



CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
416 W. Congress St., Suite 100
Tucson, Arizona 85701
602-771-1601
<http://www.azgs.az.gov>
inquiries@azgs.az.gov

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Vol.9, Bk.6

TOMBSTONE

Mining District

Cochise Co.

Arizona

Correspondence

1983

1983

PROPOSED ASSESSMENT WORK SCHEDULE FOR TOMBSTONE PROPERTY POSITION
1983 CALENDAR YEAR

COLUMN #	C-1	C-2	C-3	C-4	C-5	C-6	C-7	C-8	C-9	C-10	C-11	C-12	C-13	C-14	C-15	C-16	C-17	C-18		
PROJECT AREA	NEEDED WORK VALUE	TOTAL NO. MAGNETIC POINTS	TOTAL NO. MERCURY POINTS	FIELD MAN HRS. MAGNETIC	FIELD MAN HRS. MERCURY	EXPENSE LABOR MAGNETIC	EXPENSE LABOR MERCURY	ANALYSIS MERCURY SAMPLES	COMPUTER PROGRAMMING	FIELD MAPPING GEOL.&ALT.	GEOCHEM SAMPLING	GEOCHEM ANALYSIS	ACCOUNTING & REPORTS	RENTALS	VEHICLES	FOOD & LODGING	SUPPLIES	AREA TOTAL		
A. STATE LEASES																				
1. SECTION 18 T.20S.,R.22E.	(\$6,030.00)	123.00	41.00	10.00	8.00	246.00	205.00	154.00	169.00					45.00	34.00	56.00	135.00	56.00	25.00	1125.00
2. SECTION 19 T.20S.,R.22E.	(\$6,427.20)	339.00	113.00	27.00	23.00	678.00	565.00	424.00	466.00					124.00	94.00	156.00	375.00	156.00	69.00	3107.00
3. SECTION 29 T.20S.,R.22E.	(\$3,200.00)	219.00	73.00	18.00	15.00	438.00	365.00	274.00	301.00					80.00	61.00	103.00	248.00	103.00	45.00	2018.00
4. SECTION 30 T.20S.,R.22E.	(\$2,404.10)	273.00	91.00	22.00	18.00	546.00	455.00	341.00	875.00	1500.00	1000.00	1500.00		600.00	275.00	125.00	300.00	125.00	255.00	7897.00
5. SECTION 32 T.20S.,R.22E.	(\$6,018.90)	168.00	56.00	13.00	11.00	336.00	280.00	210.00	231.00					62.00	46.00	75.00	180.00	75.00	34.00	1529.00
6. CHARLESTON MINING DISTRICT		144.00	48.00	12.00	10.00	288.00	240.00	180.00	198.00					53.00	40.00	69.00	165.00	69.00	29.00	1331.00
7. STATE OF MAINE MINE		120.00	40.00	10.00	8.00	240.00	200.00	150.00	165.00					44.00	33.00	56.00	135.00	56.00	24.00	1103.00
B. TOMBSTONE BASIN		480.00	160.00	38.00	32.00	960.00	800.00	600.00	660.00					176.00	133.00	219.00	525.00	219.00	98.00	4390.00
C. TOMBSTONE EXTENSION		645.00	215.00	52.00	43.00	1290.00	1075.00	806.00	887.00					237.00	178.00	297.00	713.00	297.00	131.00	5911.00
1. SE TOMBSTONE EXTENSION		165.00	55.00	13.00	11.00	330.00	275.00	206.00	227.00					61.00	46.00	75.00	180.00	75.00	34.00	1509.00
D. SECTION 25 T.21S.,R.22E.		570.00	190.00	46.00	38.00	1140.00	950.00	713.00	784.00					209.00	158.00	263.00	630.00	263.00	116.00	5226.00
E. MAGNETIC ORIENTATION SURVEY		2550.00	0.00	204.00	0.00	5100.00	0.00	0.00	1913.00	0.00	0.00	0.00		510.00	384.00	638.00	1530.00	638.00	389.00	11102.00
COLUMN SUB-TOTALS		5796.00	1082.00	465.00	217.00	11592.00	5410.00	4058.00	6876.00	1500.00	1000.00	1500.00		2201.00	1482.00	2132.00	5116.00	2132.00	1249.00	
PROJECT TOTAL																				46248.00

FACTORIZING	C1	C2	C1X\$2	C2X\$5	C2X\$3.75	C5+C6X.375	C5+C6	C5+C6	C3+C4X\$25	C3+C4X\$60	C3+C4X25\$	C1+C2
MAN HOUR DATA	12.5	5					10	13.33	8	8	8	6.56

109.77 LINE MILES MAGNETIC DATA
61.48 LINE MILES HG
58.13 MAN DAYS OR 11.63 MAN WEEKS
27.13 MAN DAYS OR 5.43 MAN WEEKS

275.04 HRS. OR 34.38 MAN DAYS OR 6.88 MAN WEEKS
60 HRS. OR 7.5 MAN DAYS OR 1.5 MAN WEEKS
40 HRS. OR 5 MAN DAYS OR 1 MAN WEEK
110.05 MAN HOURS OR 13.76 MAN DAYS OR 2.75 MAN WEEKS
98.8 MAN HOURS OR 12.35 MAN DAYS OR 2.47 MAN WEEKS

1266 MAN HRS., AVE. COST/MAN HR. = \$36.53
158.25 MAN DAYS
31.65 MAN WEEKS
.61 MAN YEARS

782 FIELD HOURS
AVERAGE COST/FIELD MAN HR. = \$59.14

*NOTE: ALL TOTALS ROUNDED TO NEAREST HOUR OR DOLLAR

NOTE: ALL COLUMNS #5 THROUGH #18 ARE EXPRESSED IN DOLLARS



RESOURCE DEVELOPMENT
MINERAL RESOURCES
EXPLORATION AND INVESTIGATIONS

540 ARAPEEN DRIVE, SUITE 201
SALT LAKE CITY, UTAH 84108
TELEPHONE: 801-583-5151

January 4, 1983

REVIEWED

JAN 7 1983

By 

Mr. James A. Briscoe
James A. Briscoe & Associates, Inc.
5701 East Glenn Street, Suite 120
Tucson, AZ 85712

Re: Tombstone Development Company Lands, Cochise County, Arizona

Dear Mr. Briscoe:

We have carefully reviewed your well-prepared summary report on the referenced property. Unfortunately, since January 1982 when we first indicated a possible interest, our funding for new exploration projects has been substantially reduced, and we will not be able to make a meaningful commitment to explore or acquire your property at this time.

We certainly appreciate your submitting it for our consideration.

Yours truly,



T. T. Gin
Exploration Manager - USA

TTG/cwb



HOUSTON INTERNATIONAL MINERALS CORPORATION

A Tenneco Company

January 13, 1983

Mr. Tom H. Schloss
Tombstone Exploration, Inc.
17 East 76th Street
New York, New York 10021

Dear Tom:

I am sorry about the delay of three months in responding to you after meeting in September, but the pressures of a new job and considerable unanticipated travel have been a bit overwhelming. I want to assure you that HIMCO has a continuing interest in the Tombstone District and would like to participate in an expanded program of exploration on your claim group with an option to purchase your holdings.

One problem that our Legal Department has pointed out is that the underlying lease of February 7, 1979 with Tombstone Development Company (TDC) has a number of conditions in it that would be unacceptable to HIMCO should we purchase your interest in the property. We are therefore submitting a proposal to TDC to purchase their interest in these Tombstone claims. Our offer to you is contingent upon our being able to reach an agreement with them.

I also note that James Briscoe is a co-lessee of this lease as Austin Exploration & Mining Corporation (AEM), so I assume we are dealing with both of you on this property in whatever joint venture arrangement that you have. By copy of this letter, I am also notifying Mr. Briscoe of HIMCO's interest and proposal.

I should emphasize that this letter does not constitute an offer, expressed or implied, that is binding upon either party. Neither you nor HIMCO will be obligated until such time as we have agreed upon terms and an agreement has been formally executed by both parties.

I am proposing for your consideration, therefore, the following terms about which an agreement can be structured:

Option Term - HIMCO would be given a 5 year option term in which to conduct an exploration and evaluation program on the property.



Work Requirement - During this option term HIMCO will make the following annual expenditures on the property in order to keep the agreement in effect.

Year 1	-	\$ 200,000
2	-	300,000
3	-	500,000
4	-	700,000
5	-	1,000,000

Expenditures in excess of the requirement for any one year may be applied to the requirements for future years.

Purchase Price - On or before the expiration of the exploration right, HIMCO may elect to purchase all of TEI's and AEM's right, title and interest to the Tombstone property for a price of \$5,000,000. This payment will be made over a period of three years in equal installments beginning at the date that the option is exercised.

Mining Operation - HIMCO would recognize TEI's and AEM's current mining operations on the property and agree not to interrupt them without TEI's and AEM's prior consent. TEI and AEM would agree to limit their production to their present pit within an area to be agreed upon and a rate not to exceed the average rate for 1982.

Termination - HIMCO may terminate the agreement at any time by giving TEI and AEM written notice. Within 60 days following termination, HIMCO will make available to TEI and AEM, if they so request, copies of all the factual data and available core, etc that HIMCO developed on the property.

If these terms are acceptable to you, please let me know and we will prepare an agreement for your consideration. I anticipate being in the office for the next couple weeks and will be happy to discuss these terms with you at any time.

I look forward to hearing from you.

Yours truly,

HOUSTON INTERNATIONAL MINERALS CORP.

Joseph E. Worthington
Regional Manager

JEW/rf

cc: James A. Briscoe
5701 East Glenn Street, Suite 120
Tucson, Arizona 85712



HOUSTON INTERNATIONAL MINERALS CORPORATION

A Tenneco Company

January 13, 1983

Mr. William Hight
Tombstone Development Company
1824 North Broadwell
Grand Island, Nebraska 68601

Dear Mr. Hight:

Houston International Minerals Corporation (HIMCO) has had some discussions with Tom Schloss and James Briscoe about conducting an expanded program of exploration and development on your Tombstone District claims that are currently under lease to Tombstone Exploration, Inc. (TEI) and Austin Exploration & Mining Corp. (AEM). We have recently sent Mr. Schloss a proposal for an exploration right with an option to purchase his interest in the claims. Mr. Briscoe mentioned that your group, Tombstone Development Company, may also be receptive to a purchase of all your interest to the property, including the lease to TEI and AEM. and we made the offer to Mr. Schloss contingent upon our reaching some sort of agreement with you..

I would like to propose for your consideration, therefore, the following terms on which an exploration right and option to purchase agreement can be structured. I should emphasize that this letter does not constitute an offer, expressed or implied, that is binding upon either party. Neither you nor HIMCO will be obligated until such time as we have agreed upon terms and an agreement has been formally executed by both parties.

Option Term - HIMCO would be given a 5 year option term in which to conduct an exploration and evaluation program on the property.

Work Requirement - During this option term HIMCO will make the following annual expenditure on the property in order to keep the agreement in effect.

Year 1	-	\$ 200,000
2	-	300,000
3	-	500,000
4	-	700,000
5	-	1,000,000

Expenditures in excess of the requirements for any one year may be applied to the requirements for future years.

Purchase Price - On or before the expiration of the option term, HIMCO may elect to purchase all right, title, and interest to the Tombstone property for a price of \$1,000,000.



Termination - HIMCO may terminate the agreement at any time by giving TDC written notice. Within 60 days following termination, HIMCO will make available to TDC, if they so request, all of the factual data and available core, etc that HIMCO developed on the property.

If these terms are acceptable to you, please let me know and we will prepare an agreement for your consideration. I anticipate being in the office for the next couple weeks and will be happy to discuss these terms with you at any time.

I look forward to hearing from you.

Yours truly,

HOUSTON INTERNATIONAL MINERALS CORP.

Joseph E. Worthington
Joseph E. Worthington
Regional Manager

JEW/rf

cc: James A. Briscoe
5701 East Glenn Street, Suite 120
Tucson, Arizona 85712

NET PRESENT VALUE OF THE TENNECO OFFER
 FOR THE TOMBSTONE EXPLORATION, INC./AUSTIN MINING &
 EXPLORATION, INC. LEASE OF THE TOMBSTONE DEVELOPMENT
 COMPANY, INC.'S PATENTED LAND IN THE TOMBSTONE MINING
 DISTRICT, COCHISE COUNTY, ARIZONA

1ST YEAR 2ND YEAR 3RD YEAR 4TH YEAR 5TH YEAR

DISCOUNT RATE OF 10%
 0.10
 0.00 0.00 0.00 0.00 5000000.00
 3415067.28

CURRENT VALUE OF AUSTIN MINING 40% INTEREST

1,366,026.91

CURRENT VALUE OF T.E.I. 60% INTEREST

2,049,040.37

=====

1ST YEAR 2ND YEAR 3RD YEAR 4TH YEAR 5TH YEAR

DISCOUNT RATE OF 20%
 0.20
 0.00 0.00 0.00 0.00 5000000.00
 2411265.43

CURRENT VALUE OF AUSTIN MINING 40% INTEREST

964,506.17

CURRENT VALUE OF T.E.I. 60% INTEREST

1,446,759.26

=====

1ST YEAR 2ND YEAR 3RD YEAR 4TH YEAR 5TH YEAR

DISCOUNT RATE OF 30%
 0.30
 0.00 0.00 0.00 0.00 5000000.00
 1750638.98

CURRENT VALUE OF AUSTIN MINING 40% INTEREST

700,255.59

CURRENT VALUE OF T.E.I. 60% INTEREST

1,050,383.39

=====

	1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR	5TH YEAR
DISCOUNT RATE OF 40%					
0.40					
0.00	0.00	0.00	0.00	0.00	5000000.00
1,301,541.02					

CURRENT VALUE OF AUSTIN MINING 40% INTEREST
520,616.41

CURRENT VALUE OF T.E.I. 60% INTEREST
780,924.61

	1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR	5TH YEAR
DISCOUNT RATE OF 50%					
0.50					
0.00	0.00	0.00	0.00	0.00	5000000.00
987,654.32					

CURRENT VALUE OF AUSTIN MINING 40% INTEREST
395,061.73

CURRENT VALUE OF T.E.I. 60% INTEREST
592,592.59

	1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR	5TH YEAR
DISCOUNT RATE OF 60%					
0.60					
0.00	0.00	0.00	0.00	0.00	5000000.00
762,939.45					

CURRENT VALUE OF AUSTIN MINING 40% INTEREST
305,175.78

CURRENT VALUE OF T.E.I. 60% INTEREST
457,763.67

	1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR	5TH YEAR
DISCOUNT RATE OF 70%					
0.70					
0.00	0.00	0.00	0.00	0.00	5000000.00
598651.84					

CURRENT VALUE OF AUSTIN MINING 40% INTEREST
239460.73

CURRENT VALUE OF T.E.I. 60% INTEREST
359,91.10

	1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR	5TH YEAR
DISCOUNT RATE OF 80%					
0.80					
0.00	0.00	0.00	0.00	0.00	5000000.00
476299.34					

CURRENT VALUE OF AUSTIN MINING 40% INTEREST
190519.74

CURRENT VALUE OF T.E.I. 60% INTEREST
285,779.61

	1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR	5TH YEAR
DISCOUNT RATE OF 90%					
0.90					
0.00	0.00	0.00	0.00	0.00	5000000.00
383668.02					

CURRENT VALUE OF AUSTIN MINING 40% INTEREST
153,467.21

CURRENT VALUE OF T.E.I. 60% INTEREST
230,200.81

1ST YEAR 2ND YEAR 3RD YEAR 4TH YEAR 5TH YEAR

DISCOUNT RATE OF 100%

100.00

0.00

0.05

0.00

0.00

0.00 5000000.00

CURRENT VALUE OF AUSTIN MINING 40% INTEREST

0.02

CURRENT VALUE OF T.E.I. 60% INTEREST

0.03

=====

NET PRESENT VALUE OF THE TENNECO OFFER
 FOR THE PATENTED LAND HELD BY TOMBSTONE DEVELOPMENT
 COMPANY INC., IN THE TOMBSTONE MINING DISTRICT,
 COCHISE COUNTY, ARIZONA

1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR	5TH YEAR
DISCOUNT RATE OF 10%				
0.10				
0.00	0.00	0.00	0.00	1000000.00
683,013.46				

VALUE OF 10% COMMISSION TO J.A. BRISCOE & ASSOC., INC.
 68,301.35

1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR	5TH YEAR
DISCOUNT RATE OF 20%				
0.20				
0.00	0.00	0.00	0.00	1000000.00
482,253.09				

VALUE OF 10% COMMISSION TO J.A. BRISCOE & ASSOC., INC.
 48,225.31

1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR	5TH YEAR
DISCOUNT RATE OF 30%				
0.30				
0.00	0.00	0.00	0.00	1000000.00
350,127.80				

VALUE OF 10% COMMISSION TO J.A. BRISCOE & ASSOC., INC.
 35,012.78

1ST YEAR	2ND YEAR	3RD YEAR	4TH YEAR	5TH YEAR
DISCOUNT RATE OF 40%				
0.40				
0.00	0.00	0.00	0.00	1000000.00
260,308.20				

VALUE OF 10% COMMISSION TO J.A. BRISCOE & ASSOC., INC.
 26,030.82

1ST YEAR 2ND YEAR 3RD YEAR 4TH YEAR 5TH YEAR

DISCOUNT RATE OF 50%

0.50
0.00 0.00 0.00 0.00 1000000.00
197,530.86

VALUE OF 10% COMMISSION TO J.A. BRISCOE & ASSOC., INC.

19,753.09

=====
1ST YEAR 2ND YEAR 3RD YEAR 4TH YEAR 5TH YEAR

DISCOUNT RATE OF 60%

0.60
0.00 0.00 0.00 0.00 1000000.00
152,587.89

VALUE OF 10% COMMISSION TO J.A. BRISCOE & ASSOC., INC.

15,258.79

=====
1ST YEAR 2ND YEAR 3RD YEAR 4TH YEAR 5TH YEAR

DISCOUNT RATE OF 70%

0.70
0.00 0.00 0.00 0.00 1000000.00
119,730.37

VALUE OF 10% COMMISSION TO J.A. BRISCOE & ASSOC., INC.

11,973.04

=====
1ST YEAR 2ND YEAR 3RD YEAR 4TH YEAR 5TH YEAR

DISCOUNT RATE OF 80%

0.80
0.00 0.00 0.00 0.00 1000000.00
95,259.87

VALUE OF 10% COMMISSION TO J.A. BRISCOE & ASSOC., INC.

9,525.99
=====

1ST YEAR 2ND YEAR 3RD YEAR 4TH YEAR 5TH YEAR

DISCOUNT RATE OF 90%

0.90
0.00 0.00 0.00 0.00 1000000.00
76733.60

VALUE OF 10% COMMISSION TO J.A. BRISCOE & ASSOC., INC.

7,673.36

1ST YEAR 2ND YEAR 3RD YEAR 4TH YEAR 5TH YEAR

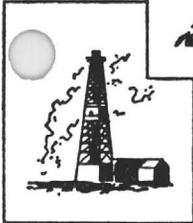
DISCOUNT RATE OF 100%

100.00
0.00 0.00 0.00 0.00 1000000.00
0.01

VALUE OF 10% COMMISSION TO J.A. BRISCOE & ASSOC., INC.

0.00

FILE *Tombstone*



RAYROCK RESOURCES LIMITED

SUITE 1011, 2200 YONGE STREET
TORONTO, ONTARIO M4S 2C6

TELEPHONE (416) 487-2821
January 13, 1983

Mr. J. A. Briscoe
Suite 120
5701 East Glenn Street
Tucson, Arizona 85712

Dear Jim:

Re: Tombstone Development Company Lands

I have reviewed your report on this project. Certain aspects are certainly attractive and the land position appears to be excellent. However, it really must be classed as grass roots exploration in which we are not interested at this time and it is far too big a project for Rayrock. Thank you for sending us your report.

In an earlier letter, you mentioned another project you were working on which you might present to us. I would be pleased to receive your report when you have the data compiled.

I hope to be in Tucson again some time this spring and will give you a call.

Best regards.

Yours very truly,

RAYROCK RESOURCES LIMITED

REVIEWED

JAN 19 1983

By *[Signature]*

T. Antoniuk, P.Eng.
Senior Geologist

TA:jd

MEMO

TO: James A. Briscoe & Tombstone Development Company
Stockholders
FROM: Thomas E. Waldrip, Jr.
DATE: January 15, 1983

RE: Re-application Fees, Prospecting Areas, State of Arizona
Grounds, Tombstone Mining District, Cochise County,
Arizona

Jim,

As per our discussions on Saturday, January 8, 1983, the following is a summary of fees necessary to continue re-applying on a continuous basis for 1983, on state grounds in the Tombstone project area, thought to still be of semi-critical importance to activities there.

For historical purposes, some ⁶⁰ state prospecting lease applications were initially applied for during the early stages of work and thereafter. Through attrition, certain applications were rejected or lost due to simultaneous filings, or our desire to take them to the prospecting permit stage. This pared the total of applications continually reapplied for to the 50 to 60 range throughout 1982, for a cost of (365 days per year, divided by 45 days average turn around at the state office, times 55 leases applied for on an average basis, times \$25.00 per application, equalling) \$11,153 per year for reapplication fees.

Continued work and completion of geological maps over the Tombstone District indicated that 35 sections or portions thereof held little or minor current interest to our exploration activities in the District, and that since there has been little interest expressed by other parties to acquire leases in these areas, it was decided not to reapply on these areas on a continuing basis. However, should they become important again, it is felt that little effort would be necessary to reacquire most, if not all, of the areas in question. This economizing move will save our land acquisition fees by some \$7,000 during 1983.

Twenty-three leases will, however, be kept by re-applying on a continuous basis (see following table summary), during 1983. Therefore, monies should be budgeted during the following months for the anticipated filing fees, including postage, which will total approximately \$5,000 for 1983.

Thomas E. Waldrip, Jr.

TEW/ms

MEMO

TO: James A. Briscoe & Tombstone Development Company
FROM: Thomas E. Waldrip, Jr.
DATE: January 17, 1983

RE: Yearly assessment work, State of Arizona Prospecting Permit areas, federal unpatented lode mining claims and other known land expenses for the 1983 calendar year, Tombstone Mining District, Cochise County, Arizona

Jim,

During the 1983 calendar year, four areas of land holding/acquisition fees will occur for the Tombstone Project if the current land position is held. These areas are namely:

1. Work requirements on State of Arizona Prospecting Permit Areas, totaling	\$24,090.00
2. Yearly assessment work on federal unpatented lode mining claims of	56,100.00
3. Location of an additional 50 to 75 unpatented lode mining claims in, around and near the Tombstone Development Company's patented mining claim holdings, at an estimated cost of \$7,500 to	11,250.00
4. Reapplication fees on State of Arizona grounds not held by Prospecting Permits, estimated schedule of	6,075.00

	\$97,515.00

Should all expected work be performed, a sum of some \$97,000 would be expended. However, this sum may be lowered by a substantial amount if certain assumptions are followed as outlined in this memo.

Work on the above items should begin as rapidly as possible, as yearly work commitments on certain state Prospecting Permits dictate an early completion schedule prior to the middle of March, 1983.

Previous memos have discussed, at length, a schedule of work commitments for State Prospecting Permits and unpatented mining claims, as well as the importance of the acquisition of remaining areas open to location by lode mining claims. These memos and discussions will stand on their own, and need little further discussions, save the fact that monies need to be budgeted and work accomplished, as suggested by the following work schedule.

Digressing for the moment, should all the necessary work be performed as outlined above, a rather substantial figure of \$97,000 would need to be expended to keep grounds currently held valid. Three factors could substantially reduce this figure. They are:

1. To jointly use monies expended on necessary work requirement on individual State of Arizona Prospecting Permit areas to satisfy yearly assessment work on adjacent federally held unpatented lode mining claims. This would save a substantial sum (in excess of \$24,000), and cover claims located north and west of the Charleston area. \$24,000

 2. An additional sum of \$12,000 for assessment work could be saved by using current mining activities of T.E.I. These mining activities are directly applicable to assessment work, and would cover the T.D.C. and T.S. claims groups, east and north of that area. 12,000

 3. Using the expenditure of claim location work for location of new claims among and surrounding T.D.C.'s patented mining claim for assessment work.

I feel it could be applicable if geochemical and geophysical work for the benefit of other T.D.C. unpatented lode claims could be done in conjunction with the claim location work. One can argue that posting would follow a grid system established by the designed district-wide assessment work, and that the cost of location work would then be limited to the cost of supplies and filing. This should save approximately \$11,250. 11,250
- \$47,250

Should my suggestions be followed, a total savings of \$47,000 would occur, leaving a total of \$50,000 to be expended on various application fees and yearly assessment and improvement work.

MEMO

January 17, 1983

Page 3 of 6

Assuming then that a budget is approved (\$50,000 less \$5,000 for application fees on state grounds), a \$45,000 exploration/assessment work schedule is in order. The following schedule, work commitment and budget is presented for approval, for initiation as rapidly as possible.

The program as envisioned, will be a three pronged geophysical, geochemical and geological survey of known areas of mineralization, branching out to areas of geologically theorized mineralization throughout the Tombstone Development Company's land holdings. A portion of the work will further test past data collected by other works to assure us that their work and observations are valid. Lastly, the work would be performed in conjunction with the finalization of land acquisition near T.D.C.'s patented mining claims.

The map (Attachment 1) accompanying this memo, present data as to the layout of this program. However, it is expected that a more in-depth explanation is in order as to how and why the program will be carried out. Essentially, the survey will consist of collection, entry, printout and evaluation of both ground magnetic and residual soil mercury vapor data, over all the outlined areas. For ease in discussion, the surveyed areas have been categorized into five separate categories with included subdivisions. The categories and subdivisions are:

A. State Leases (Prospecting Permit Areas)

1. Section 18, T.20S.,R.22E.
2. Section 19, T.20S.,R.22E.
3. Section 29, T.20S.,R.22E. (R.R.B.P.A. - Robbers Roost Breccia Pipe Area)
4. Section 30, T.20S.,R.22E. (R.R.B.P.A.)
5. Section 32, T.20S.,R.22E.
6. Charleston Mining District
7. State of Maine Mine

B. Tombstone Basin (Area of T.D.C. Patented claims)

C. Tombstone Extension (area of T.D.C. unpatented claim group)

D. Section 25 silver anomaly (Sect. 25, T.21S., R.22E.)

E. Magnetic orientation survey.

Each of the categories will be discussed as to importance and work proposed there, with cost and number of sample location points to be found in tables following.

MEMO
January 17, 1983
Page 4 of 6

A. STATE LEASES - PROSPECTING PERMIT AREAS

A combination mercury and magnetic survey will be performed over the greater portion of the State of Arizona Prospecting Permit areas. Currently, one mercury sample will be collected on a 300 foot interval over all lines presented, and analyzed. Additionally, ground magnetic readings will be taken by a proton precession magnetometer every 100 feet along the same lines and recorded. As will be noted, orientation surveys will be taken in closely adjacent areas of mineralization (base and precious) at the State of Maine Mine and Charleston. In conjunction with the survey of the above areas, geological and alteration mapping will be performed over the noticeable alteration zone immediately surrounding the Robbers Roost Breccia Pipe. Rock chip samples will be collected and analyzed from the same area. A more detailed geological alteration and rock chip geochemical sample map will be prepared.

Results of this work are hoped to enhance the believed mineral potential of northeasterly trending alteration zones in the area under state permits. Orientation mercury and magnetic surveys over known mineralized areas will be performed and used as evidence/non-evidence of potential mineralization located there. The more detailed survey is being performed over the Robbers Roost breccia pipe area to both outline the extent of alteration and to extend evidence for porphyry copper mineralization therein below.

B. TOMBSTONE BASIN

Magnetic and mercury survey of the Tombstone Basin area is being undertaken primarily because this has been the most extensive area of past mining, and, therefore, the most likely candidate area for orientation surveys to discern other areas of potential mineralization. Strong mercury signatures are hoped for here. Initially, 300 foot mercury sample intervals (100 foot magnetic readings) will be taken along noted lines.

Should results dictate, shorter sample intervals can then be taken to enhance known signatures. It is hoped that the fall-out of information collected will lead to extensions of past productive zones and outline new mineralization targets within the boundary of T.D.C.'s patented claims. This survey should also outline the importance of staking additional claims over fractions and open grounds among and surrounding T.D.C.'s patented mining claims.

MEMO

January 17, 1983

Page 5 of 6

C. TOMBSTONE EXTENSION

Reasons and assumptions as exhibited in the Tombstone Basin are valid here also.

It is strongly believed that the survey will help determine the existence/non-existence of a continuing zone of mineralization between the Tombstone Extension area and the northeastern portion of the Tombstone Basin.

D. SECTION 25 SILVER ANOMALY (Johnson Anomaly)

A magnetic/mercury survey using claim post corners will be used to interpret the validity of silver anomalies found by previous workers in the area. Results should determine the validity of lode claims in this area.

E. MAGNETIC ORIENTATION SURVEY

This survey was suggested by Dr. John Sumner as a preliminary to a more extensive district-wide grid survey. A clear picture should be presented as to magnetic responses by various rock types in the District. However, much more information is expected, especially related to faulting, rock types under cover, buried intrusives and potential signatures over mineralized rocks and structures. Initially, data will be collected on 100 foot station intervals and expanded or contracted as results are interpreted.

The survey, as outlined, is designed to take magnetic readings at 100 foot intervals with labeled lath placed at 1,000 foot intervals (every 10th station). On the other hand, mercury samples will be taken on 300 foot intervals, with a labeled stake placed at each sample location. This method will add somewhat to the expense of sample collection, but should a point need to be re-established or a fill-in survey be deemed necessary, to get better resolution of data, this method will greatly increase accuracy and efficiency for such a program.

Ultimately, all data collected will be fed into a computer data bank. In the early stages of preliminary data gathering, information will be printed out in cross-sectional format to determine if correct sample spacing have been chosen. These early cross-sections will greatly facilitate future outlay of work when compared with available geologic maps of the sampled areas. The computer data bank, however, will not come into its greatest benefit until the waining stages of the current project. At that time, printouts can be tailored to different scaled maps to best exemplify results obtained, without use of

MEMO

January 17, 1983

Page 6 of 6

extensive and expensive hand labor. Also, contour maps will be an added benefit for those areas with adequate sample density.

Results of work at the end of the current exploration activities will be several. Namely:

1. A vast amount of magnetic and geochemical data not currently available over the Tombstone District.
2. Maps of the alteration, geochemistry and geology of the Robbers Roost breccia pipe alteration zone.
3. An additional 50 to 75 claims located near T.D.C.'s patented claims.
4. Magnetic and mercury signatures over known areas of mineralization.
5. Numerous magnetic and mercury geochemical cross-section and contour maps over known areas.

In the author's opinion, the later two points may ultimately be the most rewarding aspect of the entire project. For these maps and signatures will add extensively to previous knowledge of the District, especially in an interpretational manner. In conjunction with available geologic maps of the District, resulting anomalous geochemical/geophysical signatures over known mineralized areas can be used to identify additional areas of potential mineralization, and hopefully lead to a greater understanding of the geology and structure in regards to mineral bearing zones.

Thomas E. Waldrip, Jr.

TEW/ms

PROPOSED ASSESSMENT WORK SCHEDULE FOR TOMBSTONE PROPERTY POSITION
1983 CALENDAR YEAR

COLUMN #	C-1	C-2	C-3	C-4	C-5	C-6	C-7	C-8	C-9	C-10	C-11	C-12	C-13	C-14	C-15	C-16	C-17	C-18	
PROJECT AREA	NEEDED WORK VALUE	TOTAL NO. MAGNETIC POINTS	TOTAL NO. MERCURY POINTS	FIELD MAN HRS. MAGNETIC	FIELD MAN HRS. MERCURY	EXPENSE LABOR MAGNETIC	EXPENSE LABOR MERCURY	ANALYSIS MERCURY SAMPLES	COMPUTER PROGRAM-MING	FIELD MAPPING GEOL. & ALT.	GEOCHEM SAMPLING COLLECTING	GEOCHEM ANALYSIS	ACCOUNTING & REPORTS	RENTALS	VEHICLES	FOOD & LODGING	SUPPLIES	AREA TOTAL	
A. STATE LEASES																			
1. SECTION 18 T.20S., R.22E.	(\$6,030.00)	123.00	41.00	10.00	8.00	246.00	205.00	154.00	169.00				45.00	34.00	56.00	135.00	56.00	25.00	1125.00
2. SECTION 19 T.20S., R.22E.	(\$6,427.20)	339.00	113.00	27.00	23.00	678.00	565.00	424.00	466.00				124.00	94.00	156.00	375.00	156.00	69.00	3107.00
3. SECTION 29 T.20S., R.22E.	(\$3,200.00)	219.00	73.00	18.00	15.00	438.00	365.00	274.00	301.00				80.00	61.00	103.00	248.00	103.00	45.00	2018.00
4. SECTION 30 T.20S., R.22E.	(\$2,404.10)	273.00	91.00	22.00	18.00	546.00	455.00	341.00	875.00	1500.00	1000.00	1500.00	600.00	275.00	125.00	300.00	125.00	255.00	7897.00
5. SECTION 32 T.20S., R.22E.	(\$6,018.90)	168.00	56.00	13.00	11.00	336.00	280.00	210.00	231.00				62.00	46.00	75.00	180.00	75.00	34.00	1529.00
6. CHARLESTON MINING DISTRICT		144.00	48.00	12.00	10.00	288.00	240.00	180.00	198.00				53.00	40.00	69.00	165.00	69.00	29.00	1331.00
7. STATE OF MAINE MINE		120.00	40.00	10.00	8.00	240.00	200.00	150.00	165.00				44.00	33.00	56.00	135.00	56.00	24.00	1103.00
B. TOMBSTONE BASIN		480.00	160.00	38.00	32.00	960.00	800.00	600.00	660.00				176.00	133.00	219.00	525.00	219.00	98.00	4390.00
C. TOMBSTONE EXTENSION		645.00	215.00	52.00	43.00	1290.00	1075.00	806.00	887.00				237.00	178.00	297.00	713.00	297.00	131.00	5911.00
1. SE TOMBSTONE EXTENSION		165.00	55.00	13.00	11.00	330.00	275.00	206.00	227.00				61.00	46.00	75.00	180.00	75.00	34.00	1509.00
D. SECTION 25 T.21S., R.22E.		570.00	190.00	46.00	38.00	1140.00	950.00	713.00	784.00				209.00	158.00	263.00	630.00	263.00	116.00	5226.00
E. MAGNETIC ORIENTATION SURVEY		2550.00	0.00	204.00	0.00	5100.00	0.00	0.00	1913.00	0.00	0.00	0.00	510.00	384.00	638.00	1530.00	638.00	389.00	11102.00
COLUMN SUB-TOTALS		5796.00	1082.00	465.00	217.00	11592.00	5410.00	4058.00	6876.00	1500.00	1000.00	1500.00	2201.00	1482.00	2132.00	5116.00	2132.00	1249.00	
PROJECT TOTAL																			46248.00

FACTORIZING	C1	C2	C1X\$2	C2X\$5	C2X\$3.75	C5+C6X.975	C5+C6	C5+C6	C3+C4X\$25	C3+C4X\$60	C3+C4X25\$	C1+C2
MAN HOUR DATA	12.5	5					10	13.33	8	8	8	6.56

109.77 LINE MILES MAGNETIC DATA
61.48 LINE MILES HG
58.13 MAN DAYS OR 11.63 MAN WEEKS
27.13 MAN DAYS OR 5.43 MAN WEEKS

1266 MAN HRS., AVE. COST/MAN HR. = \$36.53
158.25 MAN DAYS
31.65 MAN WEEKS
.61 MAN YEARS

275.04 HRS. OR 34.38 MAN DAYS OR 6.88 MAN WEEKS
60 HRS. OR 7.5 MAN DAY; OR 1.5 MAN WEEKS
40 HRS. OR 5 MAN DAYS OR 1 MAN WEEK
110.05 MAN HOURS OR 13.76 MAN DAYS OR 2.75 MAN WEEKS
98.8 MAN HOURS OR 12.35 MAN DAYS OR 2.47 MAN WEEKS

782 FIELD HOURS
AVERAGE COST/FIELD MAN HR. = \$59.14

*NOTE: ALL TOTALS ROUNDED TO NEAREST HOUR OR DOLLAR

NOTE: ALL COLUMNS #5 THROUGH #18 ARE EXPRESSED IN DOLLARS

FACTORING

THE FOLLOWING IS A DISCUSSION OF HOW FACTORS WERE ARRIVED AT FOR THE THE TABLE OF "PROPOSED ASSESSMENT WORK SCHEDULE FOR TOMBSTONE PROPERTY POSITION - 1983 CALENDAR YEAR"

COLUMN #3 - FIELD MAN HOURS MAGNETIC:

FACTOR: $\frac{C1}{12.5}$

C1 = TOTAL NUMBER OF MAGNETIC POINTS IN PROJECT AREA

12.5 = 12.5 POINTS RECORDED DURING 1 HOUR PERIOD. (THIS ASSUMES 100 POINTS BEING RECORDED PER 8 HOUR FIELD DAY).

OR

$$\frac{100 \text{ POINTS/MAN DAY}}{8 \text{ HOURS/MAN DAY}} = 12.5 \text{ POINTS/HOUR}$$

COLUMN #4 - FIELD MAN HOURS MERCURY:

FACTOR: $\frac{C2}{5}$

C2 = TOTAL NUMBER OF MERCURY SAMPLE POINTS IN PROJECT AREA

5 = 5 POINTS RECORDED/SAMPLED DURING 1 HOUR PERIOD. (THIS ASSUMES 40 POINTS BEING SAMPLED PER 8 HOUR FIELD DAY).

OR

$$\frac{40 \text{ SAMPLES/MAN DAY}}{8 \text{ HOURS/MAN DAY}} = 5 \text{ SAMPLES/HOUR}$$

FACTORING
PAGE 2 OF 6

COLUMN #5 - EXPENSE LABOR MAGNETIC:

FACTOR: C1 x \$2.00

C1 = TOTAL NUMBER OF MAGNETIC POINTS

\$2.00 = \$2.00 PER RECORDED POINT LABOR COST. (THIS ASSUMES
100 MAGNETIC POINTS PER 8 HOUR MAN DAY BEING
RECORDED AT A FIELD LABOR COST OF \$25.00 PER HOUR)

OR

$$\frac{100 \text{ POINTS/MAN DAY}}{8 \text{ HOURS/MAN DAY}} = 12.5 \text{ POINTS/HOUR}$$

THUS

$$\frac{\$25.00/\text{HOUR}}{12.5 \text{ POINTS COLLECTED/HOUR}} = \$2.00 \text{ PER POINT COLLECTED}$$

COLUMN #6 - EXPENSE LABOR MERCURY

FACTOR: C2 x \$5.00

C1 = TOTAL NUMBER OF MERCURY SAMPLES

\$5.00 = \$5.00 PER SAMPLED MERCURY POINT. (THIS ASSUMES 40
MERCURY SAMPLE POINTS PER 8 HOUR DAY AT A COST OF
\$25.00 PER MAN HOUR).

OR

$$\frac{40 \text{ SAMPLE POINTS/MAN DAY}}{8 \text{ HOURS/MAN DAY}} = 5 \text{ SAMPLE POINTS/HOUR}$$

THUS

$$\frac{\$25.00/\text{HOUR}}{5 \text{ SAMPLE POINTS/HOUR}} = \$5.00/\text{SAMPLE POINT}$$

FACTORING
PAGE 3 OF 6

COLUMN #7 - ANALYSIS MERCURY SAMPLES:
=====

FACTOR: C2 x \$3.75

C2 = TOTAL NUMBER OF MERCURY SAMPLE LOCATIONS

\$3.75 = SAMPLE ANALYSIS COST PER SAMPLE COLLECTED

COLUMN #8 - COMPUTER PROGRAMMING:
=====

FACTOR: C5 + C6 x .375

C5 = TOTAL EXPENSE OF COLLECTING MAGNETIC DATA

C6 = TOTAL EXPENSE OF COLLECTING MERCURY DATA

.375 = FACTOR ASSUMING THE FOLLOWING CONDITIONS:

3 HOURS OF ENTRY, PROGRAMMING AND PRINTOUT AT \$25.00
PER HOUR PER AVERAGE 8 HOUR FIELD DAY OF SAMPLE
COLLECTION AT \$25.00 PER HOUR

OR

$$\frac{3 \text{ HOURS PROGRAMMING} \times \$25.00/\text{HOUR}}{8 \text{ HOURS FIELD TIME} \times \$25.00/\text{HOUR}} = \frac{3}{8} \text{ OR } \frac{100}{8} \times 3 = .375$$

COLUMN #'s 9, 10 & 11 HAVE NO FACTOR
=====

FACTORING
PAGE 4 OF 6

COLUMN #12 - DRAFTING
=====

FACTOR: $\frac{C5 + C6}{10}$

C5 = TOTAL EXPENSE OF COLLECTING MAGNETIC DATA

C6 = TOTAL EXPENSE OF COLLECTING MERCURY DATA

10 = FACTOR ASSUMING THE FOLLOWING CONDITIONS:

1 HOUR OF DRAFTING AT \$20/HR PER AVERAGE 8 HOUR FIELD
DAY OF SAMPLE COLLECTION AT \$25.00/HOUR

OR

$$\frac{1 \text{ HOUR DRAFTING} \times \$20/\text{HOUR}}{8 \text{ HOURS FIELD TIME} \times \$25/\text{HOUR}} = \frac{20}{200} = \frac{1}{10}$$

COLUMN #13 - ACCOUNTING/REPORTS:
=====

FACTOR: $\frac{C5 + C6}{13.33}$

C5 = TOTAL EXPENSE OF COLLECTING MAGNETIC DATA

C6 = TOTAL EXPENSE OF COLLECTING MERCURY DATA

13.33 = FACTOR ASSUMING THE FOLLOWING CONDITIONS:

1 HOUR OF ACCOUNTING AT \$15/HOUR PER AVERAGE 8 HOUR
FIELD DAY OF SAMPLE COLLECTION AT \$25/HOUR

OR

$$\frac{1 \text{ HOUR ACCOUNTING} \times \$15/\text{HOUR}}{8 \text{ HOURS FIELD TIME} \times \$25/\text{HOUR}} = \frac{15}{200} = .075 \text{ OR } \frac{1}{13.33}$$

FACTORING
PAGE 5 OF 6

COLUMN #14 - RENTALS:

$$\text{FACTOR: } \frac{C3 \times C4 \times \$25}{8}$$

C3 = TOTAL FIELD MAN HOURS FOR MAGNETIC DATA COLLECTION

C4 = TOTAL FIELD MAN HOURS FOR MERCURY DATA COLLECTION

\$25 = RENTAL COST OF \$20/DAY RENTAL OF MAGNETOMETER AND \$5/DAY RENTAL OF TOPOFIL, FOR A TOTAL OF \$25 RENTAL FEES PER 8 HOUR FIELD DAY

8 = 8 HOURS PER FIELD MAN DAY

COLUMN #15 - VEHICLES:

$$\text{FACTOR: } \frac{C3 \times C4 \times \$60}{8}$$

C3 = TOTAL FIELD MAN HOURS FOR MAGNETIC DATA COLLECTION

C4 = TOTAL FIELD MAN HOURS FOR MERCURY DATA COLLECTION

\$60 = RENTAL COST OF \$10/DAY/VEHICLE + \$.50/MILE, ASSUMING 100 MILES PER DAY TRAVEL FOR A TOTAL OF \$60

8 = 8 HOURS PER FIELD MAN DAY

COLUMN #16 - FOOD AND LODGING:

$$\text{FACTOR: } \frac{C3 + C4 \times \$25}{8}$$

C3 = TOTAL FIELD MAN HOURS FOR MAGNETIC DATA COLLECTION

C4 = TOTAL FIELD MAN HOURS FOR MERCURY DATA COLLECTION

\$25 = \$25/MAN DAY FOOD AND LODGING COST

8 = 8 HOURS PER FIELD MAN DAY

FACTORING
PAGE 6 OF 6

COLUMN #17 - SUPPLIES:

$$\text{FACTOR: } \frac{C1 + C2}{6.56}$$

C1 = TOTAL MAGNETIC STATION POINTS

C2 = TOTAL MERCURY COLLECTION POINTS

6.56 = FACTOR - APPROXIMATE COST FOR SUPPLIES INCLUDING,
BUT NOT LIMITED TO, FLAGGING, SAMPLE CONTAINERS,
TOPOFIL THREAD AND LATH/SAMPLE STAKES FOR AN
APPROXIMATE COST OF \$.15 PER STATION OR 6.56
STATIONS PER \$1.00 SUPPLY EXPENSE

ASSESSMENT WORK SCHEDULE FOR TOMBSTONE PROPERTY POSITION

ASSUMPTIONS:

Field Work:

Geologist: \$25.00 / man hour

Collection of mercury samples
40 samples / 8 hour man day

Collection of magnetic data
100 points / 8 hour man day

Field mapping, alteration mapping, geochemical sampling
\$25.00 / man hour

Office Work:

Geologist: \$25.00 / man hour

Computer Programmer: \$25.00 / man hour

Draftsman: \$20.00 / man hour

Secretarial/Accounting: \$15.00 / man hour

Technical Work: (At Cost)

Mercury sample analysis: \$ 3.75 / sample

Geochemical analysis (included Ag, Au, Cu, Pb, Mo & Zn)
\$1500.00

Map reproduction: \$ 200.00

Rentals:

Magnetometer: \$20.00 / day

Topofil: \$ 5.00 / day + string

Food & Lodging:

Per diem: \$25.00 / man / day

Vehicle Rental:

Pickup truck: \$10.00 / day + \$.50 / mile

Expendables - Supplies: (At Cost)

Topofil string: \$ 6.00 / 3000 yards
Flagging: 2.00 / roll
Lath: 25.00 / bundle (50 stakes)
Survey stakes: 5.00 / bundle (25 stakes)
Claim posts: 1.00 / post
Claim tags (metal): 1.00 / tag
Staples, claim location bottles, sample bags, etc.

Office supplies:

Xeroxing: \$0.10 / copy (8 1/2" x 11") letter size
 0.20 / copy (8 1/2" x 14") legal size
 0.40 / copy (11" x 17") ledger size
Telephone: at cost
Computer disks: at cost
 ribbons: at cost
 paper: at cost
Postage: at cost

HECLA MINING COMPANY
DENVER EXPLORATION OFFICE

JEFFCO AIRPORT (303) 465-2311
9769 W. 119th Drive, Suite 24
Broomfield, Colorado 80020

REVIEWED

JAN 24 1983

By JH

January 17, 1983

James A. Briscoe
5701 East Glenn Street, Suite 120
Tucson, Arizona 85712

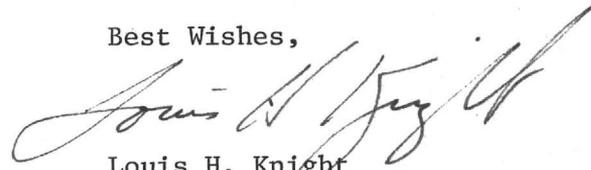
Dear Jim:

Enclosed is the map that you loaned to me relative to the Tombstone Development Company properties. Thank you for letting me borrow it.

I spent much of the day Wednesday examining the Tombstone district and especially the area just east of the pit. At this time I feel that the property does not warrant further interest by Hecla.

Thank you for taking the time to review the area with me.

Best Wishes,



Louis H. Knight
Exploration Manager

LHK/kd

Enclosure

TDC

James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

February 1, 1983

Jim Sell
Asarco, Inc.
P. O. Box 5747
Tucson, Arizona 85703

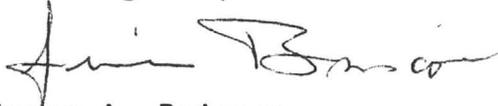
RE: Transmittal of the Tombstone area Summary Report

Dear Jim:

Enclosed is a copy of my report on Tombstone, which you expressed an interest in.

At some time, I would like to take a look at the report on the Asarco drilling, circa 1973, in the Charleston Lead Mine area, if that would be possible.

Best regards,



James A. Briscoe

JAB/ms

Enclosure

TOL

James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

February 1, 1983

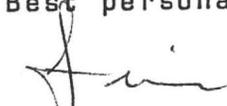
Byron S. Hardie
Newmont Exploration, Ltd.
200 W. Desert Sky Rd.
RR#6
Tucson, Arizona 85704

RE: Transmittal of the Tombstone area Summary Report

Dear Byron:

Thought you might be interested in this additional data, which I prepared since our meeting early this fall.

Best personal regards,



James A. Briscoe

JAB/ms

Enclosure

TDC

James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

February 1, 1983

Roger Newell
Newmont Exploration, Ltd.
200 W. Desert Sky Rd.
RR#6
Tucson, Arizona 85704

RE: Transmittal of Tombstone Mining District Summary Report

Dear Roger:

Thought you might have an interest in receiving a copy of this, particularly since so much of the work is yours. I would like to get together on another field trip with you when it is mutually convenient to go over some new ideas that I have regarding the district.

Best personal regards,



James A. Briscoe

JAB/ms

Enclosure

Tombstone Development Company

P. O. BOX 1445

TELEPHONE 308/382-7480

GRAND ISLAND, NEBRASKA 68801

REVIEWED

February 1, 1983

FEB 5 1983

By

JRB

Mr. Joseph E. Worthington
Houston International Minerals Corporation
P. O. Box 10200
Denver, Colorado 80210

Dear Mr. Worthington:

We are sorry for the delay in answering your letter of January 13th, but it was forwarded to Mr. Hight in Scottsdale and due to a death in the family he was in Missouri--then the letter back to me in Grand Island.

At the moment we are interested in some disposition of both our patented and unpatented claims with preferably an outright cash sale or stock exchange. Consequently, we would not be receptive to a five year exploration program and a fixed end price. Further, with the increasing prices of silver and long term outlook, we have a considerably higher value for the property than that intimated in your letter.

This certainly does not preclude your proposal with Tombstone Exploration, Inc., for exploration rights on the patented ground they presently have leased from us. It might be possible that both of us could be interested in some exploration or evaluation program on a portion of the unpatented claims over a shorter time period.

We sure appreciate your interest in the property and perhaps further discussions can be had in the future.

Very truly yours,

Frank E. Gallup
TOMBSTONE DEVELOPMENT COMPANY
Frank E. Gallup

Copy Briscoe

James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

February 3, 1983

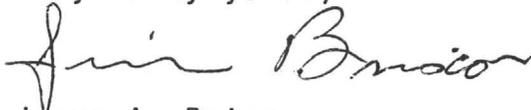
Bill Niemeyer, Geologist
Asamera Minerals (U.S.), Inc.
1000 Bible Way, Suite 4
Reno, Nevada 89502

RE: Transmittal of Summary Report, Mines Exploration, Inc.,
Randsburg Mining District, September, 1974, by Charles
Melbye, and Kelly Mine Report by Ralph J. Anctil, June 28,
1974

Dear Bill:

As per our telephone conversation of this afternoon, please find enclosed the Summary Reports as identified above. If you find this prospect of interest, I would suggest that you immediately come to Tucson to review voluminous data in my possession, or, alternatively, formulate an offer reflecting your interest. As I mentioned, there at least three other companies currently doing the same.

Very truly yours,



James A. Briscoe

JAB/ms

Enclosure

METALLGESELLSCHAFT CANADA LIMITED

SUITE 3100, 2 BLOOR ST. E., TORONTO, ONTARIO M4W 1A8 TELEPHONE: (416) 961-8788

TELEX: 06-217740, CABLES: MONTAN

REVIEWED

FEB 14 1983

By 

Mr. James A. Briscoe
James A. Briscoe & Associates, Inc.
5701 East Glenn Street
Suite 120
Tucson, Arizona 85712/USA

February 8, 1983

Re: Tombstone Mining District

Dear Mr. Briscoe:

We have now reviewed your submission with interest. Your projected ore reserves are interesting but we find the property in an early stage of exploration. As our present interest is properties in an advanced stage of exploration, we have to decline your offer. Nevertheless, we would be interested either at a later stage when ore reserves are proved or in marketing your products. We thank you for your submission and wish you success in your venture.

Yours very truly,
METALLGESELLSCHAFT CANADA LTD.
per:



J. Patel,
Senior Economic Geologist.

Pa/ig.-

TOMBSTONE DEVELOPMENT COMPANY
POSITIVE RESPONSES TO OFFERING
FEBRUARY 12, 1983

COMPANY NAME	REQUESTED SUMMARY REPORT	RESPONSE TO SUMMARY REPORT	FIELD TRIP TAKEN OR SCHEDULED	NONE-DO NOT LIKE THE GEOLOGY OF THE PROJECT	NONE-DO NOT LIKE THE GEOLOGY BUT HAVE NO MONEY	HIGH LEVEL OF INTEREST	MEDIUM LEVEL OF INTEREST	LOW LEVEL OF INTEREST	UNKNOWN	NOT YET EVALUATED	COMMENTS
AMAX EXPLORATION	X								X	X	POOR FINANCIAL CONDITION-INTEREST UNLIKELY
AMERICAN COPPER & NICKEL	X	X							X	X	WILL VISIT TOMBSTONE IN EARLY MARCH
AMOCO METALS COMPANY	X	X	X			X	?		X	X	1ST HALF OF MARCH WILL GET BACK W/RESULTS
AMSELCO EXPLORATION	X		X	X							NOT BIG ENOUGH-ED LOCKHART
ASARCO											
AZL RESOURCES, INC.											
BILLITON INTERNATIONAL	X	X		?	?						NO REASON GIVEN-NEW MAN, DAVE BROWN, INTEREST
BOLIDEN CANADA	X								X	X	
CF&I STEEL					?						TRYING TO WEATHER STEEL DEPRESSION-NO MONEY
COMINCO AMERICAN	X	X	X							X	FIELD TRIP END OF FEBRUARY
CONOCO, INC.	X				X						OUT OF MINERALS BUSINESS
DOWA MINING CO. LTD.	X								X	X	NEED PROPOSITION FOR LEASE, PURCH., JV
DUVAL CORPORATION	X	X		?	?						NOT APPROPRIATE TO PLANS
EAGLE PICHER	X				X				X	X	TOO MANY OTHER PROJECTS-R.C. BRITAIN, EXPL. MGR
ENERGY RESERVES GROUP	X								X	X	?OUT OF MINERALS BUSINESS
ENTERPRISE EXPLORATION LTD.	X	X			X						EFFECTED BY RECESSION
EXXON	X								X	X	WILL GET A TEAM ON IT RIGHT AWAY
FMC CORPORATION	X	X	X	X			X		X	X	INTEREST IN RAW EXPLORATION, F.T. mid March
GETTY OIL COMPANY	X			?					X	X	EMPHASIS ON GOLD-TOMBSTONE UNCLEAR
GILA MINES CORP.											
GOLD BASIN GROUP, INC.											
GOLD FIELDS MINING COMPANY	X	X	X			X	X				EXPRESSED STRONG INTEREST-WILL BE DOWN 3 WEEK
GRANGES EXPLORATION											
HECLA MINING COMPANY	X	X	X	?	?						LOU KNIGHT TOOK OWN FIELD TRIP
HOMESTAKE MINING	X								X	X	
HOUSTON INTERNATIONAL MIN.	X	X	X			X					MADE UNATTRACTIVE OFFER/WILL CALL IN 2 WEEKS
HUNT ENERGY, INC.	X	X			X						HAVE TAKEN BEATING IN NATURAL GAS
INSPIRATION DEVELOPMENT	X	X			X						"EXCELLENT, WELL-DONE REPORT"/NO MONEY
KERR MCGEE	X			?					X	X	STILL EVALUATING REPORT
MAPCO	X								X	X	BILL COLE, V.P. EXPRESSED INTEREST IN REPORT
LOWELL, DAVE	X								X	X	
LACANA MINING INC.	X			X							TOO BIG
METALLGESELLSCHAFT AG	X	X		?	?						
NEWMONT MINING CORP.	X	X	X			X					WILL MEET AGAIN 2/14

1413
Moore Business Forms, Inc. sv

TOMBSTONE DEVELOPMENT COMPANY
POSITIVE RESPONSES TO OFFERING
FEBRUARY 12, 1983

COMPANY NAME	REQUESTED SUMMARY REPORT	RESPONSE TO SUMMARY REPORT	FIELD TRIP TAKEN OR SCHEDULED	NONE-DO NOT LIKE THE GEOLOGY OF THE PROJECT	NONE-DO NOT LIKE THE GEOLOGY BUT HAVE NO MONEY	HIGH LEVEL OF INTEREST	MEDIUM LEVEL OF INTEREST	LOW LEVEL OF INTEREST	UNKNOWN	NOT YET EVALUATED	COMMENTS
NORANDA EXPLORATION, INC.	X								X	X	
NORTH AIR MINES, LTD.	X	X	X						X		F.T.SPRING 1983
NORTHGATE EXPLORATION LTD.	X				X						GREAT POTENTIAL FOR DISSEMINATED AU,AG
NUFUELS				?	?						"DOESN'T FIT INTO EXPLORATION PLANS
PAN OCEAN OIL(MARATHON OIL)											
PHELPS DODGE	X					X					CONDUCTING ORE RESERVE STUDIES ON TEI LEASE
PREUSSAIG, INC.	X	X	X					X			NEED MORE SPECIFIC TARGETS
RANCHERS EXPLORATION											
RAYROCK RESOURCES LTD.	X	X	X		X						TOO BIG
RIO ALGOM									X	X	
ROCKY MOUNTAIN ENERGY									X	X	
SANTA FE INTERNATIONAL											
SEREMIN, INC.	X				X						FRENCH CO.-HAS CLOSED DOWN U.S. OFFICE
J. R. SIMPLOT COMPANY	X	X					X				COMPLEX ANSWER, NEED TERMS
ST. JOE AMERICAN CORP.	X								X	X	
SUNSHINE MINING COMPANY	X	X	X						X	X	GENE SCHMIDT-WILL EVALUATE END OF FEBRUARY
TECK RESOURCES, INC.	X	X	X		?			?	X		WILL SEE 1ST OF MARCH
TOM SCHLOSS	X								X		
UNC TETON EXPLORATION	X	X			X						NO CASH MORRIBUND
UNION MOLYCORP, INC.	X			?							NO REASON GIVEN
UNITED STATES STEEL	X	X			X						WELL PREPARED REPORT-NO MONEY
URANERZ, U.S.A., INC	X								X	X	
URANGESELLSCHAFT U.S.A.	X								X	X	
URANIA EXPLORATION	X	X			X				X	X	OUT OF BUSINESS
U.S. MINERALS EXPLORATION											
VETA GRANDE COMPANIES, INC.	X	X			X						LIKE THE IDEA-NO MONEY
WESTMIN RESOURCES LTD.	X	X					X		X	X	STILL EVAL.-WILL GET BACK 1ST OF MARCH

	NUMBER	% OF TOTAL	
NO MONEY	16	26.23	
NO INTEREST	7	11.48	37.70
BEST PROSPECTS	4	6.56	
GOOD PROSPECTS	1	1.64	
LUKE WARM PROSPECTS	1	1.64	9.84
UNDECIDED	32	52.46	52.46
TOTAL	61	100.	

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TDG
loop

James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

February 17, 1983

Bill Carlson, Manager
Hunt Energy
Suite 208
12345 West Alameda Parkway
Lakewood, Colorado 80228

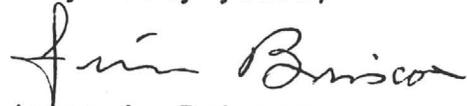
RE: Transmittal of the Tombstone Development Company Summary
Report of November, 1982

Dear Bill:

Transmitted with this letter is my Summary Report on the Tombstone Mining District. The Tombstone Development Company, which has controlled the productive ground at Tombstone for over 50 years, would be interested in a purchase with retained royalty or other deals such as we discussed in our telephone conversation this afternoon.

Please let me know if Hunt Energy should have an interest in this proposal at your earliest convenience.

Very truly yours,



James A. Briscoe

JAB/ms

Enclosure

MEMO

TO: James A. Briscoe
FROM: Thomas E. Waldrip, Jr.
Date: February 17, 1983

RE: Tombstone Development Company - Lands identified as suitable for disposal by sale under Section 203 Federal Land Policy and Management Act of 1976.

Jim,

Review of the attached notice of realty sale by the Bureau of Land Management seems to indicate that a decision has been made to begin selling excess lands administered by the B.L.M. Such a presidence is important in regard to unappropriated public domain grounds within and near T.D.C.'s patented mining claim holdings in the Tombstone Mining District. Of importance are the following ideas in relation to the mineral domain.

1. All minerals will be retained by the government.
2. Mineral exploration will remain open to the public development, under applicable laws and regulations, as prescribed by the Secretary of the Interior.
3. Should regulations, as prescribed by the Secretary of the Interior, not be formulated to date, until such time as these regulaions are formulated, the lands in question shall remain in a state of defacto withdrawal. Conjectorally, this may be of little importance, as the current administration seems to be intent on clearing the books of such withdrawals, but this may not be the case in the future.
4. Potentially, lands in question for sale could be withdrawn for up to 2 years.
5. The B.L.M. seems to be respecting all rights of surface right-of-ways and leases to the mineral domain (oil & gas), and rights to develop these resources.

With these points in mind, I would suggest that it would be reasonable for Tombstone Development Company to acquire any and all unappropriated grounds within their patented claim group and possibly to a mile distance from the outer perimeter by location of unpatented mining claims. The reasons for this are several. Namely:

MEMO TO JAB FROM TEW
February 17, 1983
Page 2 of 2

1. Claim of the mineral rights would be established should any/all of the area be deemed in excess by the B.L.M. and then put up for surface sale. This should preclude potential problems of mineral location in the future should the land be sold or withdrawn from mineral entry in light of future sales.
2. Ideally, Tombstone Development Company would be able to purchase the surface domain and also have some minor control over the mineral right without an intervening mineral claimant.
3. Pre-existing mineral claims at the time of future surface sale announcements should preclude any potential regulations governing mining etc. that may be formulated by the Secretary of the Interior.
4. Consolidation of the remaining open mineral ground would be materially to the advantage of Tombstone Development Company. Whether the company is sold or retained, the investment involved in claim location would theoretically be much less in regards to potential liabilities involved in litigation, land acquisition for mining expansion, or for that matter, any of a number of tangible and/or intangible items.


Thomas E. Waldrip, Jr.

TEW/ms

Attachment

UNITED STATES DEPARTMENT OF THE INTERIOR
 Bureau of Land Management
 Arizona Realty Action
 Competitive Sale of Public Land in Graham County
 A-5321 A-7730

The following described land has been identified as suitable for disposal by sale under Section 203 of the Federal Land Policy and Management Act of 1976 (90 Stat. 2750; 43 U.S.C. 1713), at no less than the appraised fair market value.

GILA AND SALT RIVER MERIDIAN, ARIZONA

(A-5321)		
T. 8 S., R. 26 E.,		
Section 18: E $\frac{1}{2}$ NW $\frac{1}{4}$ (parcels within)		
Parcel	Legal Description	Acres
A	NW $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$	10
B	SW $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$	10
C	NW $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$	10
D	SW $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$	10
E	NE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$	10
F	SE $\frac{1}{4}$ NE $\frac{1}{4}$ NW $\frac{1}{4}$	10
G	NE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$	10
H	SE $\frac{1}{4}$ SE $\frac{1}{4}$ NW $\frac{1}{4}$	10
S Value		
		\$12,700
		\$12,500
		\$12,600
		\$12,800
		\$12,500
		\$12,400
		\$12,500
		\$13,000

(A-7730)		
Section 22: S $\frac{1}{2}$ SW $\frac{1}{4}$ (parcels within)		
Parcel	Legal Description	Acres
J	NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$	20
K	NW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$	10
L	NE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$	10
M	S $\frac{1}{2}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$	20
O	SW $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$	10
P	SE $\frac{1}{4}$ SE $\frac{1}{4}$ SW $\frac{1}{4}$	10
		\$17,500
		\$12,000
		\$12,200
		\$17,300
		\$12,400
		\$12,500

The land will be sold at public auction by competitive bidding. The sale will be held at the Safford District Office, 425 East Fourth Street, Safford, Arizona, on Thursday, March 31, 1983, at 1:00 p.m.

Bidding Information and Instructions: The Federal Land Policy and Management Act requires that bidders must be citizens of the United States, 18 years of age or over, or, in the case of a corporation, be subject to the laws of any state of the United States. Bids may be made by a principal (the one desiring to purchase the land) or his duly qualified agent. Agents will be required to submit proof of power of attorney.

Method of Bidding: Each bid must be for all the land in a specified parcel. Bids may be made either by submitting sealed bids until three days before the sale date or by bidding orally at the sale. Bids sent by mail will only be considered if received by the Bureau of Land Management, Safford District Office, 425 East Fourth Street, Safford, Arizona 85546, prior to 1:00 p.m., Monday, March 28, 1983. Sealed bids, accompanied by a certified check, postal money order, bank draft, or cashier's check made payable to the Bureau of Land Management for not less than one-fifth of the amount of the bid must be in a separate envelope, within the transmittal envelope. The sealed envelopes must be marked in the lower left-hand corner, "Sealed Bid, Parcel ---, Public Land Sale A-5321 or A-7730. Sale to be held March 31, 1983." All sealed bids will be opened at 1:00 p.m. on the day of sale.

Oral bids will be received immediately after all sealed bids have been opened and the highest sealed bid is announced. The highest sealed bid will be the base for oral bids. If the highest bid is an oral bid, the successful bidder will be required to pay immediately one-fifth of the high bid price by cash, personal check, money order, bank draft, or any combination of these. The successful high bidder whether by sealed or oral bid, will be required to submit the remainder of the land payment by cash, certified check, bank draft, money order, or combination of the four at the time of the sale or within thirty (30) days after receipt of the decision accepting the highest bid. If final payment is not received within the specified 30 days, the high bid is rejected, the deposit is forfeited, and the parcel will be offered to the second highest bidder. All unsuccessful sealed bids will be returned within 30 days of the sale.

A patent for the land when issued will contain the following reservations:

1. A right-of-way thereon for ditches and canals constructed by the authority of the United States Act of August 30, 1890 (26 Stat. 391; 43 U.S.C. 945).

2. All minerals shall be reserved to the United States. Such minerals shall be subject to the right to explore, prospect for, mine, and remove under applicable law and such regulations as prescribed by the Secretary of the Interior.

3. A non-exclusive right-of-way thirty-three (33) feet in width for roadway and public utilities purposes to be located along the parcel boundary lines.

4. A restriction which constitutes a covenant running with the land, that the land in parcels (J) and (M) located within the base (100-year) floodplain as identified in the Federal Emergency Management Agency (FEMA) flood hazard boundary map for the area (040032 0017 A) may be used only for farming, but not for farm dwellings or buildings, or for non-intensive open space purposes.

This restriction is included pursuant to the authority contained in section 3(d) of Executive Order 11988 of May 24, 1977, and section 203 of the Federal Land Policy and Management Act of 1976 (90 Stat. 2750; 43 U.S.C. 1713).

and will be subject to:

1. A right-of-way described under Serial No. A-5312 for a flood control channel under the Act of February 15, 1901 (31 Stat. 790; 43 U.S.C. 959) on parcels (E), (F), (G), and (H).

Upon the expiration of the right-of-way, the holder of the right-of-way must negotiate new terms with the landowner.

2. Those rights granted by oil and gas lease A-16361, made under Section 29 of the Act of February 25, 1920, (41 Stat. 437; 30 U.S.C. 186). This patent is issued subject to the right of the prior permittee or lessee to use so much of the surface of said land as is required for oil and gas exploration and development operations without compensation resulting from proper oil and gas operations, for the duration of the lease A-16361, and any authorized extension of the lease. Upon termination or relinquishment of said oil and gas lease, this reservation shall terminate.

Publication of this Notice will segregate the subject lands from all appropriations under public land laws, including the mining laws, but not the mineral leasing laws. This segregation will terminate upon the issuance of a patent or two years from the date of this Notice, or upon publication of a notice of termination.

Detailed information concerning the sale can be obtained from the Safford District Office. For a period of 45 days from the date of this Notice, interested parties may submit comments to the District Manager, Safford District, Bureau of Land Management, 425 East Fourth Street, Safford, Arizona 85546. Any adverse comments will be evaluated by the District Manager who may vacate or modify this realty action and issue a final determination. In the absence of any action by the District Manager, this realty action will become the final determination of the Department of the Interior.

/s/ Vernon L. Saline
 Acting District Manager
 January 22, 1983

PUBLISH: January 26 and February 2, 1983
 The Arizona Daily Star

TDC
Resp



Westmin Resources Limited
Suite 904, 1055 Dunsmuir Street
P.O. Box 49066, The Bentall Centre
Vancouver, B.C., Canada V7X 1C4
604 681-2253 Telex: 04-51573
Telecopier: 604 681-0357

February 17, 1983

Mr. James A. Briscoe,
James A. Briscoe and Associates, Inc.,
5701 East Glenn Street,
Suite 120,
TUCSON, Arizona 85712

Dear Mr. Briscoe:

RE: TOMBSTONE PROJECT
COCHISE COUNTY, ARIZONA

Thank you for the opportunity to review the Tombstone, Arizona data package. The potential of the district appears to be enormous with both intermediate and long term targets requiring further evaluation and exploration. However, in spite of the obvious merit of the project, it does not fit our corporate objectives at this time and we must decline the opportunity to participate. Our objectives at this time are oriented towards projects capable of fruition (=cash flow) in a relatively short time frame.

I wish you success in the project and I look forward to meeting you at some time in the future. Your summary report is enclosed.

Yours very truly,

WESTMIN RESOURCES LIMITED

A. E. Soregaroli
Vice-President, Exploration
Mining Division

AES:dt.
Encl.

REVIEWED

FEB 24 1983

By



Date 1983-02-18

Reference BW-83-43

Yours dated

Your reference

Mr. James A. Briscoe
James A. Briscoe & Associates, Inc.
5701 East Glenn Street
Suite 120
Tucson, ARIZONA
85712

Dear Mr. Briscoe,

Enclosed is the information on Boliden that I promised to sent you during our recent telephone conversation.

As I explained, Boliden's primary interest is in base and precious metal massive sulfides as this is the area in which we have the most experience and expertise. However, we do not restrict ourselves solely to this type of property and are always pleased to review data on other deposit types or even commodities. As such your property may be of interest to us, but on a rather low priority basis because of the relatively early stage of exploration. I will however contact you the next time that I am in the southwestern U.S. and try to arrange a meeting to discuss it further.

Thanka you again for contacting us and please do not hesitate to do so again in the future if you have properties that you feel would be of interest.

Yours truly

BOLIDEN CANADA LIMITED

Bruce Winfield
Chief Geologist

BW/glk
Encl.

Boliden Group activities: mining, smelting, chemicals, fertilizer, trading, know-how.

Group Companies: Boliden Mineral • Boliden Metall • Boliden Kemi • Boliden Intertrade • Supra • Boliden-Bergsöe • WP-System • Boliden-France • Boliden Canada. Associated companies: Norzink, Norway • Preussag-Boliden-Blei, West Germany • AB Svensk Alunskifferutveckling, ASA.

Mail address	Office address	Telephone No.	Telex
Boliden Canada Limited PO Box 197 Toronto Dominion Centre Toronto, Ontario M5K 1H6	Suite 1008 Royal Trust Tower Toronto Dominion Centre	(416) 863-1658	06-219664 bolidencan

FILE MEMO

RE: Tombstone Mining District - Legal File
Production Data - T.E.I. Operation - from Paul Turney
meeting of Monary. February 21, 1983 from 4:45 to 5:15

In a brief meeting with Paul Turney, consultant for Tombstone Development Company on metallurgical matters at the T.E.I. mine, Paul mentioned that T.E.I. was mining 60,000 tons of ore per month. They were doing it at a cheap rate, but he would like to see their recovery increase 10%. Also, he had run some screen tests and hand found that most of the silver bearing minerals were in the fines of the crushed fraction. He feels T.E.I. should install an abrasion crusher and screen out the fines, and then treat them with an agitation leach.

I have received no reports since the July 22 report. There have been rumors that "high grade" has been encountered. Thus, it is unlikely that any lower average grade than that for July would be expected. Recovery still appears to be an unknown so again, the July figures appear to be in order. The cost to move and process a ton - from Charles Escapule from his knowledge of the operation - will also be used.

Thus:

Gold	0.023 oz Au	x 53% recovery	= 0.012 x \$500.00/oz	= \$ 6.00
Silver	1.8 oz Ag	x 46% recovery	= .083 x 14.50/oz	= \$12.04

				\$18.035

Thus:

\$18.04	Gross value of Au & Ag recovered
- 7.55	Cost of mining & milling

\$10.49	Per ton NET before taxes, refining charges & NSR

Thus:

60,000	Tons/month is the reported mining rate
x 10.49	Per ton NET before taxes, refining charges & NSR

\$629,400	NET/month before taxes, refining charges & NSR

Thus:

\$ 629,400	NET/month before taxes, refining charges & NSR
x 12	Months per year

\$7,552,800	Mined per year before taxes, refining charges & NSR

Thus:

\$7,552,800	NET/year before taxes, refining charges & NSR
- 377,640	TDC 5% NSR Royalty

\$7,175,160	NET/year before taxes and refining charges

Thus:

\$7,175,160	NET/year before taxes and refining charges
x 40%	JAB interest

\$2,870,064	NET JAB INTEREST PER YEAR BEFORE TAXES & REFINING

FILE MEMO

RE: Tombstone Mining District - Legal File
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Silver	1.8 oz Ag x 46% recovery = ^{0.83} .003	x ^{10.00} 14.50/oz = \$12.04 ^{8.30}	

			\$18.035
			13.10

Thus:

^{13.10}
~~\$18.04~~ Gross value of Au & Ag recovered
 - 7.55 Cost of mining & milling

 \$10.49 Per ton NET before taxes, refining charges & NSR
^{5.55}

Thus:

60,000 Tons/month is the reported mining rate
 x ~~10.49~~ Per ton NET before taxes, refining charges & NSR

^{5.55}

\$629,400 NET/month before taxes, refining charges & NSR
^{333,000}

Thus:

^{333,000}
 \$ 629,400 NET/month before taxes, refining charges & NSR
 x 12 Months per year

\$7,552,800 Mined per year before taxes, refining charges & NSR
^{3,996,000}

Thus:

~~3,996,000~~
\$7,552,800 NET/year before taxes, refining charges & NSR
- 377,640 TDC 5% NSR Royalty
~~199,900~~

~~\$7,175,160~~ NET/year before taxes and refining charges
3,796,200

Thus:

3,796,200
\$7,175,160 NET/year before taxes and refining charges
x 40% JAB interest

\$2,870,064 NET JAB INTEREST PER YEAR BEFORE TAXES & REFINING

A 1,518,480

James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

February 21, 1983

Bill Hight
4600 N. 68th Street
Apartment 377
Scottsdale, Arizona 85251

RE: Update on Tombstone as of Monday, February 21, 1983

Dear Bill, Frank & Lavern:

Please find enclosed an updated tabulation of changes from the last tabulation in my report of February 12. Rather than going to the labor of coloring the entire chart, I have only colored those companies that have indicated a change from the previous chart.

A summary of the changes are as follows:

Name of Company =====	Comments =====
AMAX, Inc.	Tucson Manager, Dr. Charles Miller called me and wants a presentation on the project. I will meet with Dr. Miller and his staff on Friday, February 25.
Billiton International	Mr. Dave Brown will be taking over as the new Tucson manager for Billiton. Dave has been familiar with the Tombstone District from past work. I have had two rather lengthy meetings with him last week, and he is very excited and agrees wholeheartedly with my ideas. He will be presenting them to Billiton during his first week in his new position, which will be the first week in March.
Boliden	Managing Geologist, Bruce Winfield, likes the project but does not have the budget for it.
Hunt Energy	Talked with the head of the minerals division and he indicated that inspite of budget cutbacks, they would be interested in taking a look at the Tombstone data.

Bill Hight, Frank Gallup, Lavern Baxter
 February 21, 1983
 Page 2 of

Name of Company =====	Comments =====
Noranda	They have very little money in their exploration budget, and Tombstone would be too costly at present.
Westmin Resources Limited	Dr. Art Soregaroli, Vice President Exploration, likes the project very very much and feels that it has potential for many different metals. Unfortunately, because of the world price of copper, Westmin has no budget for the project. He would like me to keep him posted as he would like to get into the project should their finances become better in the next year.
Uranerz	Managing Geologist, John Peterson likes the project but doesn't have the money to pursue it. Their main thrust is uranium exploration.

I have also talked with Phelps Dodge Vice President, Stan Holmes, who is Vice President in charge of small mine development, his geologist, Mike Palowski, and geologist Jonathan Duhammel of the Phelps Dodge exploration division. Stan Holmes is interested in developing the properties from the small mining aspect - I assume the patented portion, and Mike Palowski is conducting ore reserve calculations from old data that Phelps Dodge has in their files. He is interested in meeting with me at some point. Duhammel is interested in the more regional district-wide aspects of the project.

My current calendar calls for field trips to Tombstone as follows:

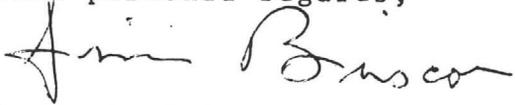
Name of Company =====	Scheduled Visit =====
Goldfields, Ltd.	Wednesday, February 23
American Copper & Nickel	Between March 1 and March 15
FMC Corporation	Mid March
Sunshine Mining Co.	Mid March
Comenco, U.S.A., Inc.	End of March

I am enclosing an article on silver from this weeks Business Week magazine, and an article from the Kiplinger Washington Letter of February 14, suggesting copper will be at \$1.00 per pound sometime this summer. As the price of precious metals as well as copper picks up, I think that Tombstone will be more and more attractive.

Bill Hight, Frank Gallup, Lavern Baxter
February 21, 1983
Page 3 of

I have also talked with Mr. Seth Horne of the James Stewart Construction Company, who holds about 250 to possibly 300 claims in the Charleston Lead Mine area, Mr. Dick Jones of International Minerals and Metals, Inc., who holds the Tombstone Mineral Reserve mill and about 500 unpatented mining claims south of the Escapule land and north of our Robbers Roost Breccia Pipe land, as well as Louis Escapule. I have discussed with these men the possibility of consolidating all of our various land holdings within the Tombstone District. All have expressed a strong interest in doing so. I will be meeting with Mr. Horne, hopefully, on Monday, February 28, and with Dick Jones sometime that same week. I hope to be able to sit down with Charlie and Louis Escapule possibly later on this week. If such a consolidation can be made, it will strongly enhance the attractiveness of the Tombstone District. One of the reasons ASARCO and other companies have dropped out in the past is because of the complex land situation.

Best personal regards,



James A. Briscoe

JAB/ms

Enclosure

TOMBSTONE DEVELOPMENT COMPANY
 POSITIVE RESPONSES TO OFFERING
 FEBRUARY 21, 1983

COMPANY NAME	REQUESTED SUMMARY REPORT	RESPONSE TO SUMMARY REPORT	FIELD TRIP SCHEDULED	NONE- DO NOT LIKE THE GEOLOGY OF THE PROJECT	NONE- DO NOT LIKE THE GEOLOGY BUT HAVE NO MONEY	HIGH LEVEL OF INTEREST	MEDIUM LEVEL OF INTEREST	LOW LEVEL OF INTEREST	UNKNOWN	NOT YET EVALUA- TED	COMMENTS
AMAX EXPLORATION	X								X	X	MEETING 2/25/83
AMERICAN COPPER & NICKEL	X	X							X	X	WILL VISIT TOMBSTONE IN EARLY MARCH
AMOCO METALS COMPANY	X	X	X			X	?		X	X	1ST HALF OF MARCH WILL GET BACK W/RESULTS
AMSELCO EXPLORATION	X		X	X							NOT BIG ENOUGH-ED LOCKHART
ASARCO											
AZL RESOURCES, INC.											
BILLITON INTERNATIONAL	X	X		?	?						NO REASON GIVEN-NEW MAN, DAVE BROWN, INTEREST
BOLIDEN CANADA	X										LOW EXPLORATION BUDGER
CF&I STEEL											TRYING TO WEATHER STEEL DEPRESSION-NO MONEY
COMINCO AMERICAN	X	X	X							X	FIELD TRIP END OF FEBRUARY
CONOCO, INC.	X										OUT OF MINERALS BUSINESS
DOWA MINING CO. LTD.	X								X	X	NEED PROPOSITION FOR LEASE, PURCH., JV
DUVAL CORPORATION	X	X		?	?						NOT APPROPRIATE TO PLANS
EAGLE PICHER	X								X	X	TOO MANY OTHER PROJECTS-R.C. BRITAIN, EXPL. MGR
ENERGY RESERVES GROUP	X								X	X	?OUT OF MINERALS BUSINESS
ENTERPRISE EXPLORATION LTD.	X	X									EFFECTED BY RECESSION
EXXON	X								X	X	WILL GET A TEAM ON IT RIGHT AWAY
FMC CORPORATION	X	X	X				X		X	X	INTEREST IN RAW EXPL.-FIELD TRIP IN MID-MARCH
GETTY OIL COMPANY	X			?					X	X	EMPHASIS ON GOLD-TOMBSTONE UNCLEAR
GILA MINES CORP.											
GOLD BASIN GROUP, INC.											
GOLD FIELDS MINING COMPANY	X	X	X			X	X				EXPRESSED STRONG INTEREST-WILL BE DOWN 3 WEEK
GRANGES EXPLORATION											
HECLA MINING COMPANY	X	X	X	?	?						LOU KNIGHT TOOK OWN FIELD TRIP
HOMESTAKE MINING	X								X	X	
HOUSTON INTERNATIONAL MIN.	X	X	X			X					MADE UNATTRACTIVE OFFER/WILL CALL IN 2 WEEKS
HUNT ENERGY, INC.	X	X									TALKED W/MIN.DEPT.-MAY HAVE AN INTEREST
INSPIRATION DEVELOPMENT	X	X									"EXCELLENT, WELL-DONE REPORT"/NO MONEY
KERR MCGEE	X			?					X	X	STILL EVALUATING REPORT
MAPCO	X								X	X	BILL COLE, V.P. EXPRESSED INTEREST IN REPORT
LOWELL, DAVE	X								X	X	
LACANA MINING INC.	X										TOO BIG
METALLGESELLSCHAFT AG	X	X		?	?						
NEWMONT MINING CORP.	X	X	X			X					WILL MEET AGAIN 2/14

TOMBSTONE DEVELOPMENT COMPANY
 POSITIVE RESPONSES TO OFFERING
 FEBRUARY 21, 1983

COMPANY NAME	REQUESTED SUMMARY REPORT	RESPONSE TO SUMMARY REPORT	FIELD TRIP TAKEN OR SCHEDULED	NONE-DO NOT LIKE THE GEOLOGY OF THE PROJECT	NONE-DO NOT LIKE THE GEOLOGY BUT HAVE NO MONEY INTEREST	HIGH LEVEL OF INTEREST	MEDIUM LEVEL OF INTEREST	LOW LEVEL OF INTEREST	UNKNOWN	NOT YET EVALUATED	COMMENTS
NORANDA EXPLORATION, INC.	X				X						NO MONEY TO PURSUE
NORTHAIR MINES, LTD.	X	X	X						X		F.T.SPRING 1983
NORTHGATE EXPLORATION LTD.	X				X						GREAT POTENTIAL FOR DISSEMINATED AU,AG
NUFUELS				?	?						"DOESN'T FIT INTO EXPLORATION PLANS
PAN OCEAN OIL(MARATHON OIL)											
PHELPS DODGE	X					X					CONDUCTING ORE RESERVE STUDIES ON TEI LEASE
PREUSSAIG, INC.	X	X	X					X			NEED MORE SPECIFIC TARGETS
RANCHERS EXPLORATION											
RAYROCK RESOURCES LTD.	X	X	X		X						TOO BIG
RIO ALGOM									X	X	
ROCKY MOUNTAIN ENERGY									X	X	
SANTA FE INTERNATIONAL											
SEREMIN, INC.	X				X						FRENCH CO.-HAS CLOSED DOWN U.S. OFFICE
J. R. SIMPLOT COMPANY	X	X					X				COMPLEX ANSWER, NEED TERMS
ST. JOE AMERICAN CORP.	X							X		X	
SUNSHINE MINING COMPANY	X	X	X					X		X	GENE SCHMIDT-WILL EVALUATE END OF FEBRUARY
TECK RESOURCES, INC.	X	X	X		?			?	X		WILL SEE 1ST OF MARCH
TOM SCHLOSS	X								X		
UNC TETON EXPLORATION	X	X			X						NO CASH MORRIBUND
UNION MOLYCORP, INC.	X			?							NO REASON GIVEN
UNITED STATES STEEL	X	X			X						WELL PREPARED REPORT-NO MONEY
URANERZ, U.S.A., INC	X				X						LIKE IDEAS BUT NO MONEY
URANGESELLSCHAFT U.S.A.	X							X		X	
URANIA EXPLORATION	X	X			X			X		X	OUT OF BUSINESS
U.S. MINERALS EXPLORATION											
VETA GRANDE COMPANIES, INC.	X	X			X						LIKE THE IDEA-NO MONEY
WESTMIN RESOURCES LTD.	X	X			X						LIKE PROJECT VERY MUCH BUT NO MONEY

	NUMBER	% OF TOTAL
NO MONEY	16 18	26.23
NO INTEREST	7	11.48
BEST PROSPECTS	4	6.56
GOOD PROSPECTS	1	1.64
LUKE WARM PROSPECTS	1 4	1.64
UNDECIDED	32 27	52.46
TOTAL	61	100.

Handwritten corrections:
 29.50 40.98
 37.70
 14.76
 9.84
 52.46
 44.26

in Fremont, Calif. GM will market the car way to replace its aging Chevrolet

Unleaded gasoline will be less than \$1 per gal. by Memorial Day.
Winter boat shows are mobbed...good bookings for spring delivery.
Sales of private aircraft are rising, led by single-engine props.
Saccharin will stay on market...Congress giving another reprieve.
Softwood lumber & plywood will be costlier as we go into spring.
Stronger furniture sales...upholstered, recliners, wall units.
Steel prices will firm up this year, shipments rising about 25%.
Copper, 95¢ per pound by summer. Probably hitting \$1 this year.
Limits on Japanese car sales to U.S. will stay as-is.

Trucking rates will drop another 10% by summer...then stabilize.
Deregulation has attracted many new truckers, and shipments are way down.
Rail freight rates, up about 5% by year end...volume rising too.
It's already noticeable in lumber and building materials, autos, grain
and certain chemicals. And piggyback traffic is gaining...small items.
Shippers can drive a hard bargain now...both trucks and rail.

House hearings on injuries & deaths in pro boxing are coming up.
Among those to testify...Howard Cosell and former champ Floyd Patterson.
Strictly for show...for the publicity angles...nothing will come of it.
Most members of Congress figure that state gov'ts should oversee boxing.

How to buy a flag that has flown over the Capitol: Get details
from your own congressman or senators. Price varies by size and fabric.

Easier rules for strip mining of coal are scheduled for April
but will be delayed awhile because of pressure from environmentalists.

Big retailers who bully their suppliers will be put on the pan
by the Federal Trade Comm. for demanding kickbacks, extra ad allowances,
fraudulent discounts for "damaged" merchandise and for prompt payments.
Some big names are on the list. The FTC will negotiate consent decrees.

Keep an eye on FTC antitrust enforcement. It's now stricter
on purchases of weak sisters by the leading company in the same line.

You can buy photos taken from earth satellites...color and b&w.
Some of them snapped by Landsat 4 from 438 miles up. Incredible detail.
You can even spot individual buildings and landmarks in various cities.
Write to: EROS Data Center, Dep't of Interior, Sioux Falls, S.D. 57198.
Ask for the information packet. Or call 605-594-6511, extension 123.

More outpatient medical clinics, especially emergency facilities
that provide speedy treatment less expensively than regular hospitals.

Interferon, the "miracle drug," is still in developmental stage
for use against cancer and viruses. Gov't approval is a LONG way off.

ALL over-the-counter drugs must be tamper-resistant by Feb. 1984
or they'll be yanked off shelves. Drug firms are trying new packaging,
spending millions on equipment, which will be passed on in higher prices.

Power mowers with blades that stop when you let go of the handle
are in the stores now...generally \$25 to \$70 more than old-style models.
You'll still be able to buy one of the old mowers for another year or so.

Gov't-guaranteed student loan and grant programs will stay as-is
for the 1983-84 college year. Congress won't go for Reagan's tightening.

Settlement of claims owed by Iran to U.S. companies is dragging.
Out of 3800 claims that have been filed, only 21 have now been paid off
by the arbitrators who decide...3 Iranians, 3 Americans and 3 neutrals.

Meanwhile, some of the U.S. businesses involved are going broke.

Kipfinger Letter Monday Feb. 11, 1983

TDCS

James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

February 24, 1983

Bill Hight
4600 N. 68th Street
Apartment 377
Scottsdale, AZ 85251

RE: Thomas E. Waldrip, Jr. Memo of February 17, 1983

Dear Bill, Frank & Lavern:

I am enclosing a memo from Tom Waldrip regarding pending federal action which may affect Tombstone Development Company lands. I would agree with Tom's suggestions.

Very truly yours,

James A. Briscoe

JAB/ms

Enclosure

cc: Frank Gallup
Lavern Baxter

MEMO

TO: James A. Briscoe
FROM: Thomas E. Waldrip, Jr.
Date: February 17, 1983

RE: Tombstone Development Company - Lands identified as suitable for disposal by sale under Section 203 Federal Land Policy and Management Act of 1976.

Jim,

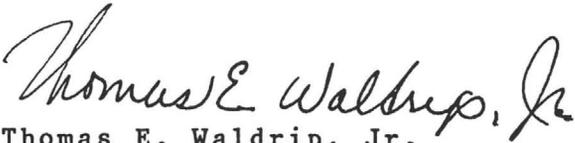
Review of the attached notice of realty sale by the Bureau of Land Management seems to indicate that a decision has been made to begin selling excess lands administered by the B.L.M. Such a presidence is important in regard to unappropriated public domain grounds within and near T.D.C.'s patented mining claim holdings in the Tombstone Mining District. Of importance are the following ideas in relation to the mineral domain.

1. All minerals will be retained by the government.
2. Mineral exploration will remain open to the public development, under applicable laws and regulations, as prescribed by the Secretary of the Interior.
3. Should regulations, as prescribed by the Secretary of the Interior, not be formulated to date, until such time as these regulaions are formulated, the lands in question shall remain in a state of defacto withdrawal. Conjectorally, this may be of little importance, as the current administration seems to be intent on clearing the books of such withdrawals, but this may not be the case in the future.
4. Potentially, lands in question for sale could be withdrawn for up to 2 years.
5. The B.L.M. seems to be respecting all rights of surface right-of-ways and leases to the mineral domain (oil & gas), and rights to develop these resources.

With these points in mind, I would suggest that it would be reasonable for Tombstone Development Company to acquire any and all unappropriated grounds within their patented claim group and possibly to a mile distance from the outer perimeter by location of unpatented mining claims. The reasons for this are several. Namely:

MEMO TO JAB FROM TEW
February 17, 1983
Page 2 of 2

1. Claim of the mineral rights would be established should any/all of the area be deemed in excess by the B.L.M. and then put up for surface sale. This should preclude potential problems of mineral location in the future should the land be sold or withdrawn from mineral entry in light of future sales.
2. Ideally, Tombstone Development Company would be able to purchase the surface domain and also have some minor control over the mineral right without an intervening mineral claimant.
3. Pre-existing mineral claims at the time of future surface sale announcements should preclude any potential regulations governing mining etc. that may be formulated by the Secretary of the Interior.
4. Consolidation of the remaining open mineral ground would be materially to the advantage of Tombstone Development Company. Whether the company is sold or retained, the investment involved in claim location would theoretically be much less in regards to potential liabilities involved in litigation, land acquisition for mining expansion, or for that matter, any of a number of tangible and/or intangible items.


Thomas E. Waldrip, Jr.

TEW/ms

Attachment

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Arizona: Realty Action
Competitive Sale of Public Land in Graham County
A-5321

The following described land has been identified as suitable for disposal by sale under Section 203 of the Federal Land Policy and Management Act of 1976 (90 Stat. 2750; 43 U.S.C. 1713), at not less than the appraised fair market value.

GILA AND SALT RIVER MERIDIAN, ARIZONA

(A-5321)

T. 8 S., R. 26 E.,

Section 18: E 1/2 NW 1/4 (parcels within)

Parcel	Legal Description	Acres	\$ Value
A	NW 1/4 NE 1/4 NW 1/4	10	\$12,700
B	SW 1/4 NE 1/4 NW 1/4	10	\$12,500
C	SW 1/4 SE 1/4 NW 1/4	10	\$12,600
D	SW 1/4 SE 1/4 NW 1/4	10	\$12,800
E	NE 1/4 NE 1/4 NW 1/4	10	\$12,500
F	SE 1/4 NE 1/4 NW 1/4	10	\$12,400
G	NE 1/4 SE 1/4 NW 1/4	10	\$12,500
H	SE 1/4 SE 1/4 NW 1/4	10	\$13,000

(A-7730)

Section 22: S 1/2 SW 1/4 (parcels within)

Parcel	Legal Description	Acres	\$ Value
J	N 1/2 SW 1/4 SW 1/4	20	\$17,500
K	NW 1/4 SE 1/4 SW 1/4	10	\$12,000
L	NE 1/4 SE 1/4 SW 1/4	10	\$12,200
M	S 1/2 SW 1/4 SW 1/4	20	\$17,300
O	SW 1/4 SE 1/4 SW 1/4	10	\$12,400
P	SE 1/4 SE 1/4 SW 1/4	10	\$12,500

The land will be sold at public auction by competitive bidding. The sale will be held at the Safford District Office, 425 East Fourth Street, Safford, Arizona, on Thursday, March 31, 1983, at 1:00 p.m.

Bidding Information and Instructions: The Federal Land Policy and Management Act requires that bidders must be citizens of the United States, 18 years of age or over, or, in the case of a corporation, be subject to the laws of any state of the United States. Bids may be made by a principal (the one desiring to purchase the land) or his duly qualified agent. Agents will be required to submit proof of power of attorney.

Method of Bidding: Each bid must be for all the land in a specified parcel. Bids may be made either by submitting sealed bids until three days before the sale date or by bidding orally at the sale. Bids sent by mail will only be considered if received by the Bureau of Land Management, Safford District Office, 425 East Fourth Street, Safford, Arizona 85546, prior to 1:00 p.m., Monday, March 28, 1983. Sealed bids, accompanied by a certified check, postal money order, bank draft, or cashier's check made payable to the Bureau of Land Management for not less than one-fifth of the amount of the bid must be in a separate envelope, within the transmittal envelope. The sealed envelopes must be marked in the lower left-hand corner, "Sealed Bid, Parcel —, Public Land Sale A-5321 or A-7730. Sale to be held March 31, 1983." All sealed bids will be opened at 1:00 p.m. on the day of sale.

Oral bids will be received immediately after all sealed bids have been opened and the highest sealed bid is announced. The highest sealed bid will be the base for oral bids. If the highest bid is an oral bid, the successful bidder will be required to pay immediately one-fifth of the high bid price by cash, personal check, money order, bank draft, or any combination of these. The successful high bidder whether by sealed or oral bid, will be required to submit the remainder of the land payment by cash, certified check, bank draft, money order, or combination at the time of the sale or within thirty (30) days after receipt of the decision accepting the highest bid. If final payment is not received within the specified 30 days, the high bid is rejected, the deposit is forfeited, and the parcel will be offered to the second highest bidder. All unsuccessful sealed bids will be returned within 30 days of the sale.

A patent for the land when issued will contain the following reservations:

1. A right-of-way thereon for ditches and canals constructed by the authority of the United States Act of August 30, 1890 (26 Stat. 391; 43 U.S.C. 945).

2. All minerals shall be reserved to the United States. Such minerals shall be subject to the right to explore, prospect for, mine, and remove under applicable law and such regulations as prescribed by the Secretary of the Interior.

3. A non-exclusive right-of-way thirty-three (33) feet in width for roadway and public utilities purposes to be located along the parcel boundary lines.

4. A restriction which constitutes a covenant running with the land, that the land in Parcels (J) and (M) located within the base (100-year) floodplain as identified in the Federal Emergency Management Agency (FEMA) flood hazard boundary map for the area (040032 0017 A) may be used only for farming, but not for farm dwellings or buildings, or for non-intensive open space purposes.

This restriction is included pursuant to the authority contained in section 3(d) of Executive Order 11988 of May 24, 1977, and section 203 of the Federal Land Policy and Management Act of 1976 (90 Stat. 2750; 43 U.S.C. 1713).

and will be subject to:

1. A right-of-way described under Serial No. A-5312 for a flood control channel under the Act of February 15, 1901 (31 Stat. 790; 43 U.S.C. 959) on parcels (E), (F), (G), and (H).

Upon the expiration of the right-of-way, the holder of the right-of-way must negotiate new terms with the landowner.

2. Those rights granted by oil and gas lease A-16361, made under Section 29 of the Act of February 25, 1920, (41 Stat. 437; 30 U.S.C. 186). This patent is issued subject to the right of the prior permittee or lessee to use so much of the surface of said land as is required for oil and gas exploration and development operations without compensation resulting from proper oil and gas operations, for the duration of the lease A-16361, and any authorized extension of the lease. Upon termination or relinquishment of said oil and gas lease, this reservation shall terminate.

Publication of this Notice will segregate the subject lands from all appropriations under public land laws, including the mining laws, but not the mineral leasing laws. This segregation will terminate upon the issuance of a patent or two years from the date of this Notice, or upon publication of a notice of termination.

Detailed information concerning the sale can be obtained from the Safford District Office. For a period of 45 days from the date of this Notice, interested parties may submit comments to the District Manager, Safford District, Bureau of Land Management, 425 East Fourth Street, Safford, Arizona 85546. Any adverse comments will be evaluated by the District Manager who may vacate or modify this realty action and issue a final determination. In the absence of any action by the District Manager, this realty action will become the final determination of the Department of the Interior.

/s/ Vernon L. Saline
Acting District Manager
January 22, 1983

PUBLISHED: January 26 and February 2, 1983
The Arizona Daily Star

JAMES STEWART COMPANY

REAL ESTATE INVESTMENTS AND DEVELOPMENT

707 MAYER CENTRAL BUILDING

3033 NORTH CENTRAL AVENUE • PHOENIX, ARIZONA 85012

602-264-2181

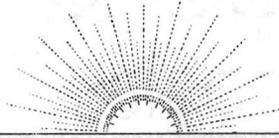
February 28, 1983

James Stewart Company
3033 North Central Avenue, Suite 707
Phoenix, Arizona 85012

This acknowledges receipt of a book entitled "The
Charleston Mine" containing geological data, drill
hole data, assays, etc. on the properties owned by
Stewart and/or M. S. Horne in the Charleston area
of Arizona.



James A. Briscoe
5701 East Glenn Street, Suite 120
Tucson, Arizona 85712



Sunshine Mining Company

P. O. BOX 1080 PHONE: Area Code 208 784-1257

Kellogg, Idaho
83837

February 28, 1983

REVIEWED

MAR 2 1983

By *JHB*

James A. Briscoe
5701 East Glenn Street, Suite 120
Tucson, Arizona 85712

Dear Mr. Briscoe,

Thank you for submitting the Tombstone Development Company property to us for review. It is unfortunate it has taken us so long to get together.

As I explained in our telephone conversation of February 18, Sunshine Mining Company although one of the largest U.S. silver producers is a small company and my territory is a large one. I therefore must concentrate my efforts on areas with the highest existing priorities before developing new areas of interest. It is my sincere intent to visit you in Tucson at the first opportunity, hopefully in March.

Sincerely,

Eugene K. Schmidt

Eugene K. Schmidt

HUNT ENERGY CORPORATION

Mineral Exploration & Mining Division

William A. Carlson
[Redacted]

March 4, 1983

Mr. James A. Briscoe
5701 East Glenn Street, Suite 120
Tucson, Arizona 85712

Dear Jim:

I am returning your summary report on the Tombstone District. We do not have an immediate interest in this acquisition, but next time I am in Tucson, I'd like to visit with you about the property, if still available, to learn more of the particulars. Our acquisition budget is a bit restricted at the present time due to corporate-wide belt tightening (some of which I was informed of this week). Our reconnaissance continues at the same level and related acquisitions will be made at this level.

Sincerely,

William A. Carlson

William A. Carlson
Manager

WAC:1b
Enclosure

REVIEWED

MAR 7 1983

By *[Signature]*

FILE MEMO

TO: TDC File
FROM: James A. Briscoe
DATE: March 4, 1983

RE: Meeting with Charles and Louis Escapule in Tombstone from approximately 1:00 p.m. to 4:30 p.m.

SUBJECT OF DISCUSSION: Consolidation of ground within the Tombstone Mining District

Present at the meeting were James A. Briscoe, Charles & Louis Escapule

LOCATION: Top of the Hill restaurant and the State of Maine office

The purpose of the meeting was to determine whether Charlie and Louis Escapule were interested in consolidating their ground with the Tombstone Development Company, Seth Horne, and the Alanco interests. The general answer to this question is "yes".

For starters, I proposed the following:

1. A generalized agreement, which everyone would be satisfied with would be struck for any major mining company. I said that probably the maximum return would be about a 5% NSR royalty.
2. Each land holder would share 50% from any royalties on their property, and would put 50% of the royalties into a common pool.
3. Money put in the common pool would be used to first pay expenses of the consortium, and then be distributed to the consortium members on a pro rata share, based on their percentage of the total of acres owned to the total acres within the consortium.

This sounded somewhat reasonable to them, but there was some hesitation for the following reasons:

1. They have patented ground, but the relationship of their patented ground to the total is quite small.
2. They point out that they are in a somewhat different circumstance since the State of Maine Mine is their income, while the other parcels under consideration are not the sole income for the other members of the group.
3. Because of #2, they would want to continue to mine the State of Maine until their income could be supplemented

FILE NAME

TO: TFC File
FROM: James A. Biscoe
DATE: March 4, 1983

RE: Meeting with Charles and Louis Biscoe in Tomastone from approximately 1:00 p.m. to 4:30 p.m.

SUBJECT OF DISCUSSION: Consolidation of ground within the Tomastone Mining District

Present at the meeting were James A. Biscoe, Charles & Louis Biscoe

LOCATION: Top of the Hill restaurant and the State of Maine office

and helping to consolidate the ground of other members of the Escapade Family

For starters, I proposed the following:

1. A generalized agreement, which everyone would be satisfied with would be reached for any major mining company. I said that probably the maximum return would be about a 25 MSR royalty.
2. Each land holder would share 50% from any royalties on their property, and would get 50% of the royalties into a common pool.
3. Money put in the common pool would be used to first pay expenses of the corporation, and then be distributed to the corporation members on a pro rata share, based on their percentage of the total of acres owned to the total acres within the corporation.

This sound somewhat reasonable to them, but there was some hesitation for the following reasons:

1. They have patented ground, but the relationship of their patented ground to the total is quite small.
2. They point out that they are in a somewhat different circumstance since the State of Maine Mine is their income, while the other parcels under consideration are not the sole income for the other members of the group.
3. Because of #1, they were reluctant to continue to mine the State of Maine until their income could be supplemented

by either purchase payments or minimum pre-production royalties, or some other source. Thus, they might be more interested in something like:

- a. Maintain the rights to mine on the State of Maine vein to a depth of 500' or possibly 800', for five years, with Cob Resources.
- b. Possibly maintain mineral rights above 500' to 800', and lease those below.
- c. Get pre-production royalties which would subplant their income from the State of Maine.

If the above basic parameters could be met, they would be interested.

They also pointed out their willingness to consolidate all of their other land holdings throughout the District, and, of course, within the main part of the District, with the Tombstone Development Company. Further, they felt that lease of the Henderson ground, directly south of the State of Maine, would be very easy. They also felt that they might be able to consolidate the Phil Calvin state lease around their patented mining claims in Section 16, and would try and consolidate all the ground in Section 16.

Ernie Escapule's Fox Ranch claims, and Solstice area claims, have not been leased, and they feel that Ernie would be interested in such a consolidation. Unfortunately, the San Pedro and the other claims held by Joe Escapule have already been leased to Cobb Resources. They will start pulling ore from the Joe Escapule claims in a reasonably short time after a drilling program.

As the District is very active at present, I think that we should move forward as rapidly as is humanly possible to affectuate this consolidation. It must be kept confidential, or the price of all small adjacent claims will go sky high.



REVIEWED

MAR 21 1983

By *[Signature]*

Amoco Minerals Company

U.S.A. Minerals Exploration
7200 South Alton Way
P.O. Box 3986
Englewood, Colorado 80155
303-740-5638

March 17, 1983

Mr. James Briscoe
Suite 120
5701 East Glenn Street
Tucson, Arizona 85212

Dear Mr. Briscoe:

I apologize for the delay in contacting you, but I have been waiting for analytical results. Amoco Minerals is interested in the Tombstone area, and we would like to know more about Tombstone Development's expectations for their holdings. We would be interested in an agreement that would permit exploration at a reasonable cost, especially during the first few years. This is particularly important since Tombstone Exploration controls most of the patented mining claims and the potential of other areas is speculative.

By the way, I think your proposal to do mercury soil gas and magnetic survey lines across the district is one of the most informative, low cost exploration procedures that would be appropriate in this area. The results could certainly effect our interpretation and evaluation of the district.

Also we will be talking with Tombstone Exploration about some of their leased claims, since they control part of our primary exploration target. These discussions will, of course, be entirely separate from any negotiations with Tombstone Development.

I hope to accompany Bill Burton, the Senior Regional Geologist, on a trip to Tombstone sometime in mid or late April. In the meantime I will be out of the office, but communications can be directed to Mr. Burton.

Sincerely,

William Zelinski
William Zelinski

WZ/ams

Bill Burton
Mark Nesbitt

ST. JOE

AMERICAN CORPORATION

2002 NORTH FORBES BOULEVARD
TUCSON, ARIZONA 85705
602-622-4766

TDC

March 17, 1983

Mr. James A. Briscoe
5701 E. Glenn St. Suite 120
Tucson, AZ 85712

Dear Mr. Briscoe:

Evaluation of your summary report on the Tombstone Development Company Lands, Cochise Co., Arizona received 12/82 has been completed.

We appreciate the opportunity to make this evaluation but regret to indicate that the holdings as presented are not of current interest to St. Joe American. We invite you to submit any other properties for review which you feel may be of interest to our company.

Thank you again and good luck with the Tombstone Development Company Lands.

Sincerely,

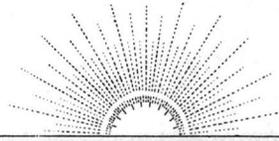


Lance W. Pape
geologist

LWP/dj

FILE

Tomb. & P.H.



Sunshine Mining Company

P. O. BOX 1080

PHONE: Area Code 208-783-1211

Kellogg, Idaho

83837

REVIEWED

APR 8 1983

By

April 4, 1983

Mr. James A. Briscoe, President
James A. Briscoe & Associates, Inc.
5701 East Glenn Street, Suite 120
Tucson, Arizona 85712

Dear Mr. Briscoe:

First, I want to thank you for your patience in waiting for us to get back to you regarding the Tombstone project.

While that project remains interesting to me personally, and to Gene Schmidt, I'm afraid we will not be able to pursue it further this year. As a result of some recent re-direction of our exploration activities and priorities, Gene has been loaned to the mine department for the next few months. And, we are going to severely restrict our "outside" exploration activities for the time being, in favor of developing some projects we already have in-hand.

So, the fact is that there is just no way we could seriously pursue an involvement in your Tombstone project at this time.

Also, for the same reason, I will not be able to pursue the Smith & Gamble Au-Ag-Hg prospect in Nevada, that you recently sent to us.

Hopefully, by late this year or early 1984, we will have cleared away some of our existing projects, and will be able to renew our search for and exploration of new opportunities. In that event, and if these (and other) projects are still available, I would hope you would let us re-consider them.

Again, thanks for giving us the opportunity to consider these projects, and the best of luck in your further efforts to sell or develop them.

Very truly yours,

Gary L. Ojala
Manager of Exploration

FILE *Tombstone*

AMERICAN COPPER & NICKEL COMPANY, INC.

11437 West 48th Avenue
Wheat Ridge, Colorado 80033
(303) 425-1230

May 6, 1983

James A. Briscoe
James A. Briscoe & Assoc.
5701 East Glenn St., Suite 120
Tucson, AZ 85712

Dear Jim:

It was a pleasure meeting with you the other week and being given such an excellent tour of the Tombstone District.

Certainly the opportunities for exploration in the district are considerable and you are to be commended in your efforts to explain the mineralizing events by your model of 'porphyry centers'.

I think however ACNC must decline participation at this time not because of lack of ultimate potential, but because our current goals are more precisely met by smaller properties with the chance of proving up any orebody which might be present more quickly.

I believe that Tombstone has great potential and I sincerely hope that you will be able to continue your work. In the event that you can demonstrate a situation with a more immediate chance of payback, please get in touch with me.

Again, thank you for the many courtesies.

Sincerely,



R. J. Worsfold
Exploration Manager

RJW/mps

REVIEWED

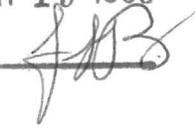
MAY 9 1983

By 

Rioamex Inc.

REVIEWED

MAY 19 1983

By 

May 12, 1983

Mr. James Briscoe
James A. Briscoe & Associates, Inc.
5701 East Glenn, #120
Tucson, Arizona 85712

Dear Mr. Briscoe:

Thank you for discussing Tombstone Development Company's Tombstone Caldera Complex Lands with me by phone last week. Certainly the Tombstone Caldera holds promising targets for both high grade vein and low grade bulk-tonnage silver deposits.

We have reviewed your summary presentation of geologic reserve potential and have decided not to pursue the project at this time on the grounds that individual target areas are not detailed enough to accommodate our current exploration policy. Rioamex is presently focusing attention on the potential acquisition and development of either semi-developed mining projects or more discrete exploration targets with ore intercepts.

If you could furnish more detailed projections or descriptions of Tombstone targets, we would welcome the opportunity to review them. Thank you for your interest in Rioamex and good luck with the Tombstone program. The report you furnished is enclosed.

Very truly yours,



David Spatz
Senior Geologist

DS/sm
Enc

cc: C. P. Costin
T. Coates

An affiliate of Rio Algom Limited

James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

May 19, 1983

Tom Chandler
Attorney at Law
Chandler, Tullar, Udall & Redhair
1700 Arizona Bank Plaza
33 North Stone Avenue
Tucson, AZ 85701

RE: Ken Allen offer for settlement.

Dear Tom:

After analyzing the most recent offer settlement from Ken Allen and Tom Schloss - a 1% or a 1/3% of 1% of the net profits of a sale of the Tombstone property, offers no inducement to me whatsoever. As comparison, I am getting 15% of the net profits from a major corporation - Texas Gas Exploration Corporation - for contributing only my technical ideas in a property which they have put approximately \$300,000 worth of work into.

A recent telephone conversation with Professor Dave Rabb (retired Arizona Bureau of Mines State Metallurgist - reference Toll Call #3044, on May 9, 1983), who is consulting for them now, indicates that the recovery at the T.E.I. operation has increased to about 1 1/2 ounces of silver and their throughput is supposedly now 2,500 tons per day. Using the same gold content as we used in my February 21, 1983, memo of 0.012 ounces gold recoverable, and a price of silver of \$13.00 per ounces and gold of \$400.00 per ounce, the following calculations show approximately 1.2 million dollars gross per month. Assuming a net operating profit before tax of 25%, approximately 300,000 profit per month would be generated. Obviously it is in Tom Schloss's best interest to carry the law suit forward. I am enthusiastic about pursuing it with all vigor.

However, I would propose one last formula for settlement. This would be:

After payback of whatever Tom's investment has been, plus interest on that investment at whatever the prime rate was during the period of pay back, plus 5%, after that payback, I would be paid on a net profits basis with only expenses from the actual mining operation being considered - that is no overhead from New York or elsewhere. I would be paid the following:

Tom Chandler
May 19, 1983
Page 2 of 2

20% of the net profits from any open pit operations 40% from any underground operations Plus immediate payment of legal fees plus an immediate cash payment of Briscoe's investment of \$75,000.

Very truly yours,

James A. Briscoe

JAB/ms

$$2.5 \times 40\% = 102$$

$$\begin{array}{r} \text{Ag } 1.5 \times \$13 \times 2,500 \text{ TPD} \times 20 \text{ dpm} = \$975,000/\text{mo} \\ \text{Au } 0.012 \times 400 \times 2,500 \times 20 = \underline{240,000} \\ \hline 1,215,000 \end{array}$$

Propose -

20% Net Profits after pay back of investment at prime + 5% on open pit

40% from underground

Immediate payment of legal fees of \$.

Briscoe investment of \$75,000

Only mine operation to be considered in N.P. calculation

James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

June 15, 1983

Lee Harbers
Cooper Aerial Photography
1692 W. Grant Road
Tucson, AZ 85705

Re: Enlargement and rectification of color air photos taken
9/7/73.

Dear Lee:

The following described job will include enlarging 1:24,000 scale color aerial photography taken on September 7, 1973, and rectifying and matching that photography to topographic maps, which are transmitted with this letter. All of these topographic maps, are blackline copies reproduced on a flatbed printer, so the scale should be accurate and distortion free. I have also included seven 5" x 5" color prints at a scale of 1:48,000 from a more recent aerial project over the same area. I would like the subject enlargements to be color matched as closely as is possible to the color balance on these 5" x 5" prints.

I am including black and white 9 x 9 prints from the 9/7/73 job, on which I have made transparent overlays showing the photo centers for the various enlargements required. These frames include 7-8, 4-4, 4-5, and 5-6. The photo centers of each of the enlargements has been plotted, and on the corresponding maps, the photo center has also been plotted. I have used red colors to indicate the enlargements to 1" = 500', purple for those to be enlarged to 1" = 200', and a green color for one photo which I would like enlarged to 1" = 100'. I have made one error which is worth bringing to your attention. That is the boundaries of the photographs would correspond to an 18" x 18" print, while I understand that the price break is on a 20" x 20" print. Thus, in adjacent photos there will be some overlap which is indeed desirable. This is particularly true on photo 7-8. However, I would like the photo centers to be moved diagonally inward so that there is more overlap, and no white margin produced on the 20" x 20" format size.

Lee Harbers

June 15, 1983

Page 2 of 2

There are also eight unnumbered photos from the State of Maine area. These are at a flight scale of approximately 1" = 500', and we have numbered them on the back of the photo. They are from two flight lines, flight line 1 and flight line 2. These photos should be rectified and matched to the 1" = 200' topography prepared by Cooper in 1973. Again, the photo centers should be moved diagonally so that the 20" x 20" borderless format is maintained.

Additionally, I am enclosing 1:24,000 scale U.S.G.S. topog maps - the Tombstone, the Fairbank, the Lewis Springs, and the Tomsbtone southeast 7 1/2 minute quads. On these maps, I have noted photo centers from the color photo project in orange. These stereo pairs, which are listed also on Attachment 1, are to be enlarged two times. I don't know whether it is possible to rectify these photos without an accurate 1:12,000 (1" = 1,000') map. If it is, I would like to have you do so. If not, maybe we should discuss enlarging the base U.S.G.S. maps to 1" = 1,000'. I have no base map coverage at 1" = 500' for enlargements 7-8 #1 and 7-8 #2, so the same would apply. The centers for these enlargements are plotted on the U.S.G.S. Tombstone quad in red.

I would also like to have 2 copies each - contact prints of the entire flight. That would include the unnumbered photos at a scale of 1" = 500' over the State of Maine area. I would prefer, of course, to have these photos numbered. Attachment 2 is a summary of this job, and my understanding of the prices for the work.

Sincerely,

James A. Briscoe

JAB/ms

Attachments

ATTACHMENT 1

Fairbank Quad

2-8, 2-9, 2-10	-	3
4-4, 4-5, 4-6	-	3

		6

Lewis Spring Quad

4-1, 4-2, 4-3	-	3
---------------	---	---

Tombstone Quad

5-4, 5-5, 5-6, 5-7, 5-8, 5-9	-	6
6-4, 6-5, 6-6, 6-7, 6-8, 6-9	-	6
7-6, 7-7, 7-8, 7-9	-	4

		16

Tombsbtone SE Quad

5-1, 5-2, 5-3	-	3
6-1, 6-2, 6-3	-	3
7-1, 7-2, 7-3	-	3

		9
		=====

TOTAL 34

ATTACHMENT 2

1.	36 18" X 18" prints	
	2 X enlargements at 1" = 1,000 (see Attach. 1)	
	\$50.27 x 36 =	\$1,809.00
2.	Frame 7-8	
	9 20 x 20 enlargements:	
	4 at 1" = 500'	
	5 at 1" = 200'	
	\$50.27 x 9 =	452.43
3.	Frame 5-6	
	4 20 x 20 enlargements	
	2 at 1" = 500'	
	1 at 1" = 200'	
	1 at 1" = 100'	201.08
4.	Frame 4-5, 1" = 500' - 20 x 20	50.27
5.	Frame 4-4, 1" = 500' - 20 x 20	50.27
6.	9 unnumbered frames - State of Maine area at 1" = 200'	
	\$50.27 x 9 =	452.43
7.	2 copies of entire Tombstone flight	
	9 x 9 contacts	
	113 x \$5.46 x 2	1,233.96
		<hr/>
	TOTAL	\$4,249.44



Amoco Minerals Company

U.S.A. Minerals Exploration
7200 South Alton Way
P.O. Box 3986
Englewood, Colorado 80155
303-740-5638

June 17, 1983

Mr. James A. Briscoe
5201 E. Glenn #120
Tucson, Arizona 85212

Dear Mr. Briscoe:

I apologize for such a lengthy delay in responding to your Tombstone submittal. However, contrary to the general condition in the mining industry, we have had a lot of drilling activity recently, and it has been difficult to get the necessary people together to consider new projects. We are interested in discussing a mineral lease or a purchase option with Tombstone Development Inc., but we are concerned about the patented claims under lease to Tombstone Exploration. One of our primary objectives involves part of this area.

Art Humphrey, the U.S. Exploration Manager, will be out of the office for at least a week and then I have to go back to the Southeast. However, I have completed my geological evaluation and made recommendations. If you wish to discuss the timing or terms of a contract offer while I am away, I would suggest calling Art or Bill Burton, the Senior Regional Geologist.

We appreciate the information you have provided on the Tombstone District. The area does appear to have considerable potential, and I hope that we will eventually come to an agreement that will permit us to work in this district.

Sincerely,

William Zelinski
Senior Geologist

WPZ/jrg

W. D. Burton
A. G. Humphrey

FMC Corporation

Energy Center
717 17th Street Suite 1620
Denver Colorado 80202
(303) 623 1880

295-7391



June 20, 1983

Mr. James A. Briscoe
5701 E. Glenn St.
Suite 120
Tucson, AZ 85712

Dear Mr. Briscoe:

As per our telephone conversations, FMC is still interested in the properties offered by Tombstone Development Company. As stated after my April 14, 1983 visit to the property, I would like to study the thesis and geologic maps of the area. Perhaps they have gotten lost in the mail.

Again, I would like to thank you for the tour of the area and for your consideration of FMC. Please note our new address and phone number.

FMC Corporation
City Center 4
1801 California Street
Suite 2720
Denver, CO 80202

(303) 295-7391

Sincerely,

A handwritten signature in black ink, appearing to read "R. Wheatley".

Robert R. Wheatley
District Geologist

RRW/vs

cc: H.N. Hurst

MEMO

TO: Jim
FROM: Tom
DATE: June 27, 1983

RE: Prospecting Permit Acquisition

Jim,

Estimates for going to Propsecting Permit stage on State of
Arizona Lands, Charleston Area

STATE OF MAINE

Section 8, T.20S., R.22E.
Lot 2, SW1/4,NW1/4SE1/4,
236.78 acres at \$2.00/acre =

\$ 474.00

\$ 474.00

TOMBSTONE BASIN

Section 6, T.20S., R.23E.
ALL
639.15 acres at \$2.00/acre =

\$1,280.00

Section 7, T.20S., R.23E.
ALL
638.80 acres at \$2.00/acre =

1,287.00

\$2,558.00

POSSIBLE

Section 19, T.20S., R.23E.
Lots 1-4,E1/2SE1/4,E1/2SW1/4Less Dot #12911
308.58 acres at \$2.00/acre =

\$ 618.00

\$ 618.00
=====

TOTAL ALL \$3,650.00

LESS POSSIBLE \$3,032.00

Page 2, Part 3, second sentence

"Lessee agrees that it shall not unreasonably stockpile ore for any excessive period of time after active and substantial production from the leased claims has commenced, and in no event shall Lessee stockpile ore for more than six months after production has commenced".

If this is the case, then ideally a cut-off grade should be established as to what is ore and what is not ore. Ideally, this will hinge on economic conditions and mining costs, however, a "low grade" stockpile is believed to be present on the property not agreeing well with the above terms and conditions. Since the "low grade ore" has been mined, it seems reasonable that an attempt should be made to beneficiate the values and in turn, payments of royalties to Lessor.

Assuming 50,000 tons being mined per month of 1 ounce, 1 ton material Ag and the Ag to Au ratio being 80:1 with an Ag value of \$12.50 and an Au value of \$425/oz., and 75% recovery from leaching

Then: 50,000 tons x 75% x (1 oz Ag / (1/80) oz Au)

$$= 37,500 \text{ oz. Ag} \times \$ 12.50 = \$468,750.00$$

$$= 469 \text{ oz. Au} \times \$425.00 = \$199,219.00$$

$$= \$667,969.00 \text{ Gross} \div 50,000 \text{ tons} =$$

$$= 13.35/\text{ton} = .05\% \text{ to TDC or } \$33,398.00$$

Fig. $\$15.25 = 43,801/\text{ton}$ = difference of 6,200 tons
 = 12.5% error. This is a high figure, however, it results in a difference of 1 out of 8 loads to the heap.

While in Tombstone, I overheard conversations stating that a certain carrier-all driver over estimated his loads by 3 or 4 per day on a total of 30 loads. I think it was this figure out close to a 10 to 15 error factor - this should be reviewed if possible.

Assuming the above factors = 43,500 tons at \$15.25 = \$663,375 x .06 = \$39,802 - a rather hefty \$6,000+ dollar increase in royalty payments -

\$360,000 - max advance royalties since inception of advance royalties

Last month ^{alone} along, somewhere between \$60,000 and \$75,000 in minimum royalties should have been paid - if this is the case, then 7 months of current production to pay off advance royalties.

Payment in kind with option contracts may be worth investigating as market fluctuation could vary as much as 15% to 25%.

is this based on the value from 12.5% error then

then only 43,801 tons vs 50,000 would be req. to give the above gross metal value

The royalty percentage shall apply to all mineral and will be based on all monies received or the market value of all ore, metals, minerals, and non-metallic minerals removed from the property

Page 4

Under such a provision, "ores" or waste on the Belcher have a market value and since they have been removed from the property an assessment should be made to their value and then assessed to T.E.I. if they are not removed at once or if they cannot be removed.

replaced

replaced on TDC property

Page 5 - 4 Operation of Mine - 1st Sentence.

By dumping waste or ore on the Belcher claim, T.E.I. has failed to comply in a positive manner to this provision. In addition, by not carrying on a sufficient exploration program waste dumps, etc "may have" been placed or may be placed on areas workable in the future thus not bring about a maximum and efficient use of the property.

Page 5 - Appendix "13" an inventory of equipment, buildings and other property.

Doesn't show up an an attachment.

Page 6 - Weekly progress reports will be sent to Lessor, as well as all data generated relating to the leased claims, etc.

By this provision, any and all assays should be made available along with development work, geology, drilling, etc. Obviously, T.D.C. doesn't have much of the information generated - if so, tonnages of ore mined, geologic projections, etc. would be available in your suit, Jim. T.D.C. should press hard to receive all information available. This will help them make decisions related to selling property and misc.

Page 9, Part II

Page 8 #10 - Improvements lessee may construct mine dumps on property. This may be construed as to only their property.

and Page 7 - Lessee further agrees to do all other things necessary and required by federal, state and local laws and regulations (this is assumed to be civil also), to protect and defend and maintain Lessor's title to the leased claims...

Obviously, T.E.I.'s disregard of the Belcher owner request to remove waste has led to a breakdown of this provision. T.D.C. could be party to an adverse judgement brought against them by the Belcher owners. I assume this would be on provisions of T.D.C. not reviewing and carefully monitoring activities by

T.E.I. As such, T.E.I., Tom Schloss, Dusty Escapule, T.D.C., Bill Hight, Frank Gallup, Jim Briscoe, ^{Austin} Austing Mining, etc. could all potentially be parties to a suit initialed by the Belcher owners - this is a worse case approach. This could jeopardize the fortunes and livelihood of all involved. Depending on potential consequences, T.D.C. and others involved may want to cancel the agreement or initiate a suit for management misconduct or receive a large financial consideration or other form of capitalization such as removal of interest in unpatented claims.

Page 7. Has T.E.I./Austin Mining been paying taxes as provided on Page 7? If not, they should be.

Page 9. Does Lessee still have a \$150,000 bond for failure to pay taxes - liens etc. as per section 12, Liens.

Page 10. 15 insurance - does T.E.I. have a two million dollar insurance policy in force?

Although several references are made to 18 unpatented claims by Attachment "A" not inclusion of 18 unpatented mining claims are found. These claims have been either removed before signing or oversight made at the time of signing. Currently, unless there is an agreement to the effect of transferring the claims - they are not part of the T.E.I. lease - even though there may be a gentlemen's agreement unless as by provisions of the lease, no changes may be made unless in writing and signed by parties involved.

Review of the lease indicates the following:

Unpatented Claims

T.D.C. 1 through 18 not included
T.D.C. 19 through 31 not included
T.S. 1 through 566 not included

Patented Claims

13.94 acres	Banner	Section 11 & 12
7.74 acres	Hard Up	Section 11 & 14
??	Hope - Questionable validity	
.85 acres	North Ext. of the Sulphuret	Section 11
12.13 acres	Silver Plume	Section 14 & 23
2.12 acres	Silver Thread	Section 11 & 12
19.49 acres	Standard	Section 15

As Found on Attachment A.

Should Be

Vigina
SW Ext Toughnut
Protectors
Surveyor

Vizina
1st S. Ext. of the Toughnut
Protection
Survey

Mexicana
So. Ext. Central

Mexican
So. Ext. Grand Central

According to Page 1, Recitals - Appendix "A", should have M.S.#
and Book and Page of recording, not found. Therefore, with the
above - are this or are they not included in lease

Tombstone Chrono
file

James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

October 4, 1983

Bill Hight, President
Tombstone Development Company
P. O. Box 1445
Grand Island, NE 68801

RE: The Frederico ground, potential stock underwriting with Seth Horne - suggested joint venture, and delineation of state ground in Robbers Roost area vs. federal mining claims

Dear Bill:

As I described to you in our telephone conversation Saturday, on Friday we found out that Frederico does not yet have clear title to his property. In spite of signing the agreement with Tom, dated August 15, 1983 (Attachment 1), he still apparently has an agreement with a machine shop owner, a Mr. Able, from Wilcox. This agreement is simply an option to purchase, but with no clear work commitments, nor minimum royalty or rental payments. We can only get a rough idea as to its content, though it probably is a legal document. The fellow has not filed any assessment work, and Frederico feels that the contract is null and void. Tom has suggested that Frederico send him a termination letter, but we are hesitant to get involved in any deeper than that at this moment.

Assuming that we can get this straightened out, which I believe we can, the deal Tom has negotiated with Frederico is very advantageous. The full agreement is appended here as Attachment 1. On the following page I have summarized the terms:

Bill Hight
 October 4, 1983
 Page 2 of 5

Total Payments To Frederico	Timing Of Payments	Total Applied to Purchase Price of \$20,000	Option Period or Time Period	Cummulative Total Time Period
\$ 750.	On signing	0	6 Months	1/2 year
\$ 3,000.	\$250 for 12 months	\$ 1,500	12 Months	1 1/2 years
\$ 5,000.	At end of 1 1/2 years from start	\$ 5,000	1 Month	1 year 7 months
<u>\$13,500.</u>	\$250/month	<u>\$13,500</u>	<u>54 Months</u>	6 years 1 month
\$22,250.		\$20,000	6 Years 1 Month	

As you can see from the above, total payments to Frederico over 6 years and 1 month will amount to \$22,250. We can back out of the project at any time. There is only a payment of \$750 for the first 6 months, so it is practically risk free. For the next 12 months we have to make payments at \$250 per month - still having the option to terminate at any point.

I have included three maps labled Attachment 2, Attachment 3, and Attachment 4. Attachment 2 and 3 are colored xerox copies, and I have only sent one of Attachment 2 because of the expense of hand coloring. However, if Frank and Lavern would also like a copy, I would be happy to color up another couple if it turns out to be useful to you. Attachment 3 is a colored photograph of our original property map. In all cases, the scale on these are 1" = 3,000'. I have also included an overlay which can be superimposed on any of these maps.

On Attachment 2, I have colored the Tombstone Development Company lands in the Robbers Roost area a deep red for those that are federal mining claims, and kind of a pink color for those that are state lands. As you can see, the boundaries of these state lands are irregular, but approximate 4 square miles. The pink color under the bullseye target, which defines the Robbers Roost zone, is the area where Asarco drilled three deep holes. We took this away from Stewart Mines (Seth Horne) approximately 2 years ago. It is extremely important land, as it is almost a certainty that a large porphyry copper system with attendant peripheral silver, lead, zinc mineralization lies beneath it. This is the area that Tom Pitcher is confused about. As near as I can guess, Tom is referring to U. S. Bureau of Land

Bill Hight
October 4, 1983
Page 3 of 5

Management (B.L.M.) microfiche to do his land status work in the district. We also get updated copies of all of this B.L.M. microfiche. However, state lands do not, and I emphasize DO NOT, appear on this microfiche. Thus, he is confused that we do not actually own land in the Robbers Roost area. As this map shows, and as Attachments 5 (which are copies of our lease documents from the state), definitely show is that we do have state leases. But, we do not have federal mining claims, and of course the state leases do not show up on his microfiche. The light green color is the Stewart Mines (Seth Horne) Charleston Lead Mine claims. The yellow colored land belongs to Alanco (previously Tombstone Mineral Reserve). The Frederico claims are the Mustang #1 and #2, and lie between our state land blocks and bounded by the Alanco and Stewart Mines claims.

I called Seth Horne (President of Stewart Construction Co. of Phoenix) to determine whether they had any conflict with the Frederico claims. He said that they did not, and that they always considered them valid and have for many years. He did say that they were right in the process of going for a stock underwriting on the Charleston Lead Mine ground. I suggested to him that because of our strategic position over the Robbers Roost alteration zone, it would be difficult for them to work without us, although it would also be difficult for us to work without them. I then suggested that maybe we could work together on the underwriting for a new company. He was very enthusiastic about this, and suggested that we get together in Phoenix next week and review it over lunch. I plan to get back in contact with him on Monday, the 11th.

I also reviewed with him the idea of consolidating all of the mining claims in the State of Maine area, where he also owns ground. He was also enthusiastic about this idea, and suggested that it could best be done under a separate underwriting for a different company.

Attachment 3 shows my concept of these two ideas. In the lower left hand portion of Attachment 3 (with the green outline), is a general outline of the combination of Stewart Mines ground and Tombstone Development Company state leases and federal mining claims. I would propose that this be called the Charleston Consolidated Mining Company ground, and be underwritten as such. I would suggest that Stewart Mines retain 60% of the equity here, and Tombstone Development Company retain 40% of the non-public equity. Since Horne and Company have spent probably in the range of two million dollars on this ground in the last 15 years, they should probably take an 80-20 split of profits until they get their money back, and then profits could go 60-40.

Bill Hight
October 4, 1983
Page 4 of 5

In the upper right hand portion of Attachment 3 (orange outline), is the area around what I believe to be the State of Maine center. This would be much more complicated since more individual owners are involved, but if we consider my outline, the Tombstone Development Company has a substantial land position so we should get at least a substantial percentage. We would have to work with Charlie and Louis Escapule for the State of Maine ground, and probably with their new partners, Cobb Resources. Further, we would have to work with Ernie Escapule and Joe Escapule, as well as several others. If we can get the cooperation of the Escapules (which I believe we can), and Horne, I think that the underwriting of the company could probably go ahead, and we could buy the others out at a later time.

Although we still have Amoco, Newmont, FMC, probably Goldfields, and possibly others interested in these areas, I think that the formation of these two companies would be the best possible way to go. All of the land would then be consolidated into two easily identifiable entities. Once this is done, agreements with larger mining companies, such as Newmont, could then be made if advantageous, or smaller veins, such as the State of Maine, or what I believe exists on the Frederico claims, could be put into production separately.

I hope that the above can be accomplished, and I will see what Seth Horne has in mind, as well as presenting these ideas to him, with your approval, of course. In the interim, I still believe that we should go ahead with the state ground trenching (see the label trenching in red in the upper righthand portion of the map, Attachment 2) and at the Frederico claims, if and when we can get them. An approximate budget for the trenching work, including the Frederico claims is as follows:

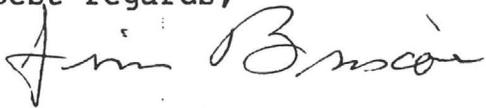
Escapule backhoe with operator & fuel \$75/hour X 8 hours/day X 5 days	\$ 3,000.00
UNC MAP silver assay instrument @ \$980/day X 2 days	1,960.00
Mobe & De-mobe from Albuquerque	150.00
Jim Briscoe @ \$25/hour X 8 hours X 7 days	1,400.00
Tom Waldrip @ \$25/hour X 8 hours X 7 days	1,400.00
Payment to Frederico	750.00
Rehabilitation of federal & state land w/ bulldozer	1,000.00
Tom Waldrip @ \$25/hour X 8 hours X 2 days or Jim Briscoe	400.00
	=====
	\$10,060.00

Bill Hight
October 4, 1983
Page 5 of 5

Please note that I have also included \$1,400 for land rehabilitation. We will have to do this for the state ground, and may well have to refill the trenches for the B.L.M. on the Frederico claims if we do not go forward with a mining operation. We expect to have a state permit within 30 days for the trenching work. It is hard to tell on the Frederico ground, since we don't know when we will clear up his title. But it should, hopefully, be within 45 or 50 days.

Please give me your thoughts on the above.

Best regards,



James A. Briscoe

JAB/ms

Attachments

cc: Lavern Baxter
Frank Gallup
(without Attachments 2 & 4)

Tom
Tombstone

James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

October 4, 1983

Mr. Robert Larkin
Minerals & Energy Section
Arizona State Land Department
1624 West Adams
Phoenix, AZ 85007

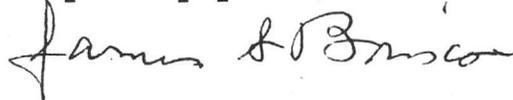
RE: Plan of operations and reclamation plan SE 1/4 Section 8,
T.20S., R.22E., Fox Ranch area, Tombstone Mining District,
Cochise County, Arizona

Dear Mr. Larkin:

Enclosed with this letter is Attachment 1, which is a map showing the location of our proposed exploration work in the southeast quarter of section 8. The area of operations will be approached by existing roads. We plan to use an International tracked backhoe with a 1/2 cubic yard bucket. Approximately 2,000' of trench 1 to 8' deep, will be dug through an area of existing mining shafts and trenches. These shafts and trenches date back to at least 1905, and probably before. It is anticipated that less than 5 acres of ground will be disturbed, and the only vegetation that will be impacted will be mesquite and white thorn acacia.

This work is being performed for the Tombstone Development Company at P. O. Box 1445, Grand Island, Nebraska 68801. The person in charge of operations will be James A. Briscoe at 5701 E. Glenn St., #120, Tucson, Arizona 85712. Since this is an area of previously active mining operations, and additional sampling and geology may be required from time to time, if it is not found presently economic to commence a full scale mining operation, we would like to leave the trenches open. Spoil heaps from the trenches and any disturbed ground will be re-seeded with native grass seed.

Very truly yours,



James A. Briscoe

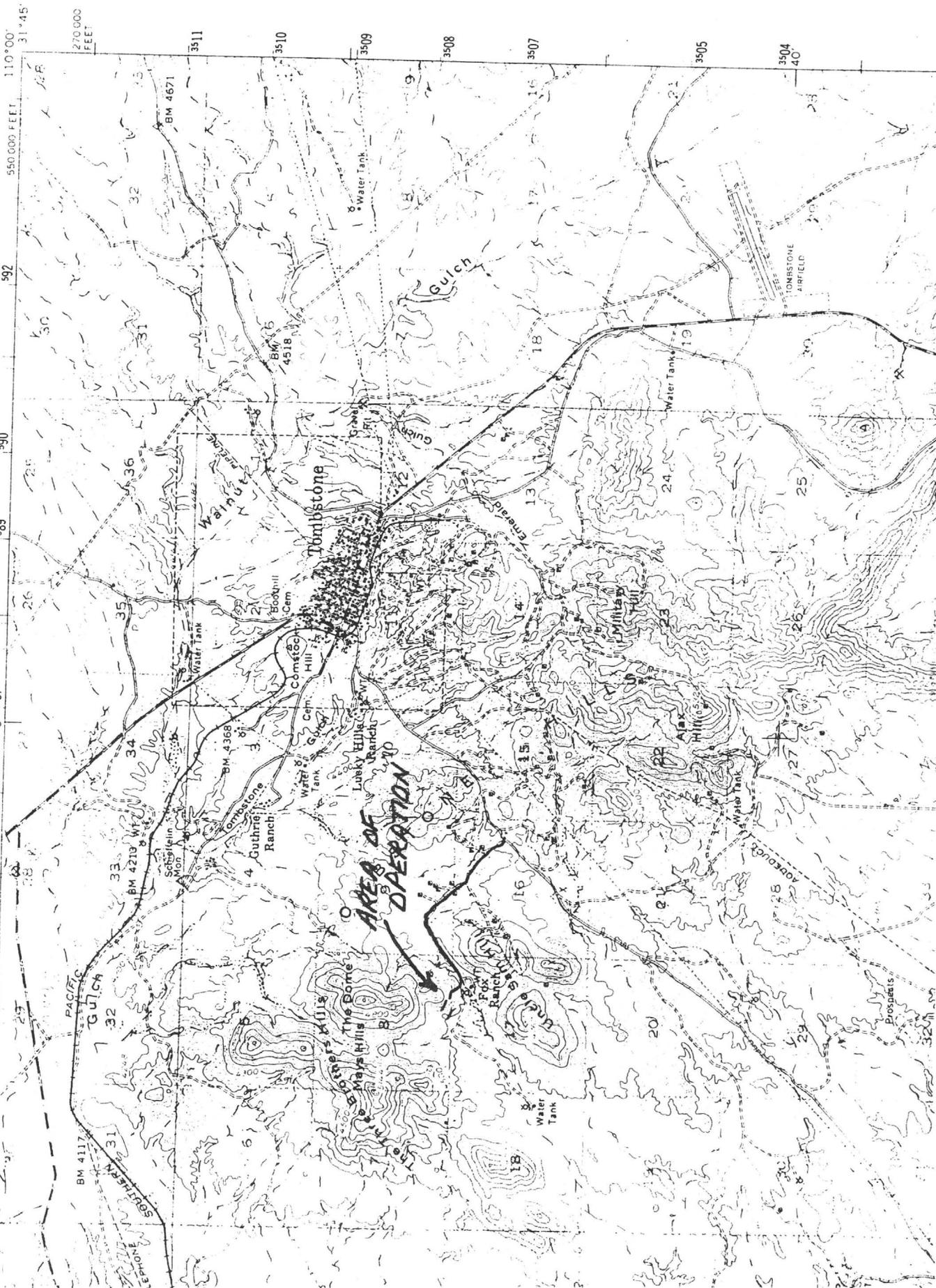
JAB/ms

UNITED STATES
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
3947

TOMBSTONE QUADRANGLE
ARIZONA-COCHISE CO.
15 MINUTE SERIES (TOPOGRAPHIC)

400' V
PERFECT

0 581 582 (SAINT DAVID) 584 587 589 590 592 550,000 FEET 110°00' 31'45" 270,000 FEET



James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

CERTIFIED MAIL #

0271578

October 4, 1983

Cochise County Recorder's Office
P. O. Box 184
Bisbee, AZ 85603

RE: Request for recording Annual Proof of Labor and Letter of Intent to Hold, Cochise County, Arizona

Dear County Official:

Please find enclosed a copy of the following items to be recorded in your county:

- ✓ 1. Tombstone Development Company - Tombstone Project - Proof of Labor - T.S. unpatented lode claims - recording fee submitted \$15.00.
2. James A. Briscoe & Associates, Inc. - Swisshelm Project - Letter of Intent to Hold - S.H.M. unpatented lode claims - recording fee submitted \$5.00.

A James A. Briscoe & Associates, Inc. check, number 2083, in the amount of \$20.00, is enclosed to cover recording fees. Should this check not cover necessary recording fees, please notify us of that fact, and appropriate funds will be sent.

The recorded document should be recorded and returned to James A. Briscoe & Associates, Inc. in the addressed and stamped envelope included.

Sincerely,

Thomas E. Waldrip, Jr.

Thomas E. Waldrip, Jr.

TEW/ms

- Enclosures:
1. JABA, Inc. check #2083 for \$20.00
 2. Proof - T.S. Group
 3. Intent - S.J.M. Group
 4. Self addressed stamped envelope

5701 East Glenn Street, Suite 120/Tucson, Arizona 85712/602-721-1375

TDCS

James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

October 7, 1983

Bill Hight, President
Tombstone Development Co.
P. O. Box 1445
Grand Island, NE 68801

RE: Transmittal of lease agreement between Dennis V. Abbl and Robert Frederico, request of permission to seek legal advice to determine validity

Dear Bill:

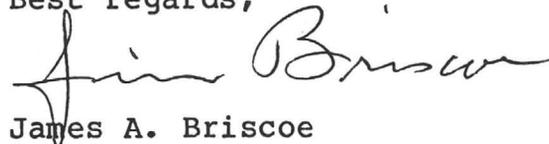
Enclosed please find the above referenced agreement between Dennis V. Abbl of Wilcox, Arizona, and Robert Frederico.

Obviously, this is a very poor contract from Frederico's point of view. It has no discernable end point because Abbl is not required to pay any money for the lease, and can renew it at any time. Further, it appears to me that he could produce from the claims without ever paying Frederico a royalty. If that evaluation is, indeed, correct, I think Abbl could mine the claim until it was exhausted, not pay Frederico anything, and still maintain a lease on the claim for as long as he wished, or simply return it to Frederico. In effect, Frederico has given all title to the claim for nothing.

I wonder if this is legally binding. Until we determine whether it is legally binding, it is unclear as to whether we should be dealing with Frederico or with Abbl. I would like your permission to consult your Tucson attorneys or any other mining attorney, if you would rather me not use them, and get an opinion as to what we should do next.

Give me a call if you have any other ideas.

Best regards,



James A. Briscoe

JAB/ms

Enclosure

I Dennis V. Abbl (Here inafter called lessee) Agree to pay
NA Dollars (\$), or make trade
for like dollar amount, to Robert Federico (Hereinafter
called lessor) for the lease of mining claim number MucTang
I 4 II which is located S25-T2C-R21
Cobice Co. In Tombstone Mining District
File No 1421 Page 175.

The above said lease is for the exploration on the property
described above as part of the mining claim. Lessor agrees
that the lessee shall have the below listed guaranteed
options and that they can be invoked by the lessee at any
time the lessee shall choose.

1. Above said lease shall be renewed automatically at
expiration if it is the desire of the lessee.
2. Above said lease shall be rewritten at any time to
cover anything pertaining to operations other than
explorations should it be the desire of the lessee.
3. Lessee retains the right to dispose of this lease or
any other existing lease thru the proper sale should
it become the desire of the lessee.
4. Lessor guarantees the lessee the option of buying
the above said mining claim for an agreed price of
\$15,000.00. The sale of the above said mining claim
shall remain the option of the lessee and can be
invoked by lessee at any time. The sale of such claim
shall make any lease in effect null and void.
5. Lessor agrees and guarantees that above said mining
claim is free from any encumbrances and is not

involved in any legal action of any nature at the time of the signing of this lease.

- 7. Lessee agrees to properly maintain the property while exploration is being done.
- 8. The above stated lease shall be for two years from the date of signing of this agreement.

It is also hereby understood and agreed that the lessor shall not be held responsible or liable for any bodily injury or property damage to those parties involved in the exploration on mining of above said claim, caused by willful or negligent action by lessee.

Date 8/30/80

Lessor Rafael L. Lewis

Witness Ronald J. Hill

Lessee Dennis P. Hill

State of Arizona)
) ss.
 County of Cochise)
 I, 30 days Aug 1980
Clarence E. Blount
 Notary Public in and for the County
 of Cochise, State of Arizona
 do hereby certify that the foregoing
 is a true and correct copy of the
 original of the within and foregoing
 instrument.

TDCS

James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

October 12, 1983

William Dolph, Esq.
Bilby, Shoenhair, Warnock & Dolph, P.C.
9th Floor
Valley National Bank Building
Tucson, Arizona 85701

RE: Transmittal of lease with option to purchase from Robert Frederico to Mr. Dennis V. Abbl for the Mustang I and II claims, Tombstone Mining District

Dear Mr. Dolph:

Enclosed is the agreement between Robert Frederico and Dennis V. Abbl concerning the Mustang claims.

The Tombstone Development Company is trying to purchase Mr. Frederico's two claims through agent Thomas E. Waldrip, Jr. Mr. Frederico executed a letter agreement with Mr. Waldrip on August 15. Since that time, the Abbl agreement has come to the fore. My interpretation of the Abbl agreement is that Frederico has essentially leased the claims for no consideration, and Abbl could actually mine the property to exhaustion before turning it back to Frederico. Mr. Abbl has apparently failed to file proof of labor for assessment work, though he has apparently done such work. Frederico has been filing the proof of labor, but feels that the agreement is null and void by Abbl's lack of performance in such filing. We would like to determine:

1. Whether the agreement with Abbl is binding.
2. Even if it is not binding, whether we would be better off dealing with Abbl.
3. Could we run the risk of being charged with collusion by Abbl, in the act of clarifying the legal situation for Frederico.

William Dolph, Esq.
October 12, 1983
Page 2 of 2

If you could chart a course for us, it would be most helpful.

Very truly yours,



James A. Briscoe

JAB/ms

Enclosure

cc: Bill Hight, Frank Gallup, Lavern Baxter
Tombstone Development Company

LAW OFFICES

BILBY, SHOENHAIR, WARNOCK & DOLPH, P. C.

NINTH FLOOR VALLEY NATIONAL BUILDING

CONGRESS AT STONE

TUCSON, ARIZONA

TELEPHONE [602] 792-4800

PLEASE DIRECT MAIL TO:

POST OFFICE BOX 871

TUCSON, ARIZONA 85702

October 19, 1983

KNAPP, BOYLE, BILBY & THOMPSON
1946-1954

BOYLE, BILBY, THOMPSON & SHOENHAIR
1954-1968

BILBY, THOMPSON, SHOENHAIR & WARNOCK, P. C.
1968-1975

RALPH W. BILBY
T. K. SHOENHAIR
HAROLD C. WARNOCK
V. E. DOLPH
DAVID W. RICHTER
CLAUDE A. VAN SLYKE
EUGENE C. GIESELER
JAMES F. MORROW
JOHN E. LINDBERG
WILLIAM H. TINNEY
JOHN A. ROBERTSON
DAVID A. PAIGE
ROGER S. LEVITAN
STEPHEN A. THOMAS
LINA S. RODRIGUEZ
MARY E. MANGOTICH
MARC G. SIMON
ANDREW M. FEDERHAR
MICHAEL J. RUSING
DOUGLAS J. NEWMAN
NANCY M. DREGNE

MICHAEL A. LACAGNINA
OF COUNSEL

OUR FILE NO. 91-145-001

Mr. James A. Briscoe
James A. Briscoe & Associates, Inc.
5701 East Glenn Street, Suite 120
Tucson, Arizona 85712

Dear Mr. Briscoe:

This letter is in reply to yours of October 12, 1983.

It is my understanding from your letter that Tombstone Development Company entered into an agreement to lease or purchase this property before it became aware of the Abbl agreement. If my understanding is correct, then the Abbl agreement would not be binding on Tombstone Development Company unless the Abbl agreement is recorded. I cannot tell from the copy you sent to me whether it has been recorded. If the agreement with Abbl was not recorded and Tombstone Development Company had no knowledge of it before it entered into its agreement, then I believe the appropriate course of action would be a letter to Mr. Abbl with a quitclaim deed and the required tender of money, demanding that he execute, acknowledge and return the deed to you for recording. If he fails to do so, then the next step would be a quiet title action against him, seeking the clear title of his claim and seeking attorney fees from him under the statute providing for the same.

If the Abbl agreement was known to Tombstone Development Company before the latter entered into its agreement with Frederico or if the Abbl agreement was recorded in the proper county recorder's office, then and in either of such events the Abbl agreement would be binding upon Tombstone Development Company to the extent that the Abbl agreement has any validity. Under such circumstances, it would seem to me that the wise course of action would be to have Abbl approached, either by Frederico or by Tombstone Development Company, in order to dispose of whatever claim Abbl may have under his agreement.

Mr. James A. Briscoe
October 19, 1983
Page Two

In view of the obvious lack of understanding or bargaining ability in Frederico, it would seem advisable to have this mission undertaken by someone else.

The question of whether the Abbl agreement is binding is one which is more difficult to answer. It certainly is a one-sided, inequitable, unfair agreement. However it is not, as you opine, completely without consideration. It does provide that Abbl agrees to "properly maintain the property while exploration is being done," whatever that means. That promise does constitute consideration. However, the contract is so ambiguous that a person might logically argue that it does not give the lessee the right to do any mining or removal of ore. It could also be argued that it is invalid because it could conceivably go on into perpetuity or at least for the life of Abbl and his assignees. It could also be argued that the contract could be terminated by Frederico because of Abbl's failure to file the appropriate notices of assessment work.

In any event, however, the question of the invalidity of this agreement should not be assumed if Tombstone Development Company intends to do any exploration or development work thereon. If that is to be done, then either Abbl should be persuaded to compromise his agreement and terminate it under a mutually satisfactory arrangement or litigation should be instituted to clear the title of this encumbrance.

If I can be of further assistance, please let me know.

Very truly yours,

W E Dolph
for Bilby, Shoenhair, Warnock & Dolph

WED:bac

TDCS

James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

October 20, 1983

Bill Hight, President
Tombstone Development Company
P. O. Box 1445
Grand Island, NE 68801

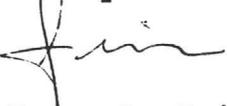
RE: Transmittal of letter concerning Frederico ground from Bill Dolph of Bilby, Shoenhair, Warnock & Dolph, P. C.

Dear Bill:

Attached is a letter I received today from Bill Dolph concerning the Frederico/Abbl contract. Obviously, the situation is fairly complex. Mr. Dolph is in Washington, D.C., but when he gets back I would like to spend a little bit of time with him reviewing the situation to be sure that we are proceeding properly.

Also, I got a call, as per your request, from Roger Newell of Newmont concerning your hoped for meeting between Newmont, Tom Schloss, and yourselves on November 14. Let me know if you would like for me to plan to attend the meeting with you.

Best personal regards,



James A. Briscoe

JAB/mas

Enclosure

cc: Frank Gallup
Lavern Baxter
Tom Waldrip

LAW OFFICES

BILBY, SHOENHAIR, WARNOCK & DOLPH, P. C.

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October 19, 1983

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MICHAEL A. LACAGNINA
OF COUNSEL

OUR FILE NO. 91-145-001

Mr. James A. Briscoe
James A. Briscoe & Associates, Inc.
5701 East Glenn Street, Suite 120
Tucson, Arizona 85712

Dear Mr. Briscoe:

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Mr. James A. Briscoe
October 19, 1983
Page Two

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If I can be of further assistance, please let me know.

Very truly yours,


for Bilby, Shoenhair, Warnock & Dolph

WED:bac

James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

October 26, 1983

William Dolph, Esq.
Bilby, Shoenhair, Warnock & Dolph, P.C.
P. O. Box 871
Tucson, AZ 85702

RE: Contract for sale of real estate on Abbl claims, Mustang I
and Mustang II, Tombstone Mining District, Cochise County,
Arizona

Dear Mr. Dolph:

As we discussed with you this morning in our telephone conversation, we learned Tuesday that Mr. Frederico has sold the Mustang claims, which we are interested in, to Mr. Dennis V. Abbl of Wilcox, Arizona. The purchase price was \$10,000, and apparently was paid in cash to Mr. Frederico. We have not seen a copy of the deed from Frederico to Abbl, but we understand that Frederico's wife's signature is not on it, though the deed has been recorded. We understand that we should get Abbl to get Frederico's wife's signature in an amended agreement so that there is no problem with title.

We think that the most expedient way of dealing with Mr. Abbl is to offer him a simple contract for sale of real estate that would allow us to purchase the claims for \$10,000 each (total of \$20,000), payable over a five year period at 10% simple interest. We would also want the following included in the lease:

1. A backout clause so that we could return the property to him with no further obligations, if exploration work showed that the property did not prove promising.
2. Accelerated purchase with no interest payment penalty (I believe that this would be taken care of by simple interest, but whatever is necessary, please do).
3. Clause showing that we would carry liability insurance and hold him harmless from any problems on the property, liens, etc.

William Dolph, Esq.
October 26, 1983
Page 2 of 2

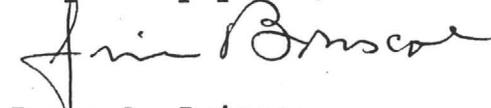
4. We would perform annual assessment work and adhere to other government regulations concerning the claims, including filing the necessary affidavits of labor on a yearly basis with the county and B.L.M.
5. The contract for sale should be transferable since of course Tom Waldrip is acting as agent for Tombstone Development Company.
6. It probably should also have the standard "boiler plate" clause of granting sole and exclusive possession of and right to enter upon the property and possess it including any extra-lateral rights pertaining to it, dips, spurs, etc., etc., water rights, and so on.
7. The initial payment would consist of 2 months of payments (what we are thinking here is first and last month, although I don't think that we have to tell him that). However, these monies would be held in escrow until satisfactory title is provided by Mr. Abbl. This would probably mean, the signature of Frederico's wife, and affidavits of labor for the preceding year from the county and B.L.M. If he won't, or is unable to clear the title, then we can do so for him, the cost of which would be deducted from the payment for the property.

Of course if you have any other suggestions, please don't hesitate to include them. Our feeling was to keep it as simple and straight forward as possible, and thus possibly getting a quick and positive response from Mr. Abbl.

Attachment 1 appended with this letter is a list of addresses and other pertinent data that will be necessary.

If we have overlooked anything, please don't hesitate to call me.

Very truly yours,



James A. Briscoe

JAB/ms

Attachment

MEMO

TO: James A. Briscoe
FROM: Thomas E. Waldrip, Jr.
DATE: October 26, 1983

RE: Telephone conversation with Mr. Dennis V. Abbl regarding his ownership of Mustang No.'s I & II lode mining claims in Tombstone Mining District (Charleston area), Cochise County, Arizona

Past Owner: Robert Frederico (See memo dated 4/21/83)

Current Owner: Dennis V. Abbl et ux.
Stella Abbl

Address: Box 684, Wilcox, Arizona 85643

Telephone: (602) 384-3657

Purchase Price: Reportedly \$10,000, however quit claim indicates \$800.00, and Abbl suggests a figure greater than \$10,000

Title: Appears clear - Stewart Mines official recognizes validity (see JAB toll call of early October - 10/3/83)

Terms: TEW terms: \$20,000 purchase price for two claims (\$10,000 per claim) for clear title over 60 months at 10% interest rate for total principal and interest of \$25,396.45. On a monthly basis, payments of \$424.84 for 60 months, capable of being terminated at any time. First and last monthly payment due on signing. No retained or carried interest on Abbl's part. Initial payment will be held in escrow until clearance of title. Open to initial work commitment, however, amount not stated.

Abbl Terms: \$100,000 per claim?? Wants to put claims out on bid

Recommendations: Draw up papers on purchase under above terms (TEW), and see if Abbl will sign. My conversations suggest a possibility that he will, since he has borrowed money and he would be making a handsome profit and interest. I get the feeling that Abbl has little or no money to proceed with any work. He suggests that as many as five people are interested,

one being his Geologist, Ron Worman (California).
This may be, but obviously, no one has come forward
with any money.

Agreement: The agreement is to be between Thomas E. Waldrip,
Jr., 4426 E. Patricia, Tucson, Arizona 85712, and
Dennis V. Abbl, Box 684, Wilcox, Arizona 85643



BRUCE BABBITT
GOVERNOR

Arizona
State Land Department

1624 WEST ADAMS
PHOENIX, ARIZONA 85007



OFFICE OF
STATE LAND COMMISSIONER

October 28, 1983

James A. Briscoe
5701 E. Glenn St., Suite 120
Tucson, AZ 85712

Re: Plan of Operations and Reclamation Plan
Prospecting Permit #08-87063, Sec. 8, Twp. 20S., Rge. 22E.

Dear Mr. Briscoe:

This office is unable to approve your plan at this time. Trenching programs are approved regularly, but on a much smaller scale and with continuous backfilling.

We would consider a phased sampling program with continuous reclamation. If you wish to propose such a program, please submit a revised plan including a map depicting proposed trench locations and a schedule for backfilling, recontouring and reseeding.

Sincerely,

Robert Larkin
Robert A. Larkin
Natural Resource Planner
Minerals & Energy Section
255-4628

4:40 call Thursday
→ Hal Susie →

11/1/83 3:15 - 3:25

RAL/plp

Problems 1. Open trenches & State Liability
2. Period - need continuous backfilling - not possible -
3. some reasonable period to keep open
→ liability can we get OK from grazing holder - would help.

4. Other trenching - get map of send to bot
5. Escapule's probably do work and fence & gate into area locked - so chances fairly remote anyone could get into area - this helps but still need some backfilling
6. Can we keep trenches to a certain depth - this might help.
7. No problem ^{we} will back fill as restoration bond could be pulled - best not to have to do this.
8. Plans - roads etc. new plan
9. if mill on site need commercial lease - best if we could truck ore out of area to private ground
10. Open pits ok but depends on mining plan ?? wait & see should be no problem but depends on size & amount of waist.

MEMO

TO: James A. Briscoe
FROM: Thomas E. Waldrip, Jr.
DATE: November 8, 1983

RE: Tombstone Exploration Inc. - News report of 100,000
gallons of cyanide pond break

Jim.

on Tucson Radio News (KNST?)

On November 7, 1983, it was reported^A that a tailings pond break discharged over 100,000 gallons of cyanide tainted waters into a wash south of the town of Tombstone, Arizona, and that various governmental agencies were investigating the spill. To date, it is unclear as to what pond broke, however, if it were the preg pond, a substantial amount of silver and gold values must have been lost. (Indications on that spill will not affect the ground water, however, the ground water in the area is being monitored). Below. I will propose three different amounts based on:

1. 0.1 oz Ag/ton solution,
2. 1 oz Ag/ton solution,
3. 2 oz. Ag/ton solution, and

approximate dollar value of each.

Assumptions: 240 gallons solution = 1 ton of solution Ag to Au ratio 80:1, and value of Ag = \$9.00/oz., Au \$380/oz.

1. 0.1 oz. Ag per ton of solution

100,000	gallons of solution	
-	240	gallons per ton =

	417	tons of solution
X	0.1	oz Ag per ton of solution =

	42	oz Ag, and approximately .05 oz Au
\$ 9.00	Ag X 42	oz Ag = \$ 378.00
380.00	Au x .5	oz Au = 190.00

	Total	\$ 568.00

2. 1 oz Ag per ton of solution

\$ 9.00	Ag x 417	oz Ag = \$ 3,753.00
380.00	Au x .5	oz Au = 1,900.00

	Total	\$ 5,683.00

MEMO

November 8, 1983

Page 2 of 2

3. 2 oz Ag per ton solution

\$ 9.00 Ag x 834 oz Ag =	\$ 7,506.00
\$380.00 Au x 10 oz Ag =	3,800.00

Total	\$11,306.00

As can be seen, a rather substantial amount of metal values could have been lost if an overflow pond was not in operation, as it should have been. In addition, I suppose one could also write off about 1,000 pounds of cyanide and a substantial amount of sodium hydroxide, estimated at 1,500 pounds to 4,000 pounds, plus a little less than 1/3 acre foot of water.

Tom

Cyanide @ \$ 300/lb =

TEW/ms	\$ 3 x 1,500	=	\$ 4,500
	\$ 3 x 4,000	=	\$ 12,000

Tombstone Chrono
file

James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

November 16, 1983

Robert B. Hicks
The Ainsley Corporation
Greylands
2055 Hamilton Avenue
San Jose, California 95125

RE: Transmittal of articles on cyanide heap leaching and computer controlled Merrill Crowe processing from California Geology, September, 1983, Engineering and Mining Journal, June, 1983, and Engineering and Mining Journal, April, 1983

Dear Bob:

Enjoyed meeting you during our get together at the Holidome Coffee Shop this morning. For your interest, I am enclosing three articles of recent date, which I have in my files.

Cyanide Heap Leaching in California, California Geology, September, 1983, gives a good run down on heap leaching in general. On Page 87, Figure 1, the diagram shows carbon column recovery. However, for the T.E.I. operation, Escapule Merrill Crowe Zinc Precipitation Plants are used. This is generally done at most silver leach operations because of the greater volume of metal recovered, and lower expense and greater simplicity of the Merrill Crowe process.

Leaching and Precipitation Technology for Gold and Silver Ores, E & MJ, June, 1983, also covers aspects of heap leaching technology. The most important part of this article from TDC's viewpoint is on Page 55, the last paragraph:

"Nevertheless, Potter reiterated that every gold plant and silver plant, even if you are using Merrill Crowe, should be using a carbon column somewhere in the system to scavenge precious metals from bleed streams and tailings return water. Homestake, for example, treats its tailings return water to recover 0.005-0.01 ounces per ton gold by passing water through carbon columns."

Robert B. Hicks
November 16, 1983
Page 2 of 2

I have noted that 0.005 ounces gold per ton of solution is equivalent to \$2 per ton of solution with gold at a \$400 per ounce price.

Computer Controlled Merrill Crowe Processing, Grub Stake Gold Mines Heap Leach Operation Is Now Interfaced With Automated Gold and Silver Recovery, E & MJ, April, 1983. This article describes a computer controlled system in use in Montana. The most important paragraph is at the end of the article, Page 59. I quote:

"The automatic computer control system has dramatically reduced work load of the analytical chemists and has enabled the plant operator to be assigned to other work tasks.... And by continuously monitoring production throughout the Merrill Crowe process, the system has become an important tool in safeguarding gold production at the mine."

I am also enclosing a copy of the proposed lease on the Mustang claims and a computer print out of the monthly payment, at interest rates from 10% to 20% by 2% increments for your review. As you can see, the difference in monthly payments is not very significant compared to paying a royalty. The document went to Mr. Abbl today.

Very truly yours,



James A. Briscoe

JAB/ms

Enclosure

cc: Bill Hight
Frank Gallup
Lavern Baxter

HOW MUCH IS THE MORTGAGE ?20000

WHAT IS THE INTEREST RATE ?10

OF YEARS TO PAY:
ENTER I.E. .5 FOR HALF A YEAR;
HOW MANY YEARS ?5

DO YOU WANT FAST OR SLOW PRINT:
ANSWER F OR S ?F

DO YOU WANT A DETAIL & A SUMMARY LIST,
OR JUST A SUMMARY LIST?
ENTER D OR S ?S

** I'M COMPUTING AS FAST AS I CAN !! **

ORIGINAL LOAN AMOUNT20000
TOTAL INTEREST PAID 5496.45
TOTAL PAYMENTS MADE 25496.45
TOTAL YEARS PAID 5
TOTAL MONTHS PAID 60
YOUR MONTHLY PAYMENT IS 424.94
THE INTEREST RATE IS 10 %

HOW MUCH IS THE MORTGAGE ?20000

WHAT IS THE INTEREST RATE ?12

OF YEARS TO PAY:
ENTER I.E. .5 FOR HALF A YEAR;
HOW MANY YEARS ?5

DO YOU WANT FAST OR SLOW PRINT:
ANSWER F OR S ?F

DO YOU WANT A DETAIL & A SUMMARY LIST,
OR JUST A SUMMARY LIST?
ENTER D OR S ?S

** I'M COMPUTING AS FAST AS I CAN !! **

ORIGINAL LOAN AMOUNT20000
TOTAL INTEREST PAID 6693.3
TOTAL PAYMENTS MADE 26693.3
TOTAL YEARS PAID 5
TOTAL MONTHS PAID 60
YOUR MONTHLY PAYMENT IS 444.89
THE INTEREST RATE IS 12 %

HOW MUCH IS THE MORTGAGE ?20000

WHAT IS THE INTEREST RATE ?14

OF YEARS TO PAY:
ENTER I.E. .5 FOR HALF A YEAR;
HOW MANY YEARS ?5

DO YOU WANT FAST OR SLOW PRINT:
ANSWER F OR S ?F

DO YOU WANT A DETAIL & A SUMMARY LIST,
OR JUST A SUMMARY LIST?
ENTER D OR S ?S

** I'M COMPUTING AS FAST AS I CAN !! **

ORIGINAL LOAN AMOUNT20000
TOTAL INTEREST PAID 7921.84
TOTAL PAYMENTS MADE 27921.8401
TOTAL YEARS PAID 5
TOTAL MONTHS PAID 60
YOUR MONTHLY PAYMENT IS 465.37
THE INTEREST RATE IS 14 %

HOW MUCH IS THE MORTGAGE ?20000

WHAT IS THE INTEREST RATE ?16

OF YEARS TO PAY:
ENTER I.E. .5 FOR HALF A YEAR;
HOW MANY YEARS ?5

DO YOU WANT FAST OR SLOW PRINT:
ANSWER F OR S ?F

DO YOU WANT A DETAIL & A SUMMARY LIST,
OR JUST A SUMMARY LIST?
ENTER D OR S ?S

** I'M COMPUTING AS FAST AS I CAN !! **

ORIGINAL LOAN AMOUNT20000
TOTAL INTEREST PAID 9181.72
TOTAL PAYMENTS MADE 29181.72
TOTAL YEARS PAID 5
TOTAL MONTHS PAID 60
YOUR MONTHLY PAYMENT IS 486.36
THE INTEREST RATE IS 16 %

HOW MUCH IS THE MORTGAGE ?20000

WHAT IS THE INTEREST RATE ?18

OF YEARS TO PAY:
ENTER I.E. .5 FOR HALF A YEAR;
HOW MANY YEARS ?5

DO YOU WANT FAST OR SLOW PRINT:
ANSWER F OR S ?F

DO YOU WANT A DETAIL & A SUMMARY LIST,
OR JUST A SUMMARY LIST?
ENTER D OR S ?S

** I'M COMPUTING AS FAST AS I CAN !! **

ORIGINAL LOAN AMOUNT20000
TOTAL INTEREST PAID 10472.03
TOTAL PAYMENTS MADE 30472.0301
TOTAL YEARS PAID 5
TOTAL MONTHS PAID 60
YOUR MONTHLY PAYMENT IS 507.87
THE INTEREST RATE IS 18 %

HOW MUCH IS THE MORTGAGE ?20000

WHAT IS THE INTEREST RATE ?20

OF YEARS TO PAY:
ENTER I.E. .5 FOR HALF A YEAR;
HOW MANY YEARS ?5

DO YOU WANT FAST OR SLOW PRINT:
ANSWER F OR S ?F

DO YOU WANT A DETAIL & A SUMMARY LIST,
OR JUST A SUMMARY LIST?
ENTER D OR S ?S

** I'M COMPUTING AS FAST AS I CAN !! **

ORIGINAL LOAN AMOUNT20000
TOTAL INTEREST PAID 11792.59
TOTAL PAYMENTS MADE 31792.5899
TOTAL YEARS PAID 5
TOTAL MONTHS PAID 60
YOUR MONTHLY PAYMENT IS 529.88
THE INTEREST RATE IS 20 %

CYANIDE HEAP LEACHING IN CALIFORNIA

By

KENNETH A. COLE
California Division of
Mines and Geology
Sacramento, California

and

ANN KIRKPATRICK
Department of Geology
University of Colorado
Boulder, Colorado

methods used,

plus

health and safety

aspects

MERRILL CROWE
ESCAPULE PLANTS 60
HERE AT TOMASTONE

The tremendous rise in gold prices in recent years initiated a new wave in interest in mining this metal in California. New areas of the State were prospected, and the older known gold-producing regions were re-examined to see if the price increase was enough to make it economical to recover gold from low-grade ore. Even waste rock and mill tailings from long-abandoned mines were assayed to see if they contained economic amounts of the metal. In many cases, the price jump alone would not have made reprocessing low-grade ores and wastes profitable if it were not for the introduction of a relatively simple, low-cost method of extracting the gold—cyanide heap leaching and activated carbon adsorption. This article is intended to provide a general introduction to the process and the chemistry/safety aspects of cyanide use for those who are not familiar with them.....editor.

INTRODUCTION

① Heap leaching, using sulfuric acid or acid ferric sulfate solutions, has been used for processing copper ores for many years. The heap leach method, using cyanide (CN) solutions, has made it profitable recently to mine many large low-grade and small high-grade gold deposits, and to re-process tailings and mine waste left from previous gold mining operations.

② Heap leaching is a fairly simple technique that avoids many expensive and complicated steps. In 1974, the U.S. Bureau of Mines (USBM) estimated that heap leaching of suitable ores, coupled with extraction of the dissolved gold by carbon adsorption, lowered capital costs to 23 per cent of those of conventional processes, and lowered operating costs to 30 to 44 per cent of usual costs (Bhappu and others, 1974).

Gold recovery by the heap leaching method, however, is often lower, ranging from 50 to 70 per cent gold recovery as opposed to the 92 to 96 per cent recovery possible using other methods of gold recovery. In addition, the ore or tailings to be processed must be thoroughly tested to determine suitability to the cyanide heap leaching process. The nature of the chemical processing makes it necessary to adequately provide for environmental protection and health and safety concerns in the plan of operation. Reclamation and disposal of liquid and solid wastes after completion of the project must also be considered in the planning process.

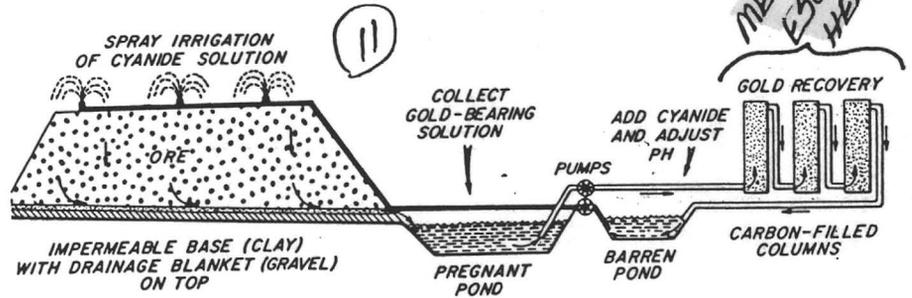
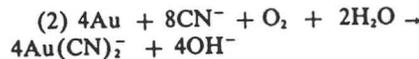
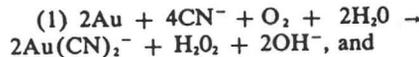


Figure 1. A simple heap leach setup. Methods for applying and collecting the solution can vary, but this is the basic leaching process.

HEAP LEACHING METHODOLOGY

In heap leaching operations, either crushed or run-of-mine gold ore is placed on specially constructed impermeable pads, and a dilute sodium cyanide (NaCN) solution is distributed into this heap by means of a spraying system or by ponding (Figure 1). The cyanide solution percolates through the heap, dissolving the gold according to the following reactions:



(Heinen and others, 1978).

Application of the cyanide solution by spraying is more common in California than the ponding system. The spray application system increases the available

dissolved oxygen needed in the reaction with the gold (equations 1 and 2 above). The ponding system of application is done by constructing berms on top of the heap to form one or more shallow ponds into which the cyanide solution is pumped.

In very cold climates, pipes and sprinklers used in spray application tend to freeze. Therefore, ponding has an advantage over spraying in cold regions in that the length of time that leaching can be done during the winter is extended (Beard, 1983). Ponding may have some limited applications within California, but spraying will probably continue to be the method that is commonly used.

At the bottom of the heap, the now gold-bearing solution is diverted by means of perforated pipes (Photo 1), a drainage blanket composed of gravel layered on top of the impermeable base, or gravel-filled channels to a "pregnant" pond, which is lined with compacted clay and/or plastic sheeting to prevent loss of the solution

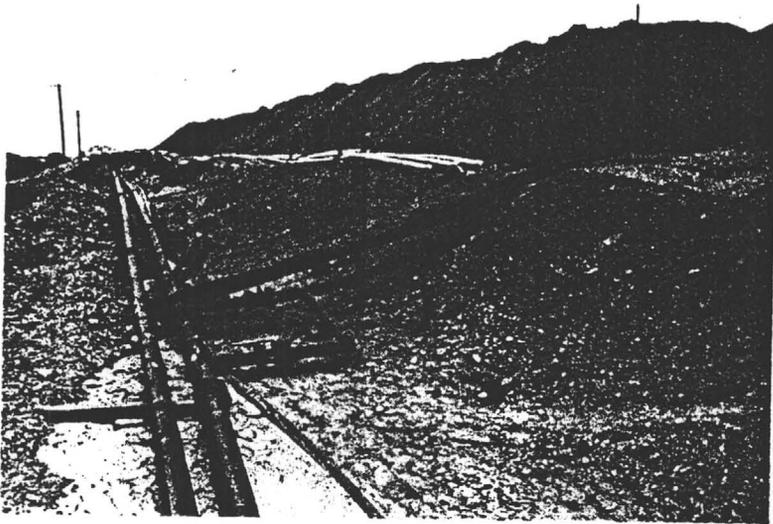


Photo 1. Drainage collection pipes (in this case perforated plastic pipe) are placed between the ore and the impermeable pad to collect the gold-bearing cyanide solution. All photos by Kenneth A. Cole.

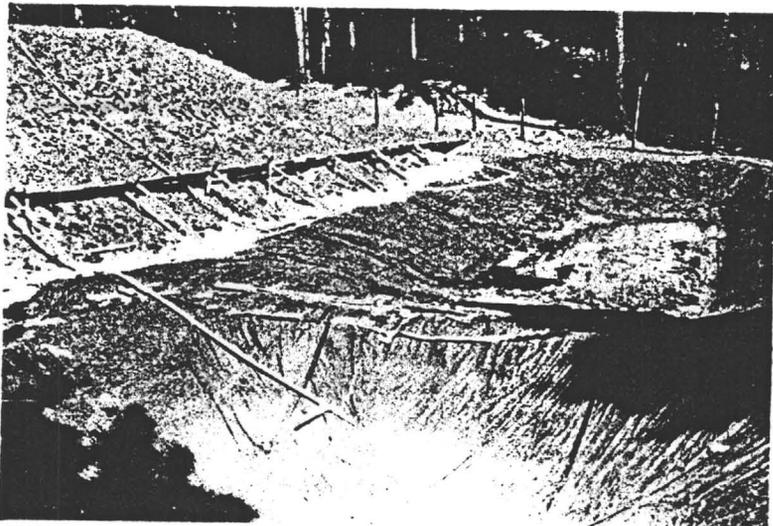


Photo 2. Both the "pregnant" and "barren" ponds are lined with plastic sheeting to prevent leakage at this small heap leach operation.



Photo 3. Pregnant cyanide solution is collected in pipes and fed into a cement sump, from which it is pumped to the recovery process site. A clay-lined emergency overflow and runoff collection basin surrounds the sump and insures that no cyanide overflows from the site as a result of heavy rainfall.

(Photos 2 and 3). The concentration of cyanide used in the leaching solution usually ranges from 0.5 to 2.0 pounds sodium cyanide (NaCN) per ton of solution, and the pH is kept between 10 and 11 (alkaline) to prevent the reaction of cyanide with hydrogen ions to produce toxic hydrogen cyanide (HCN). An adequate supply of dissolved oxygen is essential for efficient leaching of gold and silver. Aeration is provided through the sprinkling application of the cyanide solution, and available oxygen levels are enhanced by the loosely-packed construction of heaps.

One of the main advantages of the heap-leach recovery method is that it requires no special equipment to set up and, therefore, it has a relatively low capital cost. Commonly, standard pumps and plastic sprinkler systems are used to apply the cyanide solution and to move the pregnant solution to the recovery columns.

In areas that are too steep or too wet to use a heap leach system, vat leaching can be used. However, this is a more complex method of leaching and requires a higher capital outlay for operations (Photos 4, 5, and 6). In a vat leaching system, crushed ore is placed in a container with cyanide solution and agitated by rotating vanes or by bubbling compressed air up through the mixture.

Heap leach pads must be made of material which will not allow escape of the cyanide solution, and must be constructed to drain the pregnant solution toward collectors or a pond. Material used to provide the impermeable base can be concrete, asphalt, clay, plastic sheeting, or a combination of these materials. Concrete and asphalt are most often used on pads which will be reused because they will hold up under the stresses of moving ore onto and off of the pad. Compacted clay, or clayey soils are the cheapest materials to use if they are available locally. If the local soils are not impermeable enough, plastic sheeting can be used in conjunction with the soil material. In areas, such as the desert, where clay soils are rare, plastic sheeting is commonly used.

Although small heaps usually result in less compaction, heap sizes range from 1000 tons to 50 million tons, with heights ranging from 4 to 100 feet. Generally, ore that has been crushed can be leached in smaller (1000 to 10,000 ton) heaps, requiring 7 to 30 days for thorough leaching. Crushing to $\frac{1}{4}$ to $\frac{1}{2}$ inch gives better exposure of the gold to the cyanide solution, yet still allows for good percolation. Although crushing is a rather expensive

process, the percentage of the gold recovered from the ore is higher and, therefore, crushing is generally a cost-effective method for increasing recovery rates.

Uncrushed, run-of-mine material is usually placed in larger heaps and requires longer leaching time—typically 60 to 90 days. Some very large heaps have been leached for years before recovery was no longer profitable. The tailings at Cortez and Gold Acres gold mines in Nevada together provided about 5 million tons of run-of-mine ore which were leached over a 7½-year period in 117,000 ton heaps that were stacked 20-feet high and had base dimensions of 350 x 450 feet. Recovery from these ores, containing values of gold from 0.050 ounces to 0.015 ounces per ton, averaged 50 to 65 per cent (Duncan and Smolik, 1977).

(5)

The gold values contained in the solution that collects in the pregnant pond are generally recovered by adsorption on activated carbon. The pregnant solution is pumped upward through a series of three to five columns (Photo 7) filled with granular activated carbon, which is manufactured from coconut shells. The activated carbon adsorbs the gold-cyanide complex by a mechanism which is not fully understood. The first, or lead, column adsorbs all the gold from the solution until it reaches a loading of about 20 ounces of gold per ton of carbon, after which some of the gold-bearing solution will continue through to succeeding columns, resulting in a solution essentially barren of gold after passing through the entire series of columns.

The barren solution is pumped to a storage and makeup tank or pond where sodium cyanide (NaCN) and caustic soda (NaOH) or lime (CaO) are added to bring the solution back up to the desired concentration and pH prior to reapplication to the leach pile. Cyanide consumption varies greatly with different ores. Typical amounts range from 0.1 to 0.4 pound NaCN per ton of leached ore. To maintain the pH of the solution in the desired range, 0.4 pound of caustic soda or 1.0 pound of lime per ton of ore is generally needed.

When the carbon in the lead column becomes fully loaded (200 to 400 ounces of gold per ton) it is removed, the remaining columns advanced, and a column with a fresh charge of charcoal placed at the end. The loaded carbon is placed in a stripping circuit where it is treated with a hot (about 200°F) caustic solution containing NaOH and some NaCN. This removes the gold from the carbon and puts it into solution in a form that can be deposited by electrolysis.

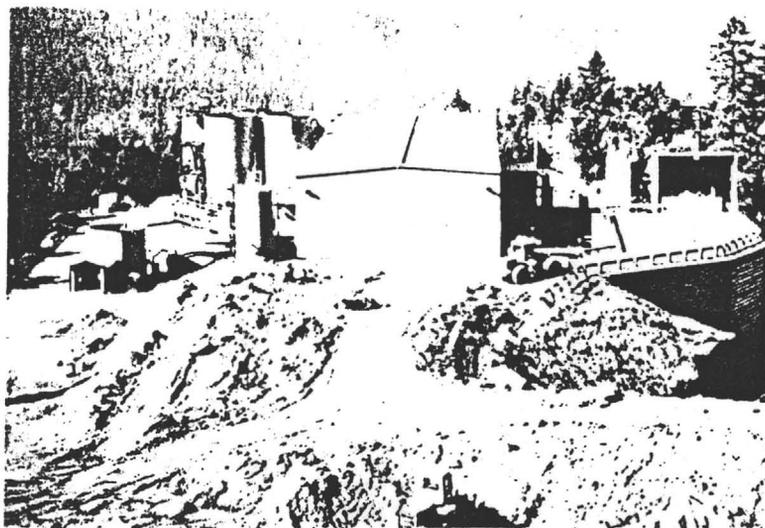


Photo 4. At this vat leaching operation, ore is fed in at the right, crushed within the building, placed into vats, with NaCN solution to the left of the building, and goes back into the building to a carbon pulp recovery system. Tailings are piped to the disposal pond and cyanide-containing water is recycled back into the process.

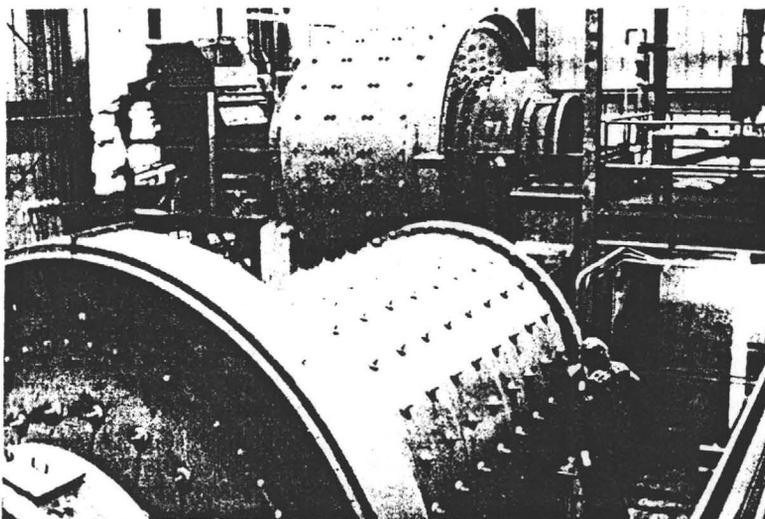


Photo 5. Rotary attrition mills grind the ore into sizes suitable for vat leaching. The ore must be small enough so that it can be agitated within the vats.

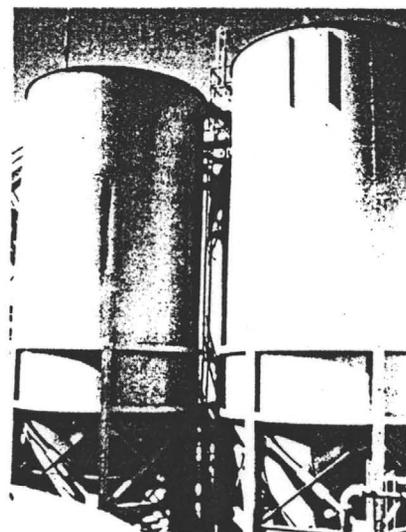


Photo 6. Steel vats used for leaching. A mixture of crushed ore and sodium cyanide solution is placed in the vat and agitated by compressed air which is fed into the bottom of the vat.

Development of this stripping method in 1952 has allowed carbon adsorption to replace precipitation on zinc dust (Zadra and others, 1952). Before this stripping technique became available, gold could only be removed from activated carbon by burning the carbon and then smelting the ashed residue. The costs involved in this were prohibitive for commercial application. Now, the carbon is washed, reacted, acid treated, and reused after stripping.

Improved stripping rates can be accomplished with the addition of an alcohol, such as methanol or ethanol, to the stripping solution, or by performing the stripping step in a pressure vessel at about 52 pounds per square inch. Pressurized hot caustic stripping also reduces the amount of NaOH needed and eliminates the need for NaCN (Potter and Salisbury, 1974). Whatever method is used, the gold-bearing strip solution is sent to an electrolytic cell where the gold in solution is reduced to metallic gold and deposited on steel wool cathodes. The spent electrolyte is then recycled back to the carbon stripping circuit and the gold-plated steel wool is refined.

6 During the carbon adsorption process, it is necessary to regularly analyze the solution coming from the last column. This is commonly done using atomic absorption analysis. When the gold begins to be present in significant quantities, it indicates that it is time to advance the carbon columns and place a fresh charge in the last column. A regular check of gold values in the solution entering the columns and in the solution leaving the lead column can also be used to indicate when that column is fully loaded.

REQUIREMENTS FOR SUCCESSFUL HEAP LEACHING.

7 Before a full-scale heap leaching operation is implemented, metallurgical tests on the ore and laboratory and pilot heap leaching tests are conducted to determine whether the characteristics of the ore make it suitable for heap leaching, and whether it requires any special treatments. For example, silver is present in many gold ores and will also be dissolved in cyanide solution. Steps to separate the silver out of the solution can be added either before or after carbon adsorption. This is usually accomplished through the use of sodium sulfide (Na_2S) to precipitate silver sulfide (Ag_2S) out of the pregnant solution. The filtrate is then processed as usual by carbon adsorption

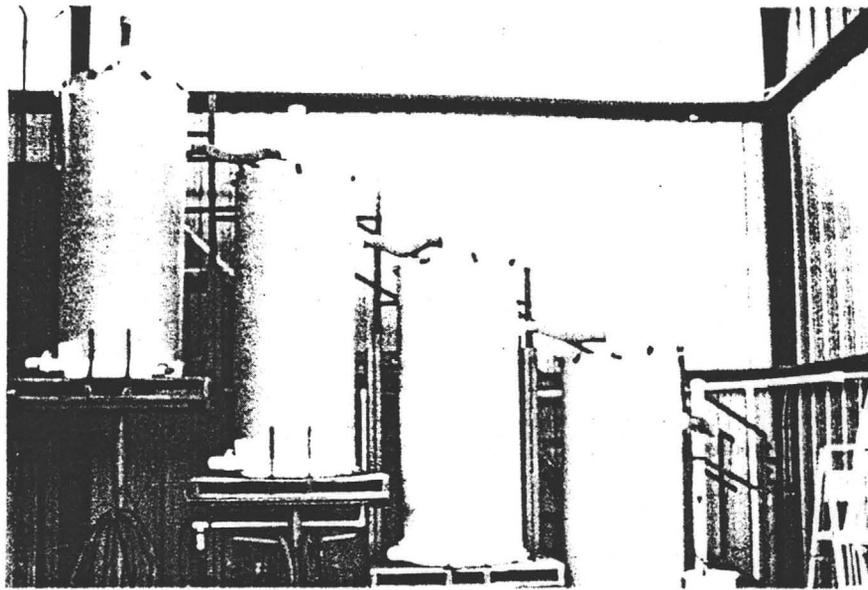


Photo 7. Lined steel columns, filled with activated charcoal made from coconut shells, are commonly used at heap leach operations to recover gold from the pregnant cyanide solution. The solution moves upward through each column.

to recover the gold. Silver sulfide can also be precipitated from the strip solution, and the filtrate is then electrolyzed to produce the gold (Heinen and others, 1978).

Heavy metal ions such as iron, copper, nickel, zinc, and manganese can retard the cyanidation of gold. Arsenic-containing minerals, such as realgar and orpiment, will react with the cyanide and inhibit the dissolution of gold. Sulfide minerals, such as pyrite, form acid when oxidized. This acid must be neutralized with larger quantities of lime or caustic soda. Carbonaceous materials, either occurring naturally in sedimentary deposits or from contaminants, such as charred mine timbers, will act as adsorbants for the dissolved gold. Other organic materials, such as oil and flotation reagents, will consume the dissolved oxygen that is necessary for the reaction of gold and cyanide (Heinen and others, 1978). Therefore, it is important to know the chemistry and mineralogy of the ore very well, and to design a process adopted to the characteristics of the ore. This will ensure maximum recovery of the gold and minimum consumption of reagents.

The ore to be leached must contain clean, very fine particles of native gold which can be readily dissolved by the cyanide solution. Most gold-bearing minerals, such as the tellurides sylvanite ($[\text{Au},\text{Ag}]\text{Te}_2$) and calaverite (AuTe_2), are not readily soluble in cyanide solution. Native gold contained in simple oxide or

sulfide ores, as well as some placers, is generally the most suitable for cyanidation (Heinen and others, 1978). The host rock must be either porous to allow for good penetration of the cyanide solution, or contain gold along permeable fractures. Most gold ores that are currently being leached are non-porous rocks containing gold values along permeable fractures. Porous rocks that contain disseminated values as products of weathering are also suitable for cyanidation (Mining Engineering, 1979).

9 Because the heap must remain permeable to the cyanide solution, ores containing excessive amounts of fines (minus 100 mesh material) cannot be leached unless they are subjected to agglomeration techniques such as those recently developed by the USBM (McClelland and Eisle, 1982). For ores containing moderate amounts of fines, proper heap building techniques will prevent segregation of coarse and fine particles within the heap, and compaction and pulverization of the ores by trucks and equipment, which hinders thorough leaching. These techniques are described in detail in an article in the Mining Congress Journal (Chamberlin, 1981).

10 The USBM agglomeration technique allows clayey gold ores to be successfully heap leached, and also reduces leaching time and cyanide consumption when used on ores containing only moderate amounts of fines. Lime or Portland ce-

ment, along with water or cyanide solution, is added to the ore and placed in a rotating agglomerator (Figure 2). This is followed by moist curing and results in a loose knit aggregate of fines and coarser particles. These aggregates are permeable, yet strong enough to hold together during leaching and mechanical handling (McClelland and Eisele, 1982). Agglomeration can also be accomplished to a lesser degree by wetting the ore prior to placement on the heap; the fines will become attached to the coarse particles as they roll and cascade during placement on the heaps.

HEALTH, AND SAFETY CONCERNS

Cyanide is very toxic, but there have been few problems reported in California from its use in the mining industry. This can be attributed to proper training of mine personnel, respect for the toxicity of the cyanide by those using it, and strict controls on setup, transportation, and use of this chemical. The process should be a closed circuit, with all solutions being recycled. The greatest potential for harmful exposure to cyanide comes from improper handling and disposal, which could result in accidental spillage of the formation of poisonous HCN gas.

The acute effects of cyanide poisoning in humans and other mammals are well documented. The chronic effects of prolonged low-level exposure on environmental systems and the longevity of cyanide are not well known. For these reasons, most of the agencies involved in the permitting process and regulation of cyanide heap leaching operations in California have taken a conservative approach. Operating permits are required from local and state agencies, including county planning departments, Regional Water Quality Control Boards, and the California Occupational Safety and Health Administration (Cal/OSHA), regarding water and air quality, hazardous material transportation, storage and use, and occupational safety.

Cyanide Compounds

The cyanide compounds of most interest in heap leaching are the cyanide salts sodium cyanide (NaCN) and potassium cyanide (KCN), hydrogen cyanide (HCN), cyanate (OCN^-), thiocyanate (SCN^-), and the metal cyanide complexes. HCN is a liquid which boils at 25.7°C , and is, therefore, found at room temperatures in both the liquid and gas

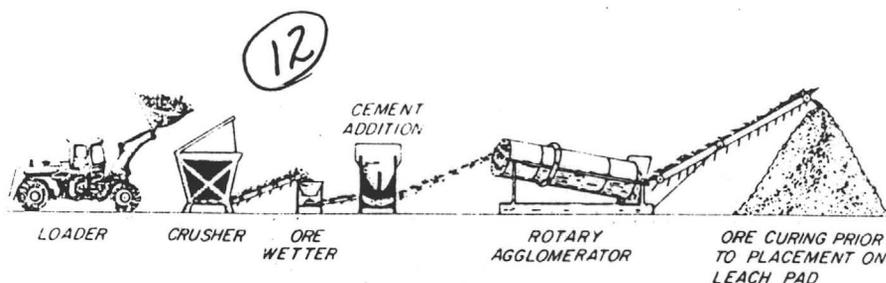


Figure 2. A simple process for preparing fine-grained ore for leaching consists of crushing, wetting, addition of cement, agglomeration, and curing.

phases. The cyanide salts dissociate in solution, resulting in potassium or sodium ions (K^+ or Na^+), cyanide ions (CN^-), and molecular hydrogen cyanide (HCN).

The cyanide ion and HCN are both toxic agents. Cyanate is formed from cyanide under oxidizing conditions and is less toxic than cyanide. Thiocyanates result from a reaction of cyanide with sulfur and are not toxic to humans. However, their presence in an acid environment results in the formation of HCN. Cyanide also reacts with many of the transition metals to form complexes such as ferrocyanide ($\text{Fe}[\text{CN}]_6^{4-}$), ferricyanide ($\text{Fe}[\text{CN}]_6^{3-}$), and many others. This ability of cyanide to complex with metals is responsible for both its usefulness in gold ore processing and for its toxicity.

Effects on Humans

When small amounts of cyanide are adsorbed into the blood, they are detoxified by reaction with thiosulfate to produce thiocyanate. When amounts larger than can be handled by this process are present in the blood, the cyanide complexes with the iron in the enzyme mitochondrial ferricytochrome oxidase. The activity of this enzyme, which is necessary for the production of oxygen, is then inhibited and results in anoxia. This lack of oxygen depresses the activity of the central nervous system, which, if severe enough, causes death.

Intake of cyanide can occur by inhalation of HCN gas or airborne salts; ingestion of salts; and absorption of liquid or gaseous forms through the skin. Inhalation of HCN at levels above 270 ppm are immediately fatal, whereas a level of 135 ppm is fatal after 30 minutes of exposure (Towill and others, 1978). Symptoms of acute poisoning are throat irritation, rapid pulse, headache, weakness, difficult breathing, numbness, collapse, and convulsions. Poisoning is treated by intravenous injection of sodium nitrate, followed by intravenous injection of thiosulfate.

Amyl nitrate and oxygen are administered as emergency measures until trained personnel are available. Other first aid measures include carrying the patient to fresh air, having the patient lie down, removing contaminated clothing, and flushing the skin with water if skin contact has occurred (National Institute for Occupational Safety and Health, 1976).

Research studies of the chronic effects of low-level exposure on workers in various cyanide-using industries were reviewed by the National Institute for Occupational Safety and Health in 1976. Long-term, low-level exposure was found to cause weakness, vertigo, nausea, headaches, dizziness, thyroid enlargement, and sulfur deficiency (National Institute for Occupational Safety and Health, 1976).

The acute effects that have been observed in humans and other mammals are similar, with each species demonstrating different thresholds of toxicity.

Effects on Fish

HCN is toxic to fish. Levels of free cyanide ($\text{HCN} + \text{CN}^-$) as low as 0.02 mg/l are lethal to some fish, with levels of 0.05 mg/l and above lethal to many more species. The threshold level varies with duration of exposure, pH, amount of dissolved oxygen, and temperature (Doudoroff, 1976). Further investigation of the effect of the sub-lethal levels of cyanide exposure on fish is needed because 0.01 mg/l of free cyanide can rapidly and lastingly impair the swimming ability of salmonoid fishes.

Effects on Plants

Cyanide inhibits respiration in most plants. The respiration of some plants, however, is insensitive to cyanide in varying degrees. In others, such as some legumes, cyanide can stimulate germination (Towill and others, 1978).

In 1978 the EPA conducted a study to review the available literature on longevity of cyanide compounds in the environment (Towill and others, 1978). Certain species of micro-organisms are able to metabolize cyanide to ammonia (NH_3) and carbon dioxide (CO_2). These organisms are found in most soils; therefore, it is generally believed that low levels of cyanide will not persist in soils. It has also been reported that cyanide breaks down readily upon exposure to air. However, indications are that these processes are not operating in the desert-like and arid environments where most of the heap leaching operations in California are located. Soils in these locations are very thin and have little organic matter containing the necessary micro-organisms.

Both the California Regional Water Quality Control Board (RWQCB) in the Colorado River Basin Region and the USBM in Reno, Nevada, have recognized the need for research in this area. The RWQCB has found cyanide in abandoned heaps in southern California, and the USBM plans to study abandoned heaps in Nevada to determine the residual cyanide levels.

Water Quality and Liquid Waste Discharge

Water quality and liquid waste discharge controls are necessary in heap leach operations to minimize potential cyanide release to the environment as well as to control sedimentation and erosion problems stemming from the mining operation itself. The nine Regional Water Quality Control Boards in California have responsibility for monitoring and enforcing waste water discharge regulations. In areas with high precipitation, surface runoff is a major concern. Contamination of surface waters with cyanide, heavy metals, acid mine drainage, and suspended solids must be avoided to protect water for drinking, irrigation, and watering of livestock, and to avoid adverse effects on fish, plants, and wildlife.

The processing solutions in cyanide heap leaching are usually recycled in a closed system because this method reduces operating costs and lessens the volume of solution which must be controlled. The RWQCB requires zero discharge from these operations. No water can be discharged during the operation without the special approval of the board. Facilities must be protected from flooding, inundation, and erosion result-

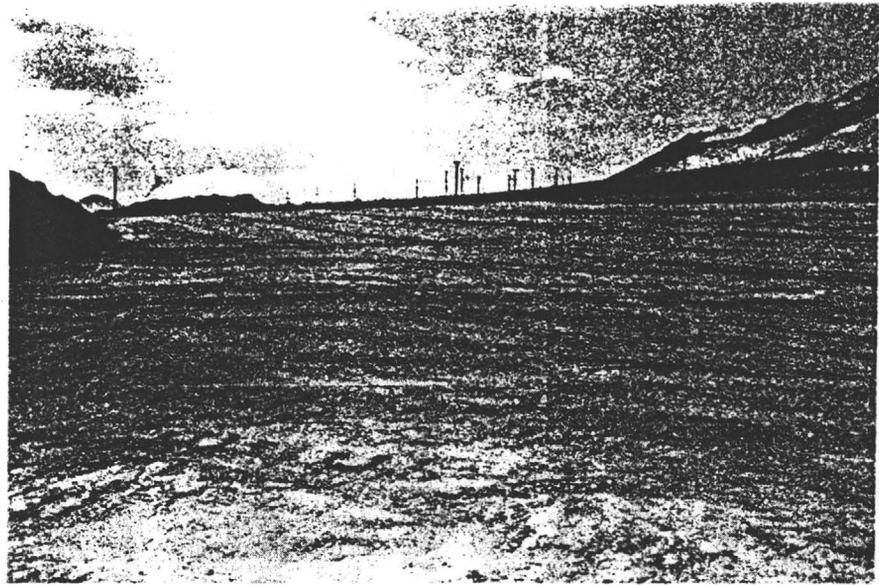


Photo 8. A new leach pad has been constructed using a sloping base, 18 inches thick, with a minimum of 30% clay. This pad will hold 600,000 tons of material at a 15-foot height.

ing from storms having a recurrence interval of 100 years or less. All possibly contaminated water must be retained on site (Photo 3). Berms and diversions to overflow ponds are usually constructed for this purpose.

Means of detoxifying cyanide solutions in the case of an emergency spill should always be available on site. Several neutralizing methods are known. Treatment with chlorine in the form of hypochlorite (OCl^-) is commonly used. The reaction that occurs forms carbon dioxide, sodium chloride, nitrogen, and water (Heinen and others, 1978). Cyanide can also be neutralized with chlorine gas or ozone. However, this method requires expensive equipment that would not be practical for the heap leach operator.

The solution resulting from neutralization with hypochlorite has a high salinity level. This has not yet been considered a problem in arid regions where the ground water is often naturally saline. High levels of heavy metals might also be contained in the solution and they would have to be precipitated out with lime or removed by other means before discharge would be permitted.

The hypochlorite neutralization process is also utilized in clean-up procedures at the closure of the operation. The cyanide solutions and processed tailings are neutralized and an analysis of cyanide concentration is submitted to the

RWQCB to determine neutralization acceptability before the solutions can be discharged. In drier areas solution ponds may be permitted to evaporate and any toxic residue that remains is shipped to an appropriate disposal site.

To prevent infiltration of solutions into the ground, leach pad and pond liners must meet permeability requirements of 1×10^{-6} cm/sec or slower. A leak detection system is desirable to detect leaking liners that can result from a wide variety of causes, including improper installation, the weight of the heaped ore, or differential settling. Many different materials have been used as pads and liners: compacted clay (Photo 10), asphalt, concrete, and plastics such as polyvinylchloride (PVC). Clay is preferable because of its natural ability to swell and repair any leaks that may develop. Whatever material is used, the RWQCB must approve design and construction of the pad before heap leaching can begin.

Solid Waste and Reclamation

Infiltration of waters into spent ore material may lead to problems if the ore is not neutralized properly after leaching. Depending upon the size of the operation, the amount of material processed, and the geographic characteristics of the site, the means of disposal of spent ore varies. The cyanide content of the material can be reduced to an acceptable level, as determined by the RWQCB, by washing with water or a dilute hypochlorite solution.

The tailings must then be stored in a location protected from surface runoff and from heavy rainfall. Leaving the heap in place on the pad usually affords this protection. This is done in many cases where the heap leach pad is not designed to be reusable and where suitable space is available to build more pads as needed. In some operations, spent ore is removed to either lined or unlined dump areas and the pad is reused. In another method, tailings are left in place, a liner is placed over them, and a new pad is constructed on top. Whatever method is used, the disposal site should be effectively isolated from surface flow and ground water aquifers.

Mine overburden must also be disposed of or used in ways to minimize erosion and problems of instability. Some overburden material may be used to level areas in preparation for leach pads, in construction of roads and diversion berms, or for backfill of mined areas with no future production value. Both overburden and tailings should be sloped at a ratio of 2 (horizontal) to 1 (vertical) or flatter to help prevent erosion and to enhance natural or planned revegetation efforts. Heap leaching results in fairly coarse tailings, so reclamation practices used with the fine tailings materials produced in vat and agitation leaching operations are not generally applicable.

Regrading of leach pads is done to help eliminate over-steep slopes, encourage natural drainage, and eliminate ponding (Jarrett and Kirby, 1978). The material can then be capped with three feet or more of soil to help prevent infiltration and provide a medium for seeding with the desired plant species. However, this is generally not possible in desert areas with little topsoil. In these cases, reclamation practices, such as grading to reduce slopes and enhance natural revegetation, may be the only practical means of restoring the area.

HANDLING AND STORAGE OF CYANIDE

Proper precautions must be taken in the handling of cyanide to eliminate the possibility of accidental poisoning and to minimize low levels of exposure that might result in adverse long-term effects. These precautions must be taken whenever unloading, opening, or emptying containers, handling or using cyanide, preparing solutions, cleaning tanks or equipment, or disposing of cyanide waste. CAL/OSHA has the responsibility for

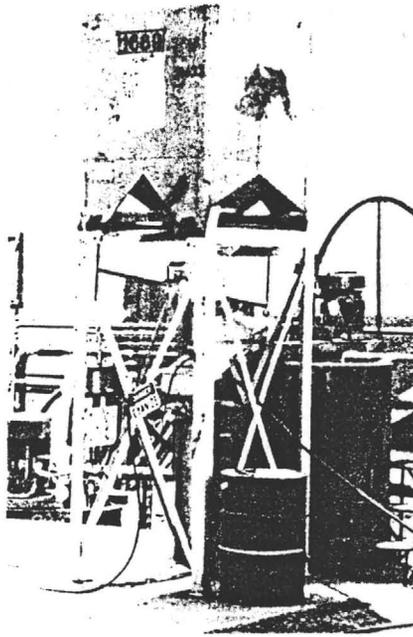


Photo 9. Cyanide briquettes are available in bins such as this one. These bins are handled with a fork lift and are reusable, thus eliminating many of the handling and disposal problems common to drum containers.

seeing that proper handling and storage techniques are followed.

Sodium cyanide used in the processing solution is transported in 200-pound drums as powder, granules, flakes, or one-ounce blocks. It can also be bought as a 30 per cent solution, or as briquettes which come in reusable bins (Photo 8). When transporting sodium cyanide, the containers must be properly labeled as to the materials and their hazards. The date, time, and route of transportation must be reported to the appropriate agencies, such as the Highway Patrol and the local county sheriff's office.

When storing cyanide, it is kept in sealed or tightly closed containers to protect it from moisture that may cause HCN to be formed. Empty containers can not be disposed of on site. Unwashed containers must be disposed of at a Class I disposal site; triple-rinsed containers can be disposed of in Class II-I disposal sites.

When handling cyanide in either the solid or liquid form, protective clothing and gloves should be worn. There should be no eating, drinking, or smoking in the areas where cyanide is present. Workers should be thoroughly informed of the hazards of exposure to cyanide, first aid

procedures, the need for protective clothing, and the proper procedures in the event of a spill.

Spills of dry cyanide should be swept up and the area thoroughly washed with alkaline water. Liquid spills should be neutralized with hypochlorite. All spills should be kept from coming into contact with acidic solutions (which may be present in sewer drains) as this will cause HCN gas to be formed. Exposure to CO₂ and water will also cause lesser amounts of HCN gas to be formed. Signs should be posted in the workplace giving first aid and emergency instructions, and first aid kits containing amyl nitrate ampules, physician treatment kits, and emergency washing facilities (Photo 9) should be on site (National Institute for Occupational Safety and Health, 1976).

Inhalation of gases formed during leaching is generally not a problem because the leaching is conducted outdoors. Studies by the Mining Enforcement and Safety Administration show that the HCN concentration in the air near heaps

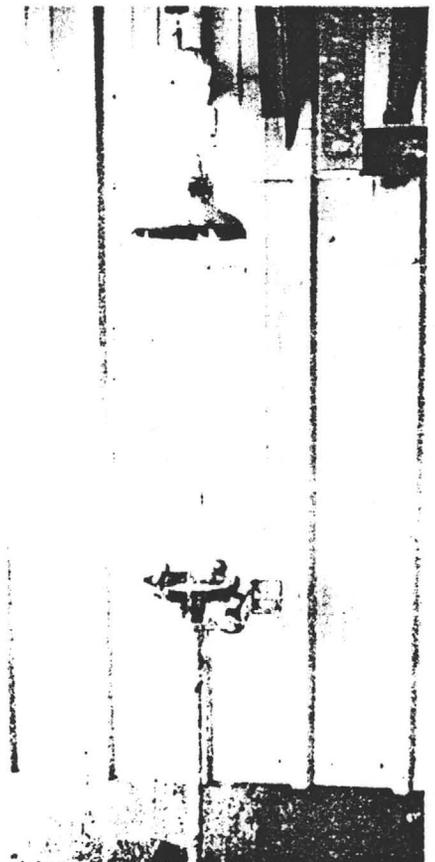


Photo 10. Wherever cyanide compounds are handled or used, emergency washing stations should be installed.

is generally 2.0 to 3.0 ppm, while the CAL/OSHA recommended limit is 4.7 for both HCN gas and NaCN dust (National Institute for Occupational Safety and Health, 1976). If any processing steps occur indoors, those areas must be properly vented to keep the levels of HCN gas and airborne salts below this limit.

SUMMARY

Most people are aware of the toxicity of cyanide, but few are familiar with its other characteristics or with the widespread industrial use of cyanides. Leaching with cyanide solutions has been carried out for many years with a very low incidence of accidents. This may be in part attributed to the relatively simple nature of leaching operations, in part to the dependence of the economic success of leaching operations on controlling the gold-carrying solution, and in a large part on the caution with which it handled.

Free cyanide is rapidly destroyed under normal atmospheric conditions, does not accumulate in organisms, and can be metabolized in small quantities with no residual effects in humans. If the cyanide is properly controlled during transportation and use, the mining operation that uses the heap leaching method can have

fewer adverse environmental impacts than one employing conventional methods for gold recovery.

REFERENCES

Beard, R.C., 1983. Heap leaching—a low-cost recovery method for small gold deposits in northwestern Ontario: CIM Bulletin, v. 76, no. 850, p. 102-108.

Bhappu, R.B., Lewis, M.F., and McAllister, J.A., 1974. Leaching of low grade gold ores—economic evaluation of available processes: presented at AIME annual Meeting, Dallas, Texas, February 23-28, AIME preprint 74-AS-55, 18 p.

Chamberlin, Paul D., 1981. Heap leaching and pilot testing of gold and silver ores: Mining Congress Journal, v. 67, no. 4, p. 47-52.

Doudoroff, Peter, 1976. Toxicity to fish of cyanides and related compounds, a review: Oregon State University, Corvallis, Department of Fisheries and Wildlife, EPA/600/3-76/038, 154 p.

Duncan, D.M., and Smolik, T.J., 1977. How Cortez gold mines heap leached low grade ores at two Nevada properties: Engineering and Mining Journal, v. 178, p. 65-69.

Heinen, H.J., Peterson, D.J., and Lindstrom, R.E., 1978. Processing gold ores using heap leach-carbon adsorption methods: U.S. Bureau of Mines, IC 8770, 21 p.

Jarrett, B.M., and Kirby, R.G., 1978. Development document for the effluent limitations and guidelines for the ore mining and dressing point source category, volumes I and II: U.S. Environmental Protection Agency, Washington, D.C., EPA/440/1-78/061-d and EPA/440/1-78/061-e, 913 p.

McClelland, G.E., and Eisele, J.A., 1982. Improvements in heap leaching to recover silver and gold from low grade resources: U.S. Bureau of Mines, RI 8612.

Mining Engineering, 1979. Heap leaching is small miner's golden opportunity: Mining Engineering, v. 31, p. 136-138.

National Institute for Occupational Safety and Health, 1976. Criteria for a recommended standard...occupational exposure to hydrogen cyanide and cyanide salts: U.S. Department of Health, Education, and Welfare, NIOSH Publication no. 77-108, 191 p.

Potter, G.M., and Salisbury, H.P., 1974. Innovations in gold metallurgy: Mining Congress Journal, v. 60, no. 7, p. 54-57.

Towill, L.E., Drury, J.S., Whitfield, B.L., Lewis, E.B., Galyan, E.L., and Hammons, A.S., 1978. Reviews of the environmental effects of pollutants: V. Cyanide: Oak Ridge National Laboratory, Tennessee, ORNL/EIS-81, EPA/600/1-78/027, 190 p.

Zadra, J.B., Engle, A.L., and Heinen, H.J., 1952. Process for recovering gold and silver from activated carbon by leaching and electrolysis: U.S. Bureau of Mines, RI 4843, 39 p.

Information on water quality and liquid waste discharge requirements was obtained by personal communication with the following State Regional Water Quality Control Board representatives: Kenneth Landau, Colorado River Basin Region; Charles McKinley, Central Valley Region; Robert Dodds, Lahontan Region; and Bud Eagle, State Water Resources Control Board.

Open File Reports

OFR 83-18 SF

GEOLOGY AND GEOMORPHIC FEATURES RELATED TO LANDSLIDING, HIGH DIVIDE 7.5-MINUTE QUADRANGLE, DEL NORTE COUNTY, CALIFORNIA. Compiled by Clifton W. Davenport. 1983. Scale 1:24,000.

OFR 83-19 SF

GEOLOGY AND GEOMORPHIC FEATURES RELATED TO LANDSLIDING, SMITH RIVER 7.5-MINUTE QUADRANGLE, DEL NORTE COUNTY, CALIFORNIA. Compiled by Clifton W. Davenport. 1982. Scale 1:24,000.

These maps are released as part of a pilot study to provide regional scale geologic mapping of sensitive north coast watersheds under provisions of Section 208 of the Federal Water Pollution Control Act. The maps depict geology, geomorphic features related to landsliding, and

slopes greater than 70 per cent. An interpretive legend describing factors affecting landslide potential for each classification accompanies each map.

Results of the studies may be used for land-use planning as general background information for the preparation of timber harvesting plans. It is anticipated that geologic and landslide-related data from the maps will be used (1) in the preparation and review of timber harvesting plans submitted to CDF prior to logging on state and private lands, and (2) as a guide to land managers for recognizing areas that should receive on-site geologic review prior to development of potentially unstable ground.

Copies of OFR 83-6 SF, OFR 83-17 SF, OFR 83-18 SF, and OFR 83-19 SF may be obtained from the San Francisco CDMG office, Information Section, or from the California Department of Forestry, 1416 Ninth Street, Room 1342-5, Sacramento, California 95814.

OFR 83-6 SF

GEOLOGY AND GEOMORPHIC FEATURES RELATED TO LANDSLIDING, WEOTT 7.5-MINUTE QUADRANGLE, HUMBOLDT COUNTY, CALIFORNIA. Compiled by Thomas E. Spittler. 1983. Scale 1:24,000.

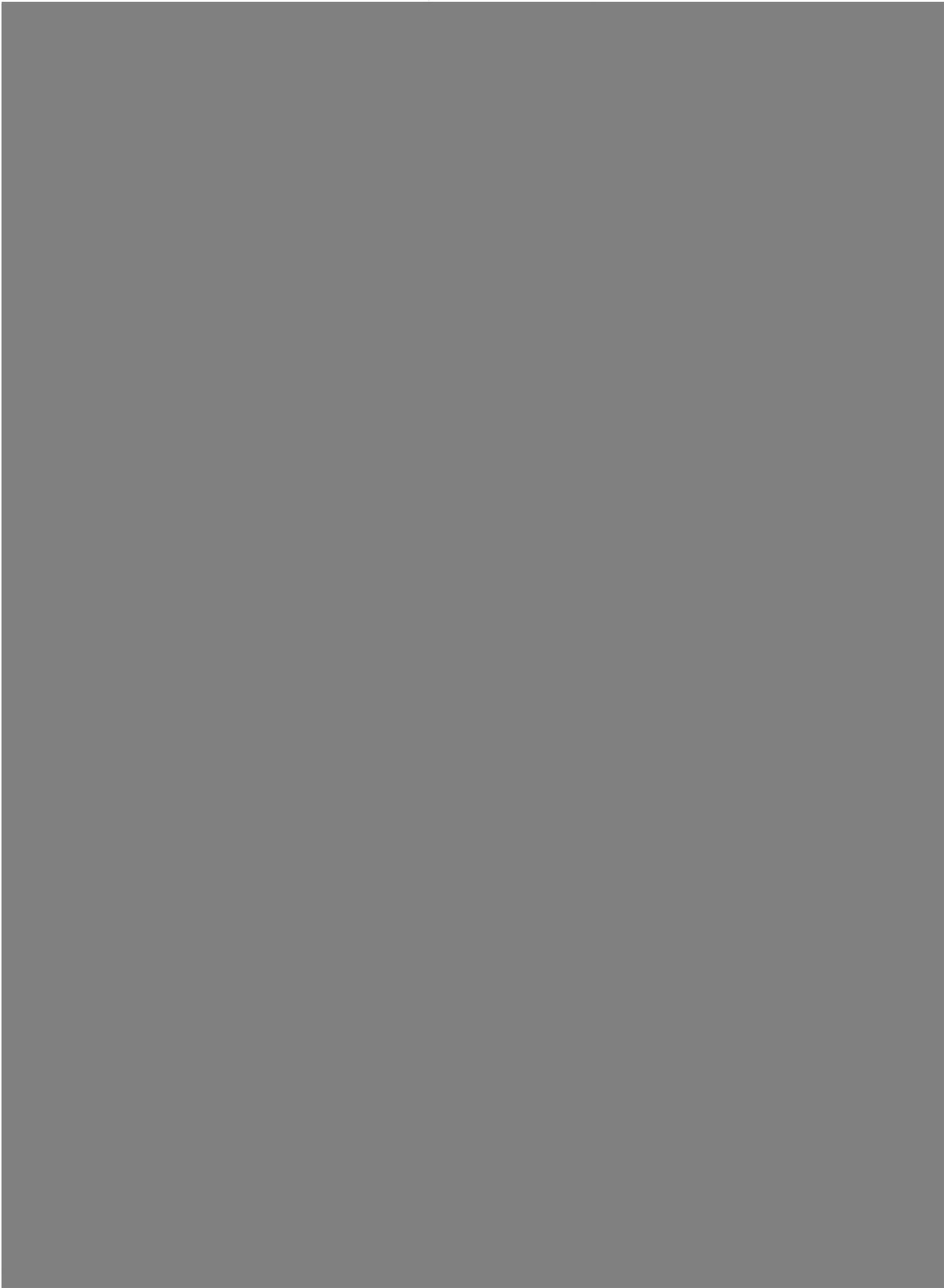
OFR 83-17 SF

GEOLOGY AND GEOMORPHIC FEATURES RELATED TO LANDSLIDING, REDCREST 7.5-MINUTE QUADRANGLE, HUMBOLDT COUNTY, CALIFORNIA. Compiled by Thomas E. Spittler. 1983. Scale 1:24,000.



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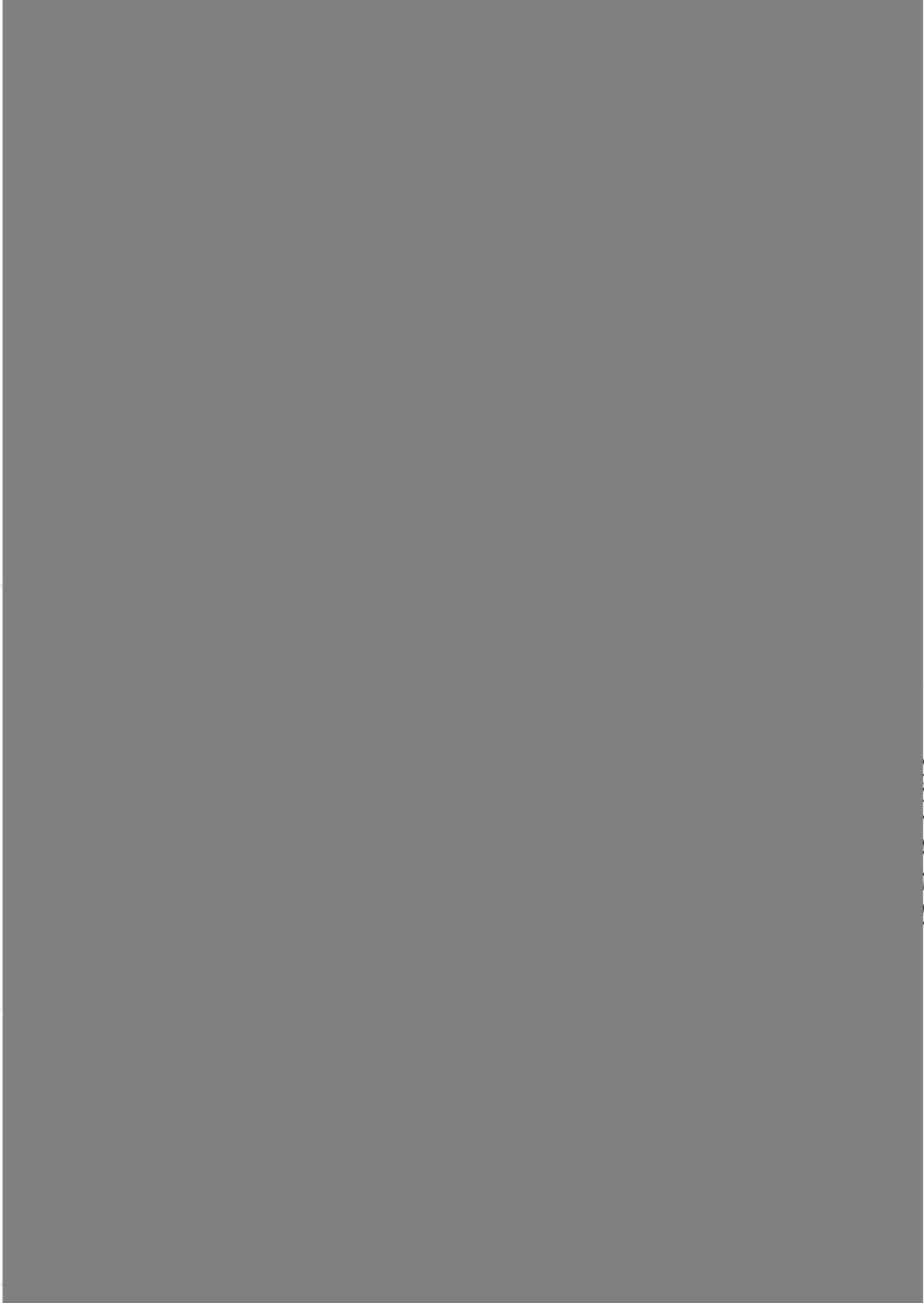


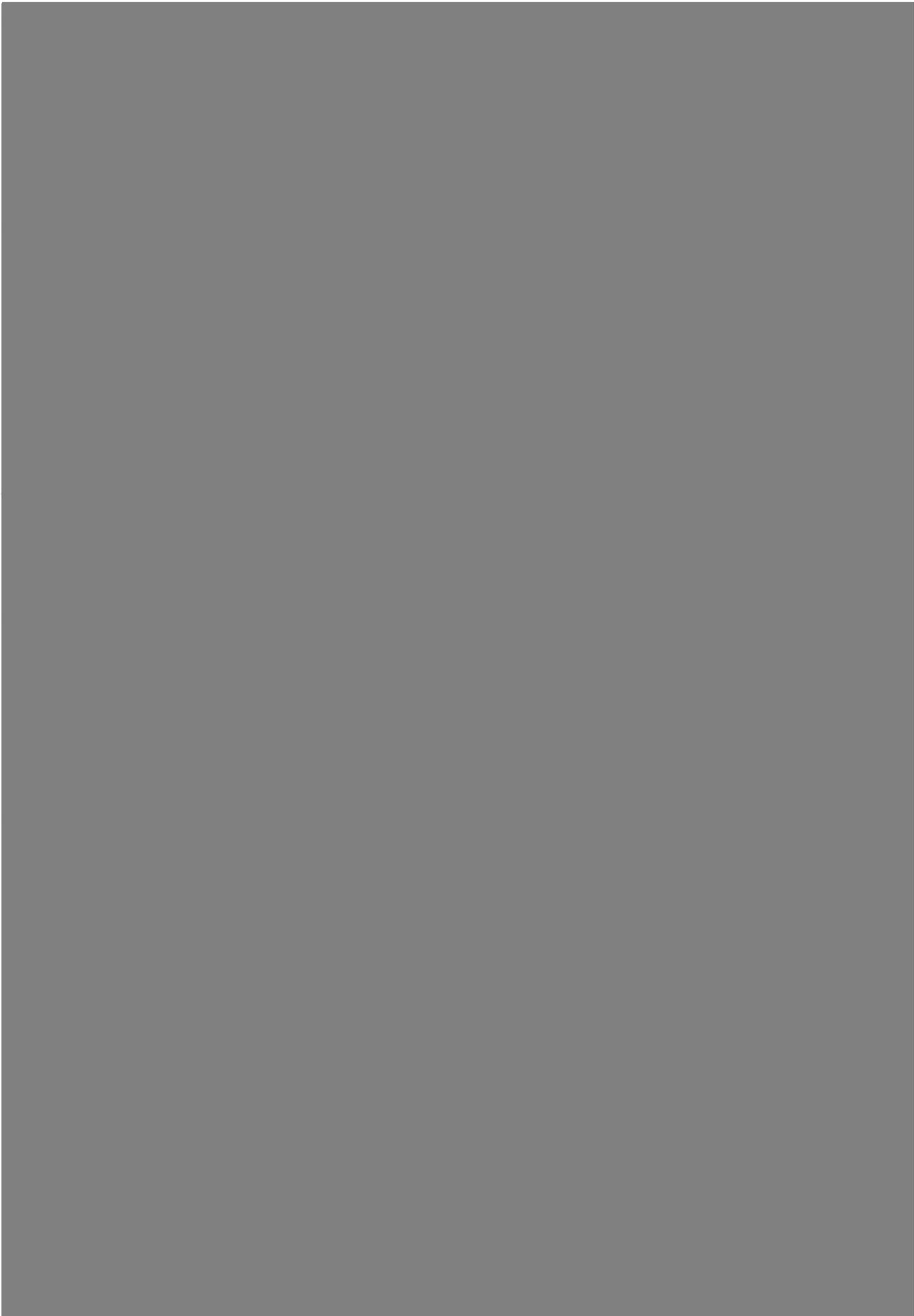


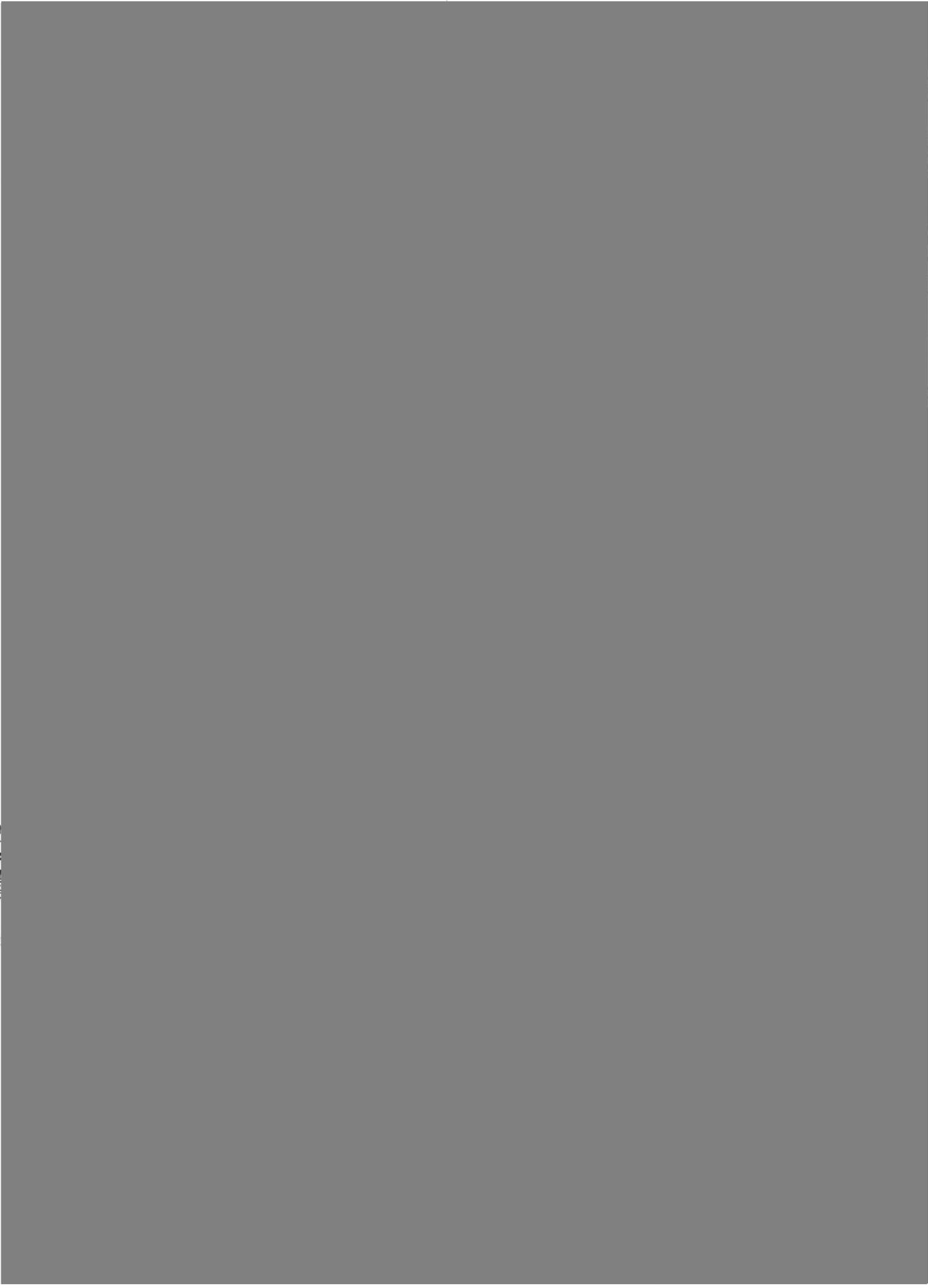
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James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

November 16, 1983

Messrs. Bill Hight, Frank Gallup, Lavern Baxter, Robert Hicks
Tombstone Development Company
P. O. Box 1445
Grand Island, NE 68802

RE: Update on meeting of November 16, 1983, Holidome Hotel,
South PaloVerde Ave., Tucson, Arizona

Gentlemen:

Within a few hours of our meeting of yesterday, two important pieces of information came to light, which I should pass on to you. Further, I wish to enlarge on the potential of the Mustang claims, by comparing them to the Ranchers Exploration Company Escalante silver mine in Utah, because they are very similar. To that end, I have attached an article from Mining Engineering magazine of September, 1982, on the Escalante mine. I will discuss the Escalante mine data and its similarities to the Mustang claims in more detail later, but I first want to comment on the new information.

I have been talking with FMC Minerals Corporation - the subsidiary of the conglomerate FMC Corporation, for approximately the last nine months. Mr. Bob Wheatley, geologist for FMC, took a tour with me of the property, and expressed interest. Since that time, other items have interfered with his pursuing Tombstone diligently, however, on my return from our meeting, I received a telephone call from Bob indicating that they are now making progress in evaluating data that I had submitted to them some months ago. They should have an answer by the first part of next week as to whether they have a continuing interest in Tombstone. If they do, he will probably try and make a field visit to Tombstone sometime later this month. While I can't be sure that FMC's response will be favorable, Bob does seem to have an enthusiastic undertone in his conversations with me. Only time will tell.

Tombstone Development Company
November 16, 1983
Page 2 of 4

In the mail, which I received about 2:00 p.m., was my most recent issue of the Arizona Pay Dirt magazine. On page 22A (a copy is enclosed with this letter), is an article regarding the Cobb Resources/Sante Fe Industries agreement on Joe Escapule's ground - adjacent to the State of Maine area, and lying between the parcels of Ernie Escapule's ground now held by Tombstone Exploration et al. Obviously, the Cobb/Sante Fe deal is not dead. Note that in Paragraph 5, J. C. Streeter, Cobb Vice President, suggests that the area may support an open pit mining operation. That area is almost undoubtedly immediately adjacent to our state land, and most likely cannot be mined efficiently without having some kind of an agreement with Tombstone Development Company regarding this state land. This is the state land I wish to do additional backhoe testing work at the same time as the Mustang claims. Also, please note in Paragraph 6, that Cobb will have to pay no money for the exploration or mine and plant construction, but will be carried by Sante Fe Industries, and retain a 25% interest in the project. This is the same type of deal that I would anticipate would be quite easy for TDC to obtain, if we can prove some kind of reserves on the Mustang claims.

If there are significant reserves on the Mustang claims (or other veins on the TDC claims which I have acquired over the last few years), then a direct comparison with the Escalante mine, which is very similar geologically, is in order. The Escalante vein contains economic silver mineralization extending over 3,500' along strike, and reaches a depth of more than 800', and has an overall average width of 19 feet. The vein on the Mustang claims may have the same width, and extends for 3,000' along the length of the two claims, and probably extends beyond the north end, which we may also be able to claim. At some depth, possibly in the range of 1,000', very high grade replacement material may be located at the interface between the volcanic rocks, which extend to the surface, and sedimentary rocks like those which contain the ore in the main part of the Tombstone District. Mineralization within the two veins (Escalante and Mustang) are very similar, and we know that recovery, if silver is present on the Mustang veins, will be good because of test work done on the State of Maine vein, which is also similar. Ranchers states that they have drilled 33 million ounces of silver, at an average grade of 12.5 ounces on the Escalante vein. This would have a gross metal value of \$330 million dollars at an average value of \$125 per ton at \$10 silver. However, they also state in the article that they have 10 years of reserves at present production, which is 1.68 million ounces per year, for a total of 16,800,000 ounces. Their total investment was \$37.7 million. I would assume that their minimum return on the ore mined would be about 25%, though

James A. Briscoe & Associates, Inc.
Tucson, Arizona

this is nowhere stated in the article, so it is an assumption. If it is correct, then \$42 million in profit should be recovered during that 10 year period. If TDC acquires the Mustang ground, and then negotiates a deal with an operator (Ranchers is certainly a good potential operator), and retains a 25% interest in the project, then \$10.5 million should be obtained over that 10 year period. Obviously, if we obtain the Mustang claims for our proposed price, we will have gotten a very good deal. If Abbl wants more, there is certainly plenty of negotiating room.

During a field trip last week, we learned from one of the ex employees of Energy Reserves Group that they have discovered 0.1 gold (\$40/ton at \$400 gold) mineralization adjacent to some of the rhyolite dikes in the eastern portion of the Tombstone Mining District. This discovery was made on state ground, which we had disputed with Energy Reserves Group, and which they had succeeded in getting over our efforts. This is a new and completely unexpected development, and the mineralization is unlike and unrelated to any of the mineralization so far discovered in Tombstone to date. THIS INFORMATION SHOULD BE CONSIDERED EXTREMELY CONFIDENTIAL. We should aggressively pursue land acquisition within the general area of the Energy Reserve Group ground, and other areas where these dikes crop out. This gold mineralization may be like the Newmont Carlin deposit, one of the largest gold mines in the United States.

In summary, of course a positive conclusion of the deal with Abbl, and positive results from initial exploration along the Mustang vein is critical. However, I do not think that now is the time to give up on the ground I have acquired for the Tombstone Development Company, within the Tombstone District. Too many things are happening:

1. The success of T.E.I.
2. The pending Joe Escapule/Cobb Resources/Santa Fe Industries operation
3. The public underwriting of Seth Horne's Stewart Mines operation, for which the TDC ground is critical
4. Discovery of gold mineralization by Energy Reserves Group

I believe now is not the time to retreat on the Tombstone area, and in fact, we should pursue further exploration more vigorously. Prices for silver will probably be rising within the next year, as will the prices for gold - see attachments from Kiplinger and Fortune magazines. We will pursue acquiring

Tombstone Development Company
November 16, 1983
Page 4 of 4

the Abbl ground, and do initial exploration on it as rapidly as possible. Sometime in the next few weeks, I will submit to you, a detailed proposal for work I believe should be accomplished in the next 12 months.

Best personal regards, \



James A. Briscoe

JAB/ms

Enclosure

P.S. I have also included articles on the Tombstone cyanide spill, Alanco, who has the mill on the Charleston Road at Tombstone, and an article from Business Week on the new interest of banks in gold sales. In addition, there is an article on the low cost Picacho gold mine near Yuma, Arizona, which I spoke to you about. It is run by Chemgold, a subsidiary of Glamis Gold Limited. The men involved with this operation have approached me looking for other opportunities of a type that would include the Mustang claims, if we can prove reserves there. At the end of this article is some interesting information on the Goldfields Mesquite gold mine in the same general area. I recommended this to a client about four years ago, but they refused to take any action. Goldfields has drilled out in excess of \$1 billion in gold reserves.

TACS

James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

November 18, 1982

D. A. Zimmerman
Hunt Energy, Inc.
Room 2800, Thanksgiving Tower
1601 Elm Street
Dallas, Texas 75201

RE: Transmittal of: "A Summary of The Tombstone Development Company Lands in the Tombstone Caldera Complex, Cochise County, Arizona - A Geologic Appraisal and Estimate of Mineral Potential"

Dear Don:

Enjoyed our telephone conversation this afternoon.

Please find enclosed with this letter, the Tombstone report we spoke about. The entire report and large plates are too voluminous for a general distribution. However, if you feel the Hunts may have an interest in the District, I would be happy to furnish you with the complete body of information, and conduct a field tour of the District.

The Tombstone Development Company is interested in selling its position in the Tombstone Mining District. A lessor is currently operating in the central part of the District. The lease, as long as it is maintained, would go with the sale of the property.

I would be happy to meet with you, and provide any additional details you might require.

Best regards,

James A. Briscoe

JAB/ms

Enclosure

James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

MEMO

TO: James A. Briscoe
FROM: Thomas E. Waldrip, Jr.
DATE: November 22, 1983

RE: Energy Reserves Group (E.R.G.) state prospecting permits, Tombstone Mining District, Cochise County, Arizona, Sections 27-29 & 33-34, Township 20 South, Range 23 East, G.S.R.B.M.

Jim,

During our recent A.G.S. fall field trip to western Arizona (November 11-13), I had the opportunity to talk to a past employee of E.R.G. (Richard Renn, I believe his name was) who now works for Goldsil Mining & Milling. According to this conversation, I learned that during this past August, E.R.G. did some exploration drilling on their state sections, and encountered a potentially interesting gold intercept in one of their holes. The facts are somewhat sketchy, but as I remember them, they encountered 24 to 28 feet of gold mineralization in the range of 0.1 oz. per ton. It seems that this mineralization is associated with the rhyolite intrusives in the area as a contact type deposit. As I understood the conversation, the sedimentary rocks contained the mineralization as the intrusive was essentially barren. The position of the drill hole is unknown. Renn did not know what was to become of the leases, but assumed they would be kept up, however, since the recent demise of E.R.G., this was uncertain. Our conversation was short and cut off at this time by our leaving the area.

On this date I contacted the state land office, as I do on a periodic basis, and the lease had been renewed on Section 28, indicating that E.R.G. as an entity is still functioning, which is interesting. As a side note, I also checked on state section 16, T.20S., R.22E. (State of Maine area), and all leases have been renewed there, that have recently come up for renewal. I will continue to monitor these two areas as forthcoming permits come up for renewal.

MEMO

November 22, 1983

Page 2 of 2

I suggest tht we need to now take a closer look at other areas containing rhyolite intrusive in the immediate vicinity, as they too may have associate gold mineralization. Several larger intrusive areas to the west of E.R.G.'s ground are currently held by T.D.C. under prospecting permit application, and should be looked at in more detail. Additional areas are available to be staked and acquired by state prospecting permit. To this end, I will be planning a trip to Phoenix the first or second week in December to update our land status map in the area. Depending on the results of that trip, further suggestions will be forthcoming.

Tom

Thomas E. Waldrop Jr.

TEW/ms

TOCS

James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

Certified Mail #P 362 667 883

December 1, 1983

U. S. Department of the Interior
Bureau of Land Management
Arizona State Office
2400 Valley Bank Center
Phoenix, AZ 85073

RE: Filing Annual Documentation of Labor for S.H.M., T.S. & M.M. Lode Mining Claim Groups, Arizona

Dear B.L.M. Official:

Please find enclosed copies of the county recorded annual documentation of labor for the following claim groups:

1. S.H.M. Lode Claim Group - owned by James A. Briscoe & Associates, located in Cochise County, Arizona, Letter of Intent to Hold - B.L.M. serial numbers included within document.
2. M.M. Lode Claim Group - owned by Thomas E. Waldrip Jr. (Yuma Association), located in Yuma County, Arizona, Proof of Labor - B.L.M. serial numbers included within document.
3. T.S. Lode Claim Group - owned by Tombstone Development Company, located in Cochise County, Arizona, Proof of Labor - B.L.M. serial numbers included within document.

These documents are being forwarded to your office as per requirements of Sections 3833 Title 43 C.F.R. for recording of annual assessment work on unpatented mining claims. Please add the documents to their corresponding claim group serial files, and update your record system.

Sincerely,

Thomas E. Waldrip, Jr.

Thomas E. Waldrip, Jr.

TEW/ms

Enclosures: 2 Proofs of Labor

1 Letter of Intent to Hold

5701 East Glenn Street, Suite 120/Tucson, Arizona 85712/602-721-1375

James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

December 9, 1983

Harald D. Drewes, Geologist
U. S. Geological Survey
Building 25, Federal Center
Denver, CO 80225

RE: Previously unrecognized Laramide? intrusives in the
Tombstone Mining District, Cochise County, Arizona

Dear Hal:

I enjoyed talking with you at the AGS field trip, a few weeks ago. I made several calls to your motel regarding our proposed trip to Tombstone, but could not catch you while you were in, and I assume that you missed the messages. It is unfortunate that we couldn't make the trip together, as I think that these intrusive bodies may have a significant impact on understanding the genesis of the ore bodies at Tombstone.

I am enclosing a copy of my November, 1982 report on Tombstone, including geologic maps taken from yours, and Newels of 1973. On page 12, I have annotated the locations of the quartz monzonite porphyry intrusives in the Tombstone area, at approximate scale. One apophysis crops out in the Tombstone Extension area, and a few narrow dikes cut Schefflin granodiorite in the area of Comstock Hill, directly behind the Lookout Lodge, on the old railroad grade. I suspect larger bodies of this intrusive may lie hidden beneath Gila conglomerate in the vicinity of the southeastern corner of the Tombstone townsite. Most assuredly, this material is post Schefflin, indicated by its intrusion into that rock in the vicinity of Comstock Hill. I suspect that it may not be as young as the 63 million year old rhyolite bodies, which crop out near the Tombstone airport.

Additional porphyritic intrusives have been intersected in deep drill holes in the Robbers Roost area, between Tombstone and Charleston. I have also indicated this area on the map on Page 12. I have not spent any significant time examining these rocks, but I would say they range from quartz diorite to quartz monzonite, with a variety of textures in evidence. Typical porphyry copper alteration is seen in drill core, including secondary K spar, anhydrite, pyrite, calcopyrite, and traces of molybdenite.

Harald Drewes
December 9, 1983
Page 2 of 2

Age dates on these newly identified intrusive rocks, would shed further light on the genesis of the Tombstone District, and may have some relevance to its interpretation as a Laramide caldera.

I would certainly be interested in your comments on the above, and will be happy to arrange a field trip with you into the District at some mutually convenient time, to examine the outcrops.

Very truly yours,



James A. Briscoe

JAB/ms

Enclosure



United States Department of the Interior

GEOLOGICAL SURVEY
BOX 25046 M.S. _____
DENVER FEDERAL CENTER
DENVER, COLORADO 80225

IN REPLY REFER TO:

December 13, 1983

Mr. James A. Briscoe
5701 E. Glenn Street, Suite 120
Tucson, Arizona 85712

Dear Mr. Briscoe:

I regret that we could not get together for a visit to your young granitic rock masses near Tombstone. Thank you for the copy of your report on the area, which amply shows how important your new observations are.

When I return to Arizona in March-April, I hope to make time to visit your localities, and count on setting up later this winter a time when we can do this together. Should you have any scheduling preferences, please contact me. What plans do you have for radiometric dating of your granitic rock?

Sincerely yours,

Harald Drewes, Geologist
Central Mineral Resources

P.S. Had we talked of a joint effort of dating the rock?

Tom
Tombstone

James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

December 15, 1983

Bill Hight
Frank Gallup
Lavern Baxter
Tombstone Development Company
P. O. Box 1445
Grand Island, NE 68802

RE: Budget for TDC land, by project to cover the months of
January and February

Dear Bill, Frank & Lavern:

As per your request during our telephone conversation, I have refigured my budget projections and have showed them on an area by area, month by month basis.

I have determined that the most important primary objectives that will result in stimulating interest in the TDC land, as well as possibly measuring ore reserves in the Mustang claim area and the True Blue/San Pedro state lease area are as follows:

1. Determine whether there is potential for Carlin-type disseminated gold in the Paleozoic sediments on TDC state leases adjacent to the Energy Reserves gold discovery, in the Tombstone airport area.
2. Determine whether there may be mineable silver and gold veins in the state lease ground in the State of Maine/True Blue/San Pedro area, adjacent to where the Santa Fe Railroad is now working.
3. Determine whether there is potential for underground or open pit mineable silver and gold ore at:
 - a. The Mustang claims
 - b. The immediate Robbers Roost breccia pipe area

These are all specific geographic areas, as shown on the map, Attachment 1. However, work will proceed more or less simultaneously on all of the areas, thus conserving expenses in travel and third party time delays. These time delays will come from the following sources:

1. Wait for photo mosaic construction
2. Wait for sample assays
3. Wait for approval from the state land department for trenching
4. Wait for deal to be signed with Abbl on Mustang claims
5. Wait for approval for trenching on the Mustang claims from the Bureau of Land Management

Work will proceed in 25 steps, but not in the sequential order, by area, depicted on Attachment 2. This is, again, to save time, travel expense, and, therefore, money. This is because we must wait for the operations of third parties mentioned in the above paragraph, as well as the fact that some material is on hand requiring no wait. The 25 work sequence steps will be as follows:

Work Sequence	Area Sequence (Refer to Attachment 2)
1.	(1.) Get a color photo mosaic (1" = 2,000') made to direct both gold sampling and silver sampling in the state lease areas, and mining claims.
2.	(4.A) Do photogeology in the State of Maine area, True Blue/San Pedro state leases
3.	(5.A) In the Robbers Roost and Mustang claim area, do photo mapping at 1" = 500' and 1" = 200'.
4.	(2) Photo geology at 1" = 2,000'
5.	(4.B) In the State of Maine area, on True Blue/San Pedro state leases do surface geology and mapping at 1" = 200'.
6.	(4.C) Do compilation of mapping in the State of Maine area on True Blue/San Pedro state leases.
7.	(4.D) In the State of Maine area, on the True Blue/ San Pedro state leases, do layout of plan for state, for trenching.
8.	(2.B) Check for major structural features present in area of Mustang claims and state leases while doing the photogeology at 1" = 2,000' on photomosaic.

9. (2.A) Pinpoint areas to sample for gold while doing photogeology at 1" = 2,000' on photomosaic.
10. (3.A) Do ground geology and alteration mapping in area of possible gold mineralization.
11. (3.C) Put in discovery posts in open ground south of T.S. Extention - in part while collecting samples and doing ground geology and sampling in area of possible gold mineralization.
12. (3.B) Collect 100 samples (assay for gold and silver) while doing ground geology in area of possible gold mineralization.
13. (5.B) Do surface geology and alteration mapping and sampling in Robbers Roost area (at 1" = 500').
14. (5.C) Do surface geology and alteration (1" = 200'), and sampling in Mustang area.
15. (5.D) Layout trenching program and make proposal to Bureau of Land Management on Mustang claim area.
16. (5.E) Supervise trenching in Mustang claim area.
17. (4.E) Supervise trenching in State of Maine, True Blue/San Pedro area.
18. (5.F) Do assays with Silver MAP in the Robbers Roost and Mustang claim area.
19. (4.F) Do assays with Silver MAP in the True Blue/San Pedro state lease areas.
20. (5.G) Compile data on Robbers Roost and Mustang claim area.
21. (5.H) Write report of findings on Robbers Roost and Mustang claim area
22. (4.G) Compile data on the State of Maine area, True Blue/San Pedro state leases

23. (4.H) Write report of findings on the State of Maine area, True Blue/San Pedro state leases.
24. (3.D) Compile data on the ground geology and sampling in the area of possible gold mineralization.
25. (3.E) Write report of findings on the ground geology and sampling in the area of possible gold mineralization.

If this portion of the work is not done simultaneously and in this number sequence, the project will drag out to two or three times the current projection, and cost substantially more. I believe if done this way, we may even be able to save money over my projected costs.

Please note that I want to go ahead with geologic mapping and evaluation and trench layout (on photos and maps not on the ground) for the Mustang claims. I think this is alright because our land is only approximately 200' distant to the north and to the south of the Mustang claims, and I will be in the area anyway. Further, we will be ready to start trenching work immediately when Abbl signs, or if he still doesn't want to sign by the time we have completed the technical work, we can determine whether we should offer him more money or forget the Mustang claims.

The total project will cost approximately \$29,453.00, will take approximately 2 calendar months, and will start upon your approval, and receipt of initial retainer of 1/3 the total amount to cover expenses. If we start on January 3, we should be completed by the 1st week of March - in time to still do state work to retain our leases if warranted. We will submit a progress bill to you every two weeks for time and material expended. Attachment 1 gives all of the details, but some of the pertinent statistics are:

- * 98 man days of work including:
 - 68 days of geology and
 - 30 days of word processing, accounting & drafting
- * 41.11% of the cost will be in backhoe work on the State of Maine area, Mustang area, and in sampling and assaying for gold in the state leases around the airport

Tombstone Development Company
December 14, 1983
Page 5 of 5

* 55.9% will be fees for James A. Briscoe & Associates, Inc.

The specific results from this work will be:

1. Approximately 1/2 of the federal assessment work on the federal mining claims, and possibly 1/4 to 1/3 of the state lease work requirements will have been accomplished.
2. Determination of whether there is potential for significant disseminated gold of the Carlin-type, in the Paleozoic sediments in the TDC leases near the airport area.
3. Whether there is potential for mineable ore on the state lease adjacent to the True Blue and San Pedro area, where Sante Fe Railroad is working
4. Whether there is potential for mineable ore on the Mustang claims - this assumes that we can cut a deal with Abbl within the above time frame. If we can't we will still have a better idea of whether there is potential for ore, and we will know whether we should make a better offer or walk away.
5. Whether there is near-surface ore in the Robbers Roost state leases.
6. Whether we will be able to drop some state lease land and federal mining claims because of limited mineral potential.

Should you have any questions or further suggestions, please give me a call.

Best personal regards,



James A. Briscoe

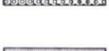
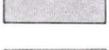
JAB/ms

Enclosures

James A. Briscoe & Associates, Inc.
Tucson, Arizona

Explanation

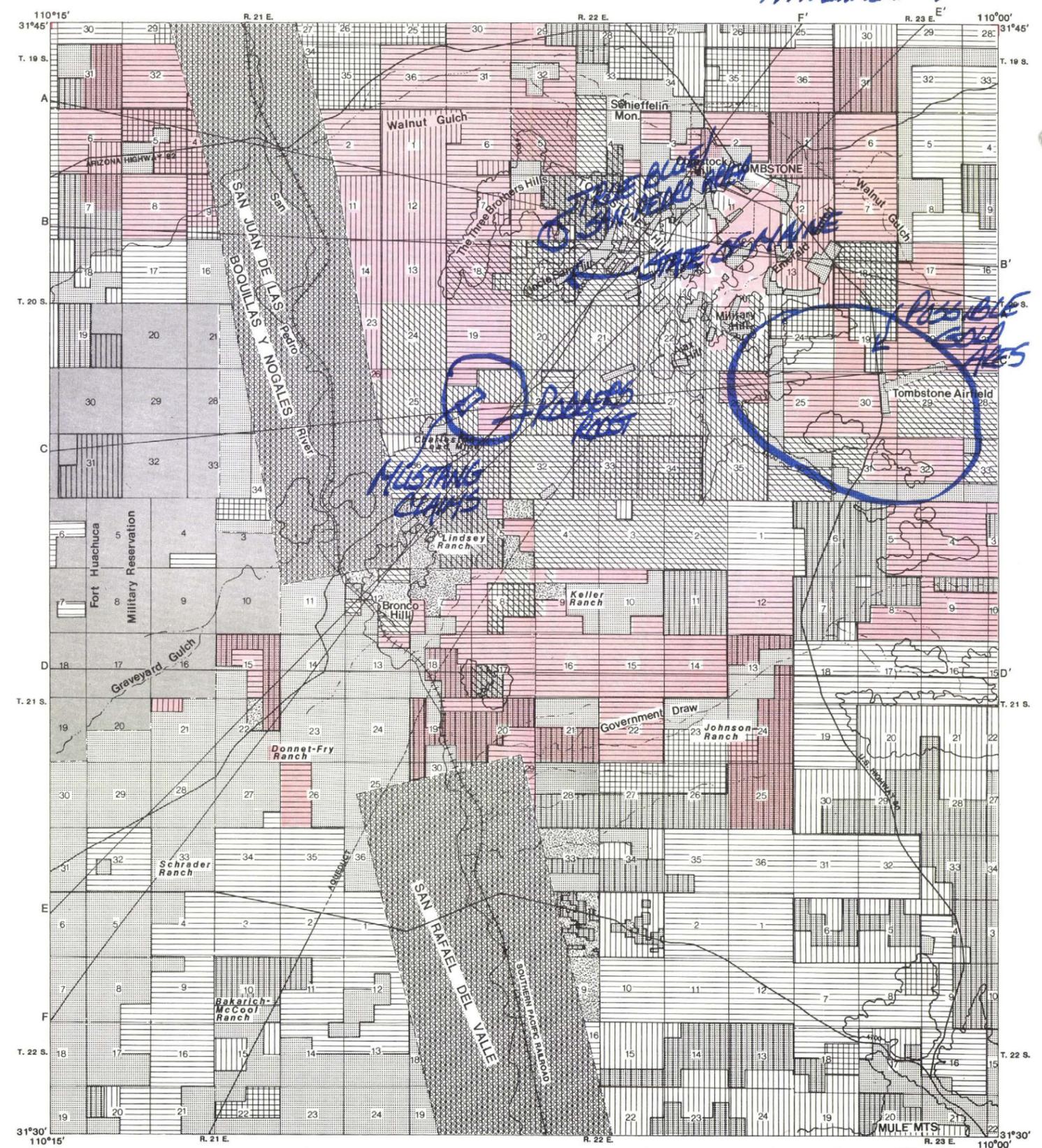
Land Status

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-  Public Domain Mineral and Surface. Mineral owned by Federal Government; Surface owned by State of Arizona.
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-  Fee Simple Surface and Public Domain Mineral Private Surface ownership Mineral owned by Federal Government.
-  Spanish Land Grants - Fee Simple. Mineral and Surface privately owned; Reservation of Gold, Silver and Mercury to Federal Government.
-  Military Reservation - Restricted Mineral Entry. Not open to Mining.
-  Water & Power Resource Service & Various other Withdrawals - Not open to Mineral Entry or Mining.
-  Mineral and Surface owned by Federal Government. Mineral Rights privately claimed.
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-  Dry wash
-  Southern Pacific Railroad
-  Government Reservation Boundary
-  Aqueduct
-  Cross section line

Tombstone Development Company, Inc. Lands

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-  Fee Simple Surface and State of Arizona Mineral. Prospecting Permit held by Tombstone Development Company, Inc.

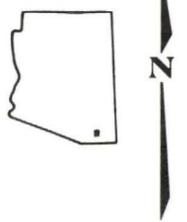


**Tombstone Development Company, Inc.
Tombstone, Arizona**

Land Status Map, Tombstone
15 min. Quadrangle

By Thomas E. Waldrip, Jr.
James A. Briscoe and Associates
Tucson, Arizona

Figure 5. Property map showing ownership of major holdings of mineral rights in the Tombstone area. Red overprint shows state, federal and private land and lands with mineral rights held by the Tombstone Development Company as of October 15, 1981.



GEOLOGIC WORK PLAN AND COST ESTIMATE BY PROJECT AREA,
TOMBSTONE MINING DISTRICT, COCHISE COUNTY, ARIZONA
PREPARED FOR THE TOMBSTONE DEVELOPMENT COMPANY BY
JAMES A. BRISCOE, REGISTERED PROFESSIONAL GEOLOGIST

DESCRIPTION	SQUARE MILES	GEOLOGIST IN OFFICE AT \$ 200 PER DAY		GEOLOGIST IN FIELD AT \$ 200 PER DAY		WORD PROCESSING, ACCOUNTING, & DRAFTING @ \$ 96 PER DAY		FOOD TRAVEL & LODGING @ \$ 45 PER DAY		SILVER MAP @ \$ 1030 PER DAY		AU & AG ASSAYS @ \$ 11.75 PER SAMPLE		MISC. SUPP. OUTSIDE SVCS. & EQUIP. RENTAL	TOTAL		% OF TOTAL		TOTAL \$/SQ. MILE	
		DAYS	\$	DAYS	\$	DAYS	\$	DAYS	\$	DAYS	\$	#	\$		DAYS	\$	DAYS	\$		
1. GET A COLOR PHOTO MOSAIC MADE TO DIRECT BOTH GOLD SAMPLING & SILVER SAMPLING IN THE STATE LEASE AREAS, AND MINING CLAIMS	400	1	200			.33	32							400	1	632	1.36	2.14	2	
2. PHOTOGEOLOGY @ 1"= 2,000' SUFFICIENT TO:																				
A. PINPOINT AREAS TO SAMPLE FOR GOLD	5	2	400												2	400	2.04	1.36	80	
B. CHECK FOR MAJOR STRUCTURAL FEATURES PRESENT IN AREA OF MUSTANG CLAIMS & STATE LEASES	400	2	400												2	400	2.04	1.36	1	
SUB TOTAL	400	4	800	0	0	0	0	0	0	0	0	0	0	0	4	800	4.09	2.72	2	
3. GROUND GEOLOGY & SAMPLING IN AREA OF POSSIBLE GOLD MINERALIZATION: (5 SQUARE MILES)	5																			
A. DO GROUND GEOLOGY & ALTERATION MAPPING	5			7	1400	2.31	222	7	315						9	1937	9.52	6.58	387	
B. COLLECT 100 SAMPLES & ASSAY FOR AU & AG 15 SAMPLES A DAY - 100 SAMPLES = 7 DAYS	5			7	1400	2.31	222	7	315			100	1175		9	3112	9.52	10.57	622	
C. PUT IN DISCOVERY POSTS IN OPEN GROUND S. OF T.S. EXT. - IN PART WHILE COLLECTING SAMPLES - 31 CLAIMS	1	1	200	3	600	.99	95	3	135					62	5	1092	5.10	3.71	1092	
D. COMPILER DATA	5	2	400			2	192								4	592	4.09	2.01	118	
E. WRITE REPORT	5	1	200			1	96								2	296	2.04	1.01	59	
SUB TOTAL	5	4	800	17	3400	9	827	17	765	0	0	100	1175	62	30	7029	30.26	23.86	1406	
4. STATE OF MAINE AREA, TRUE BLUE, SAN PEDRO STATE LEASES:																				
A. PHOTOGEOLOGY @ 1" = 200'	1	1	200			.33	32								1	232	1.36	0.79	232	
B. SURFACE GEOLOGY & MAPPING - 1" = 200'	.5			2	400	.66	63	2	90						3	553	2.72	1.88	1107	
C. COMPILATION OF MAPPING	.5	2	400			.66	63								3	463	2.72	1.57	927	
D. LAYOUT OF PLAN FOR STATE FOR TRENCHING	.5	1	200	1	200	.66	63	1	45						3	508	2.72	1.73	1017	
E. SUPERVISE TRENCHING	.5			2	400	.66	63	2	90					2000	3	2553	2.72	8.67	5107	
F. DO ASSAYS WITH SILVER MAP	.5			1	200			1	45	1	1030				1	1275	1.02	4.33	2550	
G. COMPILER DATA	1	2	400			2	192								4	592	4.09	2.01	592	
H. WRITE REPORT	1	2	400			2	192								4	592	4.09	2.01	592	
SUB TOTAL	1	8	1600	6	1200	7	669	6	270	1	1030	0	0	2000	21	6769	21.43	22.98	13538	
5. ROBBERS ROOST AND MUSTANG CLAIM AREA (2.1 SQ.MILES):																				
A. DO PHOTO MAPPING @ 1" = 500' & 1" = 200'	2	2	400			.66	63								3	463	2.72	1.57	232	
B. DO SURFACE GEOLOGY & ALTERATION MAPPING & SAMPLING IN ROBBERS ROOST AREA @ 1"=500'	2			4	800	1.32	127	4	180			30	353		5	1459	5.44	4.95	730	
C. DO SURFACE GEOLOGY & ALTERATION & SAMPLING IN MUSTANG AREA @ 1"=200'	.1			2	400	.66	63	2	90			30	353		3	906	2.72	3.08	9059	
D. LAYOUT TRENCHING PROGRAM & MAKE PROPOSAL TO BUREAU OF LAND MANAGEMENT	.1	1	200	1	200	1.33	128	1	45						3	573	3.40	1.94	5727	
E. SUPERVISE TRENCHING	.1			2	400	.66	63	2	90					2000	3	2553	2.72	8.67	25534	
F. DO ASSAYS WITH SILVER MAP	.1			2	400	.66	63	2	90	2	2060				3	2613	2.72	8.87	26134	
G. COMPILER DATA	2	2	400			2	192								4	592	4.09	2.01	296	
H. WRITE REPORT	2	4	800			4	384								8	1184	8.18	4.02	592	
SUB TOTAL	2	9	1800	11	2200	11	1084	11	495	2	2060	60	705	2000	31	10344	31.98	35.12	5172	
JANUARY & FEBRUARY MANAGEMENT FEE		8	1600			2.64	253								11	1853	10.87	6.29		
" " OFFICE EXPENSES														370		370		1.26		
" " LAND HOLDING COSTS														1656		1656		5.62		
SUB TOTAL		8	1600	0	0	3	253	0	0	0	0	0	0	2026	11	3879	11	13	0	
TOTAL		34	6800	34	6800	30	2865	34	1530	3	3090	160	1880	6488	98	29453	100	100		

Project sub areas - Tomb.

Explanation

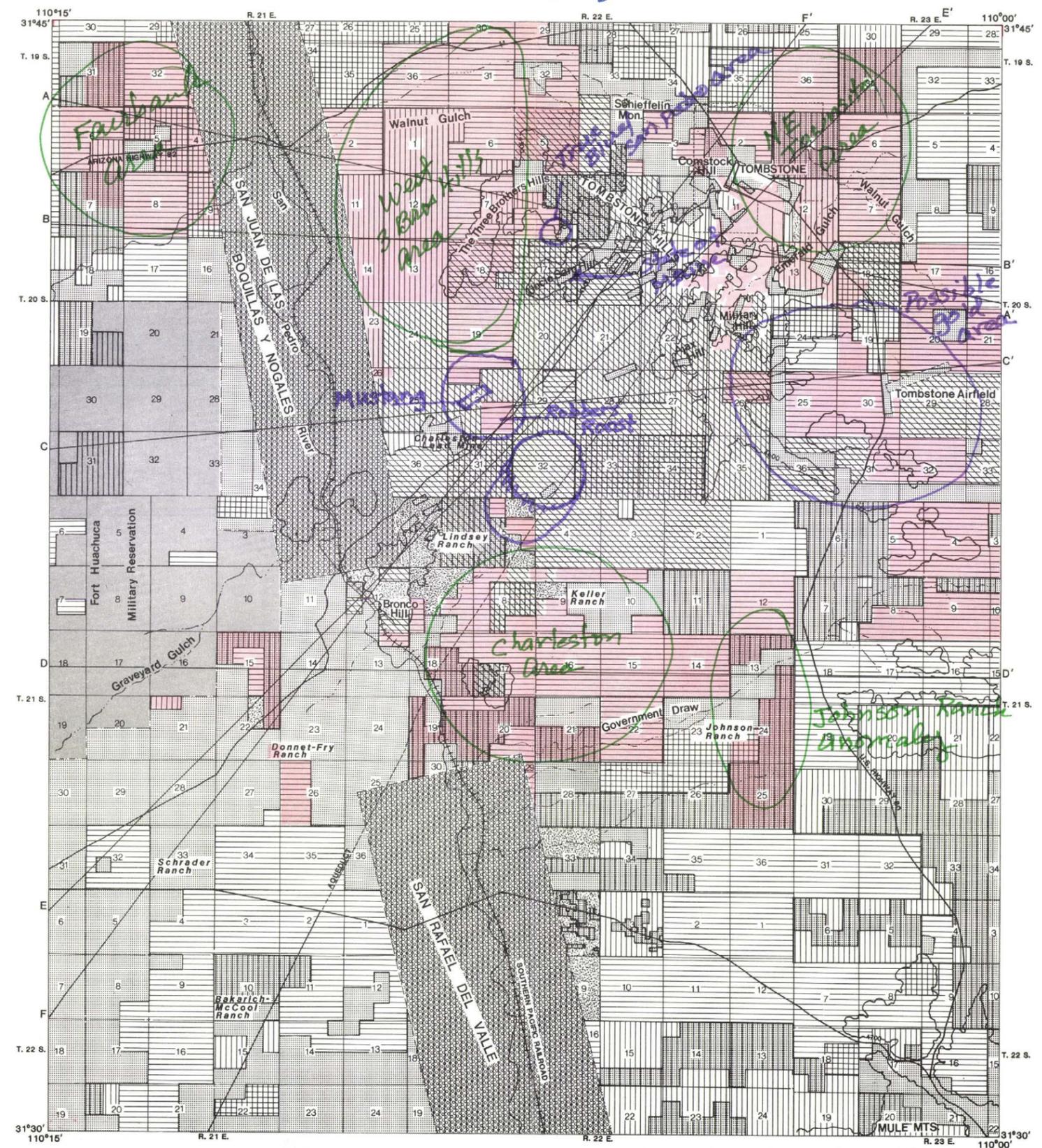
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- Dry wash
- Southern Pacific Railroad
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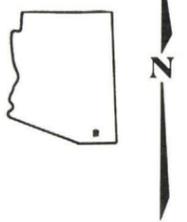


Tombstone Development Company, Inc. Tombstone, Arizona

Land Status Map, Tombstone
15 min. Quadrangle

By Thomas E. Waldrip, Jr.
James A. Briscoe and Associates
Tucson, Arizona

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James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

December 16, 1983

Bill Hight
Frank Gallup
Lavern Baxter
Tombstone Development Company
P. O. Box 1445
Grand Island, NE 68802

RE: Latest offer from Dennis Abbl on the Mustang I & II claims
and my suggestion for counter proposal

Dear Bill, Frank & Lavern:

Tom Waldrip got in contact with Mr. Abbl on the 12th. After much haggling, Abbl gave to Tom what his lowest requirements would be, which are diagramed on the computer printout with this letter. Briefly, he would like a payment of \$2,000.00 on signing, and then \$1,000.00 per month for three additional months, for a total of \$5,000.00 exploration rent - which would not apply towards the purchase price. On the 5th month, he would like a \$15,000.00 payment, and then \$1,944.44 for 18 months, which would result in his total purchase price of \$50,000, and a cost to us of \$55,000.00.

Since time is most important to us, I would like to set forward that \$15,000.00 down payment. My counter proposal is that we pay him \$7,000.00 on signing for a first exploration rental period of 7 months. At the end of 7 months, we can either make a down payment and then payments at his requested \$1,944.44 per month until payout, or we can pay him another \$5,000.00 at the beginning of the 8th month for the second exploration rental period, which would complete the 12th month from signing. Then on the 2nd anniversary, we would make a down payment so that he would have the same amount of money as far as the payment towards the principle of his sale price of \$28,611.15, as we would have made had we started with a \$15,000.00 payment in the 5th month. We would then pay him for the remainder of the year at \$1,944.44 per month, and have paid him a total of \$50,000.00 at the end of the second year.

Tombstone Development Company
December 16, 1983
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Actually, this is a double win negotiation since I believe it is both better for him, and better for us. He gets to pocket more money initially, but we have plenty of time to do our exploration work. Of course we can drop out at the end of the first exploration period if it is not successful.

We will try this with him, and hopefully will be successful. If not, we can always fall back to his proposal.

Best regards,



James A. Briscoe

JAB/ms

Enclosure

NEGOTIATIONS FOR ABL MUSTANG I & II CLAIMS

DENNIS ABL PROPOSAL 12/12/83

YEAR 1	← EXPLORATION RENT →				DOWN PAYMENT	← MONTHLY PAYMENTS →								TOTAL	CUMM. TOTAL
MONTH	1ST MONTH	2ND MONTH	3RD MONTH	4TH MONTH	5TH MONTH	6TH MONTH	7TH MONTH	8TH MONTH	9TH MONTH	10TH MONTH	11TH MONTH	12TH MONTH	TOTAL	CUMM. TOTAL	
PAYMENT	2000.00	1000.00	1000.00	1000.00	15000.00	1944.45	1944.45	1944.45	1944.45	1944.45	1944.45	1944.45	33611.15	33611.15	

YEAR 2	← MONTHLY PAYMENTS →												TOTAL	CUMM. TOTAL	
MONTH	1ST MONTH	2ND MONTH	3RD MONTH	4TH MONTH	5TH MONTH	6TH MONTH	7TH MONTH	8TH MONTH	9TH MONTH	10TH MONTH	11TH MONTH	12TH MONTH	TOTAL	CUMM. TOTAL	
PAYMENT	1944.45	1944.44	1944.44	1944.44	1944.44	1944.44	1944.44	1944.44	1944.44	1944.44	1944.44	1944.44	0.00	21388.85	55000.00

BRISCOE COUNTER PROPOSAL 12/15/83

YEAR 1	← FIRST EXPL. RENTAL PERIOD →						← SECOND EXPL. RENTAL PERIOD →						TOTAL	CUMM. TOTAL
MONTH	1ST MONTH	2ND MONTH	3RD MONTH	4TH MONTH	5TH MONTH	6TH MONTH	7TH MONTH	8TH MONTH	9TH MONTH	10TH MONTH	11TH MONTH	12TH MONTH	TOTAL	CUMM. TOTAL
PAYMENT	7000.00	0.00	0.00	0.00	0.00	0.00	0.00	5000.00	0.00	0.00	0.00	0.00	12000.00	12000.00

YEAR 2	DOWN PAYMENT	← MONTHLY PAYMENTS →											TOTAL	CUMM. TOTAL
MONTH	1ST MONTH	2ND MONTH	3RD MONTH	4TH MONTH	5TH MONTH	6TH MONTH	7TH MONTH	8TH MONTH	9TH MONTH	10TH MONTH	11TH MONTH	12TH MONTH	TOTAL	CUMM. TOTAL
PAYMENT	28611.15	1944.45	1944.44	1944.44	1944.44	1944.44	1944.44	1944.44	1944.44	1944.44	1944.44	1944.44	50000	62000.00

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James A. Briscoe & Associates, Inc.

Exploration Consultants:

Base and Precious Metals/Geologic and Land Studies/Regional and Detail Projects

James A. Briscoe
Registered Professional Geologist

Thomas E. Waldrip, Jr.
Geologist/Landman

December 19, 1983

Harald Drewes, Geologist
Central Mineral Resource
United States Department of the Interior
Geological Survey
Box 25046
Denver Federal Center
Denver, CO 80225

RE: Tombstone Mining District, Cochise County, Arizona - Age of
Tombstone Extension quartz monzonite porphyry

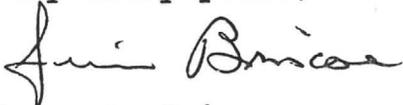
Dear Harald:

Thank you for your letter of December 13. I will look forward to getting together with you for a visit to the Tombstone District sometime in March or April, when you get back into Arizona. My schedule will be flexible enough so that I am sure that we can find a date convenient for you.

You had mentioned a possible joint effort on dating this rock unit. At present, we have budgeted no money for an age date, as this is somewhat esoteric for my clients. Obviously, however, it is quite important to the metalogenesis of the District, and I am quite enthusiastic about having it done. If you can make some suggestions as to cost and procedures, that would facilitate things on this end.

Look forward to meeting with you in the Spring.

Very truly yours,



James A. Briscoe

JAB/ms

cc: Tombstone Development Company