. Mining Recovery - losses of fine gold dust during sluicing, or in wet mining cuts. <i>and all three ops.</i> | + 5% |
| 8. Extras and Fineness - gains, made-up of extras resulting from gold sales for jewelry, which are usually cancelled by losses arising from sales deductions because of impure gold (85% pure or 850 fine). <i>cancelled by theft.</i> | 0% |
| TOTAL CORRECTIONS | +370% |

I suppose there are no bench sections

No negatives!

Ballshit!

UNCORRECTED FINAL AMALGAMATION
 ASSAY VALUES (PLACER GOLD)
 FOR DRILL LINE NO. 3, AND
 WEIGHTED GOLD VALUES
FOR ALTERNATIVE MINING WIDTHS

| <u>HOLE NO.</u> | <u>GOLD PARTICLES</u> | <u>MGMS. GOLD</u> | <u>DEPTH FEET</u> | <u>Au x DEPTH</u> | <u>WIDTH (FEET)</u> |
|-----------------|-----------------------|-------------------|-------------------|-------------------|---------------------|
| 3E | (1) | 5 | 13 | 65 | |
| 2E | (7) | 5 ⁺ | 10 | 50 | |
| 1E | (62*) | 500 | 12 | 6,000 | |
| 0 | (59) | 190 | 12 | 2,280 | |
| 1W | (3) | 5 | 11 | 55 | |
| 2W | (15) | 5 | 7 | 35 | |
| 3W | (12) | 40 | 12 | 480 | |
| 4W | (2) | 5 | 11 | 55 | |
| TOTALS | | 755 | 88 | 9,020 | |

(* This sample contained 300 mgms of fine gold "colours" plus one coarse piece (small nuggett) which weighed 200 mgms. totaling 500 mgms.)

Gold Value across a 600-foot mining width:

$$64/6 = 10.66 \text{ feet and } 8,900/64 = \text{Mgms Au} = 139.06$$

Gold Value across a 500-foot width:

$$52/5 = 10.4 \text{ feet } 8,420/52 = \text{Mgms Au} = 161.92$$

Gold Value across a 400-foot width:

$$45/4 = 11.25 \text{ feet } 8,383/45 = \text{Mgms Au} = 186.29$$

Gold Value across a 200-foot width:

$$24/2 = 12 \text{ feet } 8,280/24 = \text{Mgms Au} = 345.00$$

Gold Value across a 100-foot width:

$$12 \text{ feet deep with } 500 \text{ mgms} = \text{Mgms Au} = 500.00$$

Therefore, the resulting gross gold values per cubic yard of gravel, based on amalgamation assays only, are as follows:

| | |
|--|----------------------------|
| Value across a 600-foot mining width: | |
| 139.06 x 1.607 x 27/0.3047 x 10.66 x 100 | = \$18.57/yd. ³ |
| Value across a 500-foot mining width: | = \$22.17/yd. ³ |
| Value across a 400-foot mining width: | = \$23.58/yd. ³ |
| Value across a 200-foot mining width: | = \$40.94/yd. ³ |
| Value across a 100-foot mining width: | = \$59.33/yd. ³ |

All of the above noted gross "unfactored" gold values must be reduced by the cost of removing the barren overburden (black muck) which covers the auriferous gravels. The stripping ratio of muck (barren) to pay gravel is estimated to be "1.2 to 1.0".

FACTORED GOLD VALUES FOR DRILL LINE NO. 3,
AND ESTIMATED AURIFEROUS RESERVES
WITH THEIR PROBABLE (FACTORED) TENORS-
BENCH AREA A-1 (REFER TO DWG. 80-110-6)

| ZONE NO. | GOLD VALUES FROM AMALGAM- ATION ASSAYS | FACTORED GOLD (+370%) | GRAVEL PER INDIV. ZONE (cubic yards) | PROBABLE GROSS GOLD VALUE W/I EACH ZONE |
|--|--|-----------------------------|--|---|
| IV | (\$4.05/yd ³) | \$15.00/yd. ³ | 222,000 | \$ 3,330,000 |
| III | (\$13.51/yd ³) | \$50.00 | 51,000 | \$ 2,550,000 |
| II | (\$40.54/yd ³) | \$150.00 | 65,000 | \$ 9,750,000 |
| I | (\$67.57/yd ³) | \$250.00 | 32,000 | \$ 8,000,000 |
| Total Probable Potential: (\$63.86/yd ³) | | | 370,000 | \$23,630,000 |

NOTE: (The factored and unfactored gold values noted above are calculated with a gold price of \$500 per troy ounce with no correction for purity. The unfactored gold values arise from calculations using Geo Analytical Services amalgamation assays only.)

Therefore, the probable minimum gross gold content of zone No. II using unfactored gold values (amalgamation assays only) is believed to be 75,000 cubic yards at \$40 per cubic yard (gross) or approximately \$3,000,000.

Zone No. I must be considered hypothetical until further testing has been completed. Although this zone is 85% probable, total gold potential shown above may be reduced by \$8,000,000 due to the uncertainty of this zone.

We estimate that a conservative spread of potential gross dollars for gold from 1981's bulk sampling program would range between a minimum of \$3,000,000 and a maximum of \$13,000,000, provided that the price of gold remains at \$500 per ounce, and if production continues for 90 days.

BULK SAMPLING AND
PILOT MINING REQUIREMENTS

Bulk sampling can be conducted most expediently by employing only three D-8 bulldozers to cut trenches across Bench Area A-1, followed by sluicing of both gravels from trenches and "pillars" of pay gravels exposed between the trenches.

Productivity should approach 400,000 cubic yards of gravel for a 90-day operating season. This quantity assumes an equivalent continuous gravel production of 300 cubic yard per hour per each 20-hour day for 90 days for one bulldozer. Rental purchase machinery is recommended for the project for maximum productivity.

Sluicing of gravel would initially be on a batch basis employing a "Pearson Rock Box" (commercial sluice box) fed by bulldozer. Water could be pumped from Black Hills Creek through a 12-inch diameter pipe line.

A 20-man trailer camp is on the property, along with storage for 12,000 gallons of diesel fuel.

Prospecting lease (#5040) must be staked into placer claims before sluicing commences. This work is in progress.

Water and health permits must be secured before sluicing can commence. These requirements should be fulfilled by July 15, 1981.

CONCLUSIONS AND
RECOMMENDATIONS

Exploration drilling has outlined a block of auriferous gravels on Bench Area A approximately 6,000 feet long and 350 feet wide. This area contains a layer of gold-bearing gravel approximately 12 feet thick which is covered by approximately 15 feet of black organic muck. Gold values based on amalgamation assays only (uncorrected or "factored" for losses) range from back ground values "trace" to \$59.33 per cubic yard of gravel.

A study of the various components of the exploration program, especially local geological conditions, indicates that all amalgamation assays must be adjusted for losses (refer to section on correction factors included herein) inherent in the evaluation of a placer gold deposit. We conclude that amalgamation assays of gold for this specific area should be increased by three hundred and seventy percent (370%) to bring them in line with probable gold recovery from mining operations.

Thus, indicated values of \$40 per cubic yard across a 200-foot width in Area A-1, based on amalgamation assays, probably exceed \$150 per cubic yard but this probability cannot be established without bulk sampling. Some extremely high gold values (\$350 per cubic yard) are anticipated between Line No. 3 and No. 12.

Regardless of what the cumulative correction factor may be, sufficient uncorrected (unfactored) gold values exist (amalgamation assays only) to justify initiation of bulk sampling in preparation for establishing a mining operation on Bench Area A-1. Gold values of \$22 per cubic yard (uncorrected) across a 500-foot width on line No. 3 are considered most significant.

Consequently, we recommend commencement of bulk sampling in the form of a pilot mining operation to further assess Bench Area A. This program should commence immediately and employ D-8 or D-9 bulldozers to cut trenches across the paystreak in Area A-1.

Initial trenches should be spaced 300 feet apart and positioned to straddle drill line No. 3. Rich pay zones exposed in this area could be mined and sluiced during 1981 along with pay gravels from the various trenches to establish an early cash flow for the project.

The trenches would be 40 feet wide in the pay streak and could yield approximately 25 cubic yards of gravel per lineal foot of trench. Waste removal would constitute a dilution fraction and could be carried on simultaneously with trenching and sluicing (pilot mining).

Initially, two and one half million dollars should be made available for the project to cover capital and operating costs during 1981. This investment is believed to be sufficient to bulk sample all of Bench Area A and generate a cash flow somewhere between three and thirteen million Canadian dollars prior to October, 1981, provided that the rich gravels situated near drill line No. 3 in the initial test area are exploited (A-1 shown of DWG. 80-110-6).

Respectfully submitted,
ACE PARKER MINES & MINERALS CORPORATION LTD.



Ace R. Parker, P.Eng.

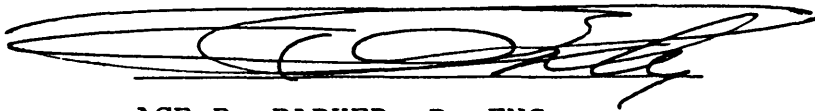
June 8, 1981
Calgary, Alberta

CERTIFICATION

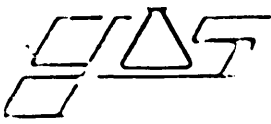
I, Ace R. Parker, of Calgary, Alberta, certify and declare that:

- I am a Consulting Engineer, practicing with Ace Parker Mines and Minerals Corporation Ltd., #223, 513 - 8th Avenue, S.W. Calgary, Alberta.
- I am a Bachelor of Science in Mining Engineering from the College of Earth Science and Mineral Industry, University of Alaska, Fairbanks (1962). I hold a Diploma in Mineralogy from the Mineral Science Institute, Chicago Illinois, U.S.A. (1959).
- I am a member of the Association of Professional Engineers, Geologists, and Geophysicists of Alberta. I am been a member of the American Institute of Mining, Metallurgical and Petroleum Engineers since 1954.
- I have formally practiced the profession of Mineral Exploration and Development for the past 18 years after working in the Mineral Industry since 1953. I have found several economic mineral deposits in North America.
- I have no direct or indirect interests in 243023 Alberta Ltd. or 245688 Alberta Ltd., Black Hills Gold Ltd., Industrial Economics (HRA) Ltd. or in any securities relating to these companies or the property described in this report.
- This Certification is part of the attached "Interim Report No. II - Pilot and Bulk Sampling on Prospecting Leases #5040 and #5051 (Black Hills Creek) Dawson Mining District, Klondike Region, Yukon Territory Canada prepared for Black Hills Gold Ltd. and dated this 8th day of June 1981."
- The attached contour map #80-110-6 shows the location of Bench Area A-1 which consists of a small portion of Bench Area A discussed in previous report - "Interim Exploration and Valuation Report on Prospecting Leases #5040 and #5051 (Black Hills Creek) Klondike Region, Yukon Territory, Canada for Black Hills Gold Ltd."
- This report is based on comprehensive personal study of documents, maps and reports, both oral and printed, relating to the property and the results of the exploration work discussed herein. I am personally familiar with all aspects of the project.

CALGARY, ALBERTA
June 8, 1981



ACE R. PARKER, P. ENG.



GEO ANALYTICAL SERVICES (WESTERN) LTD.

TYPED FROM ORIGINAL HAND-WRITTEN COPY

Black Hills Gold Ltd.
Black Hills Creek
Yukon

DATE RECEIVED _____

RECEIVED FROM:

BILL TO:

RESULTS TO

To complete rest of
results from line 3
already submitted

No of SAMPLES

DESCRIPTION

AMOUNT

LINE 3

Hole #

Gold (mg)

4E

no weight

5E

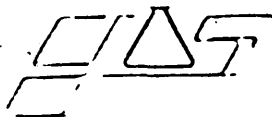
no weight

6E

no weight

TOTAL FROM REST OF
LINE 3

no weight
reading possible



GEO ANALYTICAL SERVICES (WESTERN) LTD.

TYPED FROM ORIGINAL HAND-WRITTEN COPY

Black Hills Gold Ltd.
Black Hills Creek, Yukon

DATE RECEIVED _____

| RECEIVED FROM: | BILL TO | RESULTS TO |
|----------------|---------|------------|
| | | |

| No of SAMPLES | DESCRIPTION | | | AMOUNT |
|---------------|----------------------|---------------|------------------|--------|
| | <u>Hole #</u> | <u>Line 3</u> | <u>Gold (mg)</u> | |
| | 4W | | 5 | |
| | 3W | | 40 | |
| | 2W | | < 5 | |
| | 1W | | 5 | |
| | 0 | | 190 | |
| | 1E | | 300 | |
| | 2E | | 5 | |
| | 3E | | < 5 | |
| | 4E | | no weight | |
| | Total Gold on Line 3 | | 550 mg | |
| | By Balance | | 400 mg | |

INDUSTRIAL ECONOMICS (HRA) LTD.
BLACK HILLS CREEK
CAPITAL AND OPERATING COST ESTIMATE

Mining Method

Strip mining using 3-8 K bulldozers, 11-12 inch pump, 2000 feet 12 in. pipe, Pearson Sluice Box.

Estimated cost to end of first season.

| | | |
|---|------------|------------|
| 1. Exploration work to date | | \$ 555,000 |
| 2. Development work to date | | 140,000 |
| 3. Earth moving equipment | | |
| 3 - D8K bulldozers - purchase | | |
| 3 x 4 months at \$18,000 | | 216,000 |
| 3 - D8K bulldozers operation | | |
| - operators 2 shifts 4 months | | |
| 2 x 3 x 10 x 120 x 25 | 180,000.00 | |
| - fuel at \$3.00 per gallon | | |
| 2 x 3 x 10 x 15 x 120 x 3.00 | 324,000.00 | |
| - maintenance, major repairs | | |
| including undercarriage | 120,000.00 | 624,000 |
| 4. Auxillary equipment | | |
| pump, pipe, etc. | | 100,000 |
| 5. Domestic camp | | |
| - 20 man camp rental | | |
| 6 months at 5,000 | 30,000.00 | |
| - 50/75 KW generator | | |
| 6 months at 4,000 | 24,000.00 | |
| - misc. minor equipment | 6,000.00 | |
| - fuel | 12,000.00 | 72,000 |
| 6. Wages - personnel (other than bulldozer operators) | | |
| 9 men \$2,000/day | | |
| 120 days x 2,000 | | 240,000 |
| 7. Food | | |
| 15 men at \$500/day | | |
| 120 days | | 60,000 |

| | |
|------------------------------------|----------------|
| 8. Transportation allowance | 65,000 |
| 9. Project Management, Engineering | 130,000 |
| 10. Contingency 15% | <u>298,000</u> |
| TOTAL | \$2,500,000 |

NOTE: \$555,000 for exploration has been provided by Joint Venture Investors.

The Exploration Phase is complete.

| | |
|---|----------------|
| 6. Wages - personnel (other than bulldozer operators) | |
| 9 men \$2,000/day | |
| 180 x \$2,000 | 360,000 |
| 7. Food | |
| 15 men at \$500/day | |
| 180 days | 90,000 |
| 8. Transportation Allowance | 100,000 |
| 9. Project Management Engineering | 190,000 |
| 10. Contingency 15% | <u>469,000</u> |
| | TOTAL |
| | 3,500,000 |

NOTE: \$555,000 for exploration has been provided by Joint Venture Investors.

The Exploration Phase is complete.

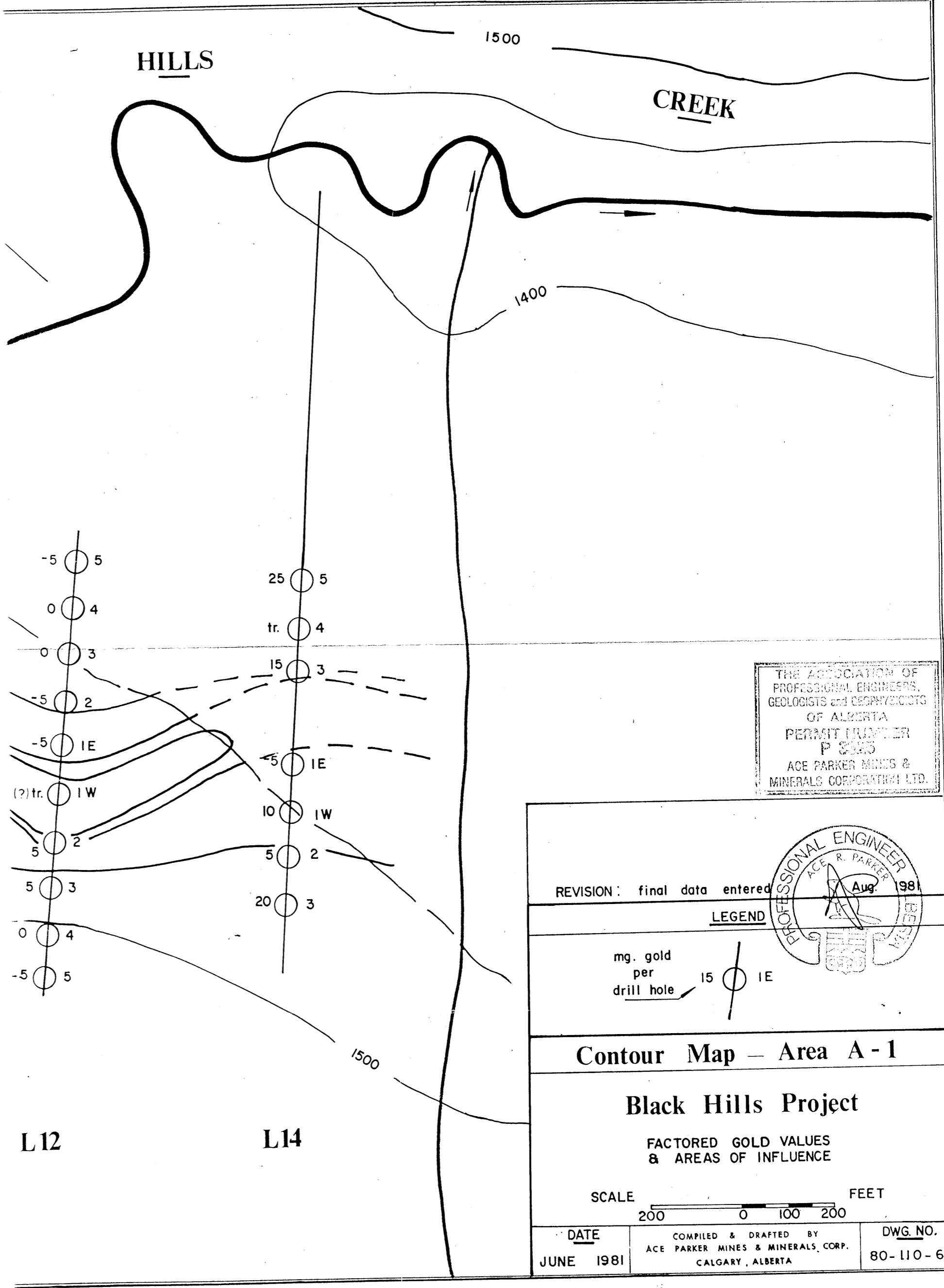
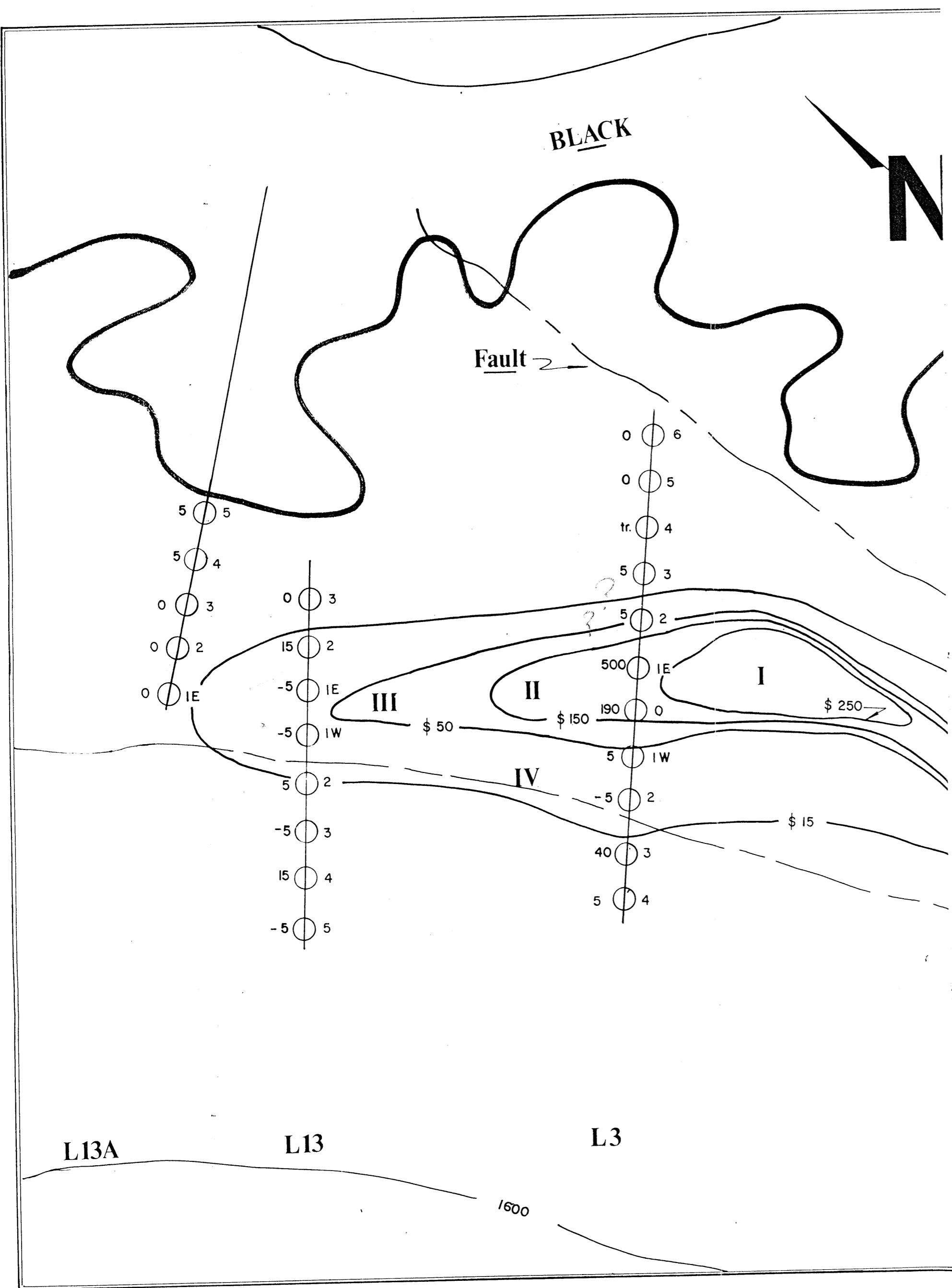
INDUSTRIAL ECONOMICS (HRA) LTD.
BLACK HILLS CREEK
CAPITAL AND OPERATING COST ESTIMATE

Mining Method

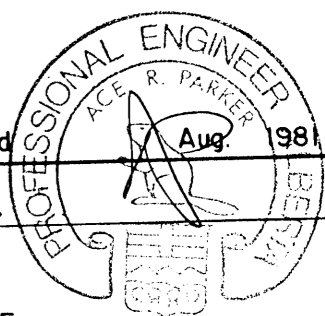
Strip mining using 3-8 K bulldozers, 1-12 inch pump, 2000 feet 12 in. pipe, Pearson Sluice Box.

Estimated cost to start of second season:

| | | |
|---|---------|------------|
| 1. Exploration work to date | | \$ 555,000 |
| 2. Development work to date | | 140,000 |
| 3. Earth moving equipment | | |
| 3 - D8K bulldozers - purchase | | |
| 3 x 4 months at 18,000.00 | 216,000 | |
| 3 x 7 months at 4,800.00 | 100,800 | 316,800 |
| 3 - D8K bulldozers - operation | | |
| - operating - 2 shifts 6 months | | |
| 2 x 3 x 10 x 180 x 25 | 270,000 | |
| - fuel at \$3.00 gallon | | |
| 2 x 3 x 10 x 15 x 180 x 3.00 | 486,000 | |
| - maintenance, major repairs incl. undercarriage | 180,000 | 1,036,000 |
| 4. Auxillary equipment pump, pipe, etc. | | 100,000 |
| 5. Domestic camp | | |
| - 20 man camp rental 12 months at \$5,000 | 60,000 | |
| - 50/75 KW generator 12 months at 4,000 | 48,000 | |
| - misc. minor equipment | 12,000 | |
| - fuel | 24,000 | 144,000 |



THE ASSOCIATION OF
PROFESSIONAL ENGINEERS,
GEOLOGISTS AND GEOPHYSICISTS
OF ALBERTA
PERMIT NUMBER
P 5035
ACE PARKER MINES &
MINERALS CORPORATION LTD.



REVISION: final data entered

LEGEND

mg. gold per drill hole 15 IE

Contour Map - Area A-1

Black Hills Project

FACTORED GOLD VALUES & AREAS OF INFLUENCE

SCALE FEET
200 0 100 200

| | | |
|-------------------|---|----------------------|
| DATE JUNE 1981 | COMPILED & DRAFTED BY ACE PARKER MINES & MINERALS, CORP. CALGARY, ALBERTA | DWG. NO. 80-110-6 |
|-------------------|---|----------------------|

