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**KARIFICO**  
MERGER & ACQUISITION  
6183 S. WILLOWBROOK DR.  
MORRISON, COLO. 80465  
BUS. 303-697-6960  
RES. 303-697-8512

DATE: October 26, 1982  
CO.#: M-GS-9  
MKT. AREA: Colorado  
CATEGORY: Gold & Silver  
Mining & Milling

SALES: 100 ton per day mill  
PRICE: \$2 M for a 49% interest  
in the mine & mill

EARNINGS: \_\_\_\_\_

TYPE OF DEAL: Cash or registered  
stock

Mr. Grover Heinrichs  
1802 W. Grant Street  
Suite 110-4  
Tuscon, Arizona 85745

Gentlemen:

This confirms the agreement wherein you or any affiliated person, or any subsidiary, or affiliated company agrees to pay a finder's fee in cash in accordance with the schedule of fees listed below in the event of any agreement entered into between your firm and any organization we present to you which results in a purchase and/or sale, and/or acquisition, and/or merger of assets, and/or capital merger, or exchange of stock, or any other type of investment therein. If there is no consummated transaction by your company and the company presented, there is no obligation for your company to pay any fees, expenses, etc. incurred by us on your behalf.

The following fee schedule is based upon the percentage of gross sale price or total investment which your firm will pay or make upon the date an agreement is entered into between your firm and the firm or individual with whom you are brought in contact:

"THIS FEE IS TO BE SHARED EQUALLY (50% - 50%) BETWEEN BUYER AND SELLER."	5% on the first \$1,000,000
	4% on the second \$1,000,000
	3% on the third \$1,000,000
	2% on the fourth \$1,000,000
	1% on any additional amount up to \$25,000,000
	½% on any additional amount thereafter.

"Gross sale price" shall mean the total consideration paid in any combination of cash, notes, stock or other property or type of investment. It shall include the present value of any and all deferred payments or items whether or not contingent on future earnings; or if the transaction results from the exercise of any option, the fee would be based on the present value of the option; all are to be discounted on a basis of 10% per year.

This agreement shall stay in effect for a period of thirty (30) months. Cancellation shall not affect fees that have been earned or may be earned in connection with presentations made prior to that date. In the event that any dispute arising out of this agreement requires litigation, the prevailing party shall be entitled to such reasonable attorney fees and attendant costs as may be awarded by the court.

Very truly yours,

KARIFICO

ACCEPTED BY:

\_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

By: Kathleen Falk Fisher  
Kathleen Falk Fisher  
Executive Vice President

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ACCEPTED BY:

\_\_\_\_\_  
Title:

\_\_\_\_\_  
Date:

By: Kathleen Falk Fisher

Kathleen Falk Fisher  
Executive Vice President

# KARIFICO

MERGER, ACQUISITION & DIVERSIFICATION CONSULTANTS  
SPECIALIZING IN ENERGY & PRECIOUS METALS

6183 S. WILLOWBROOK DR.  
MORRISON, COLO. 80465

BUS. 303-697-6960  
RES. 303-697-8512

HENDRICKS MINING COMPANY, INC.

HENDRICKS MILLING COMPANY, INC.

Tom Hendricks, age 33, President and 90% owner of Hendricks Mining Co., Inc. and Hendricks Milling Co., Inc. is seeking a partner in these gold and silver mining and milling operations. The mill is located in Boulder, Colorado, and the mine is located in Nederland, Colorado.

For approximately a two million dollar investment, 49% of the equity in Hendricks Mining Company's Mine and Mill are available to an interested investor.

Hendricks Mining Company, Inc. has continuously operated its mine and mill for the last seven years, producing gold and silver from the Cross Mine in Nederland, Colorado. This only contemplates a 200 foot deepening of their shaft. If a 500 foot deepening is needed as a result of a newly instigated deep diamond drilling program, then the \$2 million figure will have to be raised.

The mine and mill currently produces about fifteen tons per day, although the mill has 100 tons per day capacity. Even at this low mine production, their direct costs are approximately \$160 per ton. The new drilling and shaft sinking should increase their mine out-put to between 50 and 100 tons per day and should substantially lower their direct costs. The current grade of ore is running between .4 and .5 ounces gold and 10 to 13 ounces of silver per ton.

Eventually, they feel that they should also expand out of the Cross Mine area into the Caribou Mine area. The Caribou has made several significant drill hole discoveries as a result of an exploratory program which Hendricks Mining Company did for them two years ago, and they believe that they can come up with a satisfactory lease. The Caribou is contiguous to the Cross and was mined in the old days to a depth of 8 to 9 levels below the Cross's current fourth level.

I have enclosed a package of data on the Hendricks Mining and Milling Companies as well as a map of the current fourth level and several milling reports and geologic reports.

A great deal of additional data is available but a visit to the mine and mill is advisable if you have any real interest in pursuing this proposal.

Karifico

*Kathleen Falk Fisher*  
*Executive Vice President*

# Hendricks Mining Company, Inc.

Caribou, Colorado

Complete Mining and Milling Services

Exploration

Development

Production

Please find enclosed the background information on Hendricks Mining Company's Cross Mine operation and Hendricks Milling Company's Boulder Mill operation. The mine program as outlined in the report will take approximately 12 months to complete. The biggest part of the mine program, if not all of it, is tax deductible because it is primarily exploration and development work. With production at the mine scheduled to begin in August, 1983, and continuing through October of 1984, we believe this could be a good time period for gold and silver prices.

If you should have any questions, please feel free to contact me at your convenience.

Sincerely,

Thomas S. Hendricks  
President

TSH/rgj

Enclosure

P.S. We are flexible and open to discussion on this deal.

**Mill Address:** 3000 N. 63rd St. • Boulder, Colorado 80301 • (303) 443-1502

**Mine Address:** Caribou, Colorado • P.O. Box 653 • Nederland, Colorado 80466 • (303) 258-3806

**HENDRICKS MINING COMPANY, INC.**  
(Cross Mine Operation)

**HENDRICKS MILLING COMPANY, INC.**  
(Boulder Mill Operation)

**BACKGROUND INFORMATION**

by

**Thomas S. Hendricks, President**

**September 30, 1982**

**Confidential Material**

# Hendricks Mining Company, Inc.

Caribou, Colorado

Complete Mining and Milling Services

Exploration

Development

Production

## CROSS MINE OPERATION

The Cross Mine is located approximately 50 miles north and west of Denver at Caribou, Colorado. Caribou is 24 miles west of Boulder via paved Highway 119 through scenic Boulder Canyon to Nederland, Colorado, and then 4½ miles west of Nederland on a gravel county-maintained road. The altitude at the portal is 9,750 feet. The mine has been operated on a year-round basis since 1974 by Hendricks Mining Company with only 7 working days missed during that period of time due to snow conditions. The Caribou Mining District has a very rich and productive history prior to the turn of the century and played an important part in the early history of Colorado. The closeness of the mine to the Denver-Boulder area makes acquisition of parts, supplies and services very convenient. The Boulder-Nederland area has an excellent array of hotels, motels, restaurants, cultural activities and historic attractions (see attachment).

Thomas S. Hendricks, President of Hendricks Mining Company, began reopening the Cross Mine in 1974 as a one man pick and shovel operation. Since that time, the company has grown to employ as many as 18 full-time miners at the Cross Mine with an average production level reached in 1980 of 30 tons per day. Hendricks Mining Company is privately owned, 90 percent by Thomas S. Hendricks and 5 percent by his mother, Marge Hendricks, with 5 percent ownership unissued. Since its incorporation in 1974, the company has been, through its Cross Mine operation, one of Colorado's only consistently producing small gold and silver mines. Over \$2,200,000 worth of gold, silver, lead, zinc and copper have been shipped from the mine off the first 4 levels through current existing contracts with Cominco's Trail, British Columbia, smelter and Asarco's East Helena, Montana, and El Paso, Texas, smelters (see attachments).

Hendricks Mining Company has on the Cross Mine proper a 37-year lease from the original owners since the 1920's, the Dofflemyer-Stillwell Trust. This comprises approximately 110 patented acres. In addition, the company owns or leases an additional 134.5 acres that are contiguous with the Cross Mine with no conflicting claim owners. The Cross Mine has a very modern surface plant facility which includes shops, offices, dry room, haulage facilities, ore storage and well-maintained surface and underground machinery. Power is supplied by Public Service Company of Colorado.

**Mill Address:** 3000 N. 63rd St. • Boulder, Colorado 80301 • (303) 443-1502

**Mine Address:** Caribou, Colorado • P.O. Box 653 • Nederland, Colorado 80466 • (303) 258-3806

During the past seven years of operation, the company has learned a great deal about the geology of the mine. The main host rock is Precambrian gneiss intruded on the west by a recent quartz monzonite intrusive. The monzonite intrusive is believed to be the origin for the mineralization. The five predominant veins are the Rare Metals, Cross, Crown Point, Romeo and Juliet. Major junctioning of these veins is beginning to occur at depth with substantial mineralization occurring at the contact of the Precambrian gneiss and quartz monzonite. Recent mill runs from this area have shown substantial increases in gold values and the attached sampling program shows average gold values of 0.425 ounces per ton. This came from 50 samples taken by Tom Hendricks, the mine superintendent, and Pat Dentler, mine geologist. Core drilling was completed during the spring of 1981 which further proved the junctioning effect and also proved, though only with shallow holes, that veins existed in the quartz monzonite. In core hole No. 4, in the first 85 feet of core, 16 feet were mineralized and averaged 0.22 gold and 1.96 silver. This was taking averages of both low and high vein material. Two separate veins were encountered in the monzonite. Geological maps, cross sections and core data have to be reviewed at our offices to appreciate the potential for not only new veins but also what affect the existing vein junctioning will have on the future of the mine both in ore grades and tonnages.

It is for this reason that Hendricks Mining Company is seeking a new partner to help finance a core drilling program and development program for the mine. An estimated 35,000 tons of new reserves will be blocked out and readied for mining for this program as well as an estimated 150,000 to 500,000 tons of new reserves will be indicated through an approximate 10,000 feet of new core drilling. This program is estimated to take approximately 12 months to complete (see attachments). It is our firm belief that a mine has to be fully developed and ready to produce when metal prices rebound from their current lows. The profitability of the mine is demonstrated by the attached sheets showing the different ore grades and metal prices.

The current capital being sought for this program is outlined on the capital distribution chart attached. For this investment of approximately \$1,621,773.62, Hendricks Mining Company is offering the new partner the following. Please keep in mind that these figures are negotiable but are the basis for our current plans. The majority of this expenditure is, as outlined, on exploration and development and is, therefore, tax deductible.

1. A 49 percent equity position in Hendricks Mining Company including all assets, leasehold interests and current book replacement cost on Cross Mine which is approximately \$450,000.
2. One seat on our board of directors which will include decision making on major issues.
3. A priority pay out on the 35,000 tons of newly mined ore at the rate of 80 percent to the partner and 20 percent to Hendricks Mining Company out of profits until initial pay out is reached.

4. Should the new shaft sinking program and core drilling delineate large bodies of ore, then the new partner shall participate through their equity ownership in a possible public offering should that be the decision by both parties to pursue.
5. New partner will have participation in deciding whether market prices and profitability are such, after new ore is developed, to go ahead and produce ore developed from the new ore reserves.
6. After pay out, net profits would be split on a 51/49 percent basis.

Mary Weeden, bookkeeper for Hendricks Mining Company and Hendricks Milling Company, has a total of 30 years experience in business including 10 years as a bookkeeper and has been in charge of Hendricks Mining Company's and Hendricks Milling Company's books for the past 2½ years. At the end of each month accurate and concise records of accounting are available on the operations such as cash flow analysis, profit and loss statements, accounts payable sheets and general ledgers. These books will be open for inspection at any time for the new partner. Gail Jones, who has eight years experience as a secretary, prepares through cooperation with Tom Hendricks and Jenny Kissell, accurate complete records of production tonnage weights and grades, sampling results and monthly mine reports which are sent out to participating partners.

The Cross Mine is currently producing ore with a very selective mining system similar to the old "Cousin Jack" type mining at the rate of approximately 10 tons per day from an inclined vein located between the 3rd and 4th Levels. Recent values from that vein are shown on an attached sheet. Hendricks Mining Company is well known in Boulder, Colorado, for its environmental achievements and maintains a strong environmental policy as well as close contact with County Commissioners and local organizations and groups.

The existing management of Hendricks Mining Company will remain the same and Thomas S. Hendricks will personally oversee and supervise the entire program at the Cross Mine. The excellent mining crew that has been with the company for a number of years will continue on the same basis. An on-site visit of the Cross Mine and in-depth review of the data pertaining to the mine is greatly recommended by Hendricks Mining Company.

We are anxious to work with a new partner who shows an interest in what we are doing, believes in the necessity to develop when prices are low and be ready to produce when prices are high and who will also find the many amenities of the Boulder area enjoyable during the visits to the operation.

\* \* \* \* \*

Subject to Prior Sale

Legal Counsel Since 1974:

Vranesh and Raisch  
2120 - 13th Street  
Boulder, CO 80302  
(303) 443-6151  
Mr. George Vranesh  
Mr. John R. Henderson

Bank Since 1974:

First National Bank in Boulder  
P.O. Box 59  
Boulder, CO 80306  
(303) 442-6770  
Mr. Bert Stjernholm  
Mrs. Clair Beckmann

Accountants:

Ernst and Whinney  
2700 LTV Tower  
Dallas, TX 75201  
(214) 748-5751  
Mr. Brad Williams

Outside Consultants:

Pincock, Allen and Holt, Inc.  
4370 S. Fremont Avenue  
Tucson, AZ 85714  
(602) 746-1451  
Mr. Steve Milne  
Mr. Hank Schou

Contract Core Drillers:

Boyles Bros. Drilling Company  
15865 W. 5th Avenue  
Golden, CO 80401  
(303) 279-7913  
Mr. Carl High

# Hendricks Mining Company, Inc.

Caribou, Colorado

Complete Mining and Milling Services

Exploration

Development

Production

## BOULDER MILL OPERATION

The Boulder Mill is located 2½ miles east of Boulder, Colorado, at 3000 N. 63rd Street. The mill was originally built in 1935 by St. Joe Mining and Milling as a gold mill doing custom milling and mill work for the Grand Republic gold mine west of Boulder. In 1940, it was acquired by Allied Chemical Corporation and operated as a 200 ton per day fluorspar mill consistently from that date until 1973. It was also the headquarters for Allied Chemical's mining division for a number of years. The mill is situated on 110 acres of industrial zoned land. It has 87 shares of the Jones and Donnelly Ditch Company which is an excellent adequate and valuable water supply. The mill property is bordered on the north edge by an impervious basalt dike which is a perfect dam for the 18 acre tailings pond disposal area. Water from the tailings is evaporated and the mill has no discharge. The property is surrounded on three sides by Public Service Company of Colorado who has always cooperated with the mill operation.

Hendricks Milling Company has a 50 year lease on the property from Tusco, Inc. of Denver, Colorado. Should the property come up for sale, Hendricks Milling Company has the right of first refusal on the property and also has excellent bargaining strength should the lessor wish to sell any part of or sublease any of the unused property. Hendricks Milling Company began operations in December of 1976 and has milled 60,000+ tons of Cross Mine, Caribou Mine and custom milling ores. A number of capital improvements have been made over the past five years including tailings pond work, mill machinery improvements and the construction of two concrete and steel totally enclosed 400 ton concentrate storage bins. The complex has large modern offices which also serve as offices for Hendricks Mining Company. A legal 50 ton Howe Truck Scale is part of the office complex as well as a sample preparation room, core sample library, conference room and map room. The mill is considered by many to be the finest custom mill in the northern Colorado mineral belt.

Root and Simpson Assayers, who have been metallurgical assayers since 1907, are located on the mill property and provide daily assay service. McGowen Ore Testing facility is also located on the property and provides ore testing and mill flow sheet test work for Hendricks Milling Company.

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Al McGowen participated in the construction of the mill for St. Joe Mining and Milling in 1935 and was general superintendent for the Allied Chemical operation for 27 years. He provides mill consulting work for Hendricks Milling and is believed to be, by many, one of the most knowledgeable flotation experts in the country.

Jenny Kissell, who is mill manager, has been with Hendricks Mining and Milling Company for the past five years. She has 13 years of experience in business beginning with technical and clerical work for oil companies and manufacturing of mining equipment prior to joining Hendricks Mining Company in 1977. She is also in charge of expediting parts for the mining operation and is knowledgeable about all phases of the mill and mine. She has been in charge of supervising as many as 15 full-time mill employees during the past 2 years. Glenn Pfarr is the mill superintendent and has been with the Hendricks Milling Company for the past five-and-one-half years. Prior to that, he had worked 25 years in equipment maintenance and rehabilitation, had 5 years experience as a mill operator with Allied Chemical Corporation and underground mine experience. He handles daily supervision of the mill operations as well as equipment maintenance and tailings pond maintenance.

The mill is currently in excellent condition and is currently negotiating on several custom milling contracts during the period while new ore reserves are being further developed at the Cross Mine. During the last operating fiscal year of 1981, a period when the milling company made expenditures on several capital improvements, the milling company showed a net profit of approximately \$70,000. The current price charged for custom milling is between \$35 and \$45 per ton and the direct cost at the rate of 2,000 tons per month is \$26.80. The profitability can be very good under steady conditions. The expansion capabilities for the mill are tremendous if the business warranted expansion, especially in areas of selected mill circuits for particular ores, increased tonnages and/or as an ore buying station. The future for industrial development would also be very good. The property is served by an on-site rail spur through the Colorado Southern Railroad which is compatible with the Union Pacific.

Hendricks Milling Company is seeking a 49 percent partner for the buy in price of \$305,000. This would include a 49 percent stock/equity interest in the milling company as well as a seat on our board of directors for key decision making. We would also make available office space if so desired by the new partner. The same excellent bookkeeping services and secretarial work provided for and listed in the Hendricks Mining Company summary are part of the milling operation. Should the new partner have outside ore from their own operations, then negotiations would be made on price structure. Hendricks Milling Company is open for discussion and negotiations with the new partner per the special needs of that partner.

\* \* \* \* \*

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(214) 748-5751  
Mr. Brad Williams

CROSS MINE CLAIMS

Located in Boulder County, Colorado - Caribou - Grand Island Mining  
District - Sections 4, 5, 8 & 9, T1S-R73W

1. Cross Mine Proper - under 37 year lease by Hendricks Mining Company  
from Dofflemyer-Stillwell Trust

Patented claims - approximately 110 acres

American Lode	Protection Lode
Apex Lode	Rare Metals Lode
Cross Lode	Rare Metals Mill Site
Cross Mill Site	Rico Lode
Cross No. 2 Lode	Romeo Lode
Crown Point Lode	Syndicate Lode
Juliet Lode	Tacoma Lode
Mammoth Lode	Pleasant View Lode (unpat.)

2. Patented Claims included - owned by TSH and Hendricks Mining Company

Broken Bow (100%)	
Anaconda (75%)	
Bob Tail (75%)	approximately 19.5 acres
Lafayette (75%)	

3. Unpatented Claims included - owned by TSH and Hendricks Mining Company

Bear Claims Nos. 1-5 - 100 acres

4. Leased Patented Claims - in addition

Conger Claim	
Enterprise Claim	15 acres

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Total approximate acreage unpatented and patented = 244.5 acres  
(doesn't include overlap)

NEW CAPITAL DISTRIBUTION

Cross Mine Operation

1. Tunnel level portal and haulage, new hoist room, headframe extension, skip, shaft upgrading, pump stations. 200' shaft sinking, development drifting and raising, core drilling and geological work.	\$1,070,000.00
2. Ken Good buy out	375,000.00
3. Bank debt payoff (1st National Boulder and 1st National Denver - Mallon) and SD Leasing	76,773.62
4. Prospect Fee	<u>100,000.00</u>
Total Cross Mine	\$1,621,773.62

Boulder Mill Operation

1. Buy-in equity position, maintain overhead during mine development, change out filter and bucket elevator	\$200,000.00
2. 1st National - Boulder and Ford Motor Credit Co.	56,839.94
3. 1st National Denver - Mallon	<u>49,000.00</u>
Total Boulder Mill	\$305,839.94

GRAND TOTAL - BOTH PROJECTS \$1,927,613.56

CROSS MINE PROGRAM

Purpose: Increase operational efficiency from 25 TPD to 100 TPD. Block out and have ready to mine 35,000 tons of new reserves. Delineate new veins and potential reserves through carefully planned core drilling and geological mapping and sampling.

Estimated Completion Time: 12 months

1. <u>New Portal</u> - New rubber tired crosscut tunnel from surface to underground shaft, including new snowshed, 8' x 8' haulageway, hoist room, ore storage, headframe extension and Vulcan Denver electric hoist installation.	Estimated Cost:	\$165,000.00
2. <u>Rehabilitate Existing Shaft</u> - Install new Foster-Miller man trip, install 1½ ton skip, lagging timber and support timber for sinking.	Estimated Cost:	35,000.00
3. <u>New Pump Station</u> - Install on 4th Level new centrifugal pump, dam, drains, electricals, piping and shaft sinking pump system.	Estimated Cost:	25,000.00
4. <u>4th Level Preparation for Shaft Sinking</u> - New bearing sets, enlarge level station, tigger installation, incline to vertical changeover.	Estimated Cost:	35,000.00
5. <u>Shaft Sinking</u> - Sink below 4th Level 200' vertical of new shaft complete with timbered sets on 5' centers, 4' x 4' in the clear hoist compartment, 4' x 4' in the clear manway with ladders, air and water lines, ventilation and electrical lines and crosshead guides (est. at \$1,500 foot completed).	Estimated Cost:	300,000.00
6. <u>New Level Stations</u> - Blast out new stations - 5th Level at 80' down new shaft - 6th Level at 160' down new shaft - 40' sump-ore pocket and pump station	Estimated Cost:	60,000.00
7. <u>600' of Developmental Drifting</u> - On new 5th and 6th Levels*		200,000.00
8. <u>600' of New Raises in Veins</u> - Ventilation, secondary escapeways and mining access raises.**		N/C
9. <u>Core Drilling and Geological</u> - 8,000 to 10,000 feet of core drilling and geological mapping, sampling and core logging.		<u>250,000.00</u>
TOTAL CROSS MINE PROGRAM COSTS		<u>\$1,070,000.00</u>

\*Costs include management and overhead expenses

\*\*Raises driven in ore are expected to pay the cost of raising and any developmental drifting in ore will be deducted from the estimated cost and used as a credit on the production program

CROSS MINE COSTS PER TON ON CRUDE ORE  
(Estimated at 75-100 TPD at \$200.00 per ton ore)

Mining Costs	\$60.00
(Labor contract @ \$30.00 per ton)	
(Supplies, power, equipment, taxes, insurance, management @ \$30.00 per ton)	
Trucking - Mine to Mill	5.00
Milling	33.00
Mill Loss (6%)	12.00
Trucking Concentrates to Smelter (Cominco) (Ratio at 22 x 1)	4.54
Smelter Costs and Deductions	15.55
Royalties (Dofflemyer-Columbine) (12.5%)	<u>22.48</u>
TOTAL DIRECT COST	\$152.57

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Total direct cost for mining, milling, transporting,  
smelting and royalties per ton of newly mined ore is  
estimated at (35,000.00 x 152.57) =

\$5,339,950.00

See Charts for Profitability Under  
Ore Grades and Metal Prices

BANK DEBT  
(As of 6/21/82)

Hendricks Mining Company Cross Mine Operation

1st National Bank - Boulder - TSH secured	\$41,502.44
1st National Bank - Denver (Mallon)	16,000.00
1st National Bank - Boulder (equipment)	
1. Air tugger	6,907.28
2. A66 loader	11,155.61
SD Leasing (copy machine)	<u>1,208.29</u>
Total	\$76,773.62

Hendricks Milling Company Boulder Mill Operation

1st National Bank - Boulder - TSH secured	\$50,000.00
1st National Bank - Denver (Mallon)	49,000.00
1st National Bank - Boulder (Computer)	5,486.21
Ford Motor Credit Company - Bobcat (office car)	<u>1,353.73</u>
Total	\$105,839.94

GRAND TOTAL - BOTH CORPORATIONS \$182,613.56

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Hendricks Mining and Milling Companies and Thomas S. Hendricks have incurred the significant portion of the above listed debts from December, 1981, through June, 1982, during the negotiations for the Ken Good option, mining and milling overhead during this period and mine reopening.

CROSS MINE - PROFITABILITY ANALYSIS  
(Theoretical Possibilities)

Mining time = 1 yr. 3 mos. at 100 TPD

Tons	Gold oz/tn	Silver oz/tn	Lead-Zinc Combined	Gold Price	Silver Price	\$ Gross Value	Total Cost	\$ Profit Potential
35,000	0.25	4.0	\$9.84	\$700.00	\$15.00	\$8,569,400	\$5,750,500	+\$2,818,900
35,000	0.35	6.0	"	"	"	\$12,069,400	\$6,975,500	+\$5,093,900
35,000	0.45	8.0	"	"	"	\$15,569,400	\$8,200,500	+\$7,368,900
35,000	0.55	10.0	"	"	"	\$19,069,400	\$9,425,500	+\$9,643,900
35,000	0.65	12.0	"	"	"	\$22,569,400	\$10,650,500	+\$11,918,900
35,000	0.25	4.0	\$11.04	\$800.00	\$17.50	\$9,836,400	\$6,290,550	+\$3,545,850
35,000	0.35	6.0	"	"	"	\$13,861,400	\$7,594,300	+\$6,267,100
35,000	0.45	8.0	"	"	"	\$17,886,400	\$9,073,050	+\$8,813,350
35,000	0.55	10.0	"	"	"	\$21,911,400	\$10,551,800	+\$11,359,600
35,000	0.65	12.0	"	"	"	\$25,936,400	\$11,855,550	+\$14,080,850
35,000	0.25	4.0	\$12.24	\$900.00	\$20.00	\$11,103,400	\$6,655,600	+\$4,447,800
35,000	0.35	6.0	"	"	"	\$15,653,400	\$8,213,100	+\$7,440,300
35,000	0.45	8.0	"	"	"	\$20,203,400	\$9,945,600	+\$10,257,800
35,000	0.55	10.0	"	"	"	\$24,753,400	\$11,503,100	+\$13,250,300
35,000	0.65	12.0	"	"	"	\$29,303,400	\$13,060,600	+\$16,242,800
35,000	0.25	4.0	\$13.44	\$1,000.00	\$22.50	\$12,370,400	\$7,195,650	+\$5,174,750
35,000	0.35	6.0	"	"	"	\$17,445,400	\$8,831,900	+\$8,613,500
35,000	0.45	8.0	"	"	"	\$22,520,400	\$10,643,150	+\$11,877,250
35,000	0.55	10.0	"	"	"	\$27,595,400	\$11,929,400	+\$15,666,000
35,000	0.65	12.0	"	"	"	\$32,670,400	\$13,565,650	+\$19,104,750

CROSS MINE - PROFITABILITY ANALYSIS  
(Theoretical Possibilities)

Mining time = 1 yr. 3 mos. at 100 TPD

Tons	Gold oz/tn	Silver oz/tn	Lead-Zinc Combined	Gold Price	Silver Price	\$ Gross Value	Total Cost	\$ Profit Potential
35,000	0.25	4.0	\$5.02	\$300.00	\$5.00	\$3,500,700	\$4,727,800	<\$1,227,100>
35,000	0.35	6.0	"	"	"	\$4,900,700	\$4,902,450	<\$1,750>
35,000	0.45	8.0	"	"	"	\$6,300,700	\$5,252,450	+\$1,048,250
35,000	0.55	10.0	"	"	"	\$7,700,700	\$5,427,450	+\$2,273,250
35,000	0.65	12.0	"	"	"	\$9,100,700	\$5,952,450	+\$3,148,250
35,000	0.25	4.0	\$6.22	\$400.00	\$7.50	\$4,767,700	\$4,886,000	<\$118,300>
35,000	0.35	6.0	"	"	"	\$6,692,700	\$5,301,450	+\$1,391,250
35,000	0.45	8.0	"	"	"	\$8,617,700	\$5,717,250	+\$2,900,450
35,000	0.55	10.0	"	"	"	\$10,542,700	\$6,482,700	+\$4,060,000
35,000	0.65	12.0	"	"	"	\$12,467,700	\$7,073,500	+\$5,394,200
35,000	0.25	4.0	\$7.42	\$500.00	\$10.00	\$6,034,700	\$5,219,200	+\$815,500
35,000	0.35	6.0	"	"	"	\$8,484,700	\$5,700,450	+\$2,784,250
35,000	0.45	8.0	"	"	"	\$10,934,700	\$6,531,700	+\$4,403,000
35,000	0.55	10.0	"	"	"	\$13,384,700	\$7,362,950	+\$6,021,750
35,000	0.65	12.0	"	"	"	\$15,834,700	\$8,194,200	+\$7,640,500
35,000	0.25	4.0	\$8.64	\$600.00	\$12.50	\$7,302,400	\$5,377,750	+\$1,924,650
35,000	0.35	6.0	"	"	"	\$10,277,400	\$6,274,450	+\$4,002,950
35,000	0.45	8.0	"	"	"	\$13,252,400	\$7,346,500	+\$5,905,900
35,000	0.55	10.0	"	"	"	\$16,227,400	\$8,243,550	+\$7,983,850
35,000	0.65	12.0	"	"	"	\$19,202,400	\$9,140,250	+\$10,062,150

# Hendricks-Good Milling Company

Milling Base Metal and Precious Metal Ores

MILL EXPENSES			
if mill is			
	Not Running (office & Glenn)	Running 1000 T/mo	Running 2000 T/mo
Mill rent	\$120,000	\$120,000	\$120,000
Property tax	7,000	7,000	7,000
Gen. liab. ins.	5,000	7,000	7,000
Med. ins.	4,600	11,000	15,000
Life ins. (TSH)	900	900	900
Electricity	20,000	39,000	39,000
Fuels	2,000	4,000	5,000
Maintenance	5,000	42,000	50,000
Office wages	49,250	49,250	49,250
Milling supplies		19,800	39,600
Mill labor	26,000	130,000	199,000
Depreciation	32,600	32,600	32,600
Tailings pond	6,000	6,000	6,000
Office expenses	5,000	7,000	8,000
Promotion, etc.	1,500	1,500	2,000
Auto & truck	4,000	6,000	8,000
Equip. rental		500	10,000
	<u>\$288,850</u>	<u>\$483,550</u>	<u>\$598,350</u>
+10% inflation on all but rent & depre- ciation	<u>13,625</u>	<u>33,100</u>	<u>45,000</u>
	<u>\$302,475</u>	<u>\$516,650</u>	<u>\$643,350</u>
<hr/>			
Direct cost per month	\$25,206.25	\$43,054.16	\$53,612.50
Cost per ton milled	----	\$43.05	\$26.80

NEW SAMPLING PROGRAM AT CROSS MINE

Beginning June 1, 1982, by Hendricks Mining Company and Bighorn Mining Company

Date	Sample Number	Location	Gold	Silver
*6/1/82	82-1	Buddy - sample from spillage on 4th Level below #1 chute from flat vein	0.494	14.47
*6/1/82	82-2	Ore only, flat seam, 12' approx. back up from 1st sublevel about 4th	1.18	46.20
6/1/82	82-3	foot wall white material below flat seam - location same as above	0.138	4.71
6/1/82	82-4	4th Level Rare Metals left rib inclined vein dark material only, 15' length	0.352	9.45
*6/4/82	82-5	Flat seam west heading 6-4-82 near stope back	0.872	34.25
*6/12/82	82-6	East rare metals in stope 2.5 wide	1.080	53.07
6/15/82	82-7	West heading Rare Metals 4th Level +29' face sample - looked low grade	none	none
*6/15/82	82-8	Left rib, east heading, flat seam - ?Chalcopyrite predominant 3-4 Level	1.072	62.73
6/17/82	82-9	41'3" advance 4th Level Rare Metals west - slusher drift face	0.022	0.86
*6/17/82	82-10	32' east advance flat seam 2nd sublevel - Buddy's drift face	0.448	29.68
6/17/82	82-11	20 place sample mine surface dump area 4th Rare Metals storage	0.026	1.17
*6/21/82	82-12	20 place sample ore on trestle dump from 4th Level flat seam	0.454	18.21
6/21/82	82-13	Thin vein 4th Level Rare Metals west 46'+ perpendicular vein	0.370	11.14
*6/21/82	82-14	Rib sample 4th Level east Rare Metals - track level near new raise	0.232	38.46
6/23/82	82-15	Ore pile 4th Level east raise	0.15	2.36
6/24/82	82-16	Right face first sublevel above 4th Level east heading round drilled -- flat	0.492	15.89
6/26/82	82-17	East raise Rare Metals (back Buddy's raise 6/26 p.m.)	0.510	4.26
6/29/82	82-18	Flat vein on 3rd Level, 10" wide	0.418	15.30
7/6/82	82-19	Face--east top of raise 4-3 flat vein 11 a.m.	0.528	17.36

\*Flat seam samples taken from face and broken ore locations (first eight samples): Gold - 0.72 oz/tn Silver - 37.13 oz/tn

## New Sampling Program at Cross Mine cont'd

2

Date	Sample Number	Location	Gold	Silver
7/6/82	82-20	Face--east top of raise 4-3 flat vein stope back, 11 a.m.	0.612	32.07
7/6/82	82-21	High-grade only, flat seam 3rd Level CP-65 feet foot wall	1.376	41.52
7/15/82	82-22	Ore pile on trestle dump, 20-place grab sample	0.532	16.34
7/15/82	82-23	Rare Metals first sublevel above 4th Level man-raise vein	0.674	21.65
7/15/82	82-24	Tunnel level Rare Metals west high-grade inclined vein	4.120	13.40
7/19/82	82-25	20-place sample 12' in length, flat seam Rare Metals west tunnel level	3.120	9.90
7/19/82	82-26	Same vein as above, face sample west heading	1.364	6.18
7/22/82	82-27	East face Buddy's raise, RM flat seam steel ladder raise 4-3, ore and wall rock	0.136	9.26
7/22/82	82-28	West face Buddy's raise, RM flat seam steel ladder raise 4-3, ore and wall rock	0.092	5.70
7/23/82	82-29	First sublevel high-grade vein - Buddy	2.296	30.20
8/2/82	82-30	High-grade only, 4th Level Romeo-Juliet junction drift back	1.938	5.80
8/2/82	82-31	Juliet 4th Level inclined raise back only 12' up	0.422	2.05
8/9/82	82-32	Cross Vein 4th Level survey point 412, west rib dark black ore and quartz	0.118	3.19
8/9/82	82-33	Narrow vein 4th Level Cross #2 near core station, tunnel back near locomotive switch	0.644	3.53
8/10/82	82-34	Rare Metals Vein 6' up at raise, #2 chute 2' wide, 4th Level	0.044	6.98
8/12/82	82-35	Tunnel level high-grade vein east second short round 10 place in the back	1.678	8.34
8/13/82	82-36	Long hole #1 4th Level north 14½ feet in drill cuttings, Cross #2?	4.554	8.95
8/13/82	82-37	Long hole #1 4th Level north 14½-18 feet in drill cuttings, Cross #2?	2.546	4.33
8/13/82	82-38	Long hole #1 4th Level north 20-23 feet in brown cuttings, Cross #2?	0.020	0.86
8/14/82	82-39	Flat seam Tunnel Level Rare Metals up new raise 6' left back high-grade vein	2.912	11.95
8/14/82	82-40	Flat seam Tunnel Level Rare Metals up new raise 6' right back rusty quartz only	0.426	3.51

Date	Sample Number	Location	Gold	Silver
8/14/82	82-41	Junction area Romeo Vein Tunnel Level raise round, grab off ore pile from round	0.132	4.43
8/18/82	82-42	Cross Vein Tunnel Level north ore block south face up 10'	0.140	3.50
8/18/82	82-43	Cross Vein Tunnel Level north ore block south face up 20'	0.062	2.06
8/18/82	82-44	Cross Vein Tunnel Level north ore block south face up 30'	0.140	3.24
8/18/82	82-45	Cross Vein Tunnel Level north ore block north drift back	0.026	1.95
8/18/82	82-46	Cross Vein Tunnel Level upper stope old hanging wall, black rusty rock	0.190	3.77
8/18/82	82-47	Cross Vein Tunnel Level north block floor sample, sulfides visible in quartz	0.020	0.96
8/19/82	82-48	New vein 4th Level first burn hole into vein, high-grade hanging wall 1' thick	0.323	2.77
8/19/82	82-49	New vein 4th Level first burn hole into vein, footwall low grade 3' thick	0.036	0.36
8/19/82	82-50	Cross Vein south wall 20' above 3rd Level from manway	0.110	0.01
8/21/82	82-51	New vein 4th Level high-grade only one side--back--to other side	0.68	7.84
8/21/82	82-52	New vein 4th Level 2 ft low grade only, right side of vein	0.06	0.90
8/21/82	82-53	Roberts/Rare Metals Tunnel Level sample of ore, 20 chips	0.42	5.66
8/21/82	82-54	4th Level left rib vein Cross #2 area heading southwest stringers	0.14	0.28
8/21/82	82-55	Duplicate sample of Sample No. 82-54	0.10	0.16
	NOTE:	Nos. 54 and 55 were taken in the same face of vein to compare consistency of vein		
8/21/82	82-56	Up 8 ft to 11 ft new raise Cross #2 second stope round up vein widened	1.88	13.16
8/21/82	82-57	20-place sample muck pile from second raise round new vein Cross #2, 4th	0.90	7.16
8/24/82	82-58	Face sample 17½ ft up 6½ ft northeast new vein 4th Level 24 in. vein sample	1.160	8.56
8/24/82	82-59	Face sample 17½ ft up 6½ ft northeast new vein 4th Level 24 in. vein sample high-grade dark black only	2.528	21.57
8/24/82	82-60	Cross Vein 22 ft up raise 4-3 northeast footwall black streak	0.452	10.51

Date	Sample Number	Location	Gold	Silver
8/25/82	82-61	New vein 4th Level up 17 ft raise hole southwest heading, 6 ft south, rusty quartz vein 24 in. wide, sample taken at 5:10 p.m.	0.808	3.19
8/25/82	82-62	New vein 4th Level up 17 ft. raise hole northeast heading, 14 ft northeast, vein is 3 ft wide - looks good	0.994	9.71
8/25/82	82-63	20-place ore pile sample on dump trestle from today's muck, new vein 4th Level, 5:30 p.m.	1.140	7.49
8/30/82	82-64	New stope southwest advance at 8:30 a.m. rusty quartz 2 ft wide at 13 ft south-east of raise edge	0.190	0.57
8/30/82	82-65	21 ft 6 in northeast new stope new face, 20-place chip, vein 3 ft wide	0.884	11.74
9/4/82	82-66	25-place sample ore pile on trestle dump from September 3 production Crown Point Vein-B stope	0.816	10.56
9/7/82	82-67	21 ft 5 in to 26 ft northeast heading, 10:00 a.m. first sublevel above 4th Level back sample 2.2 ft wide Crown Point-B stope	1.536	34.48
9/7/82	82-68	26 ft to 32 ft northeast heading, 10:00 a.m. first sublevel back and face sample 2.2 ft wide CP-B stope	0.696	18.28
9/7/82	82-69	32 ft northeast heading first sublevel right side face sample TALC sample only CP-B stope	0.068	1.51
9/7/82	82-70	22 ft northeast heading drift back high-grade malachite copper showing 4 in. wide 4 ft. long, high-grade only	3.578	89.94
9/8/82	82-71	38 ft. northeast heading face only 2.6 ft. wide CP-B stope first sublevel above 4th Level	0.262	4.54
9/10/82	82-72	45 ft. to 50 ft. CP-B Vein junction Rare Metals first sublevel above 4th Level right rib 2.6 in. wide 2 back	0.320	3.32
9/10/82	82-73	44 ft. to 50 ft. CP-B junction Rare Metals first sublevel above 4th, left rib 2 ft. wide 2 back	0.096	1.54
9/10/82	82-74	50 ft. CP-B Rare Metals junction left rib at 50 ft. dark black high-grade heavy fines	2.486	92.65

NOTE: Sample Nos. 82-36 through 82-74 are samples for sampling program of 44th Cross Run.

Date	Sample Number	Location	Gold	Silver
	Note: Sample No. 82-75 starts mining sample program for 45th Cross Run.			
9/14/82	82-75	56 ft. CPB-RM northeast right heading face 4 ft. wide, 10 a.m.	0.470	7.43
9/17/82	82-76	Track level 4th high-grade seam 6 in. wide, right side of new track heading northeast 11 ft. from southwest raise edge	0.360	8.04
9/17/82	82-77	Track level 4th main vein CPB 2.2 in. wide sulfides plus 6 in. of rust, 11 ft. from southwest raise edge floor to back	0.524	11.16
9/19/82	82-78	25-place sample fines ore bin first half of hand picked high-grade ore at Boulder Mill	1.048	21.83
9/22/82	82-79	Track level advance 4th Level Crown Point Vein face, 7 ft. wide vein sample left side 3 ft. of ore plus rust, 17 ft. northeast from raise edge	0.328	3.98
9/22/82	82-80	Romeo Vein 41 ft. from Rare Metals south 4th Level rib chip samples--will plan long-hole program here soon	0.244	3.03
9/24/82	82-81	28 ft. northeast 4th track level CP-B Vein 16 in. wide floor to back	0.120	0.96
9/24/82	82-82	28 ft. northeast 4th track level CP-B gneiss wall rock 3 ft. 6 in. wide	0.032	0.27
9/27/82	82-83	32 ft. 6 in. northeast 4th track level CP-B Vein only, 2 ft. wide floor to back		
9/29/82	82-84	38 ft. 4th track level CP-B Vein 16 in. wide - good ore		

# Hendricks Mining Company, Inc.

Caribou, Colorado

Complete Mining and Milling Services

Exploration

Development

Production

## CROSS MINE

Yearly Production

<u>Year</u>	<u>Tons</u>	<u>Tons Per Day</u>
1977	2,234.5	9.31
1978	4,758.65	19.82
1979	3,554.13	14.80
1980	6,816.50	28.40
1981	3,724.15	15.51
1982	Production began May, 1982	

**Mill Address:** 3000 N. 63rd St. • Boulder, Colorado 80301 • (303) 443-1502

**Mine Address:** Caribou, Colorado • P.O. Box 653 • Nederland, Colorado 80466 • (303) 258-3806

# Hendricks Mining Company, Inc.

Caribou, Colorado

Complete Mining and Milling Services

Exploration

Development

Production

## CROSS MINE

Recap of Run Nos. 1-40

Average Moisture - 13.3%

Wet Weight - 935.97 tons

Dry Weight - 809.82 tons

Crude Ore - 22,501.06 tons

Average Ratio - 28.1 to 1

Gross Value - \$2,122,187.04

Average Gold Price - \$379.3024

Average Silver Price - \$11.5339

Advances - \$1,497,712.74

Interest - \$27,494.01

Gold - 3,440.58 ounces

Silver - 83,080.58 ounces

Lead - 165,717 pounds

Zinc - 204,237 pounds

Copper - 20,067 pounds

Royalties

Dofflemyer/Stillwell - \$196,976.83

Columbine Minerals - \$53,043.94

Trucking Charges - \$58,971.65

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# Hendricks Mining Company, Inc.

Caribou, Colorado

Complete Mining and Milling Services

Exploration

Development

Production

CROSS MINE

<u>RUN NUMBER</u>	<u>DATE SHIPMENT ARRIVED AT SMELTER</u>	<u>GOLD ounces</u>	<u>SILVER ounces</u>	<u>LEAD pounds</u>	<u>ZINC pounds</u>	<u>COPPER pounds</u>
1	5-13-77	39.49	1693.25	1982	---	359
2	7-18-77	53.27	2019.22	3942	4195	426
3	9-12-77	81.76	3561.51	5501	5714	704
4	10-14-77	80.70	2491.62	4190	4617	582
5	11-17-77	100.73	2534.21	4028	5227	611
6	12-22-77	80.57	1094.00	3059	5044	273
7	2-3-78	108.94	1391.13	3365	5194	400
8	3-3-78	100.91	2566.59	3598	4587	552
9	3-29-78	63.60	1222.89	2451	3827	269
10	4-26-78	91.55	1580.16	2880	2106	238
11	6-23-78	54.91	1432.06	2712	3140	318
12	8-30-78	102.85	2624.33	4316	6015	620
13	9-30-78	100.76	2164.92	4342	5354	443
14	10-30-78	77.76	2237.26	4856	6272	358
15	11-29-78	79.02	2350.32	4579	6186	449
16	1-9-79	74.71	2638.74	4788	5066	636
17	3-13-79	65.70	2301.10	3990	4944	565
18	6-29-79	57.87	2043.43	4869	5192	659
19	8-3-79	62.06	2114.20	3711	4368	624
20	8-31-79	69.14	2249.91	3827	4146	667
21	10-11-79	83.33	2742.56	4296	6364	517
22	11-30-79	66.98	1677.54	2943	3356	400
23	12-27-79	88.29	2895.43	4876	5676	648
24	1-31-80	63.54	2064.79	4144	4938	518
25	3-10-80	65.52	1879.84	3518	5277	790
26	4-18-80	75.48	1056.40	3320	5615	198
27	5-16-80	69.29	833.76	2932	3936	154
28	6-2-80	111.86	990.39	3343	4280	300

Mill Address: 3000 N. 63rd St. • Boulder, Colorado 80301 • (303) 443-1502

Mine Address: Caribou, Colorado • P.O. Box 653 • Nederland, Colorado 80466 • (303) 258-3806

## CROSS MINE

2

<u>RUN NUMBER</u>	<u>DATE SHIPMENT ARRIVED AT SMELTER</u>	<u>GOLD ounces</u>	<u>SILVER ounces</u>	<u>LEAD pounds</u>	<u>ZINC pounds</u>	<u>COPPER pounds</u>
29	6-23-80	98.76	1116.54	3671	4458	219
30	7-1-80	93.22	1491.77	3989	5092	339
31	7-28-80	82.39	1135.61	3492	5110	383
32	8-28-80	75.18	1028.36	2990	4380	211
33	9-18-80	90.85	1441.24	2821	4915	449
34	11-20-80	23.2657	530.8595	862	unkn.	151
35	2-2-81	71.93	2191.53	4435	5123	554
36	4-7-81	82.02	2872.41	7031	5942	654
37	5-26-81	96.22	2784.27	6160	5947	739
	6-4-81	101.91	2473.70	4836	6909	653
38	9-10-81	148.29	4070.68	6741	10018	866
39	12-2-81	201.0243	4459.38	9575	12391	1287
40	1-14-82	104.93	1032.71	2757	3316	284
41	6-18-82					
42	7-13-82					
43	8-9-82					
44	Milling in process					
	TOTALS	3440.58	83080.58	165717	204237	20067

# Hendricks Mining Company, Inc.

Caribou, Colorado

Complete Mining and Milling Services

Exploration

Development

Production

CROSS MINE

<u>RUN NUMBER</u>	<u>DATE SHIPMENT ARRIVED AT SMELTER</u>	<u>SMELTER LOCATION</u>	<u>GROSS VALUE</u>	<u>GOLD PRICE</u>	<u>SILVER PRICE</u>
1	5-13-77	El Paso	\$10,103.05	\$143.393	\$4.49805
2	7-18-77	Trail	16,220.49	144.95	4.39991
3	9-12-77	Trail	28,481.63	158.86	4.71552
4	10-14-77	E. Helena	24,071.16	162.10	4.8284
5	11-17-77	E. Helena	26,772.64	160.45	4.70595
6	12-22-77	E. Helena	18,483.01	173.179	4.93395
7	2-3-78	E. Helena	25,986.28	183.662	5.27286
8	3-3-78	E. Helena	29,331.43	175.275	5.1184
9	3-29-78	E. Helena	16,542.28	175.275	5.1184
10	4-26-78	E. Helena	22,928.47	176.307	5.12068
11	6-23-78	E. Helena	17,185.05	188.726	5.33065
12	8-30-78	E. Helena	34,735.22	212.076	5.5748
13	9-30-78	E. Helena	34,210.51	227.393	5.9179
14	10-30-78	El Paso	26,427.64	207.834	5.9285
15	11-29-78	El Paso	29,387.44	227.271	6.25455
16	1-9-79	E. Helena	36,737.39	245.67	7.41716
17	3-13-79	Trail	31,432.12	239.161	7.41758
18	6-29-79	E. Helena	35,239.51	294.736	9.13505
19	8-3-79	Trail	47,985.39	355.115	13.81957
20	8-31-79	E. Helena	54,048.87	355.115	13.95916
21	10-11-79	E. Helena	75,030.82	391.993	16.60265
22	11-30-79	E. Helena	64,070.96	455.084	21.79278
23	12-27-79	E. Helena	162,076.74	675.309	38.25682
24	1-31-80	E. Helena	109,220.32	665.321	35.085
25	3-10-80	E. Helena	58,391.44	517.41	14.50
26	4-18-80	E. Helena	49,362.45	513.82	12.53286
27	5-16-80	E. Helena	51,741.40	600.717	15.74762
28	6-2-80	E. Helena	83,251.55	644.283	16.05932

Mill Address: 3000 N. 63rd St. • Boulder, Colorado 80301 • (303) 443-1502

Mine Address: Caribou, Colorado • P.O. Box 653 • Nederland, Colorado 80466 • (303) 258-3806

RUN NUMBER	DATE SHIPMENT ARRIVED AT SMELTER	SMELTER LOCATION	GROSS VALUE	GOLD PRICE	SILVER PRICE
29	6-23-80	E. Helena	\$77,244.78	\$644.283	\$16.05932
30	7-1-80	E. Helena	78,068.24	627.148	15.89714
31	7-28-80	E. Helena	66,142.18	627.148	15.89714
32	8-28-80	E. Helena	67,469.71	673.625	20.14381
33	9-18-80	Trail	87,939.11	693.1399	21.7931
34	11-20-80	Denver (El Paso)	20,968.89	594.921	16.39333
35	2-2-81	Cominco	58,685.06	498.761	12.33818
36	4-7-81	E. Helena	67,883.87	479.697	10.8475
37	5-26-81	E. Helena	69,223.92	460.761	10.00068
	6-4-81	E. Helena	60,452.74	409.284	8.63114
38	9-10-81	Trail	97,849.56	429.0033	8.9737
39	12-2-81	Trail	106,817.15	376.4224	7.7892
40	1-14-82	Trail	43,986.57	366.6371	8.0196
41	6-18-82	El Paso			
42	7-13-82	El Paso			
43	8-9-82	Trail			
44	Milling in process				
		TOTAL	2,122,187.04		
				AVGS.	379.3024 11.5339

# Hendricks Mining Company, Inc.

Caribou, Colorado

Complete Mining and Milling Services

Exploration

Development

Production

CROSS MINE

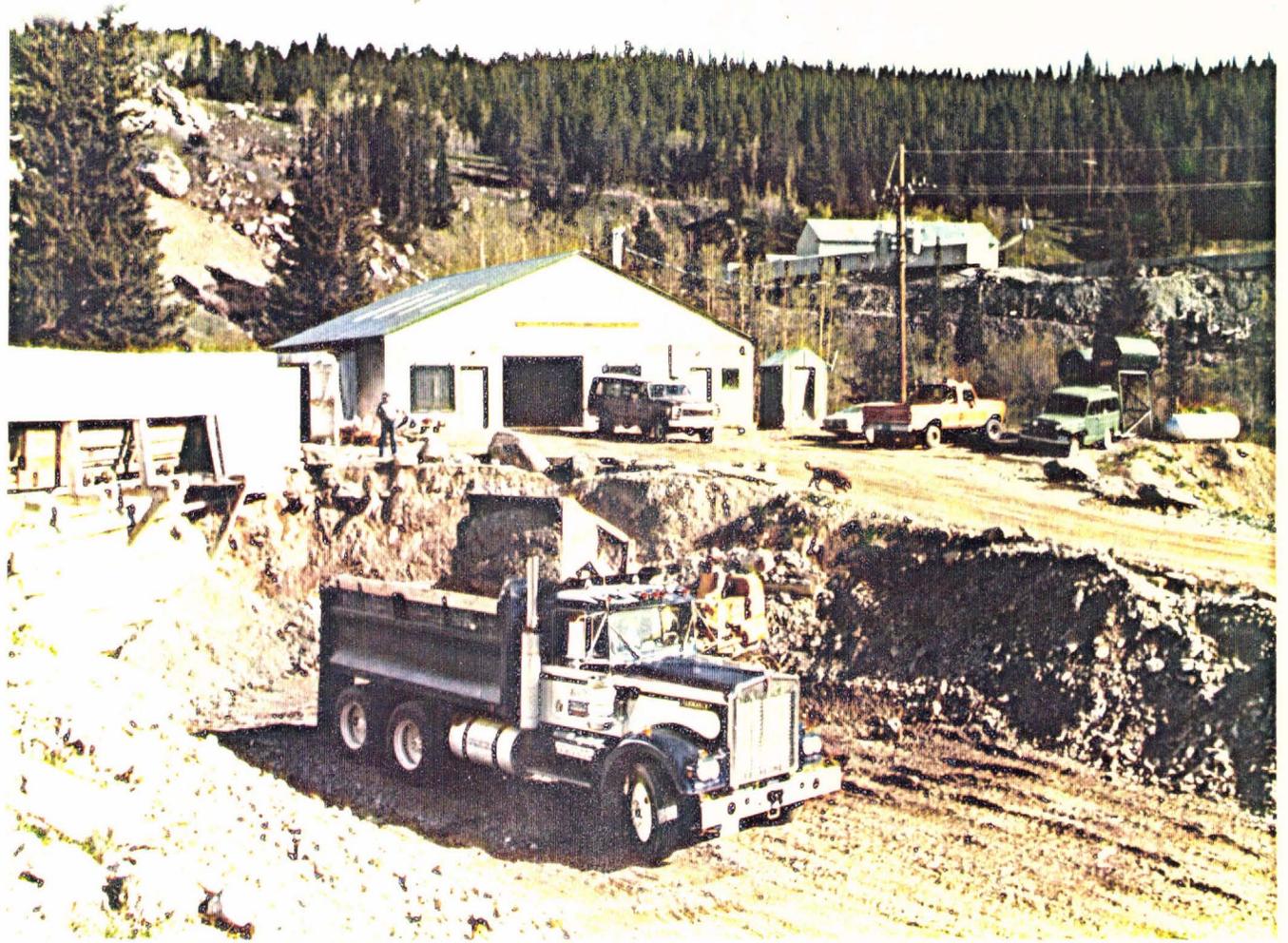
## MOISTURE

<u>RUN NUMBER</u>	<u>SMELTER LOCATION</u>	<u>MOISTURE %</u>	<u>WET WEIGHT TONS</u>	<u>DRY WEIGHT TONS</u>
1	El Paso	12.7	18.61	16.25
2	Trail	6.80	16.92	15.7695
3	Trail	8.30	23.25	21.32
4	E. Helena	8.3	21.155	19.399
5	E. Helena	9.9	25.125	22.637
6	E. Helena	10.9	20.435	18.207
7	E. Helena	13.60	24.34	21.03
8	E. Helena	13.3	21.96	19.04
9	E. Helena	17.5	19.17	15.82
10	E. Helena	15.6	23.54	19.86
11	E. Helena	10.2	14.88	13.36
12	E. Helena	7.8	24.90	22.96
13	E. Helena	10.8	23.63	21.08
14	El Paso	16.0	24.26	20.36
15	El Paso	15.3	23.88	20.21
16	E. Helena	17.8	24.17	19.87
17	Trail	16.0	21.02	17.66
18	E. Helena	12.2	23.01	20.20
19	Trail	13.8	19.05	16.42
20	E. Helena	13.8	18.50	15.95
21	E. Helena	13.0	22.86	19.89
22	E. Helena	16.9	16.02	13.32
23	E. Helena	16.1	23.82	19.98
24	E. Helena	17.5	20.93	17.27
25	E. Helena	16.3	21.89	18.32
26	E. Helena	17.7	24.02	19.76

Mill Address: 3000 N. 63rd St. • Boulder, Colorado 80301 • (303) 443-1502

Mine Address: Caribou, Colorado • P.O. Box 653 • Nederland, Colorado 80466 • (303) 258-3806

<u>RUN NUMBER</u>	<u>SMELTER LOCATION</u>	<u>MOISTURE %</u>	<u>WET WEIGHT TONS</u>	<u>DRY WEIGHT TONS</u>
27	E. Helena	17.2	23.30	19.30
28	E. Helena	12.6	24.48	21.40
29	E. Helena	11.3	24.64	21.85
30	E. Helena	12.9	24.36	21.22
31	E. Helena	13.3	24.56	21.29
32	E. Helena	12	23.93	21.06
33	Trail	12.5	24.42	21.3675
34	Denver (El Paso)	7.3	6.37	5.905
35	Trail	16.2	22.81	19.115
36	E. Helena	15.5	23.44	19.807
37	E. Helena	11.9	24.11	21.241
	E. Helena	13.0	22.06	19.192
38	Trail	12.9	35.5	30.9205
39	Trail, B.C.	15.2	47.44	40.229
40	Trail, B.C.	13.9	23.2	19.975
41	El Paso	7.1	6.58	6.11
42	El Paso	13.3	17.69	15.34
43	Trail, B.C.			
44	Milling in process			
		<u>AVG. 13.2</u>	<u>TOTALS 960.24</u>	<u>831.27</u>



THOMAS S. HENDRICKS  
P.O. Box 653 - Caribou  
Nederland, Colorado 80466

Birthdate: April 30, 1949

Title: President/Owner/Chief Operating Officer

Company: 1. Hendricks Mining Co., Inc. - President (90% owner)  
2. Hendricks Milling Co., Inc. - President (100% owner)  
3. Jones & Donnelly Ditch Co., Inc. - President  
4. Boulder County Metal Mining Association - President  
5. Colorado Mining Association - Director  
6. Boulder Coal Co., Inc. (coal products) - Secretary  
(33-1/3% owner)

Business Address: 3000 N. 63rd Street, Boulder, Colorado 80301

Business Phone No.: (303) 443-1502

Educational & Professional Summary:

I grew up in Colorado Springs, Colorado, near the gold mining district of Cripple Creek, Colorado, and spent a number of years while growing up in this area exploring many of the old Colorado gold and silver mining camps. I attended college in Minnesota for one year, and three years at the University of Colorado in Boulder majoring in geology. While going to high school and college, I worked for six different mining companies working in areas such as assay lab pilot plant facility, rock quarry operations, and underground tungsten and gold and silver mines. I worked from 1971 until 1973 as superintendent on rehabilitating and sinking a 500 foot shaft on the Comstock Silver Mine at Caribou, Colorado, for Aquarius Mining Company. In 1973, I started Hendricks Mining Company and began the Cross Mine operation at Caribou, Colorado, which during the past five years has been one of Colorado's only consistently producing small gold and silver mines. In December, 1976, Hendricks Mining acquired with Tusco, Inc. of Denver, the old Allied Chemical milling facility in Boulder, Colorado, and converted it to a modern gold and silver mill which has operated consistently since that date.

In August of 1980, I formed a partnership with Kenneth M. Good of Denver, Colorado, a well-known Colorado real estate figure and became President and chief operating officer of Hendricks-Good Mining Company, Hendricks-Good Milling Company and Hendricks-Good Cross Mine Partnership. Hendricks-Good Mining Company began reopening on August 1 the famous Caribou Mine on a two shift per day basis with production to commence late in 1981. The Caribou Mine will become one of the nation's largest silver producers. Hendricks-Good Milling Company's Boulder mill has been running at capacity since August of 1980. The various companies have employed some 56 mine and mill people.

I have been President of the Boulder County Metal Mining Association for the past three years, an organization that dates back to 1886. The organization currently has 130 active members who represent both miners and nonminers. As President of the Jones and Donnelly Ditch Company, the second oldest ditch-water system in Boulder County (1876), we work to protect our decreed water rights for farming and industrial use from suburb developers and over-anxious water attorneys. As one of the original founders of Boulder Coal Company, Inc., we are rapidly growing into a recognized supplier of coal and energy-saver coal products for a sound energy minded public.

I have given numerous speeches over the past several years on small mining and milling to such meetings as the National Western Mining Conference, the AIME Association meetings, the Colorado School of Mines Conference on Gold and Silver Mining, to school groups and county officials. I am also a director for the Colorado Mining Association.

Previous Employers:

- 1965-1967 - Colorado Lime Company, Inc., Colorado Springs, Colorado. Mr. Herb Hendricks, General Manager (father). Quarry work, lab work and plant work.
- 1967-1968 - Castle Concrete Company, Colorado Springs, Colorado. Mr. Charlie Bately, Manager. Quarry work, drilling and crusher circuit.
- 1968 - Hasseler-Bates Company, Sinton Dairy, Colorado Springs, Colorado. Mr. James Sinton. Gold and mineral exploration work.
- 1968-1969 - Golden Cycle Corporation, Pike View Operation, Colorado Springs, Colorado. Mr. Chuck Dixon, Lab Manager. Gold and silver research, exploration laboratory and pilot plant.
- 1969-1970 - Andesite Rock Company, Inc., Lyons, Colorado. Mr. James Dean, President. Drilling-blasting, quarry work, heavy equipment and crusher plan.

- 1970 - Calco, Inc., Colorado Springs, Colorado. Mr. Herb Hendricks, President (father). Construction from ground up of 150TPD limestone plant.
- 1971 - Bluebird Mining Company, Inc., Gold Lake, Colorado. Mr. James McBroom, President, Broomfield, Colorado. Underground tungsten mine - rehabilitation, new tunnels and production.
- 1971-1973 - Aquarius Mining Company, Inc., Caribou, Colorado (Comstock Mine). Mr. Richard Sigismund, President, Boulder, Colorado. Underground silver mine - surface plant and shaft sinking project, core drilling and all phases of mine development and management. I was general superintendent of the entire project for the last one year of operation.
- 1973-present - Hendricks Mining Company, Inc., President and founder of Cross Mine operation and Boulder Mill operation. From one man pick and shovel operation to one of Colorado's only consistently producing gold and silver mines. Total mine rehabilitation-exploration, development and production work. Acquisition in December, 1976, of Allied Chemical Mill in Boulder, Colorado, and refurbishing of mill to handle gold and silver sulfide ores.
- 1980-present - Hendricks-Good Milling Company and Hendricks-Good Mining Company, President and Chief Operating Officer for both entities. Work and responsibilities have included all phases of underground mining work, surface plant design and construction, legal and corporate meetings, environmental planning and permitting, geological interpretation, sampling and reporting, daily underground inspections of mine workings, complete hiring and firing of mine and mill personnel, acquisition and negotiations on surrounding mine properties, equipment maintenance and mechanical work, accounting, bookkeeping and general record keeping, approval of all incoming accounts payable, main purchaser and finder of all new and used equipment of operations, speaking obligations on the Cross Mine operation as well as on small mining in Colorado, signator on all corporate checks, public relations work, mine water discharge sampling work and reporting. Also maintainer of roadways during winter months, evaluation and investigation work on hundreds of outside potential small mine operations, sampling and research work on old mining dumps and corporate management type work of all phases, supervise and participation in construction of all surface plant buildings, underground mine planning work as well as overseer and instructor in safety programs, budgeting and planning work with in-house bookkeeper and outside accountants. Milling company has run consistently from the spring of 1977 until the present.

Outside Interests:

Played ice hockey for 18 years and was captain of high school team in 1966-67 at Palmer High School in Colorado Springs and was captain of University of Colorado's hockey club team in 1969. Enjoy ice skating, skiing, woodworking, horseback riding and mountain climbing.

Character and Business References:

Available upon request.

Banking References:

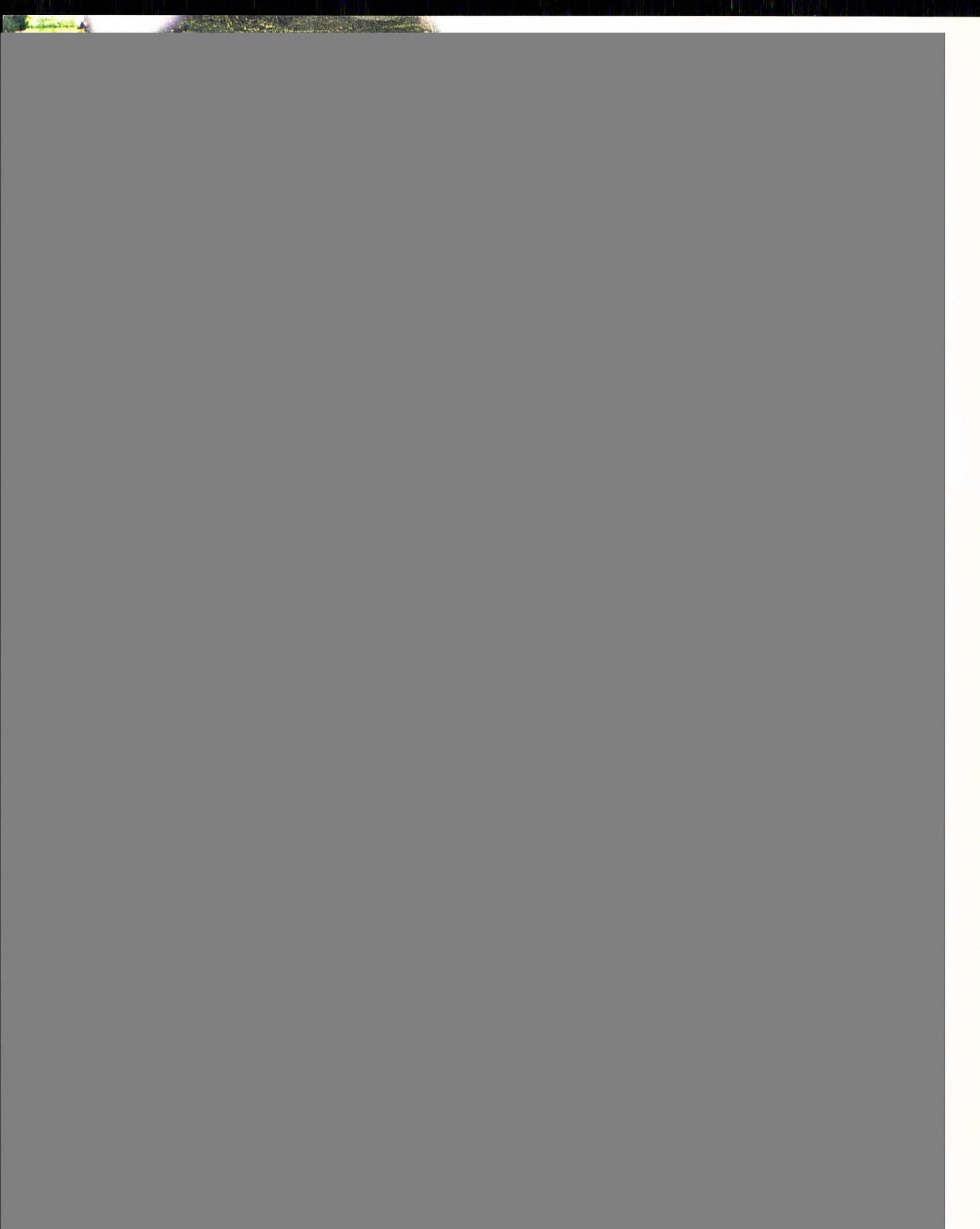
First National Bank in Boulder, Colorado. Contacts: Mrs. Clair Beckmann, Vice President; and/or Mr. Bert Stjernholm, Commercial Loan Officer. Mailing address: P.O. Box 59, Boulder, Colorado 80306. Phone: (303) 442-6770

Accountants:

Mr. Brad Williams at Ernst and Whinney in Dallas, Texas.



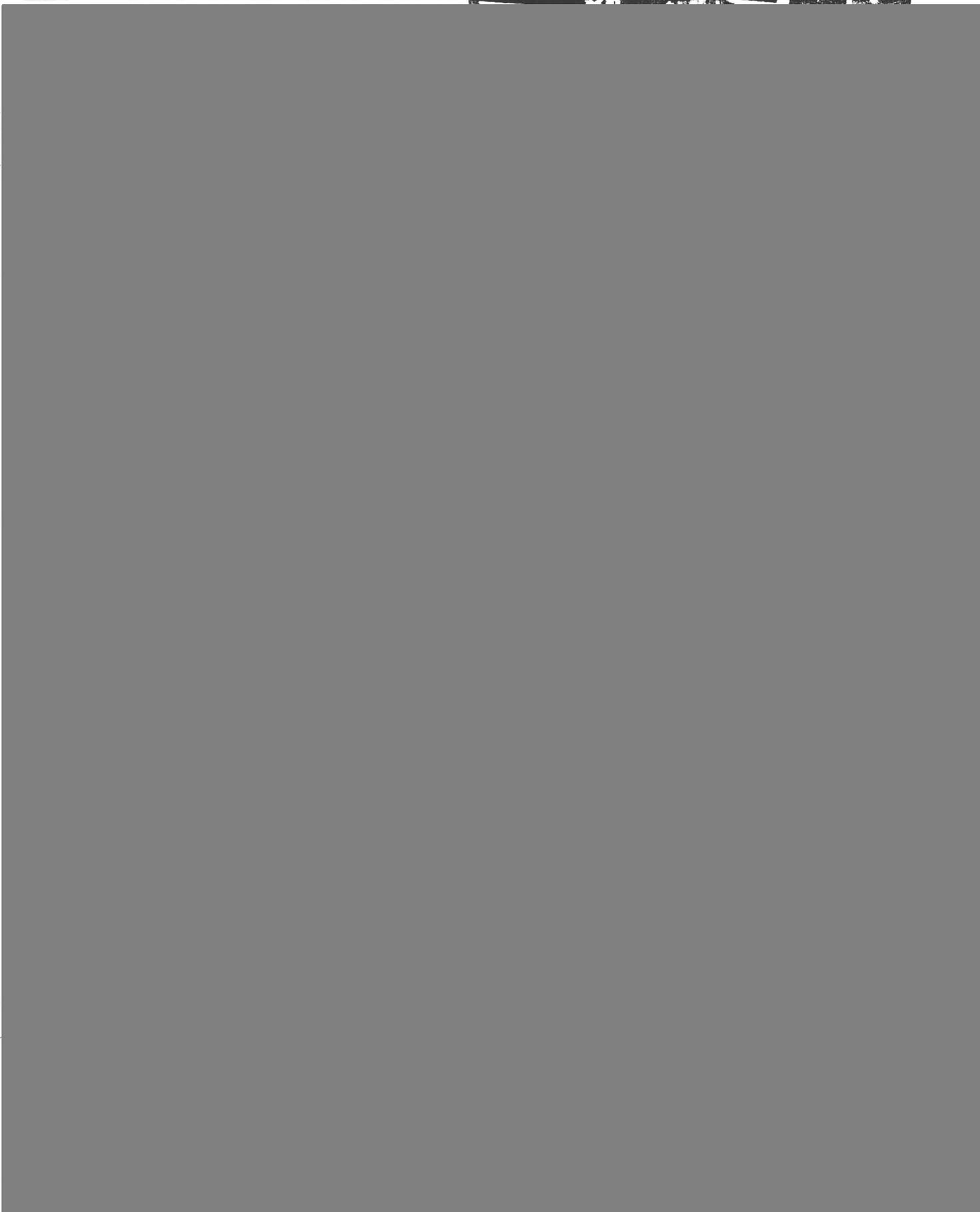




# Newsweek

Thomas S. Hendricks (below left)

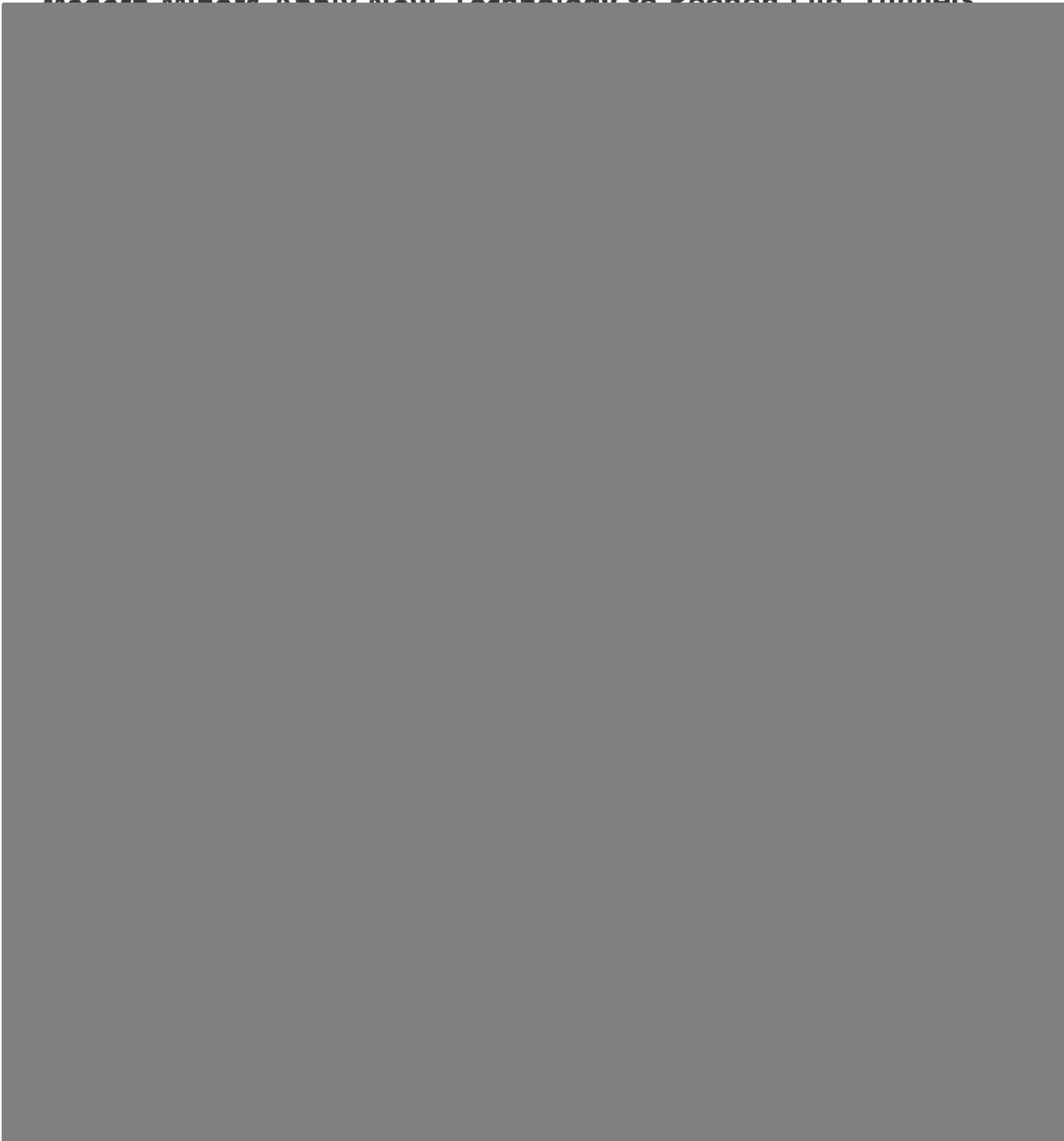
Glenn Pfarr, Mill Superintendent



# BUSINESS and FINANCE

THE DENVER POST Mon., Aug. 25, 1980 19

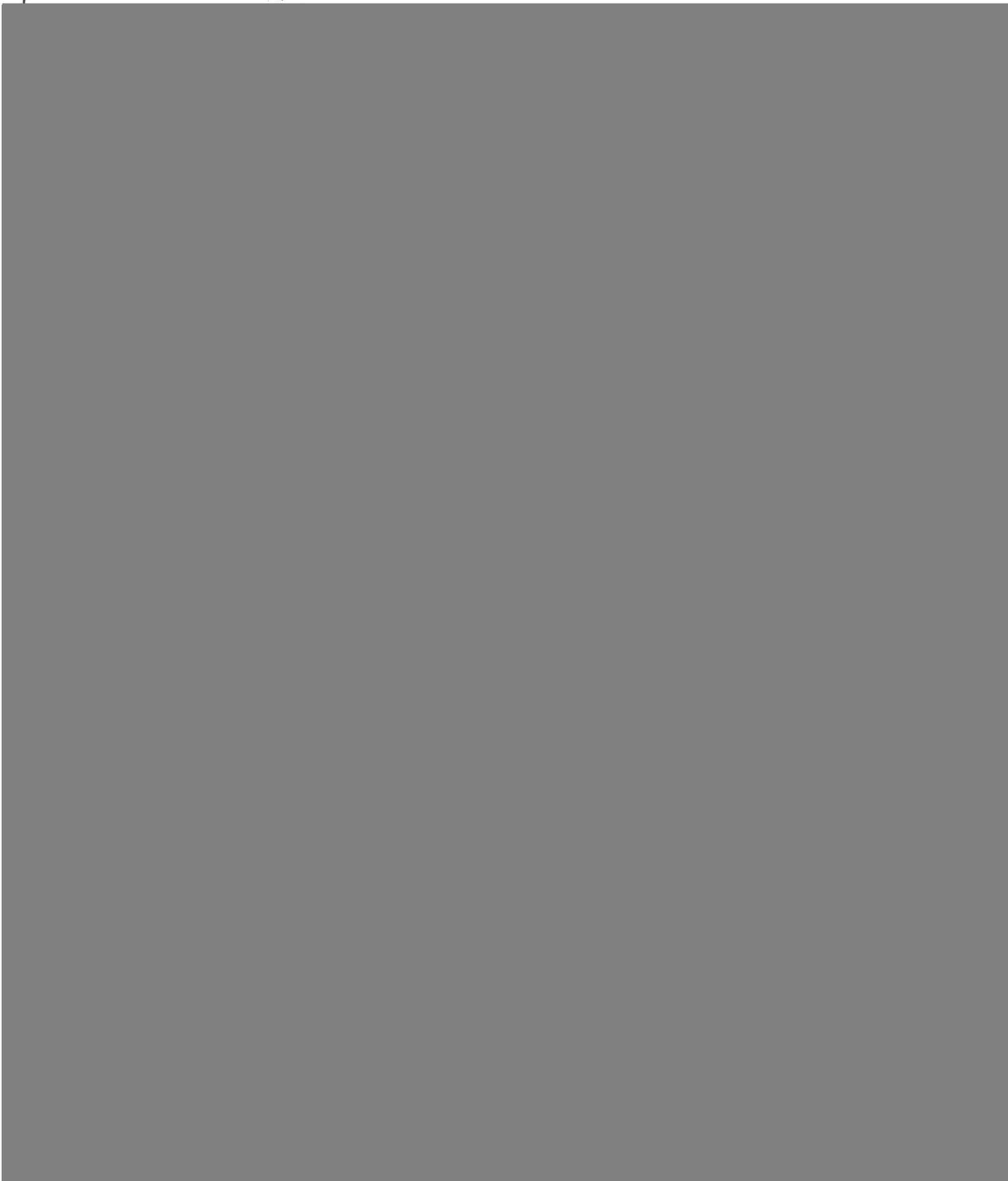
## Modern Miners Apply New Technology to Reopen Old Tunnels



# Business

Rocky Mountain News, Denver, Colo.

Monday, July 13, 1981 — Page 61



*Wednesday, September 23, 1981, Denver, Colorado 80206*

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**THE MINING RECORD**

CONTRACTORS SPECIFICATIONS FOR EXPLORATION AND DEVELOPMENT WORK  
AT THE CROSS MINE OPERATION, CARIBOU, COLORADO

By

Thomas S. Hendricks, President  
Hendricks Mining Company, Inc.

August, 1982

## CROSS MINE EXPLORATION AND DEVELOPMENT PROGRAM

### Purpose

The purpose of this program is to increase the operational efficiency of the mine from 25 tons per day to 100 tons per day. This program would see the installation and utilization of new hoisting and transport equipment, blocking out new ore reserves of approximately 35,000 tons that would be ready to be mined efficiently, delineate new veins and increase future reserves through a carefully planned core drilling, geological mapping and sampling program.

The Cross Mine operation is located in Sections 8 and 9, Township 1S, Range 73W, approximately 24 miles west of Boulder, Colorado, or approximately 51 miles northwest of Denver, Colorado. Access from Nederland, Colorado, to Caribou is via well-maintained county road open year-round. The mine has a new Gardner Denver 750 Electric Compressor as well as offices, modern dry room, shower facilities, shop, lunch room, etc. There is 1200 amp 480V electric service at the portal. A Cat 955 Track Loader and a Ford A66 Loader are also available at the portal. We have diesel storage capacity of 2,500 gallons and there is adequate drill water. A large 40' x 80' steel building is also available for closed in equipment storage. Power is also available in this building.

Estimated Completion Time: 12 months or less

1. New Portal - New rubber tired crosscut tunnel from surface to underground shaft, including new snowshed, 8' x 8' haulageway, hoist room, ore storage, headframe extension and Vulcan Denver electric hoist installation.

Specifications: Crosscut tunnel length approximately 125 feet, hoist room approximately 12' x 12' x 10' high. Ore storage to handle 100 tons, 20 cu ft to the ton broken, rubber tired loading of ore. Headframe extension--raise existing headframe up 20 feet, install raise for hoist cable and accommodate skip dumping into 100 ton ore storage area. Install Vulcan Denver 50HP Electric Hoist on concrete and steel pad per specs including electrical installation. Hoist room when finished will be enclosed with concrete block wall, strongbarn roof with lights, electric heater, phones and mine-bell signaling device. A 60 foot 8 x 8 snowshed from portal area out to existing trackway will be handled by local carpenters. Any ground that needs timber from the portal in will have to meet MSHA specifications.

2. Rehabilitation of Existing Shaft - Installation of new Foster-Miller man trip to be completed by Hendricks Mining Company.

Specifications: Install new 1½ ton skip, replace any needed support timber and existing winze, lag existing winze with 2 x 8's to existing 4th Level, replace any blocking and/or posts, dividers, etc., that need replacing and general rehabilitation of existing winze.

3. New Pump Station - Install on 4th Level new centrifugal pump, dam, drains, electricals, piping and shaft sinking pump system.

Specifications: Centrifugal pump shall be at 20HP to be able to accommodate some slimes. The pump station will be a critical part for the shaft sinking efficiency.

4. 4th Level Preparation for Shaft Sinking - New bearing sets, enlarge level station, tigger installation, incline to vertical changeover.

5. Shaft Sinking - Sink below 4th Level 200' vertical of new shaft complete with timbered sets on 5' centers, 4' x 4' in the clear hoist compartment, 4' x 4' in the clear manway with ladders, air and water lines, ventilation and electrical lines and crosshead guides.

Specifications: Timber shall be a good grade of Douglas Fir all 8 x 8's, lagging shall be 2 x 8's and hanging rods shall be a minimum of 5/8" diameter steel. Air line shall be 4" steel victaulic grooved, water discharge line 4" victaulic grooved, and electric lines will be MSHA approved SQ cord and necessary guides for skip shall be #1 Douglas Fir 4 x 6's and any rail for skip shall be 30 lb. There will be 16" x 8" bearing sets between new levels at 40' intervals or placed at the base of each 8 sets.

6. New Level Stations - Blast out new stations - 5th Level at 80' down new shaft - 6th Level at 160' down new shaft - 40' sump-ore pocket and pump station.

Specifications: Station size will be discussed on mine inspection. Ore pockets will be installed on both levels with air actuated skip loading doors to be used on both the 5th and 6th Levels. Ore pockets and car dumping locations, etc., will be discussed on site.

7. 600' of Developmental Drifting - On new 5th and 6th Levels.

Specifications: Tunnel size to be a minimum of 6 x 7. Track gauge is 18" 30 lb. rail ties on 3' centers.

8. 600' of New Raises in Veins - Ventilation, secondary escapeways and mining access raises.

Specifications: Raise size will be minimum of 4' x 6' and most will be driven in ore (these raises may come under ore production contracts).

9. Core Drilling and Geological - 8,000 to 10,000 feet of core drilling and geological mapping, sampling and core logging.

Summary

These are just summaries to be used as an outline for the Cross Mine exploration/development program. It is imperative in figuring a bid on these various projects that an on-site inspection of the mine and discussion with Thomas S. Hendricks is needed to go over each item in full.

We look forward to giving you the opportunity to bid on this project.

Sincerely,

HENDRICKS MINING COMPANY, INC.

Thomas S. Hendricks  
President

TSH/rgj

CURRENT CROSS MINE PROVEN AND POSSIBLE ORE RESERVES  
EXISTING 4TH LEVEL UP

Calculated by

Thomas S. Hendricks, Pres. and Gen. Manager  
Hendricks Mining Company, Inc.

Cross Mine Operation - Caribou, Colorado

September 1, 1982

PROVEN ORE

Ore reserves proven in place at Cross Mine from the existing 4th Level up to the surface as of September 1, 1982. Most are accessible with little development work for immediate mining.

- A. Cross Vein - ready to mine without any development work other than 4-3 raise preparation and draw chute widening and timber plus rail and draw chute construction plus air and water lines.

<u>4th Level to 3rd Level</u>		
120'1 x 2.6'w x 70'h = 21,000 cu.ft - 12 =		1,750.00 tons
<u>3rd Level to 2nd Level</u>		
45'1 x 2.6'w x 60'h = 7,020 cu.ft - 12 =		585.00 tons
<u>2nd Level to Tunnel Level</u>		
100'1 x 2.6'w x 60'h = 15,600 cu.ft - 12 =		1,300.00 tons
<u>Tunnel Level to Surface N Stope</u>		
100'1 x 2.6'w x 45'h = 11,700 cu.ft - 12 =		<u>975.00 tons</u>
	Cross Vein Total Tonnage	4,610.00 tons

- B. Crown Point Vein - ready to mine on 4th Level. Third Level would need rail and cleanup as would 2nd Level. Tunnel Level north is almost set up now--fan, etc., would have to be relocated.

<u>4th Level to 3rd Level</u>		
110'1 x 2.6'w x 70'h = 20,020 cu.ft - 12 =		1,668.33 tons
<u>3rd Level to 2nd Level</u>		
75'1 x 2.6'w x 50'h = 9,750 cu.ft - 12 =		812.50 tons
<u>2nd Level to Tunnel Level</u>		
75'1 x 2.6'w x 60'h = 11,700 cu.ft - 12 =		975.00 tons
<u>Tunnel Level to Surface</u>		
75'1 x 2.6'w x 80'h = 15,600 cu.ft - 12 =		<u>1,300.00 tons</u>
	Crown Point Vein Total Tonnage	4,755.83 tons

- C. Rare Metals Vein - this Tunnel Level area is nearly ready to go--some rail improvement is needed plus set up work on large electric slusher--new haulage tunnel down old Cousin Jack Tunnelway by slabbing may be the best route. This would enable good access to Romeo and Juliet Veins on Tunnel Level upward.

Tunnel Level to Surface  
 $200' l \times 2.6' w \times 70' h = 36,400 \text{ cu.ft} - 12 = \underline{3,033.33} \text{ tons}$   
 Rare Metals Vein Total Tonnage 3,033.33 tons

- D. Romeo Vein - 4th Level pillars are ready to go--Tunnel Level would be part of above mentioned Rare Metals set up work.

4th Level Pillars  
 $110' l \times 2.6' w \times 8' h = 2,288 \text{ cu.ft} - 12 = 190.67 \text{ tons}$   
Tunnel Level to Surface from Rare Metals to Monzonite  
 $110' l \times 3' w \times 90' h = 29,700 \text{ cu.ft} - 12 = \underline{2,475.00} \text{ tons}$   
 Romeo Vein Total Tonnage 2,665.67 tons

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Summary Total - Proven Ore

Cross Vein	4,610.00 tons
Crown Point Vein	4,755.83 "
Rare Metals Vein	3,033.33 "
Romeo Vein	<u>2,665.67 "</u>
Total	15,064.83 tons

POSSIBLE ORE

Ore reserves possible in place at Cross Mine from the existing 4th Level up to the surface as of September 1, 1982. Most are accessible with only development drifting and raising, mostly in ore.

- A. Cross Vein - recommend that this possible ore zone be core drilled or long holed first and then drift south from each existing level at winze to monzonite contact if economic ore vein shows up.

South of Winze to Monzonite - 4 Levels  
 80'l x 2.6'w x 250'h = 52,000 cu.ft - 12 = 4,333.33 tons

Cross Vein Total Tonnage 4,333.33 tons

- B. Crown Point Vein - again, drilling is recommended first and then development drifting on vein or thru new drifting west of winze at existing winze stations if drilling proves economic ore present. Good chance on this ore.

South of Winze to Monzonite - 4 Levels  
 80'l x 2.6'w x 250'h = 52,000 cu.ft - 12 = 4,333.33 tons

Crown Point Vein Total Tonnage 4,333.33 tons

- C. Rare Metals Vein East of Cross - some drifting--drift widening and rail work plus raising on ore--definitely a few core holes would prove the existence of the Rare Metals in this area. May go a long way east.

Rare Metals East of Cross  
 100'l? x 2.6'w x 200'h = 52,000 cu.ft - 12 = 4,333.33 tons

Junction Area of Rare Metals West and Juliet Vein  
 80'l x 3'w x 300'h = 72,000 cu.ft - 12 = 6,000.00 tons

Rare Metals Vein Total Tonnage 10,333.33 tons

- D. Juliet Vein (Monzonite Contact Area) - drifting on 4th Level southeast and northwest is recommended, especially northwest to possible junction with Rare Metals west. Southeast drifting would hit Crown Point and Cross monzonite junctions. Good production raiseway system is also needed to handle production from upper levels above 4th Level. Tunnel Level could be handled from new Tunnel Level drifting already mentioned above.

4th Level-3rd Level Plus Drifting Southeast and Northwest  
 80'l x 4'w x 70'h = 22,400 cu.ft - 12 = 1,866.67 tons

3rd Level-2nd Level Pillars Plus 3rd Sublevel to 2nd Level  
 80'l x 4'w x 30'h = 9,600 cu.ft - 12 = 800.00 tons

2nd Level-Tunnel Level  
 80'l x 4'w x 65'h = 20,800 cu.ft - 12 = 1,733.33 tons

Tunnel Level-Surface  
 80'l x 4'w x 90'h = 28,800 cu.ft - 12 = 2,400.00 tons

Juliet Vein Total Tonnage 6,800.00 tons

Summary Total - Possible Ore

Cross Vein	4,333.33	tons
Crown Point Vein	4,333.33	"
Rare Metals Vein	10,333.33	"
Juliet Vein	<u>6,800.00</u>	"
Total	25,799.99	tons

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Total Proven and Possible Tons Above 4th Level

$$15,064.83 + 25,799.99 = 40,864.82$$

Summary

There exists near the present Cross Mine workings the potential for new veins that could be proved up with a very limited core drilling program. This is particularly true in a 250 foot radius west on the Rare Metals Vein on an angle to the south and southeast, particularly in the monzonite intrusive. It is also believed that the Cross and Crown Point Veins may penetrate into or have origin in the monzonite to the south. New veins are also expected to exist in the monzonite, particularly to the southwest or on property owned or leased by Hendricks. Any new veins found west of or southwest of the existing 4th Level would have minable backs from the 4th Level up of at least 400 feet due to the contoured increase of Goat Hill. From drilling above the 4th Level in areas already set up for drilling could prove the presence of economical high-grade ore in some of the many flat seams that intersect the existing veins.

Another area for immediate ore that was not included in the calculated reserves would be on the first sublevel above the 3rd Level between the Cross and Crown Point on the inclined section of the Rare Metals Vein. This may be the main Rare Metals Vein with the copper seam splitting off to the northeast at the Crown Point Vein. There could be an estimated 2100 tons of good ore in this area mined at 3 feet or narrower.

When the new equity capital is received and we begin our new shaft sinking below the 4th Level and ore development program, we will block out and have ready to mine an estimated 35,000 tons of new ore. This would bring the total then, if no additional mining took place on the above mentioned reserves, to blocked out, proven and possible of 75,864.82 tons. The core drilling part of the program would also contribute significantly to the possible and probable category if veins continued downward or new veins are discovered of additional reserves of 150,000+ tons.

HENDRICKS MINING CO. INC.  
P. O. BOX 458 - CARIBOU  
NEDERLAND COLORADO 80466

PROPERTY OF HENDRICKS MINING CO.

REPORT ON THE PROPERTY  
OF  
THE CROSS GOLD MINING COMPANY  
CARIBOU, COLORADO

July 19, 1939

By

Walter E. Burlingame, E.M.

Mr. W. T. Dofflemyer

Denver, Colorado, July 19, 1939

Dear Sir:

Pursuant to your request, I made an examination of the property of the Cross Gold Mining Company on July 1 and 2, 1939, and beg leave to submit the following complete report. On June 27, 193 I submitted a progress report, which was a recapitulation on reports dated September 23, 1933, May 26, 1934 and July 17, 1935, which consisted of an original with progress reports more particularly as it affected the tenor and amount of ore blocked out or exposed on the Cross, Crown Point and Rare Metals Veins. Practically all work has been carried on using the shaft, driven straight for 231 feet along a 65 degree dip. This is 4' x 8' in clear, well timbered and lined near the surface and in good condition.

LOCATION? ACCESSIBILITY AND EXTENT

The property consists of the following patented claims:

Cross	#518	150 x 1500	5.16
Crown Point	6823	150 x 1500	5.16
Romeo	)		
Juliet	)		5.16
Protection	) 13272	ea 150 x 1500	5.16
Tacoma	)		5.16
Mammoth	)		5.16
Syndicate	) 15609	150 x 1500	5.16
American	)		
Apex	) 14286	150 x 1500	5.16
Rico	(		5.16

and the following unpatented claims

Rare Metals	600 x 1500	20.66
Cross #2	600 x 1500	20.66
Cross Mill Site	5 Acres	5
Rare Metals Mill Site		5 = 10

47.36

Owing to considerable overlapping there are 71.86 acres in the group, with the vein systems and possible extensions well covered.

The property is twenty-five miles west of Boulder, close by Caribou, and connected with it by a good motor highway as follows:

Boulder to Nederland	18 miles
Nederland to Fairview	3 miles

Fairview to property 3.5 miles

The last three miles are a fairly steep grade, and over a typical mountain road. The property is about one fourth mile east from the old town of Caribou. A stub road about one third mile long leads from the property to the main road. It is located in the Grand Island Mining District in Sections 8 and 9, Township 1 South, Range 73 West, at an elevation of 9600 feet. Weather conditions are excellent in the Summer and Fall, while severe wind and snow prevail through the Winter and Spring. The road can be kept open during a normal Winter the year around. Late Spring snows may block the road temporarily. The property has daily mail service, and is equipped with telephone, and electric power and lights from the Public Service Company of Colorado. A spring close by furnishes pure water for potable and domestic purposes.

#### HISTORY AND DEVELOPMENT

Caribou is one of the oldest silver-producing camps in Colorado. As early as 1859 and 1860 prospectors came into this section, but it was not until 1869 that the silver bearing lodes were located. The Poorman, Caribou, and No-Name were heavy producers, but there were also many small producers on Caribou Hill, Idaho Hill and Boulder County Hill that were profitable. East of Caribou about one fourth of a mile and through the gap the valley widens, and on the slide slopes are a number of claims with one system of veins running approximately north and south and another approximately east and west. These veins with development have yielded ore with values in both gold and silver. The Cross, which has been in the process of development since 1932 by the above company, is a typical example, and contains the cross and Crown Point, which blend in with the Rare Metals vein to the north. The

Rare Metals vein and enrichment from recent developments is classed as a fault fissure. However, the two systems have no doubt been enriched at the same time or contemporaneously. Recent developments on this vein are proving it to be larger and of more importance than the Cross or Crown Point, with a fairly steady shoot of ore from the second level west for 240 feet long and 140 feet vertically. Farther west for 100 feet as exposed on the third level the Rare Metals vein is twisted and turned, but shows a width of over  $3\frac{1}{2}$  feet and the usual values. With depth the fourth level likewise shows continuance of ore shoots. A study of the plan of the workings gives the relative positions of veins, the irregular strike of the Rare Metals vein to the west, the number of junctions and many important features as to the formation favorable for ore deposition and the persistence of these measures with depth. The broken up condition is entirely favorable for gold and silver enrichment, while the vein characteristics point to a deep seated source and values to a considerable depth (at least 1000 feet). The vein filling is largely quartz with some galena<sup>u</sup> and pyrite scattered through the mass, and at least one wall fairly well defined. Junctions or near junctions show the best values. Branches of the vein, as in the Cross fourth level and second level Rare Metals, give commercial values. A flat vein at 10A<sub>cp</sub> was noted on the third level Crown Point. It dips to the NE 56 and gave a value of \$64.51 for a width of  $2\frac{1}{2}$  feet. This is only exposed but is quite likely to be in itself the source of considerable with further development.

Other notable producers in the near vicinity were the St. Louis and Potosi. While I have no authentic records of production of any single property, the Caribou District is credited with \$20,000,000.00 production mostly silver. In later years, however, the district in the immediate

vicinity has been the scene of some continuous and profitable operation in both gold and silver.

Development at the property consists of an x-cut tunnel (east-west) approximately 850' long. This tunnel intersects the Cross vein 250' from the portal, and the Crown Point 425' from the portal. These two veins are the principal N-S veins, although the tunnel runs 423' farther, intersecting others, (See Sample) with the vein running N-S gave \$9.12 per ton for a five foot average. This may be the Romeo Vein nearer the surface as indicated S'S24' to 28' inclusive of the third level West (Rare Metals). The Rare Metals vein (E-W) as exposed from the Cross working has been opened up for 450' along the strike and about 140' vertically from the second to fourth levels. This vein is not discernible on the surface. The fourth level is approximately 200 feet below the tunnel level. Depth from the surface likewise increases as development proceeds to the west. From a survey of the map will be seen the following in the plan, using the Cross winze as working shaft. (231')

- |  |  |
|--|--|
| 1. Cross Vein                          | Tunnel to fourth level inclusive (231') developed to north of shaft.                           |
| 2. Crown Point Vein                    | Tunnel to third level inclusive (about 140') Developed from x-cut and S from Rare Metals Vein. |
| 3. Rare Metals Vein and S branch (E-W) | Second to fourth level inclusive (180' x 450') developed from Cross workings.                  |
| 4. West Rare Metals                    | SW veins merge with Rare Metals vein Rare Metals vein swerves to NE                            |

The last indicates a repetition of the Cross, Crown Point system to the west.

#### GEOLOGY

The formation here consists of a coarse-grained biotite granite, a finer grained gneiss with dikes and masses of quartz diorite and porphyry.

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This formation is one fourth mile or so East of an immense magnetic iron dike fifty feet to several hundred feet wide running approximately north and south, and outcropping for at least a mile. There are several systems of veins, the N-S and NE-SW being the most important. The E-W system, which runs across the Crown Point and Cross claims (Rare Metals) is classified as a fault fissure, and comparatively has a greater real and potential value than the Cross or Crown Point. The two systems are so intimately associated, however that they can hardly be considered separately. There are also evidences of large flows of eruptive rock shown by masses of quartz diorite, in ridges on the surface, and also in the underground workings. Near Sample #11 this material is exposed in the x-cut tunnel. The Cross and Crown Point have walls of pegmatite and granite gneiss, and the vein is from six inches to five feet in width with fairly well defined walls showing slickensides. The Rare Metals vein is a pronounced shear of considerable extent, with a generally greater vein width,  $2\frac{1}{2}$  to 7 feet, and rather better defined walls, although to the west considerable dynamic action (as seen from the map) has twisted and rolled it to a marked degree. The vein filling in both cases are usually more or less silicified, appearing as a hard blue of gray quartz containing some pyrite, and appreciable amount of galena, and often a little copper, with gold and silver values. A general analysis of the geology (see map) is as follows: The Cross and Crown Point extend to the fault (Rare Metals) on the North. This gives the present area as favorable for values, namely, to the south of the fault for at least 200' on the Cross and Crown Point. Along with this came a very important enrichment within the fault itself, well proven for 240' x 140'. The fault and fissures were evidently formed simultaneously while the mineral solutions later deposited the quartz, pyrite and galena (with contained gold and silver)

the fault acting as an impervious sheet, and confining the solutions to the present area. While the present development on the fault is somewhat limited, the presence of junctions (AB and CD) and contacts are entirely favorable. Indications point to a possible repetition of the present system of veins to the west as shown by the Romeo and the SW course of the second and third levels of Rare Metals west. Depth development along the Rare Metals can be easily expected to go down to 1000 feet or more, as such formation is obviously of great extent and depth. The flat vein encountered at 10Acp and dipping northeast 56 degrees and showing values of \$64.51, is very significant, as it still further proves the fractured condition of the formation, and likewise points to favorable junctions not only in the present area, but with the Rare Metals vein to the north.

FACILITIES? WORKING CONDITIONS, IMPROVEMENTS

Since my visit of June and July 1937, there have been the following developments, working one shift with three or four men:

Raise S	65'	
Raise T	65'	
Third West (Rare Metals)	115'	drift
Third	75'	drift exploration
Third East	75'	drift
Third Crown Point	100'	drift
Second Level West (Rare Metal)	100'	drift exploration
Second West on vein	165'	drift
Second West on South Branch (Rare Metal)	120'	drift
Second Level Crown Point	95'	drift
Second North x-cut	150'	drift exploration
Total	1,125	feet

Of this amount 665' were drifts along the vein, 320 were exploration drifts and 130 feet were raises.

The property is accessible practically the entire year from Boulder, Colorado. From here mining supplies and food supplies can be had at prevailing prices. The haul from Boulder is about 40 cents per cwt. Boulder also has a good machine shop and welding shop. Repair parts from Denver or the East are brought here over the Colorado & Southern Railway.

Timber can best be contracted for at reasonable prices, although there is some fair standing timber directly to the North of the property. Very little timber is required in drifting as the walls stand well, although shafts, raises and stopes require the usual amount.

Caribou Creek has a flow of water the entire year. This varies from a few gallons per minute to around twenty-five gallons in the spring of the year. The working of the mine are producing at this period about seventy gallons for an eight hour to twelve hour period, or averaging twenty-three gallons per minute over a twenty-four hour period. Using these two supplies, you have about thirty-five gallons per minute, equal to 219 tons per hour. A fifty ton flotation mill requires 200 tons for twenty-four hours. In the fall and winter months the flow from the creek and from the pumps would be nearer seventy per cent of the above. However, by the use of a settling pond, and re-using the clear water, the required amount may no doubt be obtained throughout the year.

The present improvements and equipment consist of the following:

On the surface is a bunk and boarding house 20' x 36' with attached room 12' x 14'. This is a frame building substantially erected, covered with Flintkote roofing and lined with beaver board. Several suitable bedrooms, kitchen and dining room give very excellent accommodations for about eight people. Many of the miners reside in Nederland, and travel back and forth to the work. At the portal of the tunnel is a tunnel house 20' x 40',

substantially built and covered with Flintkote. This is suitably partitioned into three rooms, one with forge and blacksmith shop, one with compressor, and the third 20' x 20' for framing timbers, constructing ladders, and the usual woodshaping and repair work around a mine. The equipment consists of forge, drill press, blacksmith tools, and small Sinclair sharpener with dies and dollies, anvil, several sets of steel, picks, shovels, etc. in one compartment.

Electric power is brought in by the Public Service Company of Colorado. A Blaisdell compressor (227 cu. ft.) with thirty-five horse power motor and suitable receiver carries the air through a two inch line to the workings. Electric lighting is used on the surface and at important points underground. The underground installations consists of an electric hoist with twenty horse power slip ring motor and resistance with one half inch cable. Owing to considerable water in the workings in the Spring and Summer two pumps electrically driven have taken care of this satisfactorily. A Krough Kimball two inch centrifugal pump was being used in the shaft, while a three and a half inch Deming pump, driven by a five horse power motor is used in the third and second level according to the particular work. Track and pipe lines are used throughout, and column, water tanks, jack hammers and drifters, also three number 3 buckets are in use. On the surface are two 3/4 ton mine cars, with suitable track on the dump for disposing waste.

The present working x-cuts to the collar of the winze on the Cross (about 330') is equipped with 16 lb. rails, as is the main track dump. A snowshed with steel frame (65' long) protects the portal during the winter months, and makes possible tramming and dumping. The second level and workings throughout are equipped with eight pound rails, using trucks for changing buckets.

The winze (4' x 8' in the clear) drive 231' 65 degrees along the dip is straight, and timbered with cross sets is used as a working shaft for practically all development below the tunnel level. Electric power is used throughout. The hoist, pulling from an extreme depth of 231' and from three levels to work from, is capable of taking care of fifty tons in two shifts. Ore is dumped automatically into an overhead bin. From there it is drawn by chute in cars, then trammed and dumped.

The prevailing wages for miners are as follows: machine men and blacksmith \$4.25 per eight hour shift, muckers, trammers, top men and miners \$4.00 per eight hour shift.

DEVELOPMENTS

The developments since the inception of the property by your company are approximately as follows:

Cross Vein, Tunnel Level:		
South and West exploration		212'
North		93'
Shaft		231'
Second Level 180' North		
165' East		345'
160' North		230'
Third Level 70' East		
Fourth Level 150' West		
75' West Branch		<u>225'</u>
		1336'
Crown Point		
Second Level		95'
Third Level		<u>100'</u>
		195'
Rare Metals Vein		
Second Level West		165'
North West-Southeast along AB West		120'
East second level		60'
Third Level West 285' west		
60' SW		345'
Fourth Level East and West		<u>155'</u>
		845'
Raises		
Cross Raise 3-4		80'
" 2-3		65'
" T-2		80'
Crown Point Raise T		65'

Rare Metals Raise X	10'	
"    W	72'	
"    S	<u>65'</u>	437
Exploration		
North X-cut second Level	150'	
E-W drift second level	100'	
E-W drift, third level	<u>75'</u>	325
Miscellaneous crosscuts and connections		<u>100</u>
Total feet development		3238

SAMPLING AND VALUATION (consult map)

On my last visit to the property, new developments on the veins were sampled at ten foot intervals. This work was done on the second level west Rare Metals for 165', second level South branch Rare Metals for 120' and on the third level extreme West for 110 feet and on the east some 50 feet. Drifts on Crown Point as exposed from the second and third levels for 95' and 100' were also sampled. Likewise raises S and T were sampled. A few random samples were taken at important points O, 28E', 10Acp important showings exposed by late developments.

Sample locations are as follows:

Second level West (Rare Metals Vein)	21 to 25 inclusive
Second Level West (A-B) South Branch	30x to 38x inclusive
Second Level Crown Point	1cp to 5cp inclusive
Third Level Rare Metals vein West	39x to 50x inclusive
Third Level Rare Metals	16 to 20 inclusive
Third Level Crown Point	6cp to 10cp inclusive

The results of these samples, together with those from the original and several progress reports, have been coordinated and are here tabulated. Values given are entirely in gold and silver. Several random composites

of various workings show as high as 5.40% lead. An average of the Cross, Crown Point and Rare Metals vein indicates a 1.1% lead content. This has not been included in the separate values but would be of importance in milling by concentration (table and flotation) and would add \$0.70 a ton where a ghih grade lead product is affected. This figure is included in the ore reserves. Values used in calculations are: Au at \$35.00 per oz., Ag at \$0.71 per oz. and lead quotation of \$5.00 less 1 1/2¢ per lb. or \$3.50 per cwt. On vertical sides of ore bodies sampling was resorted to in the raises which were driven along the vein and gave better access to the vein. The shaft was driven straight and not continuous on the vein with the dip thereby only exposing the vein at irregular intervals unsuitable for systematic sampling.

#### ECONOMIC VALUE

Development since June 1937 has definitely proven the importance of the Rare Metals Vein and definitely blocked out about 15,000 tons of ore with 11,268 tons of probable ore. This has been done in 200' below the tunnel level. Considering this and the future outlook of the property you are now justified in erecting and operating a modern plant using the reserves already blocked out. Developments for future ore should be prosecuted at the same time, especially along the Rare Metals fourth level west and with depth and from the Rare Metals second to the surface which will take care of a future supply. The costs of mining and milling would be about 3.50 per ton plus 1.00 per ton for hauling and marketing the concentrates or a total of 4.50 per ton. Ore of an average of 13.90 should yield a profit of 9.40 per ton.

RECOMMENDATIONS AND CONCLUSION

Development should be carried on relentlessly on the fourth level Rare Metals to the west for 100 feet or so. The raise should be completed to the third level. The Rare Metals vein for 180 feet directly west of its intersection with the second level Cross shows excellent results on the second third and fourth levels and development on this shoot with depth should be highly productive. Further development here on the Rare Metals above the second level by a blind raise at 28 or 29 for 100' or better to the surface will block out considerable amount of ore at little expense. Also the tunnel level of the Crown Point should be extended approximately 200 feet west along the Rare Metals Vein from Raise T as a practical way to work this same ore shoot to the surface with a possibility of an addition of approximately 9600 tons of ore. By completing the raises along D1 and E1 of considerable tonnage and value would then be classed as blocked ore.

Exploration to locate the Romeo vein is recommended, first along the tunnel crosscut at O and some further work on the third level west to the southwest. Some drifting along the flat at 10acp in the Crown Point 3 may disclose an important shoot of ore. Another lift extending the present shaft 80' for greater depth on the Cross is also advisable which in opening up would likewise intersect the Rare Metals vein some 70' below on the fourth level and afford a point of vantage for further depth on this vein. The above developments should be carried on while the mill is being erected and operation gotten under way, using the present reserves for milling. Widening the shaft, near the collar and the use of a No. 4 bucket in hoisting ore would be advisable. The present hoisting equipment is adequate at this time but with increased duty and depth would be more efficient by use of skips.

Respectfully submitted,

Signed: Walter E. Burlingame, E.M.

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HENDRICKS MINING CO. INC.  
P. O. BOX 653 - CARIBOU  
NEDERLAND, COLORADO 80466

BRIEF REPORT  
on  
MINING PROPERTIES  
of  
THE CROSS GOLD MINING COMPANY

February 1, 1937

Gentlemen:

The following is a brief report of the holdings of our Company, located near Caribou, Boulder County, Colorado.

LOCATION, ACCESSIBILITY, EXTENT

The property is composed of the following patented claims:

Cross ---	Survey No.	518 ---	150 x 1500 feet --	5.03 acres
Crown Point "	"	6823 ---	150 x 1500 " --	3.70 "
Syndicate "	"	15609 ---	150 x 1500 " --	5.03 "

and the following locations:

Cross No. 2 -----	600 x 1500 feet ---	approximately 10 acres.
Cross Mill Site ----	5 acres.	
Pleasant View Placer -	10 "	
Rare Metals -----	3 "	

The locations may be seen from Map No. 1, giving plan of all patented claims. Owing to considerable overlapping, there are approximately 41.76 acres in the group.

The property is 24 miles west of Boulder and is connected with it by a good motor highway, as follows:

Boulder to Nederland -----	18 miles
Nederland to Fairview -----	2-1/2 "
Fairview to Caribou -----	3-1/2 "

The last three miles is a steep grade over a typical mountain road.

The property is about one-fourth mile east of the old town of Caribou, and is connected with the main highway by a stub road about one-third mile long. The altitude of the property is 9600 feet.

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The property is located in the Grand Island Mining District, in Sections 8 and 9, Twp 1 S., R. 13 W.

Weather conditions are excellent in summer and fall, while wind and snow flurries prevail during the winter months. The road can be kept open during a normal winter almost the year round, although the late spring snows may block the road several days at a time. Caribou has mail service two or three times a week.

#### DEVELOPMENT

The Cross Lode is developed by a crosscut tunnel running east and west approximately 850 feet. This tunnel intersects the Cross Vein 280 feet from the portal, and the Crown Point at 400 feet from the portal. These two veins are the principal ones to consider, although the tunnel runs approximately 425 feet further, intersecting other North and South veins.

The present operations are on the Cross Vein. On the tunnel level this vein has been stoped for about 160 feet along the drift and to a height averaging 75 feet. The drift to the south of the crosscut tunnel is now used for handling ore and muck from the present operations. The drift to the north has been driven 93 feet past the end of the old stope, opening a fair body of ore.

Eighty-five feet south of the intersection of the crosscut tunnel and the Cross Vein, on the Cross Vein, a winze (4' x 8' in the clear) has been sunk 235 feet along the dip of the vein approximately 60°. This winze is well timbered with square sets and equipped with an electric hoist with 20 H.P. slip ring motor and resistance with 9/16" steel cable. At the second level (75 feet below the tunnel

level) a drift has been driven along the vein 201 feet on the north branch showing fairly continuous ore body.

On the third level (75 feet below the second level) a drift has been driven on the vein 160 feet to the north where the vein splits, branching to the northeast and northwest. The northeast branch has been drifted on for about 20 feet, and the northwest branch or Rare Metals Vein for 157 feet. More development is now being done on the Rare Metals Vein to the west. The drifts on both the third and fourth levels are being pushed ahead and are opening up a good body of ore. A raise on this vein from the fourth to the third level is to be put through soon. During the summer of 1936, three raises were put up between the different levels to more thoroughly develop ore bodies and to show beyond doubt that the ore bodies were continuous from level to level. The average grade of the ore exposed in the raises is better than that exposed in the drifts. The ore from the three raises was shipped and, although the dilution of waste was much greater in carrying 5' x 7' raises than would be in actual mining, the ore ran 0.22 oz. gold, 5.32 oz. silver per ton from raises one and two and 0.44 oz. gold and 7.12 oz. silver per ton from raise No. 3. High grade from raise No. 2 ran 1.03 oz. gold and 40.28 oz. silver.

The car load shipments from drifting on the Rare Metals Vein on both the 3rd and 4th levels has averaged 0.44 oz. gold, 28.60 oz. silver and 6.1% lead. The vein along the drift from which this ore was shipped averaged from 14" to 42" in width; the rest of the vein of mill ore will average from 18" to 4 feet in width. On the 4th level some of the small high grade streaks, from 11" to 2 feet, ran

as high as 1.76 oz. gold and 112 oz. silver.

The Crown Point has been developed by a shaft 100 feet deep, and by the continuation of the crosscut tunnel west 110 feet from the Cross Vein. North of the intersection of the crosscut tunnel and the Crown Point, the vein has been drifted on approximately 100 feet to the north and 30 feet to the south. The vein has been stoped for about 20 feet in two places along the drift and to a height of about 20 feet. There is still a good showing of mill ore in the backs of these stoped, and along the drift.

#### GEOLOGY

The formation in this vicinity is usually a coarse grained biotite granite, a finer grained gneiss with dykes and masses of quartz-diorite and pegmatite. There are several systems of veins, the ones striking about north and south, and the northeast and southwest, and east and west are those of the greatest economic importance. The Cross Vein has walls of pegmatite and schist, and the vein is from one to six feet in width and fairly well-defined walls showing a good deal of slickensides. The vein fillings are usually more or less silicified or hard blue quartz, carrying gold and silver values in sulphide of iron, with some galena. Undoubtedly vein junctions are the most favorable for ore and those junctions found by intersections at slight angles give the steadiest and most dependable ore bodies. The richest part of the vein is usually on the foot wall or on the hanging wall. As the enrichment is sporadic, the mining of the entire vein for milling ore should first be considered as the practical way to proceed with production. Any high grade either stripped in mining or sorted out of the mill ore could

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be shipped as a separate product. Other properties surrounding the Cross have been mined to a depth of over 1000 feet showing that the ore shoots in this district go to considerable depths.

ORE RESERVES.

Detailed tonnage estimates of ore blocked out.

We wish to refer you to Mr. Burlingame's report of July 3rd, 1935, in which he gives estimates of ore blocked out.

A summary of total ore reserves on the Cross Vein as given in his report are as follows:

<u>Location</u>	<u>Tonnage</u>	<u>Value Per Ton</u>	<u>Gross Value</u>
Tunnel to 2nd level	1500	24	36000
2nd to 3rd level	2370	17.8	42300
3rd to 4th level	2100	9.9	20800
Dumps	<u>4600</u>	3.04	<u>13960</u>
	10570		\$113060

An average value of \$10.70 per ton.

As Mr. Burlingame was unable to get but a few samples under the track on the tunnel level only about 60% of the tonnage was considered as ore blocked out. We wish to submit our sampling of the tunnel level. Samples were taken before the track fill and track were laid. Our samples, including those taken by Mr. Burlingame, on the tunnel level, as shown on assay map of tunnel level gave an average of 2.76 feet with an average value of \$19.67 per ton along 260 feet of tunnel level. A composite with those of Mr. Burlingame gives an average width of 2.26 feet and an average value of \$21.34 which gives the following results, considering 80% of the actual tonnage as ore blocked out:

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	<u>WIDTH</u>	<u>TONNAGE</u>	<u>VALUE PER TON</u>	<u>GROSS VALUE</u>
Tunnel level to second level	2.26	2320	\$21.34	\$49,504.00

On the fourth level no samples of the high grade streaks were taken by Mr. Burlingame due partially to the fact that the high grade ore on the hanging wall was being stripped and left on the wall. We, therefore, feel that a few samples taken by us making a composite of some low grade and high grade should be averaged in to make a fair average of the ore. A composite of samples 4L 2, 5, 7-8, 11, 12, and 13 with Mr. Burlingame's results would give an average width of 2.77 and a value of \$15.22 per ton.

Therefore, between the third level 160 and fourth level 145' (length of drift August 1, 1935) and 78' on the dip of the vein we have as follows:

	<u>WIDTH</u>	<u>TONNAGE</u>	<u>VALUE PER TON</u>	<u>GROSS VALUE</u>
3rd to 4th level	2.77	2700	\$15.22	\$41,094.00

Samples taken on the dump by Mr. Burlingame included one dump of crosscut material, which we consider is too low grade, and brought down the average of the 4600 tons available for the mill. Our average samples taken from the dump gave \$6.54. Taking an average with Mr. Burlingame, the dump samples would give an average of \$4.79. In one of his previous reports he gave an average of \$5.46 for dumps.

No ore reserves were computed on the tunnel level north 93' beyond the old stope or on the Cross No. 2 exposed on the second level and third level and drifted on for 60' on the fourth level. Also no ore reserves were computed on the Rare Metals vein drifted on for

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80 feet on the fourth level and extended approximately 95 feet on the third level exposing a good grade of ore. In cases where ore bodies are not exposed on three and four sides we have allowed 25' above and below each level which is considered conservative and good practice.

A summary of ore reserves blocked out to date would then be as follows:

	<u>LENGTH</u>	<u>HEIGHT</u>	<u>WIDTH</u>	<u>VALUE</u>	<u>TONS</u>	<u>GROSS VALUE</u>
Tunnel level north	93'	70'	2.2	9.82	1139	\$11,185
Tunnel level to Second level	70	76	2.26	21.34	2320	49,504
2nd to 3rd level	160	70	2.28	16.60	2300	38,180
3rd to 4th level	160-145'	78	2.77	15.22	2700	41,094
3rd level, Rare Metals Vein	170	25-25	2.4	22.48	1700	38,216
4th level, Rare Metals Vein	80	25-25	2.2	26.50	733	19,424
Cross No. 2, 4th level	60	25-25	2.86	9.16	723	6,421
Ore on dumps				4.79	<u>4600</u>	<u>22,034</u>
					16,215	\$226,058

#### MILLING FACILITIES

Coon Creek, which flows across the mill site, would provide ample water supply for a 35 to 50 ton plant. The workings of the mine at the present time produce about 30 gallons per minute for a 15 hour pumping period, or averaging 20 gallons per minute constantly. Even in the dry season, by proper conservation of these two supplies, sufficient water would always be available.

A mill site of approximately 5 acres east of the portal of the tunnel, affords a good location for the erection of a mill with ample room for tailings disposal.

#### METALLURGICAL TEST WORK

The material used for test work was composed of large samples of ore taken from all over the mine. A good deal of oxidized material as well as live sulphides were tested in order to fully determine our milling problems. The results of this test work show that a very good grade of concentrate can be made, as well as a high saving. This test work, further, clearly indicates that the milling of our ore presents no complex problems, and should prove successful under maintained conditions.

#### IMPROVEMENTS AND EQUIPMENT

On the surface is a bunk house and boarding house, 30' x 36'; with coal bin and cold storage room attached (10' x 20'); a frame building substantially built and covered with Flint Coat Roofing and lined with heavy beaver board. This bunk house affords suitable facilities for the accomodation of ten men.

At the portal of the tunnel is a tunnel house, 20' x 40',

substantially built and covered with Flint Coat. This is suitably partitioned into three rooms; one the blacksmith shop, containing forge, blower, drill press, emery wheel, blacksmith tools, pipe and bolt dies, and a small Sinclair sharpener and other equipment necessary around a blacksmith shop. The second room contains the compressor, a 10" x 10" horizontal Blaisdell with flat belt drive with 35 H.P. Electric motor. This compressor makes sufficient air for 2 jackhammers or small drifters. The compressor is connected with a 13' x 3 1/2' air receiver on the outside of the building. A two inch line is run from the receiver into the mine workings. The third room is used as a carpenter shop for framing mine timbers etc.

The present crosscut tunnel or haulage tunnel to the collar of the winze on the Cross Vein is equipped with 16 pound rail as also is the track on the dump. A snow shed, with steel frame work, about 85 feet long protects the portal during winter months, making tramming possible during the bad weather. The other levels are equipped with 8 pound rail.

The winze, 4' x 8' in the clear, is 235 feet deep and well timbered with square sets. The manway compartment contains a good ladderway, air and water pipes, and 3 inch ventilation pipe. The shaft compartment is equipped with wooden skids for the bucket.

A standard one ton hoist, equipped with 20 H.P. motor and 9/16" cable, is being used at the present time. No. 3 buckets, holding 1100 pounds are being used. We have 3 No. 3 buckets and 2 No. 5 buckets. A skip pocket at the collar of the winze holds approximately 3 cars of muck.

A No. 4 Sturdeven Exhauster Blower is located at the collar of the winze for mine ventilation and is driven by a three H.P. motor.

On the third level, a No. 62 Deming Deep Well Pump is being used for a station pump, and is driven by a 5 H.P. motor. The pump delivers approximately 30 gallons per minute, which is discharged through a 3 inch line at the collar of the winze. A new electric Kimble-Krough Centrifugal Pump, which will deliver approximately 100 gallons per minute, mounted on steel skids is being used for a sinking pump and can be later used as a station pump.

Two No. S 55 Gardner-Denver jackhammers are being used for sinking. When drifting, these same machines are mounted on shells. Columns, water tanks and hose are provided with these machines. We also have a No. 50 Clipper jackhammer and 3 dry stopers, and one M11 Gardner-Denver self-rotating stoper.

For tramming facilities in the main tunnel, we have one ton car with ball-bearing wheels and two 3/4 ton cars, also one timber truck. On the second and third levels, buggies or trucks are used for transporting the buckets from the winze to the headings. A more detailed list of equipment may be had when desired.

#### FUTURE DEVELOPMENT

At the present time we are developing the Rare Metals Vein to the west on the third and fourth levels, and will put a raise through between the levels to further block out the ore exposed. If the Rare Metals Vein is extended further to the west the Crown Point Vein will be cut and can be developed through the Cross workings. We now have sufficient ore blocked out and in sight to keep a 25 to 35 ton plant in operation for some time. A personal examination is necessary to

Teal Report 1937

fully appreciate the great possibilities of future development and production of the property.

This is by no means a complete or detailed report and any additional information desired will be gladly submitted.

Respectfully submitted,

THE CROSS GOLD MINING COMPANY

President and General Manager

Addenda:

Should additional properties be desired, the Juliet group to the west, consisting of five patented claims, can be had at a reasonable price. The Juliet group has been developed by a shaft thirty feet deep, with a good showing of commercial ore and by a crosscut tunnel driven from the Cross and Crown Point workings (not shown on the map) into the Juliet group. Several veins of commercial ore were cut but have not been developed.

The Potosi group adjoining to the northwest consisting of four patented claims can also be had at a very reasonable figure. The Potosi has been developed by a shaft 450 feet deep from which five levels have been run. The shaft at present is in very poor condition and the workings are full of water. There is a difference of 210 feet in elevation between the tunnel level of the Cross and the Collar of the Potosi shaft. The bottom level of the Cross workings is 225 feet below the collar of the Cross Winze (tunnel level) and by continuing the drift on the Rare Metals vein to the west the Potosi workings can be cut within a few feet of the bottom level and worked through the Cross.

HENDRICKS MINING'S HISTORIC INFORMATION ON CROSS MINE

Note: This article has been retyped from a photocopy of the original furnished to Tom Hendricks by Tom Teal in 1975.

The following figures will show what was done by two men leasing from November 1889 to February 1890. There was taken out and sold to the Denver mint and banks, gold brick and retorts to the amount as follows:

By L No 1 to Denver mint	-	-	-	\$1927.31
" " " Bankers	-	-	-	712.29
" No 2	-	-	-	2520.00
				<hr/>
				\$5159.60

This amount was produced, each leaser working the mine and mill about two months with an average of five men employed, three in the mine and two in the mill.

SUMMARY OF EXPENSES.

Four months work of Mine and Mill	-	-	-	\$1300.00
" " rent of mill	-	-	-	200.00
" " wood for engine	-	-	-	416.00
" " management	-	-	-	400.00
" " sundries and repairs	-	-	-	400.00
				<hr/>
				\$2716.00
Product	-	-	-	\$5159.60
Expenses	-	-	-	2716.00
				<hr/>
Profit	-	-	-	\$2443.00

The following report made by Ernest Le Neve Foster, late State Geologist, and one of the most conservative and reliable Mining Engineers of the State, gives all that is required in regard to the value of the property:

MR. FOSTER'S REPORT.

The Cross Lode is situated at Caribou, in Grand Island Mining District, Boulder County, Colorado, about 22 miles from the town of Boulder. The property consists of one claim patented from the United States, as survey lot No. 518, and embraces 1500 feet in length by 150 feet in width of surface ground, together with the lode included therein.

The mine is a true fissure vein in granite, its course is nearly North and South, and dips to the West at an angle of about 65 degrees. The lode is large and strong, in width it varies from six inches to six feet, and carries a gold bearing quartzose gangue, also there is frequently present a streak of solid iron pyrites. For determining the value of the ore I took the following samples from various parts of the mine:

Locality.	Ozs. gold per ton.	Ozs. Silver per ton.
Pure white quartz, breast of S drift 15 in	6.0	8.0
Bottom of North drift 3½ feet wide	0.3	0.2
Breast of south drift 18 inches wide	0.4	1.1
Iron pyrites from pillar near shaft	0.35	1.25
Quartz ore " " "	0.25	0.75
South stope over breast of drift 18 inches	3.0	3.6
Block South of shaft 2½ feet	0.3	0.9
Broken ore from North stope ready for mill	1.5	3.0

Whilst these afford excellent checks as to the value of the ore, they are not so good as the average obtained from actual mill runs, which show yields from \$10 to \$50 per ton, but probably a fair average will be \$15 per ton.

The development of the mine has not been very extensive, but so far as opened the continuity of the ore body has been demonstrated very satisfactorily. The shaft is 140 feet deep, having levels at 50 and 100 feet deep, the latter being connected with the surface by a cross cut tunnel about 200 feet long. A large portion of the ground in the back of the 100 foot level has been stoped out. The shaft is sunk 40 feet below the tunnel level, and is the only work done below that level. The bottom of the tunnel level shows the ore body going down with great regularity, and on an average in quite as large a body as below it.

It is not possible to get at accurate records of the past production of the mine, but from the most authentic sources it appears to have been from \$20,000 to \$30,000.

The property is now being worked on a very small scale, and the ore milled is in a ten stamp mill about 2000 feet from the mine, so that everything is worked to a great disadvantage; with a twenty stamp mill at the mouth of the tunnel a great saving could be made, and with a little more development there would be no difficulty in keeping twenty stamps at work. During the month of December last with only three men working in the mine and two at the mill, there was nearly \$1700 produced at a cost of less than \$800. The ground in the mine is not hard so that

it can be cheaply broken. I estimate that the following would be about the cost of working this mine per fathom:

Stoping . . . . .	\$10.00
Development work . . . . .	8.00
Timbering . . . . .	4.00
Management . . . . .	5.00
Milling ore . . . . .	4.00
Sundries . . . . .	4.00
	<hr/>
Total per fathom . . . . .	\$35.00

There is no doubt that the ground will yield four tons per fathom on an average, which at \$15 per ton would be worth \$60 per fathom. This would leave a net profit of \$25 per fathom, which on a production of 20 tons per day would amount to \$125 per day or \$3125 per month or in round numbers \$36000 per annum.

In addition to the Cross lode there is within the sidelines of the patent, and nearly parallel to the Cross, another lode, probably fifty feet distant from it, and for the purpose of intersecting this the cross cut is being driven ahead, and it is expected that it will be cut within a very short distance. This parallel vein has been opened at several places on the surface, and results obtained by panning the material found in it have been very satisfactory, which leads to the belief that this may be as good and productive a vein as the Cross lode itself.

For economical work the property is well located, labor is reasonable and to be had without difficulty, mining supplies can be purchased either in Denver or Boulder at fair prices. The product of the mine being Metallic Gold can be sold to the mint at Denver, and concentrates from the tailings can be sold to smelters at good prices. Fuel in the shape of pine timber grows on the surrounding mountains, and can be purchased for \$4 to \$5 per cord delivered at the mouth of the tunnel. For the erection of a mill there is an excellent site at the mouth of the tunnel, where there is an ample supply of water for at least twenty stamps the year round, and for a large portion of the year fifty head could be supplied if necessary.

This property will commend itself to every one who will examine it, and when more extensively developed there will be no difficulty in producing twenty tons daily, and even as much as fifty tons per diem is within the bounds of reason for this mine to produce. Then with a mill at the mine its profitable working would be assured.

ERNEST LENEVE FOSTER,  
Mining and Consulting Engineer.

Georgetown, Colo., May 29, 1890

SUMMARY.

I have endeavored to be conservative in all my statements in regard to the property. The value of the mine and its close connection with other lodes of great value, is so well known in Colorado and with the reports embodied in the prospectus, warrants me in not making further comments upon the property. Only if the mine will make such returns as given under the system of leasing and paying rent for a mill of only half the capacity of the product of the mine, what will it do under able management and own mill of 20 stamps, in place of (the existing) 10 stamps?

Signed: E L Foster

HENDRICKS MINING'S HISTORIC INFORMATION ON CROSS MINE

Note: This article has been retyped from a photocopy of the original furnished to Tom Hendricks by Tom Teal in 1975.

Caribou, Colo., July 2, 1890

Geo. (W.) Teal, Esq.,

Dear Sir: I will endeavor to give you a correct statement of the ore extracted by me from the Cross mine at Caribou--the gross value, and also the amount I received during the short period the mine was under my control and management.

I mined and had milled 140 tons of free milling gold ore, and by taking samples from time to time gave the following results by assay: \$22, \$10, \$80, \$12 and \$15 per ton. The whole crevice being from two to four feet wide, by averaging the above I found the ore worth \$27 per ton. The gross value of the ore was \$3780.

The mill did not save with the management at that time to exceed two thirds of the value of the ore and I only received for the 140 tons \$2520. I was just fifty-two days producing that amount of ore with a force of four men, three men mining and one traming. My expenses for mining, milling and hauling was \$1527. Royalty \$252. Total \$1779.

Amount Received	-	-	2520.00
" Expenses	-	-	<u>1779.00</u>
Leaving a clear profit of	-	-	\$ 741.00

The mill was run by other parties, their charges being \$5 per ton or 50 per cent more than if the mill had been run in connection with the mine.

By having mill at mouth of crosscut tunnel, the Cross can be made one of the best paying mines in the county. Hoping this will give the required information, I am

Yours Respectfully,

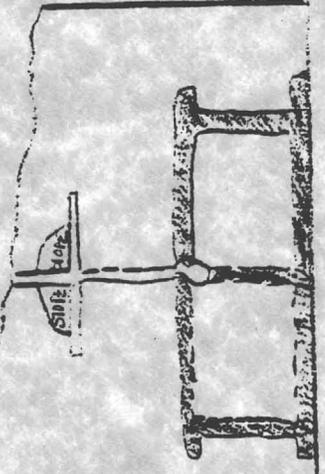
C. M. Carroll.

GROUND PLAN  
Scale 200 Feet to the inch

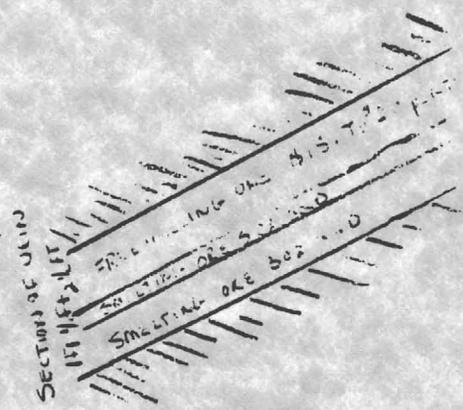
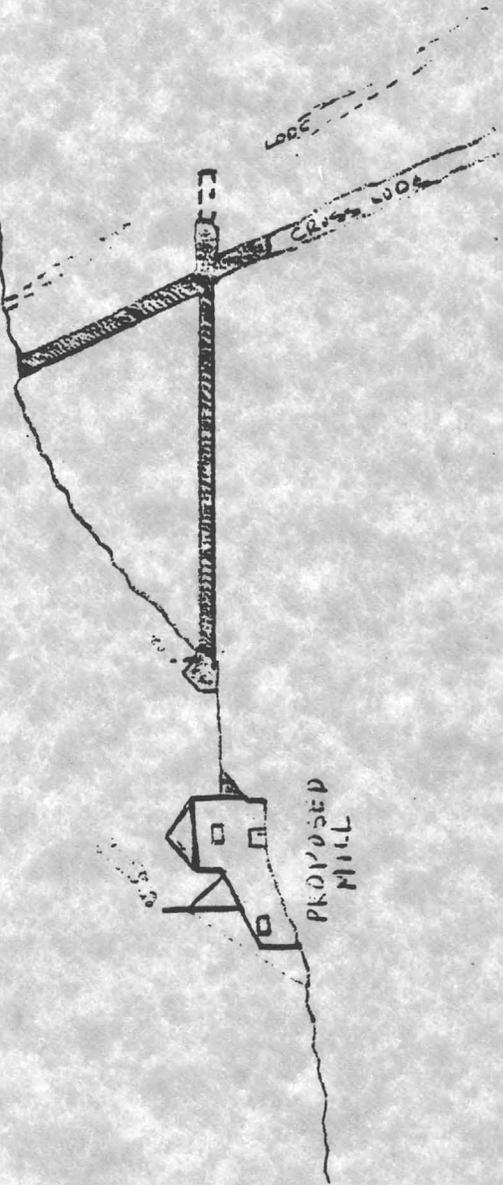
CROSS LODGE



LONGITUDINAL SECTION  
Scale 200 feet to the inch



CROSS SECTION  
Scale 100 Feet the inch

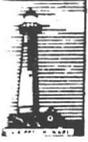


*Wednesday, November 3, 1982*

**THE MINING RECORD**

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**M A I N**



# Rocky Mountain News

Weather

Colder  
Page 107

144 PAGES

24th year, No. 195

Denver, Colo.

**Tuesday**

November 2, 1982

25c

# GOLD: 44 countries represented at confab

...conducted by them and their Hewlett Packard computer back home. When the Adens produce a prediction, they explain them with a bevy of charts that

a chart are as good as a sure thing, almost. To the Adens, for example, the prospect that gold prices will move steadily upward through 1985, to a price that topples the

to end, bringing back more inflation. The key to measuring the inflationary cycle, they say, lies in the fact that each successive peak, since 1967, has been high-

fundamentals, to a technical analyst, only exist to explain why the charts are correct. So the Adens will say that inflation is going to keep going up because U.S. deficit spending will keep going up.

# Hendricks Mining Company, Inc.

Caribou, Colorado

Complete Mining and Milling Services

Exploration

Development

Production

Please find enclosed for your reference on the Cross Mine, the following reports:

1. Walter E. Burlingame's, professional mining engineer, independent report on Cross Mine - 1939
2. George H. Teal's report on Cross Mine - 1937
3. E. L. Foster and C. M. Carroll's 1890 reports

Also included for your reference is the most current Progress Report showing current mill runs and smelter settlements.

We would also like to inform you that we have made the decision and contracted with Boyles Bros. Drilling Company (worldwide drillers) to begin core drilling at the Cross Mine immediately. Their equipment has been moved onto the mine site and we will begin drilling by Thursday, November 11. We will be drilling below the 4th Level to depths between 500 feet and 1,000 feet to hit areas we believe to be major vein junctures. Drilling will also be done horizontally off the 4th Level to prove reserves above that level. Junction areas in the Caribou District have always been exceedingly rich producers. See enclosed cross section map that shows expected junctions with our vein systems.

The Cross Mine is continuing to produce high quality ore. From the time Hendricks Mining put the Cross Mine into production in the spring of 1977, we have produced through 45 smelter shipments 875.98 dry tons of concentrates containing: 3,845 ounces of gold, 92,398 ounces of silver, 183,816 ounces of lead, 214,624 pounds of zinc and 22,718 pounds of copper. This production has come from some 22,464 tons of newly mined vein rock and development waste-vein rock.

**Mill Address:** 3000 N. 63rd St. • Boulder, Colorado 80301 • (303) 443-1502

**Mine Address:** Caribou, Colorado • P.O. Box 653 • Nederland, Colorado 80466 • (303) 258-3806

Page 2

Shipments which were mined through our selective mining program averaged well above 0.50 ounces of gold per ton and 8.0 ounces of silver per ton. We expect to maintain this same selective program when we increase our tonnage to 100 tons per day.

Should you have any questions, please feel free to contact us regarding this information.

Sincerely,

Thomas S. Hendricks  
President

TSH/rgj

Enclosures

## PROPERTY EXAMINATION REPORT

NAME: CROSS MINE DATE: August 12, 1982  
CLAIMS: 40 claims, approx. 160 acres  
OWNER: Thomas S. Hendricks  
LOCATION: CO, Boulder County, T 1S, R 73W, Sect. 9NW  
DEPOSIT TYPE: Au Ag Veins

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### Cross Mine Evaluation

#### Location and Access

The mine adit, at an elevation of 9,710 feet, is located  $3\frac{1}{2}$  miles west-northwest of the town of Nederland in Boulder County, Colorado, and is serviced by an all weather, improved surface road. Although the winters tend to be severe, they have not hampered mine production in the past five years.

#### Previous Work

The Cross Mine, discovered in 1873 and worked intermittently until 1940, was reopened in 1973 by Thomas S. Hendricks. At this time the mine had been developed to the fourth level, 180 feet below the adit level, with an estimated 25,000 tons of ore remaining above the fourth level in four vein systems; Cross, Crown Point, Rare Metals and Romeo. These reserves were in the proven to probable category as 0.27 oz/ton gold and 7.49 oz/ton silver over and average vein width of 2.9 feet. Hendricks has since stoped most of the Rare Metals from the third to the adit level, as well as on the Cross, Crown Point and the Romeo veins, removing approximately 23,000 tons.

#### Geology

The Idaho Springs formation, a Precambrian migmatite, has been intruded by a Tertiary age monzonite named the Caribou stock which hosts the majority of the ore deposits of the Grand Island mining District. However, several ore deposits are hosted by the Idaho Springs Formation.

The Idaho Springs formation at the Cross Mine, which is near the monzonite stock, is a quartz-biotite-feldspar migmatitic paragneiss. The pegmatitic phases of the migmatite, essentially quartz and felspar, exhibit both concordant and discordant relationships to the gneissic foliation, and seem to be more prevalent near the vein systems in the Cross Mine. Hypabyssal rocks including dioritic, gabbroic and granitic phases form small dykes in the mine area and are probably genetically related to the monzonite intrusive.

The Idaho Springs formation has been subdivided into felsic, pegmatitic and intermediate phases and classified by the presence of alteration. Silicification and sericitic alteration appear to be dominant wall rock alteration adjacent to the vein systems in the Cross Mine. Usually the altered zone is more pervasive in the hanging walls of the vein systems and is most evident in the pegmatitic phases of the migmatite where the feldspars are sericitized white. In a few places adjacent to the Rare Metals vein abundant sheared chlorite is present presumably indicative of a shear zone or fault into which the mineral bearing fluids injected.

### Mineralization

Blue to grey amorphous quartz containing veinlets and veins of very fine grey powdery sulphides constitute the most common ore type at the Cross Mine. The minerals comprising these sulphides are usually acanthite, pyrite, galena, chalcopyrite and spalerite and can become more coarsely crystalline in some veins. Secondary iron oxide staining and zones of iron oxide are found along fractures and shear zones in and adjacent to the vein systems.

A complex of four major vein systems and several mineralized shear zones constitute the Cross Mine. The Cross and Crown Point veins strike  $190^{\circ}$  and dip  $75-85^{\circ}$  to the east. These vein systems appear to end at the monzonite contact to the south, abut against the Rare Metals on the north, and should coalesce about 150' below the fourth level. However, where the Romeo vein meets the monzonite contact a rather wide mineralized zone is produced. The near vertical Rare Metals vein trends east west and has been mined over a strike length of about 300 feet. The Rare Metals structure becomes complicated on the west end of the vein where it appears to feather out into a series of small sub parallel sutures, and may be faulted off on the east end by the Cross Vein. Assuming the Rare Metals continues beyond the western structure it is eventually limited in strike by the monzonite contact which trends northwest-southeast itself. Whether or not the Rare Metal Vein continues in the monzonite is a speculative point at this time. Low angle, dilatant, mineralized fracture zones, produced as a result of the monzonite intrusive, cut the major vein systems in the mine. These zones are usually well mineralized and of high tenor but appear to be limited in scale and erratic.

The Romeo, Cross and Crown Point exhibit a splaying feature at their retrospective contacts with the Rare Metals vein and could significantly increase the potential tonnages at these locations. As it stands now, the Cross vein on the third level has been correlated with the Crown Point on the fourth but may in fact not be discovered on the fourth. Pat Dentler (the geologist at the Cross Mine) seems to think this is the case as evidence of a vein similar to the Cross is found in the eastern wall of the fourth winze station. A typical vein at the Cross Mine ranges in thickness from a few inches to seven feet and is mined about 3' wide. A zone of intensely

fractured material with parasitic mineralized veinlets can occur several feet from the main vein. These veinlets may carry high gold and silver values that enable the vein to be mined at drift width although the main vein may be very narrow itself.

### Mine Assays

Parts of the third and most of the fourth levels have been chip channel sampled and assayed for gold and silver in the Cross Mine. At the time of this report the raw data had not been plotted and contoured on plans and sections.

Rudimentary statistical treatment summarized in table 1, has produced some interesting results (Appendix A). Aside from the expected lognormal distributions of the gold assays in the Rare Metals, Romeo and Crown Point veins, there is a definite direct correlation between gold and silver values in the Crown Point and Rare Metals veins and almost no correlation in the Romeo vein. Since the gold is distributed lognormally, its corresponding means can probably be reduced by about 20%.

### Core Drilling

The core drilling performed by Hendricks Mining Company was in no way definitive and (was) only an attempt to establish the presence or persistence of some of the vein systems in the Cross Mine. The cores were scanned by the Hendricks staff and not logged in any detail.

The drill holes that penetrated the Rare Metals vein (#1-3) were briefly logged to establish a better control on the vein systems (Appendix B, Figure 1). In drill hole #2 (Figure 3) ten feet of core was lost at the point where it would have intersected the Rare Metals vein (about 60 feet below the fourth level). However there were remnants of grey sulphides in some of the core but not enough for a reliable assay. Silicification seritization and secondary iron staining of fractures was observed in the core from drill hole 1 at the appropriate location of the Rare Metals vein (Figure 2). Drill hole 3 may have penetrated the feathering feature of the Rare Metals as it was difficult to ascertain. (Figure 4).

Mineralized zones from diamond drill holes 1 thru 3 have been sent for assay and the results are plotted on figures 2 and 3. The remaining results from diamond drill hole 3 will be forwarded as soon as they are received.

### Reserves and Economic Potential

No ore reserves have ever been drilled off at the Cross Mine. The mine has been gophered for its entire life including the period under Hendricks direction. Ore reserve estimation has been divided into the areas above and below the fourth level.

Reserves Above the Fourth Level. On the Longitudinal Section of the Rare Metals vein six blocks have been extrapolated and interpolated to total approximately 17,000 tons of ore (Table 2). This assumes that the Rare Metals is not restricted in strike by the Cross Vein or the feathering feature on the west. The Cross, Crown Point, and Romeo veins are not considered here and it is thought that the additional tonnages they may represent will offset over zealous estimations on the Rare Metals vein. An earlier independent estimation by Maurice Magee suggests that 15000 tons may still remain in the mine. Since some of the 15000 tons has been mined, a revised estimate of 13000 tons is more reasonable. (Most of the tonnage ore was high grade due to falling prices and as such probably did not constitute a great volume).

So if we are to split the difference between the two estimates we arrive at 15,000 tons of ore remaining above the fourth level.

Reserves Below the Fourth Level. Again using all the above assumptions and that the Rare Metals persists to 375' below the fourth level we derive approximately 48000 tons of ore (Table 2). The depth continuation of the Cross/Crown Point vein and Romeo can be counted on for an additional 5847 tons before they coalesce. Continuation of the Juliet zone for 150' below the fourth level will add another 5085 tons, and we can add another 7627 tons for the wider zones present at the junctures of the Romeo and Cross Veins with the Rare Metals. This brings the potential tonnage available below the fourth level to approximately 66,000 tons and the grand total for the Cross Mine to 81,000 tons.

Now, if we consider some of the assumptions made in the previous estimations as an alternate situation we can make appropriate adjustments in the tonnages. If the Rare Metals vein is faulted off by the Cross vein on the east and dies out on the west where it splays, we can effectively halve the potential tonnage available below the fourth level to 24000 tons. And lets assume that either the grade or the minable widths are reduced in the north-south vein systems halving their respective potential tonnages below the fourth level. This now leaves us with 33000 tons of ore below the fourth level. Extending with this line of reasoning lets reduce the tonnage available from the Rare Metals Vein above the fourth level to say 7000 tons brings the total reserves to 40000 tons for the Cross Mine.

### Economic Analysis

A preliminary sensitivity analysis was performed on the Cross Mine using input parameters supplied from Hendricks Mining historical records. The capital costs for the base case were estimated to be \$200,000 assuming two hundred feet of shaft sunk at a cost of \$1000/foot. The base model used \$400 gold and \$8 silver and returned a net present value discounted at 18% of \$109,495.33. The internal rate of return method was not employed in the analysis due to the limited economic mine life for the estimated reserves. Additional economic analyses could determine the optimum extraction rate and reserves; but at this stage it was deemed unnecessary. Appendix C shows four examples of the detailed analysis on varying the gold and silver prices. The results are listed in Table 3 and it is readily apparent that the Cross Mine operation becomes economic between 375\$ and 400\$ gold and \$8 silver.

Table 4 lists the results of varying the input parameters up to 20% and they are displayed graphically on figure 5. It is evident from figure 5 that the mine is very sensitive to the ore grades, mining and milling costs and metal prices, and relatively insensitive to the reserves, capital costs, smelter charges and freight, and level of production. This seems to indicate that establishing vast reserves may not be necessary and more emphasis should be placed on grade control and mining techniques.

### Conclusions

The gneissic foliation of the Idaho Springs formation host rock exerts no control on the mineralization at the Cross Mine.

The vein systems at the Cross Mine resulted from the intrusion of the Caribou Stock.

Smaller gash or dilatant structures were formed as a consequence of the monzonite intrusion and may host very high grade ore.

Silicification and sericitic alteration is present in the hanging wall of the vein systems.

The east and west strike extensions of the Rare Metals vein have not been established.

The Cross Vein has not been discovered on the fourth level and may continue at depth sub parallel to the Crown Point Vein.

The potential tonnage available for discovery at the Cross Mine, appears to be in the order of 30,000 to 60,000 tons.

Recommendations (Table 5).

Underground Program.

- 1) 2500' of diamond drilling to outline additional reserves
- 2) Comprehensive sampling program to establish the presence of ore zones within the veins and for grade control. This would include preparing assay plans and sections for each vein in the mine.
- 3) Analyse selected pulps from previous assays for metal values to discover if there are significant metal ratios in each of the veins

Surface Program.

- 1) Detailed geological mapping in the vicinity of the Cross Mine
- 2) Cleaning out and sampling old workings
- 3) New exploration trenches along the gneiss monzonite contact where necessary
- 4) VLF electromagnetic survey over the Rare Metals vein surface projection on the east and west ends. If this survey is successful, one may want to establish the presence of favourable structures elsewhere on the property.

Proposed Diamond Drilling Program. Approximately 2500 feet of diamond drilling (\$50,000) is proposed to evaluate the tenor and tonnage potential of the Rare Metals vein below the fourth level. Four fences of drill holes, two bearing north and the others bearing north west and north east, have the potential to prove up approximately 48,000 tons of ore. (Table 6, Figure 6). However, if the Rare Metals is faulted by the Cross vein on the east drill holes 2B and 2C will not be necessary. Likewise should the Rare Metals vein not continue to the west drill holes 4B and 4C will not be utilized and the potential tonnage could be reduced as much as half. This additional 1000 feet of drilling could be used to outline tonnages above the fourth level as previously recommended by the Pincock, Allen and Holt report. Alternatively some of the remaining drill footage could be utilized in establishing the existence of north-south trending veins similar to the Cross, Crown Point and Romeo veins, on the north side of the Rare Metals vein.

TABLE 1

Assay Statistical Summary

	<u>Rare Metals Vein</u>	<u>Romeo Vein</u>	<u>Crown Point Vein</u>	<u>Totals &amp; Averages</u>
Sample Size	30	44	12	86
Gold Mean	0.40	0.495	0.61	0.48
Silver Mean	13.59	3.91	5.96	7.57
Gold Distribution	Lognormal	Lognormal	Lognormal	
Silver Distribution	Normal	Normal	Lognormal	
Correlation Coefficient	70.5%	22.2%	98.7%	

TABLE 2

POSSIBLE RESERVESRare Metals Vein Above 4th Level:

<u>Zone</u>	<u>Thickness</u>	<u>Depth</u>	<u>Width</u>	<u>Tons (RF=11.8)</u>
A	3'	180'	70'	3203
B	3'	55'	205'	2867
C	3'	130'	130'	4297
D	3'	90'	110'	2517
E	3'	45'	105'	1201
F	3'	70'	165'	2936
				<hr/>
				17,021

Veins Below the 4th Level

<u>Zone</u>	<u>Thickness</u>	<u>Depth</u>	<u>Width</u>	<u>Tons (RF=11.8)</u>
Rare Metals Vein	3'	375'	500'	47,669
Crown Point Vein	2'	150'	130'	3305
Romeo Vein	2'	150'	100'	2542
Juliet	10'	150'	40'	5085
Crown Point Rare Metals Juncture	10'	150'	30'	3814
Romeo- Rare Metals Juncture	10'	150'	30'	3814
				<hr/>
				66,228

TABLE 3

Effect of Metal Prices on the Cross Mine Economics

<u>Au/Ag Prices</u>	<u>Annual Cash Flow</u>	<u>Payback Period</u>	<u>NPV @18%</u>	<u>Return on Investment</u>
375/8	90940	2.2	-72370	0.45
400/8	220525	0.91	109495	1.1
400/9	312488	0.64	238561	1.56
400/10	404451	0.49	367627	2.02

CROSS-MINE  
SENSITIVITY  
ANALYSIS

VARIABLE	% Change	M.P.V.	M.P.V. Difference	% Difference
Reserves	-10	8122	-27854	-24.71
	-20	54551	-54707	-50.15
	10	135773	26278	24.80
	20	161297	51802	47.31
Au Grade	-10	-181489	-290984	-265.75
	-20	-472474	-581969	-531.50
	10	400480	290985	265.75
	20	691464	581969	531.50
Ag Grade	-10	6243	-103252	-94.30
	-20	-97010	-206505	-188.60
	10	212748	103253	94.30
	20	316001	206506	188.60
Production	-10	107392	-2103	-1.92
	-20	104788	-4707	-4.30
	10	111233	1735	1.58
	20	112686	3191	2.91
Mining Costs	-10	316518	207023	189.07
	-20	523541	414046	378.14
	10	-97528	-207023	-189.07
	20	-304550	-414045	-378.14
Mell Costs	-10	213007	103512	94.54
	-20	316518	207023	189.07
	10	5984	-103511	-94.53
	20	-97528	-207023	-189.07
Capital Cost	-10	127110	17615	16.09
	-20	144724	35229	32.17
	10	91891	-17614	-16.09
	20	74267	-35228	-32.17
Smelter Fees	-10	121846	12351	11.29
	-20	134471	24976	22.61
	10	97144	-12351	-11.29
	20	64519	-24976	-22.61
Smelter Char	-10	152037	42542	38.85
	-20	194853	85086	77.96
	10	66954	-42541	-38.85
	20	24138	-85087	-77.91
Au Prices	-10	-181489	-290984	-265.75
	-20	-472474	-581969	-531.50
	10	400480	290985	265.75
	20	691465	581970	531.50
Ag Prices	-10	6243	-103252	-94.30
	-20	-97010	-206505	-188.60
	10	212748	103253	94.30
	20	316001	206506	188.60

TABLE 5

Estimated Budget Summary

Diamond Drilling 2500' X \$18/ft	\$45,000
Logging	<u>\$ 5,000</u>
TOTAL	\$50,000

Underground Sampling Program

Geologist 10 days @ \$75 day	750
Assays	<u>250</u>
TOTAL	1,000

Surface Program

As per Table 7. 4344/wk X 2	8,688
-----------------------------	-------

GRAND TOTAL \$59,688

say \$60,000

TABLE 6 PROPOSED DIAMOND DRILLING

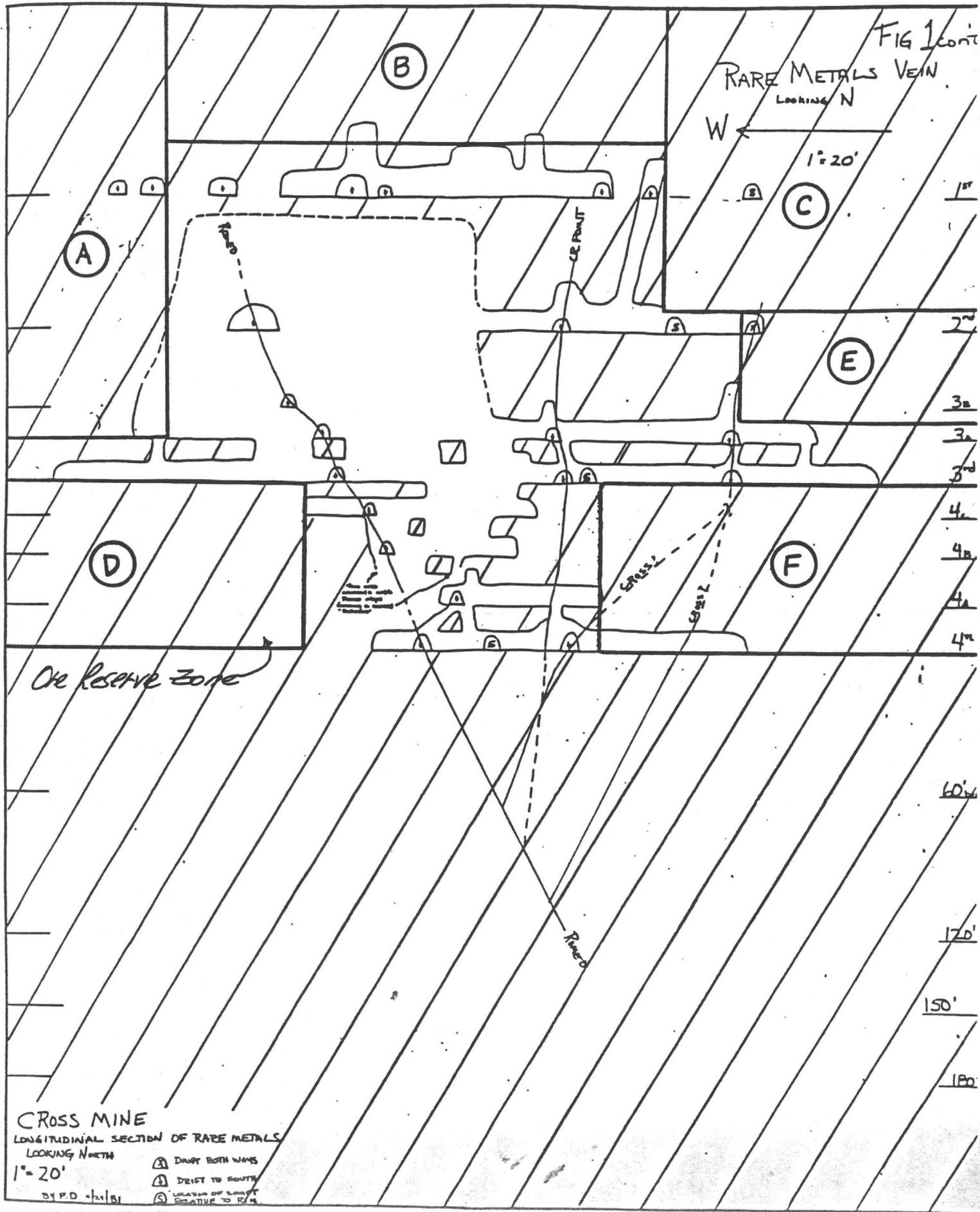
Drill Hole	Hor. Dist. to Bearing	Inclination	Depth	Length	Cost-20\$/ft	Cost-25\$/ft	Percentage	
	142.22	0.22	30.22	80.83	161.66	3233.16	4041.45	7.28
	143.22	3.22	45.22	142.80	197.99	3959.80	4949.75	8.67
	142.22	0.22	62.22	242.49	260.22	5600.00	7022.20	12.24
	142.22	45.22	32.22	103.92	207.85	4156.92	5196.15	9.12
	142.22	45.22	45.22	180.22	254.56	5091.17	6363.96	11.14
	142.22	45.22	60.22	311.77	362.22	7280.22	9020.22	15.76
	142.22	0.22	32.22	46.19	92.38	1847.52	2309.42	4.24
	142.22	2.22	45.22	80.22	113.14	2262.74	2828.43	4.95
	142.22	0.22	60.22	138.56	160.22	3220.22	4022.22	7.22
	142.22	315.22	30.22	57.74	115.47	2309.40	2886.75	5.05
	142.22	315.22	45.22	120.22	141.42	2828.43	3535.53	6.19
	142.22	315.22	62.22	173.21	200.22	4000.22	5002.22	8.75
				2254.46	45689.14	57111.43	100.00	





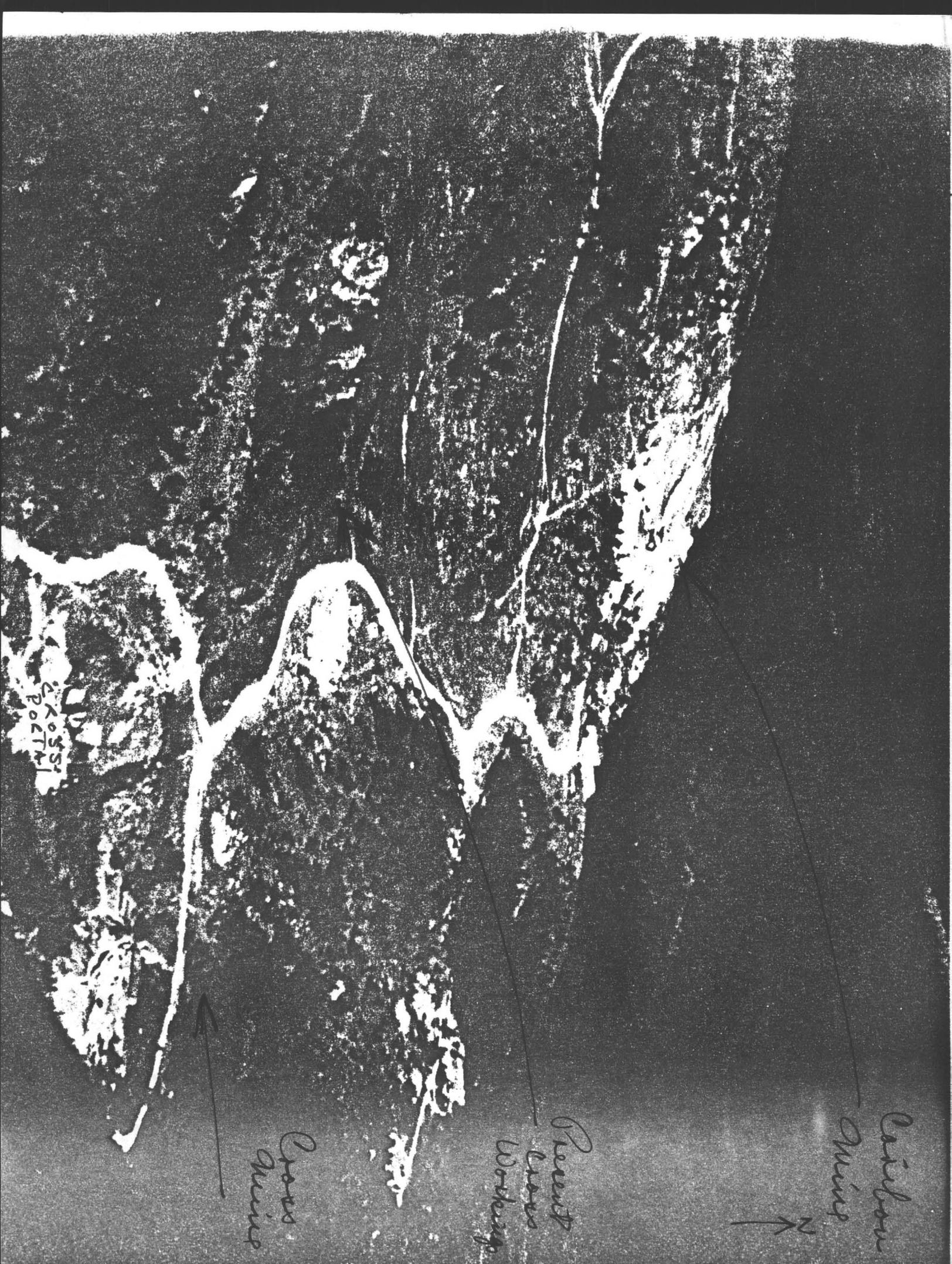
RARE METALS VEIN  
Looking N

W ← 1" = 20'



**CROSS MINE**  
 LONGITUDINAL SECTION OF RARE METALS  
 LOOKING NORTH  
 1" = 20'  
 BY P.D. 4/1/61

- Ⓐ DRIFT BOTH WAYS
- Ⓐ DRIFT TO SOUTH
- Ⓐ LOCATION OF DRIFT RELATIVE TO R.M.



Carillon  
Mines  
N

Great  
Cave  
Workings

Cross  
Mines

100  
KOSKI  
POLMI

# Hendricks Mining Company, Inc.

Caribou, Colorado

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## Cross Mine Progress Report

September 10, 1982 through October 20, 1982

This period of time has seen us complete approximately 47 feet of new 7' x 7' haulage tunnel on the Crown Point Vein, 4th Level. This was driven under the initial sublevel drift to accommodate the 18" gauge train, two draw chutes and a manway access to begin shrink stoping on the Crown Point Vein 4th to 3rd. The tunnel was driven on the vein and split shot. The ore was separated and collected to be used in the 45th Cross Mine mill run. Milling of this run commenced on Monday, October 18, and will be completed and ready for shipment around October 27 to Cominco. Some tonnage used in this run will come from our shrink stoping operations, which should see some very excellent grades. Shrink stoping on this vein will continue for the next several weeks, as will slusher drifting to the southwest from the new manway. We are hopeful that as we reach the contact with the monzonite, we will find a good ore zone.

Initial calculations have been made to determine the cost for opening up for mining on the Tunnel Level Rare Metals, Romeo and Juliet Veins. Tunnel widening, installation of new track, air line, water line, etc., would have to take place for a distance down the old tunnels for approximately 350 feet. This would open up a potentially good future reserve between the Tunnel Level and surface, approximately 130 feet of backs. We will keep you informed on our future plans for start up on this project.

Enclosed for your reference is an assay summary sheet on the 44th Run, which was shipped to Cominco on September 27, 1982. This came from 181.53 tons of crude ore produced on the initial sublevel

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drifting on the Crown Point. Settlement will be on average October prices, completed around November 15, 1982. Please note the head values on the gold and silver.

Settlements Enclosed

Enclosed is your settlement check on the 42nd Run shipped to Asarco's El Paso smelter on July 13, 1982. Also enclosed is your settlement on the 43rd Run shipped to Cominco on August 9, 1982. Both of these were settled on the average September prices. Should you have any questions, please feel free to contact us.

Partnership Progress

We are still working very hard towards a new partnership and expect to have something wrapped up in the next couple of weeks. Everyone is encouraged with the recent increases shown in the metal markets, particularly due to lower interest rates. We have also altered the terms of our buy in to make it more attractive for the groups we are dealing with.

Summary

The mine is being kept in excellent working condition. The buildings and snowsheds have been readied for winter operation. The repair work on the outside walls and roofs of the mine cabins is also nearly complete.

Sincerely,

Thomas S. Hendricks  
President

TSH/rgj

Enclosures

cc/encl: John Henderson  
Marge Hendricks

CROSS MINE ASSAYS  
44th Run

	Heads				Cons				Tails			
	Au		Ag		Au		Ag		Au		Ag	
	*	∅	*	∅	*	∅	*	∅	*	∅	*	∅
00 1	0.534	0.39	4.33	3.95	6.728	6.60	125.67	126.50	0.036	0.030	0.84	1.02
00 2	0.364	0.34	2.56	5.99	7.836	7.76	102.52	101.70	0.030	0.023	0.65	0.68
00 3	0.454	0.56	6.81	8.93	6.676	8.81	104.88	137.10	0.034	0.030	1.09	0.92
00 4	0.948	0.84	7.29	11.50	8.192	7.87	178.61	180.50	0.032	0.027	0.81	0.79
00 5	0.586	0.48	10.63	9.00	8.656	8.58	172.05	170.20	0.028	0.020	0.77	0.80
00 6	0.488	0.52	6.19	8.00	9.020	8.85	145.61	143.70	0.036	0.026	1.07	0.80
00 7	0.512	0.41	8.31	5.50	9.120	8.83	126.86	126.10	0.036	0.023	0.77	0.60
00 8	0.464	0.38	5.80	6.10	9.392	9.51	127.29	127.80	0.004	0.028	0.94	0.70
00 HG	1.044	1.16	20.36	21.70	6.160	5.79	142.65	143.30	0.044	0.039	1.06	1.47
00 9	0.132	0.20	0.83	3.61	10.248	9.68	93.91	94.80	0.008	0.012	0.29	0.26
Averages	0.553	0.53	7.31	8.43	8.203	8.23	132.01	135.17	0.029	0.026	0.83	0.80
00 Comp					8.784	8.12	140.98	128.20				

Pb 10.72%  
Cu 2.44%  
Zn 12.32%

\* = Root and Simpson  
∅ = Skyline

High-Grade Samples	Au	Ag	Pb	Cu	Zn
COCP	7.548	114.81	9.59	2.46	11.81
82-78 Heads	1.048	21.83			
HG 1T	1.240	26.50			
HG 2T	0.920	21.70			

# Hendricks Mining Company, Inc.

Caribou, Colorado

Complete Mining and Milling Services

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## BOULDER MILL CONCENTRATE SHIPMENT

Run number: 42

Smelter location: El Paso, Texas

Date arrived at smelter: 7/13/82

Date final settlement received: 10/15/82

Concentrate wet weight: 35375#; 17.6875 tons

Concentrate dry weight: 30670#; 15.335 tons

Percent moisture: 13.3%

METAL CONTENT		VALUE	
gold:	<u>3.76625 oz/ton</u> <u>57.756</u> ounces	\$	<u>24,968.12</u> (\$432.311)
silver:	<u>124.4725 oz/ton</u> <u>1,908.79</u> ounces	\$	<u>16,177.91</u> (\$8.47548)
lead:	<u>14.1175%</u> ; <u>4330</u> pounds	\$	<u>485.00</u> (\$0.11201)
zinc:	<u>    %</u> ; <u>    </u> pounds	\$	<u>---</u>
copper:	<u>1.93%</u> ; <u>592</u> pounds	\$	<u>173.50</u> (\$0.29307)

Gross value: \$ 39,244.56

Smelter costs: \$ 4,360.62

Assays at smelter 214.00

Trucking charges: \$ 1,343.20

33,326.74

Royalty to

Robert T. Dofflemyer Trust 833.16

William Todd Dofflemyer \$ 277.72

Virginia S. Dofflemyer 277.72

John C. Dofflemyer 277.72

Crude Ore Tons: 215.07

Concentrate Ratio: 14.0 to 1

Location of Crude Ore Mined: Rare Metals

4th-3rd Level, flat seam

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Mine Address: Caribou, Colorado • P.O. Box 653 • Nederland, Colorado 80466 • (303) 258-3806

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Frances M. Stillwell \$ 833.16

Frances M. Stillwell Trust 833.16

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Gross value: \$ 39,244.56

Smelter costs: \$ 4,360.62

Assays at smelter 214.00

Trucking charges: \$ 1,343.20

Royalty to 33,326.74

Columbine Minerals \$ 1,666.32

Crude Ore Tons: 215.07

Concentrate Ratio: 14.0 to 1

Location of Crude Ore Mined: Rare Metals

4th-3rd Level, flat seam

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## BOULDER MILL CONCENTRATE SHIPMENT

Run number: 43

Smelter location: Trail, British Columbia

Date arrived at smelter: 8/9/82

Date final settlement received: 10/14/82

Concentrate wet weight: 34920#; 17.46 tons

Concentrate dry weight: 29612#; 14.806 tons

Percent moisture: 15.2%

	METAL CONTENT		VALUE	\$US
gold:	<u>5.209 oz/ton</u> <u>77.1245</u>	ounces	<u>\$ 32,648.27</u>	<u>(\$423.3191)</u>
silver:	<u>163.60 oz/ton</u> <u>2422.26</u>	ounces	<u>\$ 20,250.34</u>	<u>(\$8.3601)</u>
lead:	<u>23 %</u> ; <u>6811</u>	pounds	<u>\$ 1,122.45</u>	<u>(\$0.1648)</u>
zinc:	<u>15.5 %</u> ; <u>4590</u>	pounds	<u>\$ 1,094.26</u>	<u>(\$0.2384)</u>
copper:	<u>2.1 %</u> ; <u>622</u>	pounds	<u>\$ 272.31</u>	<u>(\$0.4378)</u>

Gross value: \$ 51,260.81

Smelter costs: \$ 1,792.36

Trucking charges: \$ 2,281.60

Royalty to 47,541.80

Robert T. Dofflemyer Trust 1,188.54

William Todd Dofflemyer \$ 396.18

Virginia S. Dofflemyer 396.18

John C. Dofflemyer 396.18

Crude Ore Tons: 212.08

Concentrate Ratio: 14.3 to 1

Location of Crude Ore Mined: 4th Level

Rare Metals

Mill Address: 3000 N. 63rd St. • Boulder, Colorado 80301 • (303) 443-1502

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	Smelter costs:	<u>\$ 1,792.36</u>	
	Trucking charges:	<u>\$ 2,281.60</u>	
	Royalty to	<u>47,541.80</u>	
	Frances M. Stillwell	<u>1,188.54</u>	
	Frances M. Stillwell Trust	<u>\$ 1,188.54</u>	

Crude Ore Tons: 212.08

Concentrate Ratio: 14.3 to 1

Location of Crude Ore Mined: 4th Level

Rare Metals

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# Hendricks Mining Company, Inc.

Caribou, Colorado

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Smelter costs:		\$ <u>1,792.36</u>	
Trucking charges:		\$ <u>2,281.60</u>	
Royalty to		<u>47,541.80</u>	
Columbine Minerals		\$ <u>2,377.08</u>	

Crude Ore Tons: 212.08

Concentrate Ratio: 14.3 to 1

Location of Crude Ore Mined: 4th Level

Rare Metals

Mill Address: 3000 N. 63rd St. • Boulder, Colorado 80301 • (303) 443-1502

Mine Address: Caribou, Colorado • P.O. Box 653 • Nederland, Colorado 80466 • (303) 258-3806

**ASARCO INCORPORATED  
EL PASO PLANT**

BOUGHT OF HENDRICKS MNG CO		EL PASO TEX,	
ADDRESS	PO BOX 653	SMELTER LOT	1021
	NEDERLANDO	SHIPPERS LOT	
SHIPPING POINT	CO, 80466	CLASSIFICATION	PB CTS
NAME OF MINE		PURCHASE TERMS	L82415

OCT 12 1982

ARRIVAL	CAR	GROSS	TARE	CONTAINERS	WET	%	DRY	QUOTATIONS
MIX	DATE	NUM	RR	WT	WT	CODE	WT	H2O
465	7/13	1	TRK	65260	29880	3	5	35375 13.3
								30670

AU 437.311  
 AG 8.72548  
 PB 25318  
 CU 29307  
 PRICE  
 PER 211

42nd Run

TOTAL 35375 30670

ASSAYS	OZ PER TON		WET LEAD %	COPPER %	SiO <sub>2</sub> %	FE %	CAO %	Zn %	S %	Al <sub>2</sub> O <sub>3</sub> %	AS %	SB %	BI %	NI %	%
	GOLD	SILVER													
SMELTER	3.75	122.775	14.175	1.93							.05	.04	.02	.02	
SHIPPER	3.855	124.59	14.06												
UMPIRE	3.76625	124.4725													
METALLICS															
SETTLE	3.76625	124.4725	14.1175	1.93											

VALUES PER TON				DEDUCTIONS			CHARGE	CREDIT
PAYMENT				FREIGHT	BASE INCL LABOR ADJ		25381	
	PAY	CONTENT	PRICE	AMOUNT	(FIXED)	EXCESS VALUE OVER	2000.00	2796
GOLD	.02	MIN. 95 %	3.5589375	432.311	1538.57			
SILVER	LESS	1.0	MIN. 95 %	117.298875	8.47548	994.16		
LEAD	LESS	30	Min %	222.35	.11201	24.91		
COPPER	LESS	30	@ 60 %	5.16	.29307	1.51		
GROSS VALUE				2559.15				
LESS DEDUCTIONS (NET CHARGE)				281.77				281.77
FREIGHT VALUE				X X X				
NET VALUE				2277.38	@ 15.335			34923.62
LESS FREIGHT:				WET TONS @	PT.			
LESS SWITCHING:				RESETS:	REWORKS:			
LESS FREIGHT INTEREST:								
LESS TRUCK LOT:							25.00	
LESS MOISTURE PENALTY:							74.68	
LESS UMPIRE: Union Assay							134.00	
LESS HAULING:								
LESS REPRESENTATION: Western Weighers							80.00	
LESS ROYALTY:								
LESS ADVANCE INTEREST:							768.24	
LESS ADVANCE: 7/19/82 to 10/7/82							18000.00	
LESS ADVANCE: 9/16/82 to 10/7/82							7000.00	
BALANCE DUE SHIPPER/SMELTER							8901.70	
TOTALS							34923.62	34923.62

*KK*



43rd Run

LEAD CONCENTRATE COMINCO LTD. OCTOBER 06, 1982  
TRAIL, B.C.  
FINAL SETTLEMENT: HENDRICKS MINES- CROSS

IN ACCOUNT WITH: HENDRICKS MINING CO LTD  
BOX 653 NEDERLAND  
COLCRADO, 80466

LOT NUMBER: 15 SERIAL NUMBER: 4558  
CAR NUMBERS DATE RECEIVED  
1 TRUCK 08 09 82

NET WET WEIGHT	MOISTURE	NET DRY WEIGHT	SHORT DRY TONS				
34920 LBS	15.2000 %	29612 LBS	14.8060				
ASSAYS: GOLD	SILVER	COPPER	LEAD	ZINC	SULPHUR	SILICA	
5.2090	163.6000	2.1000	23.0000	15.5000	31.3000	5.2000	
OZ/ DRY TCN		%	%	%	%	%	
ALUMINA	IRON	LIME	ANTIMONY	ARSENIC	BISMUTH	MAGNESIA	CADMIUM
0.9000	18.2000	0.2500	0.1000	0.1000	0.0100	0.0000	0.0000
%	%	%	%	%	%	%	%

METAL PRICES: SEPTEMBER, 1982 AVER  
EXCHANGE: \$US TO \$CDN = 1.23470 STERLING TO \$US = 1.71202  
LABOUR RATE = 18.040

COMINCO CDN PRICE 32.500 \* 0.000 = 0.00000  
US PRICE 25.318 \* 1.23470 \* 0.650 = 20.31909  
LME PRICE 306.244 \* 1.71202 / 2204.6 \* 1.23470 \* 0.350 = 10.27725

CALCULATED LEAD PRICE = 30.59634

PB PRICE 30.59634 - 10.00 - 0.25 ( 30.59634 - 40.00 ) = 20.59634 ¢/LB  
ZN PRICE 800.000 / 2204.6 \* 1.23470 - 15.00 = 29.80450 ¢/LB  
AG PRICE 8.72548 \* 1.23470 \* .970 - 0.00000 = 10.45015 \$/OZ  
AU PRICE 437.31100 \* 1.23470 \* 0.98 - 0.000 = 529.14893 \$/OZ  
CU PRICE 60.524 \* 1.23470 - 20.000 = 54.72898 ¢/LB

PAYMENTS PER TON	CONTENT	DEDUCTIONS	PAID FOR		
PB	460.00 LBS	39.28 LBS	420.72 LBS	=\$	86.65 LEAD
ZN	310.00 LBS	124.00 LBS	186.00 LBS	=\$	55.44 ZINC
AG	163.6000 OZ	11.8426 OZ	151.7574 OZ	=\$	1585.89 SILVER
AU	5.2090 OZ	0.3646 OZ	4.8444 OZ	=\$	2563.39 GOLD
CU	42.00 LBS	25.20 LBS	16.80 LBS	=\$	9.19 COPPER
			TOTAL PAYMENT	=\$	4300.56

DEDUCTIONS		
BASIC TREATMENT CHARGE	=\$	-120.00
ALUMINA	=\$	-0.36
LABOUR: LABOUR RATE = 18.040	=\$	-18.96
TRUCKING CHARGE	=\$	-6.00
MOISTURE	=\$	-6.00
NET DEDUCTIONS	=\$	-151.32
VALUE/S.D.T. -- F.O.B. TADANAC	=\$	4149.24
VALUE/S.D.T. * 14.8060 S.D.T.	=\$	61433.65
LESS:		
EXTRA HANDLING	=\$	354.95
NET AMOUNT	=\$	61078.70
VALUE US \$	=\$	49468.45
AMOUNT ADVANCED	=\$	34461.57
SETTLEMENT AMOUNT	=\$	15006.88

REMARKS:  
INTEREST @17% FOR 22 DAYS (\$354.95 CDN)

CROSS MINE ASSAYS  
42nd Run

	Heads				Cons				Tails				
	Au		Ag		Au		Ag		Au		Ag		
	*	∅	*	∅	*	∅	*	∅	*	∅	*	∅	
MM 1	0.370	0.49	9.49	12.7	3.48	3.53	128.52	133.7	0.016	0.02	0.76	0.73	
MM 2	0.624	0.32	13.88	11.8	3.548	3.47	130.06	128.9	0.018	0.022	0.98	0.92	
MM 3	0.522	0.34	18.02	7.31	4.784	4.55	130.38	129.6	0.042	0.031	0.16	0.38	
MM 4	gravel				7.952	7.71	100.61	100.0	0.008	0.006	0.29	0.09	
Avg.	0.505	0.38	13.80	10.60	4.941	4.815	122.39	123.05	0.021	0.020	0.55	0.53	
MM Comp					12.29 Pb								
					2.05 Cu								
					15.87 Zn								
1st pipe* (9-place con's bins)					4.092				127.59				
PP2 Cons					3.928				128.43				
					13.91 Pb								
					1.95 Cu								
					15.44 Zn								
					11.18 H <sub>2</sub> O								

\* = Root & Simpson

∅ = Skyline

CROSS MINE ASSAYS  
43rd Run

	Heads				Cons				Tails			
	Au		Ag		Au		Ag		Au		Ag	
	*	∅	*	∅	*	∅	*	∅	*	∅	*	∅
NN 1	0.458	0.38	12.26	12.40	4.540	5.20	183.04	180.40	0.024	0.02	1.00	1.00
NN 2	0.310	0.33	12.49	11.20	4.856	4.80	178.87	175.20	0.004	0.02	1.94	1.30
NN 3	0.222	0.35	5.92	7.00	5.540	5.23	148.66	148.00	0.030	0.02	1.08	0.80
NN 4	0.618	0.30	17.01	9.40	5.488	5.31	161.90	161.30	0.032	0.02	1.16	1.10
Averages	0.402	0.34	11.92	10.00	5.106	5.14	168.12	166.23	0.022	0.02	1.30	1.05
NN Comp					5.436	5.27	167.83	168.1				

\* = Root and Simpson  
∅ = Skyline Labs

23.05% Pb  
2.0% Cu  
16.25% Zn



LEAD CONCENTRATE COMINCO LTD.  
TRAIL, B.C.  
PRELIMINARY SETTLEMENT: HENDRICKS MINING

OCTOBER 22, 1982

IN ACCOUNT WITH: HENDRICKS MINING CO LTD  
BOX 653 NEDERLAND  
COLORADO, 80466

LOT NUMBER: 16 SERIAL NUMBER: 4668

CAR NUMBERS

DATE RECEIVED

1 TRUCK

09 27 82

NET WET WEIGHT 28540 LBS MOISTURE 15.5000 %  
NET DRY WEIGHT 24116 LBS SHORT DRY TONS 12.0580

ASSAYS:	GOLD	SILVER	COPPER	LEAD	ZINC	SULPHUR	SILICA
	8.5900	136.1000	2.5500	11.9000	11.6000	35.8000	7.5000
	OZ/ DRY TON		%	%	%	%	%
ALUMINA	IRON	LIME	ANTIMONY	ARSENIC	BISMUTH	MAGNESIA	CADMIUM
0.9000	25.1000	0.4000	0.2000	0.1000	0.0100	0.0000	0.0000
%	%	%	%	%	%	%	%

METAL PRICES: OCTOBER 18, 1982

EXCHANGE: \$US TO \$CDN = 1.22670 STERLING TO \$US = 1.71870

LABOUR RATE = 18.040

COMINCO CDN PRICE 30.500 \* 0.000 = 0.00000

US PRICE 26.000 \* 1.22670 \* 0.650 = 20.73123

LME PRICE 301.750 \* 1.71870 / 2204.6 \* 1.22670 \* 0.350

= 10.10006

CALCULATED LEAD PRICE = 30.83129

PB PRICE 30.83129 - 10.00 - 0.25 ( 30.83129 - 40.00 )

= 20.83129 €/LB

ZN PRICE 800.000 / 2204.6 \* 1.22670 - 15.00

= 29.51420 €/LB

AG PRICE 9.79000 \* 1.22670 \* .970 - 0.00000

= 11.64911 \$/OZ

AU PRICE 428.25000 \* 1.22670 \* 0.98 - 0.000

= 514.82759 \$/OZ

CU PRICE 61.132 \* 1.22670 - 20.000

= 54.99062 €/LB

PAYMENTS PER TON

	CONTENT	DEDUCTIONS	PAID FOR	
PB	238.00 LBS	23.60 LBS	214.40 LBS	=\$ 44.66 LEAD
ZN	232.00 LBS	163.33 LBS	68.67 LBS	=\$ 20.27 ZINC
AG	136.1000 OZ	10.0013 OZ	126.0987 OZ	=\$ 1468.94 SILVER
AU	8.5900 OZ	0.6013 OZ	7.9887 OZ	=\$ 4112.80 GOLD
CU	51.00 LBS	30.60 LBS	20.40 LBS	=\$ 11.22 COPPER
			TOTAL PAYMENT	=\$ 5657.89

DEDUCTIONS

BASIC TREATMENT CHARGE = \$ -120.00

ALUMINA = \$ -0.36

LABOUR: LABOUR RATE = 18.040 = \$ -18.96

TRUCKING CHARGE = \$ -6.00

MOISTURE = \$ -6.30

NET DEDUCTIONS = \$ -151.62

VALUE/S.D.T. -- F.C.B. TADANAC = \$ 5506.27

VALUE/S.D.T. \* 12.0580 S.D.T. = \$ 66394.60

VALUE US \$ = \$ 54124.56

75% Add

40,593.00

Less Preliminary

30,000.00

Final Adv.

\$ 10,593.00 US

# Hendricks Mining Company, Inc.

Caribou, Colorado

Complete Mining and Milling Services

Exploration

Development

Production

## Cross Mine Progress Report August 3 thru September 10, 1982

August was an exciting month for us at the Cross Mine operation. After carefully evaluating the core from diamond drill holes Nos. 4 and 5, we decided to long hole the potential Crown Point Vein west and north of our 4th Level core drill station. That station is approximately 60 feet north of the 4th Level winze. Cuttings from the long holes were assayed with some very excellent results. We, therefore, decided to drive approximately 26 feet of new 6 x 7 tunnel in this direction. We encountered the vein at a point 86 feet north by northwest from the winze station. The intersect was discouraging at first because of its 12 inch or narrower width. However, we decided to proceed further development and drove a 22 foot narrow raise upwards and established the first sublevel station 15 feet up.

Sublevel drifting commenced and the vein widened with each round we drove to the northeast. A special slusher bucket was built 24 inches wide to assure selective mining of this vein. It reached at its widest spot in 50 feet of drifting northeast 3 feet. Please see updated assay sheet to see a number of the face and back samples we took from the sublevel drift and enclosed map for new vein location. At 50 feet it intersected with a spur of the Rare Metals Vein forcing the Crown Point to turn east and west. We expect this junction area to also be above average grade ore.

Future mining plans which will continue through September and October will see a drift driven on the vein at the 4th track level which will enable construction of two draw chutes. This block of ore will then be mined on a shrink stope basis to assure tight control of selective mining. Further development will also be advanced westward along the junction with the Rare Metals and eventually southwest towards the monzonite intrusive. This could

**Mill Address:** 3000 N. 63rd St. • Boulder, Colorado 80301 • (303) 443-1502

**Mine Address:** Caribou, Colorado • P.O. Box 653 • Nederland, Colorado 80466 • (303) 258-3806

prove to be a very exciting area for the Crown Point system. We are more optimistic than ever about the potential of junctioning of the veins below the 4th Level, especially with the discovery of the Crown Point Vein with its above average values. The ore taken from this development work totaled 181.53 tons which was used to make up the Cross 44th Run. Milling of this run is expected to be completed by September 23 with shipment taking place to Cominco on September 25. Settlement for the 44th Run will be based on October prices, settled around November 10. We expect this to be the highest grade gold run in our history of operating the mine, even though the tonnages are again low. Please see attached scale tonnage sheet and assay tabulations in to us thus far on the 44th Run.

#### Other Settlements Status

Enclosed is your settlement check on the 41st Run which was shipped to El Paso, Texas, on June 18, 1982. Also enclosed is the mill figure sheet and smelter settlement sheet on this run. As you know, this came from clean-up rock and accumulated Cross Mine clean-out concentrates from 1977 to 1981. The 42nd Run, shipped to Asarco on July 13, 1982, will be settled around October 10 or 15 on average September prices and the 43rd Run shipped to Cominco on August 9, 1982, will also be settled around October 10th to the 15th on average September prices. Settlement on both of these shipments is obviously much more exciting noticing that September prices are up considerably over the prices prevailing during the time of shipment. These should bring some pretty good settlements.

#### Partnership Progress

Things are progressing well towards securing a new partner. Several of the groups which we have been working with are showing a continued interest and we feel a deal is very close at hand. Hopefully, this will be completed in time whereby the surface part of our program can be completed prior to the winter conditions which set in around December.

#### Summary

The mine has been kept in excellent working condition during the past month-and-a-half. Approximately 15 tons of road base material were spread out in front of the buildings to improve the appearance and also parking conditions. The new 15HP Beebe Brothers Air Hoist will be temporarily installed later this month to add increased hoisting efficiency and a new Gardner Denver 83 Jackleg Drill was purchased for mining on the new Crown Point Vein. Sampling work is continuing in a number of areas and an updated version of proven and possible ore reserves above the 4th Level was compiled. A number of old geologists' and engineers' reports on the mine are being put

Page 3

together as well as the 1980 Pincock, Allen and Holt report. We expect to do some improvements on the outside walls and roofs of the mine cabins as well as the necessary yearly winterizing work. Our optimism has never been higher for the project.

Sincerely,

Thomas S. Hendricks  
President and General Manager

TSH/rgj

Enclosures

cc/encl: John R. Henderson  
Marge Hendricks

NEW SAMPLING PROGRAM AT CROSS MINE

Beginning June 1, 1982, by Hendricks Mining Company and Bighorn Mining Company

Date	Sample Number	Location	Gold	Silver
*6/1/82	82-1	Buddy - sample from spillage on 4th Level below #1 chute from flat vein	0.494	14.47
*6/1/82	82-2	Ore only, flat seam, 12' approx. back up from 1st sublevel about 4th	1.18	46.20
6/1/82	82-3	foot wall white material below flat seam - location same as above	0.138	4.71
6/1/82	82-4	4th Level Rare Metals left rib inclined vein dark material only, 15' length	0.352	9.45
*6/4/82	82-5	Flat seam west heading 6-4-82 near stope back	0.872	34.25
*6/12/82	82-6	East rare metals in stope 2.5 wide	1.080	53.07
6/15/82	82-7	West heading Rare Metals 4th Level +29' face sample - looked low grade	none	none
*6/15/82	82-8	Left rib, east heading, flat seam - ?Chalcopyrite predominant 3-4 Level	1.072	62.73
6/17/82	82-9	41'3" advance 4th Level Rare Metals west - slusher drift face	0.022	0.86
*6/17/82	82-10	32' east advance flat seam 2nd sublevel - Buddy's drift face	0.448	29.68
6/17/82	82-11	20 place sample mine surface dump area 4th Rare Metals storage	0.026	1.17
*6/21/82	82-12	20 place sample ore on trestle dump from 4th Level flat seam	0.454	18.21
6/21/82	82-13	Thin vein 4th Level Rare Metals west 46'+ perpendicular vein	0.370	11.14
*6/21/82	82-14	Rib sample 4th Level east Rare Metals - track level near new raise	0.232	38.46
6/23/82	82-15	Ore pile 4th Level east raise	0.15	2.36
6/24/82	82-16	Right face first sublevel above 4th Level east heading round drilled -- flat	0.492	15.89
6/26/82	82-17	East raise Rare Metals (back Buddy's raise 6/26 p.m.)	0.510	4.26
6/29/82	82-18	Flat vein on 3rd Level, 10" wide	0.418	15.30
7/6/82	82-19	Face--east top of raise 4-3 flat vein 11 a.m.	0.528	17.36

\*Flat seam samples taken from face and broken ore locations (first eight samples): Gold - 0.72 oz/tn Silver - 37.13 oz/tn

## New Sampling Program at Cross Mine cont'd

2

Date	Sample Number	Location	Gold	Silver
7/6/82	82-20	Face--east top of raise 4-3 flat vein stope back, 11 a.m.	0.612	32.07
7/6/82	82-21	High-grade only, flat seam 3rd Level CP-65 feet foot wall	1.376	41.52
7/15/82	82-22	Ore pile on trestle dump, 20-place grab sample	0.532	16.34
7/15/82	82-23	Rare Metals first sublevel above 4th Level man-raise vein	0.674	21.65
7/15/82	82-24	Tunnel level Rare Metals west high-grade inclined vein	4.120	13.40
7/19/82	82-25	20-place sample 12' in length, flat seam Rare Metals west tunnel level	3.120	9.90
7/19/82	82-26	Same vein as above, face sample west heading	1.364	6.18
7/22/82	82-27	East face Buddy's raise, RM flat seam steel ladder raise 4-3, ore and wall rock	0.136	9.26
7/22/82	82-28	West face Buddy's raise, RM flat seam steel ladder raise 4-3, ore and wall rock	0.092	5.70
7/23/82	82-29	First sublevel high-grade vein - Buddy	2.296	30.20
8/2/82	82-30	High-grade only, 4th Level Romeo-Juliet junction drift back	1.938	5.80
8/2/82	82-31	Juliet 4th Level inclined raise back only 12' up	0.422	2.05
8/9/82	82-32	Cross Vein 4th Level survey point 412, west rib dark black ore and quartz	0.118	3.19
8/9/82	82-33	Narrow vein 4th Level Cross #2 near core station, tunnel back near locomotive switch	0.644	3.53
8/10/82	82-34	Rare Metals Vein 6' up at raise, #2 chute 2' wide, 4th Level	0.044	6.98
8/12/82	82-35	Tunnel level high-grade vein east second short round 10 place in the back	1.678	8.34
8/13/82	82-36	Long hole #1 4th Level north 14½ feet in drill cuttings, Cross #2?	4.554	8.95
8/13/82	82-37	Long hole #1 4th Level north 14½-18 feet in drill cuttings, Cross #2?	2.546	4.33
8/13/82	82-38	Long hole #1 4th Level north 20-23 feet in brown cuttings, Cross #2?	0.020	0.86
8/14/82	82-39	Flat seam Tunnel Level Rare Metals up new raise 6' left back high-grade vein	2.912	11.95
8/14/82	82-40	Flat seam Tunnel Level Rare Metals up new raise 6' right back rusty quartz only	0.426	3.51

## New Sampling Program at Cross Mine cont'd

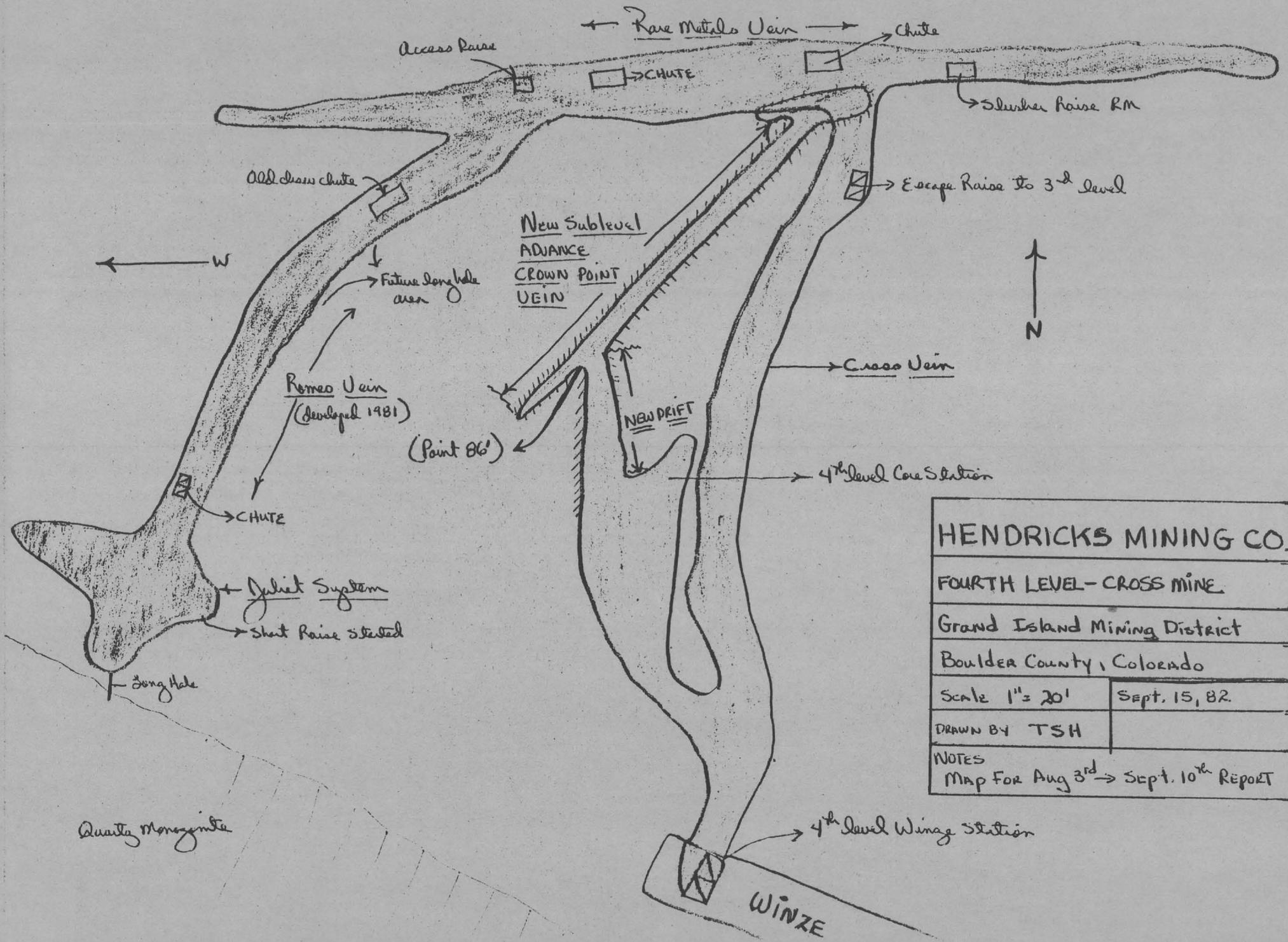
3

Date	Sample Number	Location	Gold	Silver
8/14/82	82-41	Junction area Romeo Vein Tunnel Level raise round, grab off ore pile from round	0.132	4.43
8/18/82	82-42	Cross Vein Tunnel Level north ore block south face up 10'	0.140	3.50
8/18/82	82-43	Cross Vein Tunnel Level north ore block south face up 20'	0.062	2.06
8/18/82	82-44	Cross Vein Tunnel Level north ore block south face up 30'	0.140	3.24
8/18/82	82-45	Cross Vein Tunnel Level north ore block north drift back	0.026	1.95
8/18/82	82-46	Cross Vein Tunnel Level upper stope old hanging wall, black rusty rock	0.190	3.77
8/18/82	82-47	Cross Vein Tunnel Level north block floor sample, sulfides visible in quartz	0.020	0.96
8/19/82	82-48	New vein 4th Level first burn hole into vein, high-grade hanging wall 1' thick	0.323	2.77
8/19/82	82-49	New vein 4th Level first burn hole into vein, footwall low grade 3' thick	0.036	0.36
8/19/82	82-50	Cross Vein south wall 20' above 3rd Level from manway	0.110	0.01
8/21/82	82-51	New vein 4th Level high-grade only one side--back--to other side	0.68	7.84
8/21/82	82-52	New vein 4th Level 2 ft low grade only, right side of vein	0.06	0.90
8/21/82	82-53	Roberts/Rare Metals Tunnel Level sample of ore, 20 chips	0.42	5.66
8/21/82	82-54	4th Level left rib vein Cross #2 area heading southwest stringers	0.14	0.28
8/21/82	82-55	Duplicate sample of Sample No. 82-54	0.10	0.16
	NOTE:	Nos. 54 and 55 were taken in the same face of vein to compare consistency of vein		
8/21/82	82-56	Up 8 ft to 11 ft new raise Cross #2 second stope round up vein widened	1.88	13.16
8/21/82	82-57	20-place sample muck pile from second raise round new vein Cross #2, 4th	0.90	7.16
8/24/82	82-58	Face sample 17½ ft up 6½ ft northeast new vein 4th Level 24 in. vein sample	1.160	8.56
8/24/82	82-59	Face sample 17½ ft up 6½ ft northeast new vein 4th Level 24 in. vein sample high-grade dark black only	2.528	21.57
8/24/82	82-60	Cross Vein 22 ft up raise 4-3 northeast footwall black streak	0.452	10.51

Date	Sample Number	Location	Gold	Silver
8/25/82	82-61	New vein 4th Level up 17 ft raise hole southwest heading, 6 ft south, rusty quartz vein 24 in. wide, sample taken at 5:10 p.m.	0.808	3.19
8/25/82	82-62	New vein 4th Level up 17 ft. raise hole northeast heading, 14 ft northeast, vein is 3 ft wide - looks good	0.994	9.71
8/25/82	82-63	20-place ore pile sample on dump trestle from today's muck, new vein 4th Level, 5:30 p.m.	1.140	7.49
8/30/82	82-64	New stope southwest advance at 8:30 a.m. rusty quartz 2 ft wide at 13 ft south-east of raise edge	0.190	0.57
8/30/82	82-65	21 ft 6 in northeast new stope new face, 20-place chip, vein 3 ft wide	0.884	11.74
9/4/82	82-66	25-place sample ore pile on trestle dump from September 3 production Crown Point Vein-B stope	0.816	10.56
9/7/82	82-67	21 ft 5 in to 26 ft northeast heading, 10:00 a.m. first sublevel above 4th Level back sample 2.2 ft wide Crown Point-B stope	1.536	34.48
9/7/82	82-68	26 ft to 32 ft northeast heading, 10:00 a.m. first sublevel back and face sample 2.2 ft wide CP-B stope	0.696	18.28
9/7/82	82-69	32 ft northeast heading first sublevel right side face sample TALC sample only CP-B stope	0.068	1.51
9/7/82	82-70	22 ft northeast heading drift back high-grade malachite copper showing 4 in. wide 4 ft. long, high-grade only	3.578	89.94
9/8/82	82-71	38 ft. northeast heading face only 2.6 ft. wide CP-B stope first sublevel above 4th Level	0.262	4.54
9/10/82	82-72	45 ft. to 50 ft. CP-B Vein junction Rare Metals first sublevel above 4th Level right rib 2.6 in. wide 2 back	0.320	3.32
9/10/82	82-73	44 ft. to 50 ft. CP-B junction Rare Metals first sublevel above 4th, left rib 2 ft. wide 2 back	0.096	1.54
9/10/82	82-74	50 ft. CP-B Rare Metals junction left rib at 50 ft. dark black high-grade heavy fines	2.486	92.65

NOTE: Sample Nos. 82-36 through 82-74 are samples for sampling program of 44th Cross Run.

Date	Sample Number	Location	Gold	Silver
		Note: Sample No. 82-75 starts mining sample program for 45th Cross Run.		
9/14/82	82-75	56 ft. CPB-RM northeast right heading face 4 ft. wide, 10 a.m.	0.470	7.43
9/17/82	82-76	Track level 4th high-grade seam 6 in. wide, right side of new track heading northeast 11 ft. from southwest raise edge	0.360	8.04
9/17/82	82-77	Track level 4th main vein CPB 2.2 in. wide sulfides plus 6 in. of rust, 11 ft. from southwest raise edge floor to back	0.524	11.16
9/19/82	82-78	25-place sample fines ore bin first half of hand picked high-grade ore at Boulder Mill	1.048	21.83
9/22/82	82-79	Track level advance 4th Level Crown Point Vein face, 7 ft. wide vein sample left side 3 ft. of ore plus rust, 17 ft. northeast from raise edge	0.328	3.98
9/22/82	82-80	Romeo Vein 41 ft. from Rare Metals south 4th Level rib chip samples--will plan long-hole program here soon	0.244	3.03
9/24/82	82-81	28 ft. northeast 4th track level CP-B Vein 16 in. wide floor to back		
9/24/82	82-82	28 ft. northeast 4th track level CP-B gneiss wall rock 3 ft. 6 in. wide		
9/27/82	82-83	32 ft. 6 in. northeast 4th track level CP-B Vein only, 2 ft. wide floor to back		



Quartz Monazite

HENDRICKS MINING CO.	
FOURTH LEVEL - CROSS MINE	
Grand Island Mining District	
Boulder County, Colorado	
Scale 1" = 20'	Sept. 15, 82.
DRAWN BY TSH	
NOTES Map For Aug 3 <sup>rd</sup> → Sept. 10 <sup>th</sup> Report	

# Hendricks Mining Company, Inc.

Caribou, Colorado

Complete Mining and Milling Services

Exploration

Development

Production

## CROSS MINE CRUDE ORE 44th Run

<u>Date Hauled In</u>	<u>Pounds</u>	<u>Tons</u>
8/12/82	38,380	19.19
8/19/82	35,620	17.81
8/24/82	40,600	20.30
8/26/82	32,420	16.21
8/27/82	39,100	19.55
9/1/82	33,560	16.78
9/7/82	30,620	15.31
9/7/82	31,980	15.99
9/9/82	29,620	14.81
9/9/82	33,740	16.87
9/10/82	32,360	16.18
9/10/82	<u>34,560</u>	<u>17.28</u>
	412,560	206.28
		206.28
Crude ore moisture deduction estimated at 12%		<u>-24.75</u>
Actual dry scaled crude ore tonnage		181.53

Mill Address: 3000 N. 63rd St. • Boulder, Colorado 80301 • (303) 443-1502

Mine Address: Caribou, Colorado • P.O. Box 653 • Nederland, Colorado 80466 • (303) 258-3806

CROSS MINE

Ore & Waste Production Records from Daily Mine Log  
August 3 thru September 10, 1982

44th Run - August Contract

<u>Date</u>	<u>Ore</u>	<u>Waste</u>	<u>H-Grade</u>
8/3/82	0	0	0
8/5/82	0	0	0
8/6/82	4.5	0	1.5 est.
8/9/82	9.75	0	0
8/10/82	6.0	0	0
8/11/82	0	0	0
8/12/82	0	0	0
8/13/82	0	0	0
8/16/82	4.5	0	some
8/17/82	0	15.0	0.5
8/18/82	2.25	0	0
8/19/82	0	18.0	0
8/20/82	0	14.25	0
8/21/82	0	0	0
8/22/82	0	0	0
8/23/82	9.0	0	0
8/24/82	9.0	0	0.25
8/25/82	9.0	1.75	0
8/26/82	9.0	0	0
8/27/82	9.0	0	0
8/29/82	0	0	0
8/30/82	9.0	0	0
8/31/82	0	0	0
9/1/82	9.0	0	0
9/2/82	4.5	0	0
9/3/82	9.0	0	0
9/4/82	0	0	0
9/5/82	0	0	0
9/6/82	7.5	0	0
9/7/82	12.0	0	0
9/8/82	13.5	0	0
9/9/82	18.0	0	0
9/10/82	<u>13.5</u>	<u>0</u>	<u>0</u>
	168.0 wet tons	49 tons	2.25 tons

CROSS MINE ASSAYS  
44th Run

	Heads				Cons				Tails			
	Au		Ag		Au		Ag		Au		Ag	
	*	∅	*	∅	*	∅	*	∅	*	∅	*	∅
00 1	0.534	0.39	4.33	3.95	6.728	6.60	125.67	126.50	0.036	0.030	0.84	1.02
00 2	0.364	0.34	2.56	5.99	7.836	7.76	102.52	101.70	0.030	0.023	0.65	0.68
00 3	0.454	0.56	6.81	8.93	6.676	8.81	104.88	137.10	0.034	0.030	1.09	0.92
00 4	0.948	0.84	7.29	11.50	8.192	7.87	178.61	180.50	0.032	0.027	0.81	0.79
00 5	0.586	0.48	10.63	9.00	8.656	8.58	172.05	170.20	0.028	0.020	0.77	0.80
00 6	0.488	0.52	6.19	8.00	9.020	8.85	145.61	143.70	0.036	0.026	1.07	0.80
00 7	0.512	0.41	8.31	5.50	9.120	8.83	126.86	126.10	0.036	0.023	0.77	0.60
00 8	0.464	0.38	5.80	6.10	9.392	9.51	127.29	127.80	0.004	0.028	0.94	0.70
00 HG	1.044		20.36		6.160		142.65		0.044		1.06	
00 9					10.248		93.91		0.008		0.29	
Averages												
00 Comp												

\* = Root and Simpson  
∅ = Skyline

# Hendricks Mining Company, Inc.

Caribou, Colorado

Complete Mining and Milling Services

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## BOULDER MILL CONCENTRATE SHIPMENT

Run number: 41  
Smelter location: El Paso, Texas  
Date arrived at smelter: 6/18/82  
Date final settlement received: 9/13/82

Concentrate wet weight: 13,155#; 6.58 tons  
Concentrate dry weight: 12,221#; 6.1105 tons  
Percent moisture: 7.1%

METAL CONTENT		VALUE	
gold:	<u>5.356 oz/ton</u> <u>32.7278</u> ounces	<u>\$ 11,920.12</u>	<u>(\$364.22)</u>
silver:	<u>94.775 oz/ton</u> <u>579.12</u> ounces	<u>\$ 4,132.68</u>	<u>(\$7.13614)</u>
lead:	<u>8.9 %; 1088</u> pounds	<u>\$ 280.90</u>	<u>(\$0.25818)</u>
zinc:	<u>          %;</u> pounds	<u>\$ --</u>	
copper:	<u>1.0025 %;</u> <u>123</u> pounds	<u>\$ --</u>	

Gross value: \$ 14,960.09

Smelter costs: \$ 1,727.26

Assays at smelter 320.00

Trucking charges: \$ 1,343.20

11,569.63

Royalty to

Robert T. Dofflemyer Trust 289.24

William Todd Dofflemyer 96.41

Virginia S. Dofflemyer 96.42

John C. Dofflemyer 96.41

Crude Ore Tons: 98.48

Concentrate Ratio: 23.3 to 1 actual ratio

Location of Crude Ore Mined: 98 tons of Cross Mine

winter cleanup rock. Homestake dump custom milling and  
Cross Mine clean-out concentrates 1977-1981.

Mill Address: 3000 N. 63rd St. • Boulder, Colorado 80301 • (303) 443-1502

Mine Address: Caribou, Colorado • P.O. Box 653 • Nederland, Colorado 80466 • (303) 258-3806

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Royalty to 11,569.63

Frances M. Stillwell 289.24

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ASARCO INCORPORATED

EL PASO PLANT

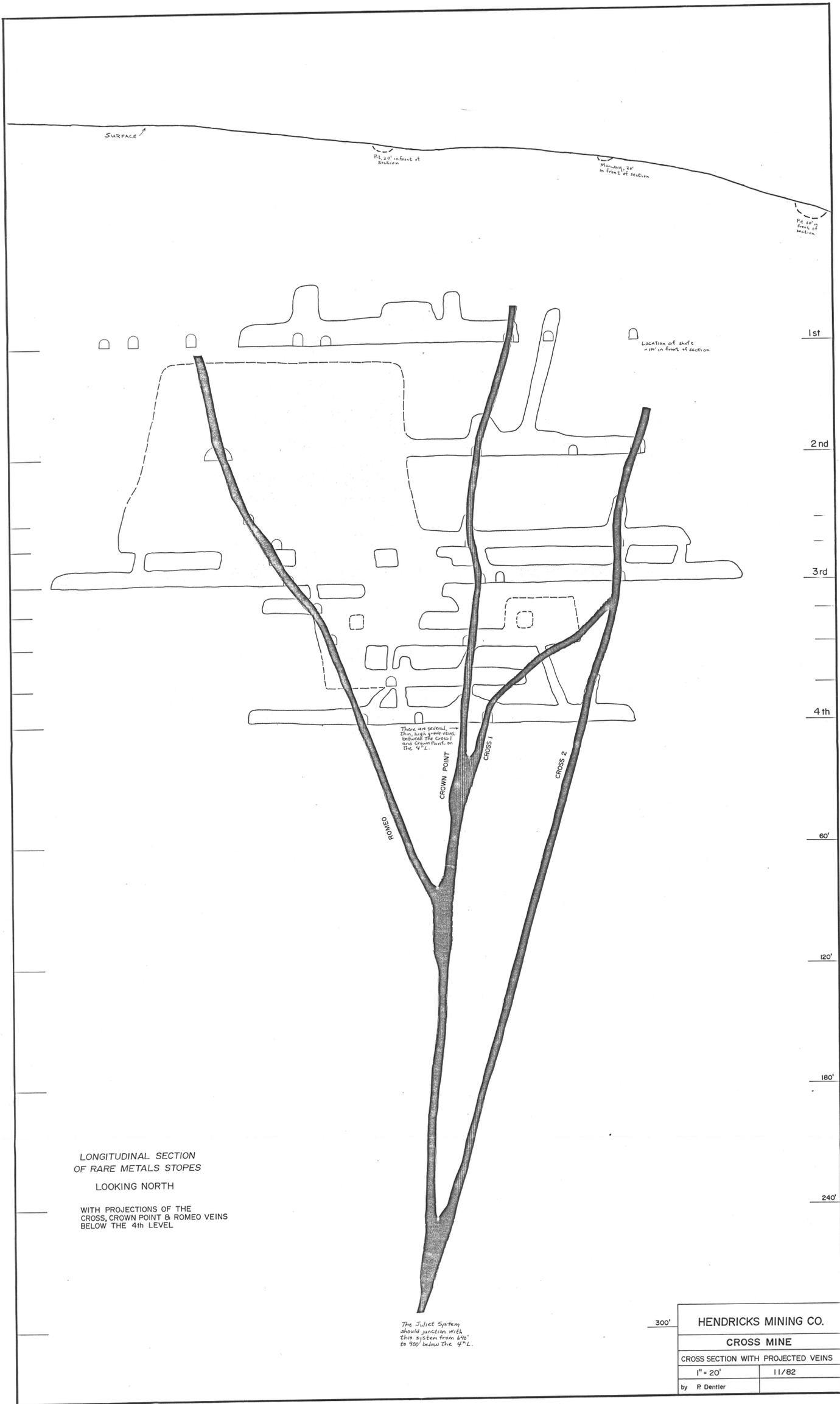
BOUGHT OF HENDRICKS MNG CO EL PASO TEX,  
 ADDRESS PO BOX 653 SMELTER LOT 856 SEP 9 1982  
 NEDERLANDO CO, 80466 SHIPPERS LOT  
 SHIPPING POINT CLASSIFICATION AU-AG CTS  
 NAME OF MINE PURCHASE TERMS 182415

MIX	ARRIVAL DATE	CAR NUM	RR	GROSS WT	TARE WT	CONTAINERS	WET WT	% H2O	DRY WT	QUOTATION
449	6/18	936	TRK	42820	29660	3	5	13155	7.1	12221

TOTAL 13155 12221

ASSAYS	OZ PER TON		WET LEAD %	COPPER %	SI <sub>2</sub> O <sub>3</sub> %	FE %	CAO %	ZN %	S %	AL <sub>2</sub> O <sub>3</sub> %	AS %	SB %	BI %	NI %
	GOLD	SILVER												
SMELTER	4.95	95.925	9.0	1.0225							.12	.09	.01	.02
SHIPPER	5.285	94.7	9.2											
UMPIRE	5.086	95.725												
METALLICS	7.27	-95	-2	-02										
SETTLE	5.356	94.775	8.9	1.0025										

VALUES PER TON				DEDUCTIONS			CHARGE	CREDIT
PAYMENT				FREIGHT	BASE, INCL. LABOR ADJ.	256.17		
	PAY CONTENT	PRICE	AMOUNT	(FIXED)	EXCESS VALUE OVER \$	2000.00		
GOLD	.02 MIN 95 %	5.0692	359.226				2241	
SILVER	1.0 MIN 95 %	89.08625	6.88614					
LEAD	Min %	118.0	.11701					
COPPER								
GROSS VALUE					ALLUMINA			
LESS DEDUCTIONS (NET CHARGE)					AS SB BI		278.58	
FREIGHT VALUE				X X X	NET CHARGE			
NET VALUE				2169.68 @ 6.1105	WET TON DRY TONS			
LESS FREIGHT:				WET TONS @	CREDITS			
LESS SWITCHING:				RESETS:	REWEIGHS:			
LESS FREIGHT INTEREST:								
LESS TRUCK LOT:					25.00			
LESS MOISTURE PENALTY:								
LESS UMPIRE:				Root + Simpson	240.00			
LESS HAULING:								
LESS REPRESENTATION:				Western Weighers	80.00			
LESS ROYALTY:								
LESS ADVANCE INTEREST:					309.97			
LESS ADVANCE:				6/28/82 to 9/7/82	8400.00			
BALANCE DUE SHIPPERS:					4202.86			
TOTALS					13257.82			



LONGITUDINAL SECTION  
 OF RARE METALS STOPES  
 LOOKING NORTH

WITH PROJECTIONS OF THE  
 CROSS, CROWN POINT & ROMEO VEINS  
 BELOW THE 4th LEVEL

HENDRICKS MINING CO.	
CROSS MINE	
CROSS SECTION WITH PROJECTED VEINS	
1" = 20'	11/82
by P. Dentler	