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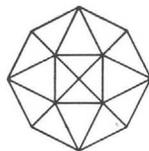
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III - 67

RICHARD A. BIDEAUX *mining and geological computer applications*

252 W. INA ROAD
TUCSON, ARIZONA 85704, USA
602 742-7111



RECEIVED

AUG 19 1985

Industrial Resources, Inc.

*For Review
by EGH & Recommendations
Sept. 15, 1985*

August 19, 1985

Mr. Joe P. Juhan
Grant Road Industrial Park

Dear Joe,

This finds me still promoting gold mines - the only kind of mines worth promoting...

Enclosed is material on this year's mine, the reopening of one of the most famous Mother Lode mines in California. We have been successful in attracting a large company to operate and invest in this project, Transwestern Mining Company, a subsidiary of New Mexico Public Service, New Mexico's only power company, \$4 billion plus last year. Transwestern has committed a bit over \$2 million of the \$4 million total needed.

We are continuing to sell this, presently expecting closing by the end of September - talking to two companies either of which could take down about \$1.5 million of the remainder, they will visit the mine next week. And we have private investment of over \$250,000 in hand, so are looking for the remaining \$250,000 to close it out, or fractions thereof.

If I can answer any questions, give you a presentation, slides, etc., let me know. Best would be a trip to the mine, as we have a dozen people working there right now - what other gold mine have you seen where you could invest in the opening, but work has already started -

Sincerely,

Dick Bidaux

#265

*Next mine visit open
September 6*

ALLEGHANY GOLD MINES, LTD.,
a California limited partnership
INSTRUCTIONS FOR SUBSCRIPTION AGREEMENT
AND QUESTIONNAIRES

- Step One: If you have not already done so, complete and execute your Offeree Questionnaire, which is attached hereto. (Exhibit "D")
- Step Two: Complete and execute all appropriate information on the Subscription Agreement which is attached to this Private Placement Memorandum as well as the Subscription Note attached to the Subscription Agreement. (Exhibit "B" and Appendix I)
- Step Three: If you consulted with an investment advisor ("Purchaser Representative") regarding this investment, then make sure your Purchaser Representative either delivers to you or sends direct to the General Partner his/her Purchaser Representative Questionnaire which is attached hereto. (Exhibit "E")
- Step Four: Complete and execute the Acknowledgement Letter which is attached hereto. (Exhibit "F")
- Step Five: Forward the signed "Subscription Agreement," "Purchaser Representative Questionnaire," "Offeree Questionnaire" and the "Acknowledgement Letter" together with the check or money order (made payable to Nevada National Bank-Alleghany Gold Mines, Ltd. Escrow Account and the executed Subscription Note to:

Transage, a California general partnership
1325 Airmotive Way, Suite 340
Reno, Nevada 89502
- Step Six: Upon receipt of the above documents by the General Partner, verification of your residency and financial qualifications, and acceptance of your subscription by the General Partner (who reserves the right to accept or reject a subscription for any reason whatsoever), a Receipt and Acceptance by the General Partner will be mailed to you.
- Step Seven: Upon the close of the Offering, the subscriber(s) whose subscriptions have been accepted by the General Partner will receive a Limited Partnership Certificate evidencing the number of Units owned.

ALLEGHANY GOLD MINES, LTD.
a California limited partnership

SUBSCRIPTION AGREEMENT

The undersigned hereby purchases Partnership Units and adopts and agrees to be bound by the provisions of the Agreement of Limited Partnership (the "Partnership Agreement") of Alleghany Gold Mines, Ltd., a California limited partnership (the "Partnership").

1. Purchase. Subject to the terms and conditions hereof and the provisions of the Partnership Agreement, the undersigned hereby irrevocably tenders to the Partnership:

(a) this Subscription Agreement; and

(b) the payment in cash, check or money order payable to Nevada National Bank-Alleghany Gold Mines, Ltd. Escrow Account in the amount of _____ (\$4,750.00 per Unit) together with an executed Subscription Note in the form attached as Appendix I to this Subscription Agreement, in the principal amount of _____ (\$5,250.00 per Unit) representing the full purchase price of _____ Units (\$10,000 per Unit, minimum subscription four Units);

(c) I understand that, if this Subscription Agreement is accepted, such funds will be held by Nevada National Bank in Reno, Nevada, in an Escrow Account as described in the Private Placement Memorandum until or unless subscriptions for all 199 Units have been accepted, and will be returned promptly to me in the event that such amount is not subscribed and paid on or before August 1, 1985 (or October 1, 1985) if the Closing Date is extended by the General Partner.

2. Adoption of Partnership Agreement. The undersigned hereby specifically accepts and adopts each and every provision of the Partnership Agreement attached as Exhibit "A" to the Private Placement Memorandum dated May 28, 1985 (the "Private Placement Memorandum"), together with any amendments thereto and agrees to be bound thereby.

3. Representations and Warranties. The undersigned hereby makes the following representations and warranties to the General Partner and the Partnership, and agrees to indemnify, save harmless and pay all judgments and claims against the General Partner or its agents, and to indemnify all Limited Partners against any liability or injury, including, but not limited to, that arising under Federal and/or state income tax

and/or securities laws, incurred as a result of any misrepresentation herein or any warranties not performed by the undersigned:

(a) That I am a bona fide resident and domiciliary of the state of _____, over 21 years old, and legally competent to execute this Agreement;

(b) That, except as hereinafter set forth, I am the sole and true party in interest and am not purchasing for the benefit of any other person, and I have either (i) a minimum net worth (exclusive of home, furnishings and automobiles) of \$100,000 (with the assets included in the computation thereof valued at fair market value) and a minimum annual gross income of \$100,000; or in the alternative, (ii) a minimum net worth (exclusive of home, furnishings and automobiles) of \$300,000; or that I am purchasing in a fiduciary capacity for a person who (or for an entity in which each person) is deemed to be a "purchaser" of the subject Units pursuant to Regulation D promulgated under the Securities Act of 1933, as amended, and meets the conditions set forth above;

(c) That I have been urged by the General Partner to receive independent outside investment counseling from my CPA, attorney or other investment counsel. I have consulted with the advisor(s) named below, if any (such advisor(s) hereinafter being the "Purchaser Representative(s)");

(d) That I and/or my Purchaser Representative(s) have read and analyzed and are familiar with the Partnership Agreement, the Private Placement Memorandum, this Subscription Agreement and other related documents, as amended or supplemented to date, and I confirm that all documents requested by me and/or my Purchaser Representative(s) have been made available to us, and that we have been supplied with such additional information concerning this investment as we have requested;

(e) That neither I nor my Purchaser Representative(s) have been furnished any offering material or literature other than the Private Placement Memorandum and the Exhibits thereto; and that we have relied only on the information in the Private Placement Memorandum and Exhibits and the information furnished or made available to us pursuant to paragraph (d) above;

(f) That I and/or my Purchaser Representative(s) have obtained in our judgment, sufficient information to evaluate the risks and merits of an investment in the Partnership and that we have such knowledge and experience in financial and

business matters that we are capable of evaluating the merits and risks of this investment;

(g) That I am aware that this investment is highly speculative and subject to substantial risks, and that I am capable of bearing the high degree of economic risks and burdens of this venture, including, but not limited to, the possibility of complete loss of all contributed capital, the loss of all anticipated tax benefits, and the lack of a public market such that it might not be possible to readily liquidate this investment so that my ownership thereof might continue indefinitely;

(h) That I understand that I am not investing for the purpose of receiving on a periodic basis any distribution of Partnership profits. I am purchasing these Units because I share the identical investment objectives of the General Partner as outlined in the Private Placement Memorandum;

(i) That I have been advised that the following person will receive the compensation hereinafter indicated as brokers, finders, purchaser representatives or in any other capacity in connection with my purchase of the subject Units (if NONE, so indicate):

(j) That the offer to sell Units was directly communicated to me and my Purchaser Representative(s) by the Partnership in such manner that we were able to ask questions of and receive answers from the Partnership or a person acting on its behalf concerning the terms and conditions of this transaction and that at no time were we presented with or solicited by any leaflet, public promotional meeting, circular, newspaper or magazine article, radio or television advertisement, or any other form of general advertising otherwise than in connection and concurrently with such communicated offer;

(k) That these Units are being acquired solely for my own account, for long term investment for an indefinite period, and are not being purchased with a view to or for the resale, distribution, subdivision or fractionalization thereof;

(l) That I understand that the Units are being offered and sold under the exemption from registration provided for in Section 4(2) of the Securities Act of 1933, as amended, and Regulation D promulgated thereunder, as well as under exemptions provided under the securities laws in the various states in which the Units are being offered; that this transaction has not been reviewed by, passed on or submitted to

any Federal or state agency; and that the terms of this Offering may not conform to the guidelines of certain state securities agencies;

(m) That if I am a resident of the State of Arizona, I understand that:

(i) the Units have not been registered under the Arizona Revised Statutes, as amended, and therefore cannot be resold in Arizona unless they are registered under the Arizona Revised Statutes, as amended, or an exemption from registration is available, and

(ii) the certificate evidencing my Units shall bear the following legend:

THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE ARIZONA REVISED STATUTES, AS AMENDED, ("SECURITIES ACT") IN RELIANCE UPON AN EXEMPTION UNDER SECTION 44-1844 AND CANNOT BE RESOLD OR OTHERWISE TRANSFERRED UNLESS THEY ARE REGISTERED UNDER THE SECURITIES ACT OR AN EXEMPTION FROM REGISTRATION IS AVAILABLE.

(n) That if I am a resident of the State of New Mexico, I understand that:

(i) the Units have not been registered under the Securities Act of New Mexico and, therefore, cannot be resold in New Mexico, unless they are registered under the Securities Act of New Mexico or an exemption from registration is available, and

(ii) the certificate evidencing my Units shall bear the following legend:

THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF NEW MEXICO ("SECURITIES ACT") IN RELIANCE UPON AN EXEMPTION UNDER RULE 2.02(2)(F) PROMULGATED PURSUANT TO THE AUTHORITY GRANTED IN SECTION 58-13-3(M). THESE SECURITIES CANNOT BE RESOLD OR OTHERWISE TRANSFERRED UNLESS THEY ARE REGISTERED UNDER THE SECURITIES ACT OR AN EXEMPTION FROM REGISTRATION IS AVAILABLE.

(o) That if I am a resident of the State of Georgia, I understand that:

(i) the Units have not been registered under the Georgia Securities Act of 1973 and therefore cannot be resold in Georgia unless they are registered under the Georgia Securities Act of 1973, or an exemption from registration is available, and

(ii) the certificate evidencing my Units shall bear the following legend:

THESE SECURITIES HAVE BEEN ISSUED OR SOLD IN RELIANCE ON PARAGRAPH (13) OF CODE SECTION 10-5-9 OF THE 'GEORGIA SECURITIES ACT OF 1973,' AND MAY NOT BE SOLD OR TRANSFERRED EXCEPT IN A TRANSACTION WHICH IS EXEMPT UNDER SUCH ACT OR PURSUANT TO AN EFFECTIVE REGISTRATION UNDER SUCH ACT.

(p) That if I am a resident of the State of Michigan, I understand that:

(i) the Units have not been registered under the Michigan Compiled Laws, 1979, as amended, and therefore cannot be resold in Michigan unless they are registered under the Michigan Compiled Laws, 1979, as amended, or an exemption from registration is available, and

(ii) the certificate evidencing my Units shall bear the following legend:

THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE MICHIGAN COMPILED LAWS, 1979, AS AMENDED, IN RELIANCE UPON AN EXEMPTION UNDER SECTION 451.802(b)(9), AND CANNOT BE RESOLD OR OTHERWISE TRANSFERRED UNLESS THEY ARE REGISTERED UNDER THE MICHIGAN COMPILED LAWS, 1979, AS AMENDED, OR AN EXEMPTION FROM REGISTRATION IS AVAILABLE.

(q) That if I am a resident of the State of Connecticut, I understand that:

(i) the Units have not been registered under the Connecticut Uniform Securities Act and, therefore, cannot be resold in Connecticut unless they are

registered under the Connecticut Uniform Securities Act or an exemption from registration is available, and

(ii) the certificate evidencing my Units shall bear the following legend:

THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER SECTION 36-485 OF THE CONNECTICUT UNIFORM SECURITIES ACT AND, THEREFORE, CANNOT BE RESOLD UNLESS THEY ARE REGISTERED UNDER THE CONNECTICUT UNIFORM SECURITIES ACT OR AN EXEMPTION FROM REGISTRATION IS AVAILABLE.

(r) That if I am a resident of the State of Pennsylvania, I understand that:

(i) the Units have not been registered under the Pennsylvania Securities Act of 1972 and, therefore, cannot be resold in Pennsylvania unless they are registered under the Pennsylvania Securities Act of 1972 or an exemption from registration is available,

(ii) the certificate evidencing my Units shall bear the following legend:

THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE PENNSYLVANIA SECURITIES ACT OF 1972 PURSUANT TO AN EXEMPTION UNDER SECTION 203(d) AND, THEREFORE, CANNOT BE RESOLD OR OTHERWISE TRANSFERRED EXCEPT IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 203(d) AND RULE 203.041(e)(2),

(iii) I may not sell the Units within 12 months after the date of purchase by me unless they are subsequently registered under the Pennsylvania Securities Act of 1972 or the Securities Act of 1933, as amended, and

(iv) I have the right to withdraw my acceptance of the offer to purchase the Units without incurring any liability to the Partnership or any other person, within two business days from the date of receipt by its General Partner of this Subscription Agreement.

(s) That if I am a resident of the State of Texas, I understand that:

(i) the Units have not been registered under the Texas Securities Act of 1957 and, therefore, cannot be resold in Texas unless they are registered under the Texas Securities Act of 1957 or an exemption from registration is available,

(ii) the certificate evidencing my Units shall bear the following legend:

THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE TEXAS SECURITIES ACT OF 1957 OR ANY SECURITIES LAWS, AND, THEREFORE, CANNOT BE RESOLD OR OTHERWISE TRANSFERRED UNLESS THEY ARE REGISTERED UNDER THE TEXAS SECURITIES ACT OF 1957 OR AN EXEMPTION FROM REGISTRATION IS AVAILABLE,

(iii) its general partner will make a notation in the appropriate records of the Partnership regarding the restrictions on transfer of the Units,

(iv) prior to the sale of these Units, I must bear the economic risk of the investment for an indefinite period of time because the Units have not been registered under applicable securities laws and therefore cannot be sold unless they are subsequently registered under such securities laws or an exemption from such registration is available.

(t) That these Units, or any interest therein, will not be resold, either to an Assignee or to a substituted Limited Partner, unless

(i) the Units are subsequently registered under the Securities Act of 1933, as amended, and appropriate state securities laws (or unless the Partnership receives an opinion of counsel satisfactory to it that an exemption from registration is available),

(ii) the Partnership receives an opinion of counsel satisfactory to it that any such contemplated resale will not cause a termination of the Partnership for tax purposes,

(iii) similar warranties as are set forth in this Paragraph 3 are obtained from any such Assignee or substituted Limited Partner, and

(iv) the written approval of a General Partner to any substitution shall have first been obtained;

(u) That I am aware of the following:

(i) The Partnership has no financial or operating history; this is the Partnership's first venture and the General Partner has had only limited experience in the gold mining industry.

(ii) The management and control of the Partnership shall rest solely with the General Partner and that I will have no right to participate in such management and control, except to the extent that I may vote on matters expressly set forth in the Partnership Agreement.

(iii) No public market for the Units exists or is likely to develop and that it may not be possible to liquidate this investment readily, if at all, in the case of an emergency or for any other reason. I am further aware of the restrictions to any transfer of Units set forth in the Partnership Agreement; that, in addition, other limitations may be imposed upon transfer of the Units by state securities laws and regulations; that the Units will not be, and investors in the Partnership have no rights to require that the Units be, registered under the Securities Act of 1933, as amended, and any such registration is unlikely; Rule 144 adopted under the Securities Act of 1933, Release No. 5233, January 11, 1972, as amended, which provides for routine sales of unregistered securities in limited amounts in accordance with the terms and conditions of such rule, is not presently applicable to the Units and the Partnership has not covenanted to make such rule available for such resale of the Units; and Rule 237 adopted under the Securities Act of 1933, Release No. 5224, January 10, 1972, may be available for limited sales of the Units, but only in accordance with the terms and conditions of such rule, which among other things, requires that the Units have been beneficially owned and paid for by the seller for at least five years and are sold in a bona fide negotiated transaction other than through a securities broker or dealer.

(iv) The Partnership does not intend to emphasize tax benefits. Further, the tax effects which may be available as a result of an investment in the Partnership are not susceptible to absolute prediction and new developments in rulings of the Internal Revenue Service, court decisions or legislative changes may have an adverse effect thereon.

(v) The discussion of the Federal income tax consequences arising from an investment in the Partnership as set forth in the Private Placement Memorandum is general in nature and the Federal income tax consequences to me of an investment in the Partnership will depend on my particular circumstances.

(vi) There can be no assurance that the Internal Revenue Code or the Regulations promulgated thereunder will not be amended in a manner that would deprive the Partnership or its Partners of some or all of the tax benefits described in the Private Placement Memorandum.

(vii) The General Partner may, at any time prior to the recording of the Partnership Agreement and/or the filing of the Certificate of Limited Partnership, refund and pay back to me my entire contribution for Units, and it will be up to me and/or my Purchaser Representative(s) to convince the General Partner that I have the requisite financial and business experience and the financial capability to purchase some of the Units being offered and to bear a total risk of loss should it occur.

(viii) That my subscription will be returned unless all Units are subscribed prior to August 1, 1985 (or October 1, 1985 if the Closing Date is extended by the General Partner).

(v) That it has never been represented (other than as set forth in the Private Placement Memorandum), guaranteed or warranted to me by any broker, the General Partner, its agents or employees, or any other person, expressly or by implication, any of the following:

(i) The approximate or exact length of time that I will be required to remain as an owner of my Units.

(ii) The percentage of profit and/or amount of or type of consideration, profit or loss (including tax write-offs and/or tax benefits) to be realized, if any, as a result of this venture.

(iii) The past performance or experience on the part of any General Partner, securities broker or finder, their partners, salesman, associates, agents, or employees or of any other person, that will in any way indicate the predictable results of the ownership of Units or of the overall Partnership venture.

(w) The undersigned, if a corporation, partnership, trust or other form of business entity, is authorized and otherwise duly qualified to purchase and hold Units in the Partnership, recognizes that the information provided under the Private Placement Memorandum relates to investments by an individual and does not address the Federal income tax consequences of an investment by any of the aforementioned entities and has obtained such additional tax advice that it has deemed necessary, and such entity has its principal place of business as set forth on the signature page hereof and has not been formed for the specific purpose of acquiring Units in the Partnership. (If the undersigned is one of the aforementioned entities, it hereby agrees to supply any additional written information that may be required);

(x) That the information set forth in that certain Offeree Questionnaire executed by me, is true and complete as of the date hereof, and if there would be any material change in such information prior to the acceptance of this Subscription Agreement by the General Partner, the undersigned will immediately furnish the revised or corrected information to the General Partner.

4. Title. I desire to take title to my interest as follows (check one):

- (a) Individually, as a single person
- (b) Husband and Wife, as community property
(Both must sign)
- (c) Joint Tenants
(Both must sign)
- (d) Tenants in common
(All must sign)
- (e) Separate property
- (f) Trust
(Include name of trust, name of trustee, date trust was formed, and a copy of the Trust Agreement or other authorization)
- (g) Partnership
(Include a copy of the Partnership Agreement)
- (h) Corporation
(Include certified corporate resolution authorizing signature)

(i) Other
Indicate:

and the exact spelling of the name(s) under which title to the Units shall be taken is (please print):

[NOTE: Investors should seek the advice of their attorneys in deciding in which of the above forms they should take ownership of the Units because different forms of ownership may have varying gift tax, estate tax, income tax and other consequences, depending on the state of the investor's domicile and his particular personal circumstances. For example, in community property states, if community property assets are used to purchase Units in individual ownership, this might have adverse tax consequences.]

5. Special and Limited Power of Attorney. I hereby make, constitute and appoint the General Partner, with full power of substitution, to be my true and lawful attorney-in-fact for me and in my name, place and stead for my use and benefit to execute, acknowledge, file, record and swear to in the execution, acknowledgment, filing and recording of:

(a) The Agreement of Limited Partnership and/or any separate Certificate of Limited Partnership, as well as amendments thereto which are in accordance with the terms of the Partnership Agreement, which under the laws of the State of California or any other state are required to be filed, or which the General Partner deems it advisable to file;

(b) Any other instrument which may be required to effect the continuation of the Partnership, the admission of original, additional or substituted Limited Partners, the admission of a substitute General Partner, an amendment to the Partnership Agreement, the reduction of the Capital Contributions of Limited Partners or the dissolution, termination or extension of the Partnership, provided such continuation, admission, amendment, reduction, dissolution, termination or extension are in accordance with the terms of the Partnership Agreement;

(c) Any other instrument which may be required to be executed or filed by the Partnership under the

laws of any state or by any governmental agency, or which the General Partner deems it advisable to file.

The foregoing grant of authority:

(i) Is a Special Power of Attorney coupled with an interest, is irrevocable and shall survive the death, incapacity, merger, termination or dissolution of the undersigned;

(ii) May be exercised by any General Partner for each Limited Partner by an authorized facsimile signature of any General Partner (or one or more of its officers or partners) or by listing all of the Limited Partners executing any instrument with a single signature of a General Partner acting as attorney-in-fact for all of them;

(iii) Shall survive the delivery of an assignment by a Limited Partner of the whole or any portion of his interest; except that where the Assignee thereof has been admitted to the Partnership as a substituted Limited Partner, the Special Power of Attorney shall survive the delivery of such assignment for the sole purpose of enabling a General Partner to execute, acknowledge and file any instrument necessary to effect such substitution.

In the event of any conflict between the provisions of the Partnership Agreement and any instrument or document executed, acknowledged or filed by the General Partner pursuant to this Special Power of Attorney, the Partnership Agreement shall govern.

6. Regulation D. Notwithstanding anything herein to the contrary, every person or entity who, in addition to or in lieu of the undersigned, is deemed to be a "purchaser" pursuant to Rule 501 of Regulation D promulgated under the Securities Act of 1933, as amended, makes and joins in making all of the covenants, representations and warranties made by the undersigned.

7. Purchaser Representative(s) Relationship With Partnership. I acknowledge that I have been advised that the following relationship exists between the Purchaser Representative(s) named below and their affiliates, on the one hand, and the Partnership, the General Partner and its Affiliates, on the other hand (if NONE, so indicate):

8. Independent Tax Advice. I acknowledge that I have been advised to consult my own attorney concerning the Partnership and to consult with independent tax counsel regarding the tax consequences of participating in the Partnership.

9. Miscellaneous. I further understand and acknowledge that:

(a) This Agreement is not transferable or assignable by me.

(b) If the undersigned is more than one person, the obligations of the undersigned shall be joint and several and the representations and warranties herein contained shall be deemed to be made by and be binding upon each such person and his heirs, executors, administrators, successors and assigns.

(c) This subscription, upon acceptance by the General Partner, shall be binding upon my heirs, executors, administrators, successors and assigns.

(d) This Agreement shall be construed in accordance with and governed by the laws of the State of California, except as to the manner in which the subscribing Limited Partner elects to take title to Units in the Partnership and such ownership shall be construed in accordance with the state of his principal residence.

10. Acceptance by General Partner. Execution of this Subscription Agreement and tender of the payment referenced in Paragraph 1 above shall constitute an irrevocable offer which the Partnership may accept or reject and I acknowledge and agree that I am not entitled to cancel, terminate or revoke this Agreement or any of my agreements hereunder. Acceptance by the Partnership shall be indicated by personally delivering or by depositing in the United States mail, postage prepaid, this Agreement duly executed by the General Partner, to me at the address set forth below. I understand that the General Partner will notify me whether the subscription has been accepted, in whole or in part, or rejected, in whole or in part, by the Closing Date. If this subscription has not been accepted on or before the Closing Date, this Agreement and all of my agreements hereunder shall automatically be cancelled, terminated and revoked. In the event this subscription is rejected or not accepted by the General Partner, all funds plus any interest, if any, earned and received thereon while such funds were held in the custodial account of the Partnership, and all documents tendered by me, shall be returned within said time. It is understood that the General Partner shall have the sole

discretion to determine which of the subscriptions should be rejected in whole or in part.

Signature of Offeree

Signature of Offeree

Date

Date

Name of Offeree
(Please Print)

Name of Offeree
(Please Print)

Address (Number and Street)

Address (Number and Street)

City, State and Zip Code

City, State and Zip Code

Telephone Number

Telephone Number

Social Security Number of
Individual, or other Taxpayer
Identification Number

Social Security Number of
Individual, or other Taxpayer
Identification Number

NAME OF PURCHASER
REPRESENTATIVE(S)
(Please Print)

NAME OF PURCHASER
REPRESENTATIVE(S)
(Please Print)

Accepted by:

ALLEGHANY GOLD MINES, LTD.,
a California limited partnership

By: TRANSAGE, a California
general partnership
its General Partner

By: _____ Dated: _____

ALL CHECKS ARE TO BE MADE PAYABLE TO:

Nevada National Bank-Alleghany Gold Mines, Ltd. Escrow Account

SUBSCRIPTION NOTE

\$ _____, _____, 1985

FOR VALUABLE CONSIDERATION, receipt of which is hereby acknowledged, the undersigned ("Maker"), a limited partner in Alleghany Gold Mines, Ltd., a California limited partnership, hereby agrees to pay to Alleghany Gold Mines, Ltd., a California limited partnership ("Holder"), at 1325 Airmotive Way, Suite 340, Reno, Nevada, the principal sum of _____

_____ Dollars (\$ _____), payable as follows:

(a) _____ Dollars (\$ _____) payable on March 1, 1986, and

(b) _____ Dollars (\$ _____) payable on March 1, 1987.

All payments shall be made in lawful money of the United States of America free from setoff, deduction or counterclaim of any kind whatsoever.

Maker may prepay this Subscription Note in whole or in part on any date without premium or penalty, but any partial prepayment shall not extend or postpone the due date of any subsequent payment or change the required amount of any payment, unless Holder shall otherwise first agree in writing.

Maker waives presentment, protest, demand and notice of protest, demand, dishonor and nonpayment of this Subscription Note.

As security for this Subscription Note, Maker gives to the Holder a security interest and contractual right to set-off a portion of the money and property of Maker now or at any time hereafter coming within the Holder's custody or control as set forth in the Holder's Agreement of Limited Partnership. The provisions of Paragraph 6 of the First Amended and Restated Agreement of Limited Partnership of Alleghany Gold Mines, Ltd. are hereby incorporated by reference.

This Subscription Note may be assigned by Holder, but said assignee shall take subject to any and all defenses available to Maker, whether at law or in equity.

In the event of a default, the undersigned promises to pay all costs and expenses of collection and reasonable attorneys' fees incurred by the holder of this Subscription Note, whether or not suit be instituted. Each maker shall be jointly and severally liable hereon and each maker, co-maker and guarantor consents to renewals, replacements and extensions of time for payment hereon before, at or after maturity, consents to the acceptance, release or substitution of securities for this Subscription Note, and waives demand, notice, protest and the right to assert any statute of limitations. No delay or omission on the part of the Holder hereof in exercising any right hereunder shall operate as a waiver of such right or of any other right under this Subscription Note.

At the option of Holder, without prior notice, the whole amount of principal shall become immediately due and payable upon the occurrence of any of the following events, each of which shall constitute a default by Maker under this Subscription Note: (a) Maker's failure to make any payment within thirty (30) days after the date it is due under the terms of this Subscription Note, or (b) the filing of a petition in bankruptcy by Maker, or (c) the initiation of any proceeding under any bankruptcy or insolvency laws against Maker that is not dismissed within forty-five (45) days after the filing of the petition, or (d) the making of a general assignment for the benefit of creditors by Maker. No delay or omission on the part of Holder in exercising any right under this Subscription Note, or under any other agreement or instrument securing this Subscription Note, shall operate as a waiver of such right on any future occasion or of any other rights under this Subscription Note or under any agreement or instrument securing this Subscription Note. To the extent permitted by law, Maker waives the right, in any action on this Subscription Note, to assert that such action was not commenced within the time required by law for such commencement. All rights and remedies of Holder provided for herein are cumulative and shall be in addition to all other rights and remedies provided by law or in any agreement or instrument securing this Subscription Note.

If this Subscription Note is not paid when due, or any other default described above shall occur, or Maker shall breach any other provision of this Subscription Note or any agreement or instrument securing this Subscription Note, Maker hereby promises to pay all related costs, including, but not limited to, reasonable attorneys' fees, incurred by Holder to enforce or interpret the terms and conditions of this Subscription Note, or any agreement or instrument securing this Subscription Note, whether or not litigation is instituted.

The covenants and agreements contained in this Subscription Note shall bind the successors and assigns of Maker and shall inure to the benefit of Holder and its successors and assigns. Diligence, demand, notice, presentment, notice of dishonor, grace, notice of protest and notice of intent to accelerate the maturity of this Subscription Note are hereby waived by all makers, sureties, guarantors and endorses hereof. This Subscription Note shall be the joint and several obligation of all makers, sureties, guarantors and endorsers, and shall be binding upon them and their heirs, personal representatives, successors and assigns. This Subscription Note shall be governed by and construed in accordance with the laws of the State of California.

If any provision of this Subscription Note is held to be invalid, illegal or unenforceable in any respect, this Subscription Note shall be construed as not containing such provision and all other provisions of this Subscription Note shall remain in effect, and to this end the provisions of this Subscription Note are declared to be severable.

CERTIFICATE OF LIMITED PARTNERSHIP INTEREST

IN

ALLEGHANY GOLD MINES, LTD.,

a California limited partnership

Alleghany Gold Mines, Ltd., a California limited partnership ("Partnership"), hereby certifies that _____ (the "Limited Partner") is shown on its books and records as the owner of _____ Unit(s) in the Partnership, as defined in Paragraph 3.30 of the Agreement of Limited Partnership of the Partnership (the "Partnership Agreement"), and, as such, is entitled to all of the rights, privileges and duties of a Limited Partner as set forth in the Partnership Agreement, as currently in effect or as hereafter amended. Date of issuance: _____, 198_.

ALLEGHANY GOLD MINES, LTD.,
a California limited partnership
By: TRANSAGE, a California general
partnership, its General Partner

By: _____
Partner

THE UNITS REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933 AND MAY NOT BE SOLD OR TRANSFERRED IN THE ABSENCE OF SUCH REGISTRATION OR AN EXEMPTION THEREFROM UNDER SAID ACT. THE UNITS MAY NOT BE PLEDGED, SOLD OR TRANSFERRED IN THE ABSENCE OF (1) AN EFFECTIVE REGISTRATION STATEMENT COVERING THE UNITS FILED UNDER THE ACT, (2) AN OPINION OF QUALIFIED COUNSEL, WHICH OPINION AND COUNSEL ARE SATISFACTORY TO THE GENERAL PARTNER, THAT SUCH REGISTRATION IS NOT REQUIRED, OR (3) OTHER EVIDENCE SATISFACTORY TO THE GENERAL PARTNER THAT SUCH REGISTRATION IS NOT REQUIRED. THE UNITS ARE ALSO SUBJECT TO THE RESTRICTIONS ON TRANSFER SET FORTH IN PARAGRAPH 9 OF THE PARTNERSHIP AGREEMENT FOR THE PARTNERSHIP.

THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE ARIZONA REVISED STATUTES, AS AMENDED, ("SECURITIES ACT") IN RELIANCE UPON AN EXEMPTION UNDER SECTION 44-1844 AND CANNOT BE RESOLD OR OTHERWISE TRANSFERRED UNLESS THEY ARE REGISTERED UNDER THE SECURITIES ACT OR AN EXEMPTION FROM REGISTRATION IS AVAILABLE.

THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF NEW MEXICO ("SECURITIES ACT") IN RELIANCE UPON AN EXEMPTION UNDER RULE 2.02(2)(F) PROMULGATED PURSUANT TO THE AUTHORITY GRANTED IN SECTION 58-13-3(M). THESE SECURITIES CANNOT BE RESOLD OR OTHERWISE TRANSFERRED UNLESS THEY ARE REGISTERED UNDER THE SECURITIES ACT OR AN EXEMPTION FROM REGISTRATION IS AVAILABLE.

THESE SECURITIES HAVE BEEN ISSUED OR SOLD IN RELIANCE ON PARAGRAPH (13) OF CODE SECTION 10-5-9 OF THE "GEORGIA SECURITIES ACT OF 1973," AND MAY NOT BE SOLD OR TRANSFERRED EXCEPT IN A TRANSACTION WHICH IS EXEMPT UNDER SUCH ACT OR PURSUANT TO AN EFFECTIVE REGISTRATION UNDER SUCH ACT.

THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE MICHIGAN COMPILED LAWS, 1979, AS AMENDED, IN RELIANCE UPON AN EXEMPTION UNDER SECTION 451.802(b)(9), AND CANNOT BE RESOLD OR OTHERWISE TRANSFERRED UNLESS THEY ARE REGISTERED UNDER THE MICHIGAN COMPILED LAWS, 1979, AS AMENDED, OR AN EXEMPTION FROM REGISTRATION IS AVAILABLE.

THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER SECTION 36-485 OF THE CONNECTICUT UNIFORM SECURITIES ACT AND, THEREFORE, CANNOT BE RESOLD UNLESS THEY ARE REGISTERED UNDER THE CONNECTICUT UNIFORM SECURITIES ACT OR AN EXEMPTION FROM REGISTRATION IS AVAILABLE.

THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE PENNSYLVANIA SECURITIES ACT OF 1972 PURSUANT TO AN EXEMPTION UNDER SECTION 203(d) AND, THEREFORE, CANNOT BE RESOLD OR OTHERWISE TRANSFERRED EXCEPT IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 203(d) AND RULE 203.041(e)(2).

THESE SECURITIES HAVE NOT BEEN REGISTERED
UNDER THE TEXAS SECURITIES ACT OF 1957 OR
ANY SECURITIES LAWS, AND, THEREFORE,
CANNOT BE RESOLD OR OTHERWISE TRANSFERRED
UNLESS THEY ARE REGISTERED UNDER THE
TEXAS SECURITIES ACT OF 1957 OR AN
EXEMPTION FROM REGISTRATION IS AVAILABLE.

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a California limited partnership

PRE-OFFERING QUESTIONNAIRE

This form is to be completed by the General Partner of Alleghany Gold Mines, Ltd., a California limited partnership, or its authorized agent prior to the time that any Units of Alleghany Gold Mines, Ltd., a California limited partnership are offered to the Prospective Offeree named herein. If answer is "none" or "not applicable", so indicate.

Name of Prospective Offeree: _____
Address: _____
Occupation: _____
Business Address: _____

1. Describe circumstances concerning how you first obtained the name of the Prospective Offeree.

2. Did you have any independent prior personal knowledge of Prospective Offeree's personal net worth or annual income? Yes: ____. No: ____. If yes, describe fully, including amounts and source of your knowledge.

3. Were any representations made to you concerning Prospective Offeree's personal net worth or annual income prior to your initial contact with Prospective Offeree? Yes: ____. No: ____. If so, describe, setting forth amounts, if applicable.

4. Did you have independent prior personal knowledge of Prospective Offeree's prior experience, if any, in similar investments? Yes: _____. No: _____. If yes, fully describe source and content of your knowledge.

5. Were any prior representations made to you concerning Prospective Offeree's prior experience? Yes: _____. No: _____. If yes, fully describe, including the source thereof.

6. State how first contact with Prospective Offeree was initiated.

7. Did Prospective Offeree make any representations to you as to his personal net worth or annual income? Yes: _____. No: _____. If so, describe, giving amounts.

8. Did Prospective Offeree make any representations to you as to his prior experience in similar investments or his ability to understand similar investments? Yes: _____. No: _____. If so, describe fully, including Prospective Offeree's education, if known.

a. Did you form an opinion of Prospective Offeree's estimated personal net worth? Yes: _____. No: _____. If so, state estimated amount: \$_____.

b. Did you form an opinion of the Prospective Offeree's estimated annual income? Yes: _____. No: _____. If so, state estimated amount: \$_____.

9. Based on the foregoing, do you believe that Prospective Offeree would be capable of bearing the loss of his entire investment without a significant adverse effect upon his business affairs and current standard of living?
Yes: ____ . No: ____ .
10. Based on the foregoing, do you believe that Prospective Offeree has sufficient prior knowledge and experience in financial and business matters that he is capable of evaluating the merits and risks of the investment?
Yes: ____ . No: ____ .

Date: _____

Signature of General Partner
or Authorized Agent

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ALLEGHANY GOLD MINES, LTD.,
a California limited partnership

OFFEREE QUESTIONNAIRE

INSTRUCTIONS: This Questionnaire is being sent to each individual who has indicated an interest in purchasing Units of Alleghany Gold Mines, Ltd., a California limited partnership (the "Partnership). The purpose of this Questionnaire is to assure the Partnership that each investor will meet the standards imposed by the securities laws of the various states in which the Units will be offered and by Regulation D promulgated under the Securities Act of 1933, as amended ("the Act"), since the Units will not be registered under the securities laws of any state or the Act.

If the answer to any question is "None" or "Not Applicable", please so state:

Your answers will at all times be kept strictly confidential. However, by signing this Questionnaire you agree that the Partnership may present this Questionnaire to such parties as it deems appropriate if called upon to establish the availability under the Act, or under any state securities laws, of an exemption from registration of this private offering.

Please complete, sign, date and return one copy of this Questionnaire to the Partnership or its authorized representative as soon as possible.

PLEASE PRINT

Name _____

Address _____

City _____ State _____ Zip _____

Phone (____) _____

Occupation _____

Business Address _____

City _____ State _____ Zip _____

Phone (____) _____

1. Set forth in the space provided below, the state(s) in which you have maintained your principal residence during the past two years and the dates during which you resided in each state.

2. Do you maintain a house or apartment in any other state? If yes, in which state(s)?

3. In which state, if any, do you pay state income tax?

4. In which state, if any, are you registered to vote?

5. In which state, if any, do you hold a driver's license?

6. What is your present age?
Under 21__ ; 21-30__ ; 31-40__ ; 41-50__ ; 51-64__ ; over 64__.

7. In your Federal income tax return for 1982, 1983, and 1984 check which of the following tax tables you used:

	1982	1983	1984
Single Person/Individual Return	()	()	()
Head of Household	()	()	()
Married Individuals/Joint Returns	()	()	()
Married Individual/Separate Returns	()	()	()

8. What was your income from all sources during the calendar year 1982? _____ 1983? _____
1984? _____

9. What portion of your income during the calendar year 1984 was derived from sources other than salary?

10. What was your tax bracket for 1984 (i.e., the taxable rate imposed upon the last dollar of taxable income reported in your 1984 Federal income tax return)? _____

11. Is your average yearly income from all sources anticipated for the next three-year period ending 12/31/87 in excess of (check one):

__ \$50,000; __ \$100,000; __ \$150,000; __ \$200,000; __ \$300,000

(a) What percentage of your income as shown above is anticipated to be derived from sources other than salary? _____

12. Was your net worth as of 12/31/84 in excess of (check one):

___\$100,000; ___\$200,000; ___\$300,000; ___\$500,000;
___\$1,000,000

(a) What percentage of your net worth as shown is invested in "tax shelter" investments and investments in marketable securities (stocks, bonds, debentures, or notes)?

(b) What percentage of your net worth as shown above constitutes home, furnishings and automobiles? _____

(c) What percentage of your net worth as shown above constitutes liquid assets (cash or assets readily convertible to cash)? _____

13. Please briefly describe your educational background, including dates of attendance and degrees obtained.

14. Are you a director of any company? If so, please state the name, principal place of business and principal type of business of such company or companies.

15. Please describe briefly principal positions held during the last ten years or since graduation from college. Specific employers need not be identified. What is sought is a sufficient description to enable the Partnership to determine the extent of vocationally related experience in financial and business matters.

16. Investment experience:

(a) Please indicate the frequency of your investment in marketable securities: () often; () occasionally; () seldom; () never.

(b) (i) Please indicate the frequency of your investment in unmarketable securities (such as tax-advantaged private placement securities in research and development, real estate, equipment leasing, coal, mineral, oil and gas, or cattle

feeding or breeding syndications): () often; () more than once; () never.

(ii) Please describe below your principal such investments, including date of investment, name of company, amount invested and a brief description of the company's business.

(c) Please indicate in the space provided below any additional information which you think may be helpful in enabling the Partnership to determine that your knowledge and experience in financial and business matters is sufficient to enable you to evaluate the merits and risks of this investment.

17. In evaluating the merits and risks of this investment do you intend to rely upon the advice of any other person?
Yes: ___ No: ___

If your answer to question 17 is "Yes", please identify each such person and indicate their business address and telephone number below.

Name: _____
Business Address: _____
Telephone Number: (____) _____

18. I hereby acknowledge that any delivery to me of the Private Placement Memorandum prior to the determination by the General Partner of my suitability as an investor shall not constitute an offer of Units of the Partnership until such determination of suitability shall be made, and that I shall promptly return the Private Placement Memorandum to the General Partner upon request.

To the best of my information and belief, the above information supplied by me is true and correct in all respects and I will promptly notify the General Partner of any changes in the foregoing answers.

IN WITNESS WHEREOF, I have executed this Questionnaire
this ___ day of _____, 1985, at _____, _____.

(Signature of Offeree)

Homestake's Equity Mine development nearing final phase



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a California limited partnership

PURCHASER REPRESENTATIVE QUESTIONNAIRE

Name of Offeree: _____

Please complete the following questionnaire fully, attaching additional sheets if necessary:

Name of Purchaser Representative: _____

Address: _____

City: _____ Zip: _____ Phone: _____

Occupation: _____

1. Present occupation or position, indicating period of such practice or employment and field of professional specialization, if any and a description of your principal business activities during the last five years.

2. List any business or professional education, including degrees received, if any:

3. List all licenses, designations and memberships in professional organizations, pertaining to your occupation (e.g., the NASD, Bar Association and Committees, Accounting Societies and Committees).

4. Have you had experience in advising clients with respect to investments of this type?

Yes: _____ No: _____

5. List any other professional licenses or registrations, including bar admissions, accounting certifications, real estate brokerage licenses, and SEC or state broker-dealer registrations, held by you:

6. Describe generally any business, financial or investment experience that would help you to evaluate the merits and risks of this investment:

7. State how long you have known the Offeree and in what capacity:

8. Except as set forth in subparagraph (a) below, neither I nor any of my affiliates have any material relationship with Alleghany Gold Mines, Ltd., a California limited partnership (the "Partnership"), its General Partner, or any of its affiliates, and no such material relationship is mutually understood to be contemplated:

(a) _____

- (b) If a material relationship is disclosed in subparagraph (a) above, indicate the amount of compensation received or to be received as a result of such relationship:

9. In advising the Offeree in connection with the Offeree's prospective investment in the Partnership, I will be relying in part on the Offeree's own expertise in certain areas.

Yes: _____

No: _____

10. In advising the Offeree in connection with the Offeree's prospective investment in the Partnership, I will be relying in part on the expertise of an additional purchaser representative or representatives.

Yes: _____

No: _____

If "Yes," give the name and address of such additional representative or representatives:

11. Please describe any or all of the following events which have occurred during the past ten years. If inapplicable, so state in your answer: (i) Have you been convicted, indicted or investigated in connection with any past or present criminal proceedings (excluding traffic violations and any

other minor offenses)? (ii) Have you been the subject of any order, judgment or decree of any court of competent jurisdiction permanently or temporarily enjoining you from acting as an investment advisor, underwriter, broker or dealer in securities or as an affiliated person, director or employee of an investment company, or from engaging in or continuing any conduct or practice in connection with any such activity or in connection with the purchase or sale of any security, or were you the subject of any order of a Federal or state authority barring or suspending for more than sixty (60) days your right to be engaged in any such activity, or to be associated with persons engaged in any such activity, which order has not been reversed or suspended?

I understand that the Partnership and the General Partner will be relying on the accuracy and completeness of my responses to the foregoing questions and I represent and warrant to the Partnership and the General Partner as follows:

- (i) I am acting as Purchaser Representative for the Offeree in connection with the Offeree's prospective investment in the Partnership.
- (ii) The answers to the above questions are complete and correct and may be relied upon by the Partnership in determining whether the offering in connection with which I have executed this Questionnaire is exempt from registration under the Securities Act of 1933, as amended, pursuant to Regulation D, or otherwise.
- (iii) I will notify the Partnership immediately of any material change in any statement made herein occurring prior to the closing of any purchase by the Offeree of an interest in the proposed investment.
- (iv) I am not an affiliate, director, officer or other employee of the Partnership or any General Partner or any affiliate thereof, or a beneficial owner of 10 percent or more of any class of the equity securities of the Partnership or any General Partner or any affiliate thereof.
- (v) I have disclosed to the Offeree in writing prior to the Offeree's acknowledgement of me as his Purchaser Representative, any material relationship with the Partnership, the General Partner or any affiliates disclosed in my answer to question 8 above.

(vi) I personally (or, if I have checked "Yes" in question 9 or 10 above, together with the Offeree or the additional purchaser representative or representatives indicated above) have such knowledge and experience in financial and business matters that I am capable of evaluating the merits and risks of the Offeree's prospective investment in the Partnership.

(vii) I have reviewed the Private Placement Memorandum and have advised _____ as to the advisability and nonadvisability of becoming an investor in Alleghany Gold Mines, Ltd., a California limited partnership although _____ has full responsibility for his/her investment and I understand that I am in no way responsible for any loss of investment if experienced by _____ and I am not liable under any securities laws for acting as an advisor or participating as such in the Offering.

IN WITNESS WHEREOF, I have executed this Questionnaire
this ____ day of _____, 1985.

(Signature of Purchaser Representative)

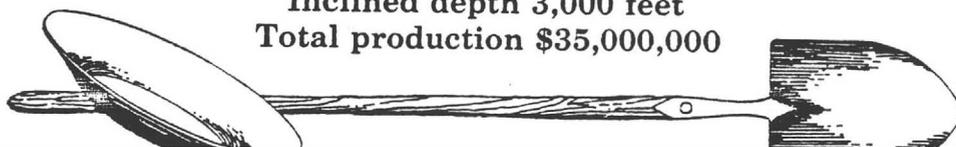
THE ORIGINAL SIXTEEN TO ONE MINE

1896 to 1965

Alleghany, Sierra County

Inclined depth 3,000 feet

Total production \$35,000,000









THE ORIGINAL SIXTEEN TO ONE MINE

By William B. Clark and Willard P. Fuller, Jr.

After a long and colorful history, the renowned Sixteen To One gold mine at Alleghany, Sierra County, was shut down in December, 1965. This was only after a long but vain attempt to surmount the difficulties that have beset the domestic gold mining industry since World War II. The production of this, one of California's outstanding mines, is estimated to be at least \$35 million in gold valued at \$35 an ounce. Much of this total was from small but surprisingly rich ore bodies, one of the factors that enabled the mine to operate until recently. The "Sixteen" was the last sustained commercial lode-gold mining operation in California; Alleghany was the last California community where the economy was based chiefly on gold mining. At the present time there are only a few intermittent prospecting operations in the district.

Alleghany is in the southwestern portion of Sierra County, about 40 miles northeast of Nevada City by road. It is picturesquely perched on a narrow bench on the steep canyon slope, at the Tertiary-bedrock contact. The district is located in a belt or zone of high-grade gold mineralization that extends from Goodyear's Bar south through Forest, Alleghany, Chips' Flat, and Minnesota, to Snow Point and Washington in Nevada County. This zone was studied in days past by such outstanding geologists as J. B. Trask, Waldemar Lindgren, H. W. Turner, and H. G. Ferguson. The total production of the Alleghany district is estimated to be more than \$50 million at actual prevailing gold prices. As in many of California's Sierra Nevada gold districts, much of the earlier production was from placer mines; but since the early 1900s, quartz mines have been the principal source of the yellow metal. In addition to the consolidated operations of the Sixteen To One, other important producers of lode gold in the district have been the Brush Creek, Docile, El Dorado, German Bar, Cold Canyon, Irelan, Kate Hardy, Kenton, North Fork, Oriental, Osceola, Plumbago, and Yellowjacket mines. The Ophir, Rainbow, Rainbow Extension, Red Star, South Fork, Tightner, and Twenty One, all originally separate operations, eventually became part of the Sixteen. Significant amounts of placer gold have been produced at a number of drift mines, the largest of which were the Bald Mountain, Bald Mountain Extension, Highland & Masonic, Live Yankee, and Ruby; and from small hydraulic pits at Chips' Flat and Minnesota.

The unusual ore bodies at Alleghany are in quartz veins; they range from small enrichments or pockets containing a few hundred dollars worth of ore to bodies that produced gold valued at a million dollars or more. One enrichment at the Sixteen To One, with a pitch length of 40 feet, yielded ore worth more than \$2 million; another at the Oriental that had a horizontal stoping length of only 14 feet is said to have produced \$734,000 worth of gold. The veins strike in a northerly direction, dip either east or west, and ordinarily are 2 to 5 feet in thickness, although some of the quartz is as much as 50 feet thick. The gold is found in the native form, coarse, commonly associated with arsenopyrite, but with only small amounts of other sulfides. The veins are found mostly in amphibolite, but they also cut across slate, quartzite, chert, schist, and granite. Numerous serpentine and associated mariposite or "bluejay" bodies are present, and appear to have an important influence on the localization of the ore shoots.

Gold mining began in the Alleghany area in the spring of 1851, when a group of Kanakas (Hawaiian sailors) discovered coarse nuggets in what is now known as Kanaka Creek near its junction with Frenchman's Ravine. Soon thereafter, the "Great Blue Lead", a buried Tertiary auriferous gravel channel, was found just west of the present town of Alleghany. Many claims, including the Alleghany and Knickerbocker, were staked at once, and tunnels were driven. During the driving of the tunnels on the Alleghany and Knickerbocker (1853-55), a bedrock vein was encountered. However, at that time scant attention was paid it, for the objective of the miners was the rich channel placer deposit.

ABOUT THE AUTHORS

William B. Clark has been a geologist with the California Division of Mines and Geology since 1951. Many readers will remember him for his 15-year tour of duty in the Division's Sacramento office, of which he was in charge. He is a graduate of the University of California at Berkeley—first as a major in history, then in geology. He is the author of numerous reports on the mines and mineral resources of various Mother Lode counties, and of articles on various phases of gold mining. His newest book, *Gold Districts of California*, is now in the hands of editors and cartographers, being prepared for publication. No publication date has yet been set; when it is ready for release, this magazine will carry a notice.

Willard P. Fuller, Jr., presently a geologist with Calaveras Cement Company, has been closely interested in the Sixteen To One for the past quarter of a century. He first visited the mine when he accompanied a fellow graduate student of Harvard University who came west to study the mine. Mr. Fuller spent the summers of 1940 and '41 working at the mine as a mucker; winters he attended graduate school at the California Institute of Technology. Ten years later, he returned to the Sixteen To One to work as company geologist.

Mr. Fuller comes by his interest in history late but honestly; his grandfather was Edward Channing, a well-known historian. Bill Fuller presently serves as Editor for the Calaveras County Historical Society.

The miners who came to the Alleghany district were a varied lot. The town drew its name from the Alleghany drift, so christened by the company of Pennsylvania miners driving it. Many of the first miners came from New England and other eastern states. Amongst the later arrivals were some Frenchmen and Germans; and after the '70s a number of Cornishmen or "Cousin Jacks" found their way to the district. Chinese, also rather late arrivals, reworked the placer tailings along the streams, as well as some of the old drifts.

Drift mining accounted for much of the gold produced in the Alleghany district from the 1850s through the 1880s; the production is believed to have totaled as much as \$10,000,000. Many of the original gravel claims were combined into larger drift mining companies, such as the Bald Mountain and the Highland & Masonic, and these consolidations paid very well. The first quartz mining to be done in the district was probably in 1853, at the German Bar and Irelan mines; somewhat later, quartz mining was initiated near Chips' Flat, but only on a very small scale.

During the mid-1860s notice was taken of the richness of some of the veins, and lode mines that later became large producers, such as the Brush Creek, Gold Canyon, Oriental, Kenton, Plumbago, and Rainbow, were opened. In the '70s and '80s several notable high-grade ore bodies were found. One rich pocket at the North Fork yielded more than \$70,000; another that contained \$116,000 was encountered in the Rainbow mine. A slab of quartz containing gold worth \$20,648, from this latter pocket, was exhibited in San Francisco in 1882.

By 1890 mining was relatively quiet in Alleghany, for only the Ruby and Bald Mountain Extension drifts maintained payrolls; but in 1891, a partnership that included Jack Binning, G. W. Hildebrande, and Charles Currie was formed. These men had become acquainted with Jim McCormick, an old-time resident, who knew of the bedrock vein uncovered nearly 40 years before in the Knickerbocker tunnel. Fired by his enthusiasm, they reopened the tunnel, and located the Contract and



Day shift at the Sixteen To One mine in 1936. Superintendent Bennett is fifth from left in second row.



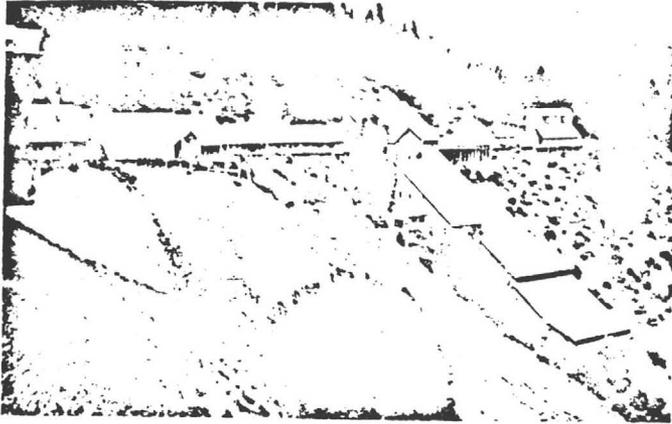
Original Tightner buildings at Knickerbocker tunnel portal in 1907; view west. From the H. L. Johnson collection.



Original Tightner buildings at Knickerbocker tunnel portal in 1907; view south. From the H. L. Johnson collection.



Trucks on the Foote Road in 1923 after delivering supplies to Aghany. Courtesy Ed. Bawden.



Sixteen To One surface plant, view east. The No. 2 portal is to the left. Photo by C. V. Averill.



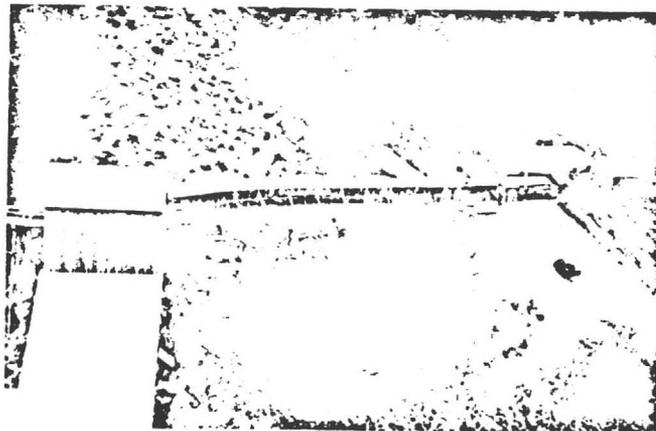
Main street of Allegheny about 1910; looking east. The Sixteen To One mine is in Kanaka Canyon to the right. From H. L. Johnson collection.



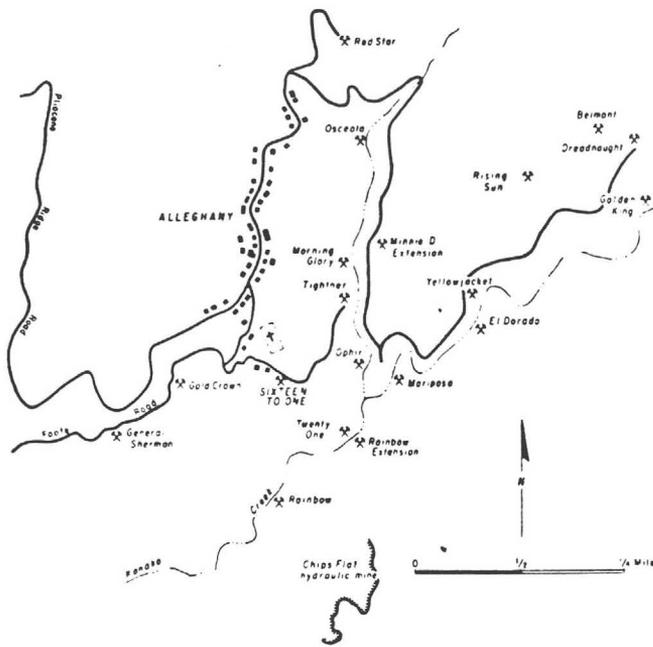
Knickerbocker tunnel about 1910. Jack Binning, supt., in center, and L. D. Woodbury, superintendent of the adjoining Red Star mine, on right. From H. L. Johnson collection.



H. L. Johnson (left) and Jack Binning by high-grade ore body in the Tightner mine in 1911. This ore body yielded \$470,000 in gold. Courtesy California State Library.



Lower Tightner tunnel and mill in 1912. Photo from H. L. Johnson collection.



Sketch map of the Alleghany district in the vicinity of the Sixteen To One mine.

Contract Extension lodes north and south of the remembered vein. The partners drifted north and sank a small winze, but the vein "tightened",—and the mine was dubbed the "Tight'ner" by the townspeople. Tom Bradbury, stimulated by the interest in the Tighner mine, in 1896 located the Sixteen To One claim on the vein outcropping in his back yard just south of the Contract claims, and started a prospect tunnel, christening it the "Sixteen-To-One" in honor of the silver-gold ratio of U.S. coinage, as proposed by William Jennings Bryan in his campaign speeches.

Henderson L. Johnson took a lease and bond on the Tighner in 1903. A native of Ohio and a former teacher, Johnson, who had mined in Colorado and New Mexico, came to Alleghany in 1890. He was associated with several mines in the district, and worked briefly as foreman at the Gaston mine near Graniteville, in Nevada County. When Johnson took charge of the Tighner, instead of continuing north on the vein, he decided to drift south toward the Alleghany tunnel, where, although no gold had been found in it there, the vein was stronger. In his first blast \$20 worth of gold was recovered, and it was soon apparent that a rich strike had been made. Nearly \$470,000 was eventually taken by Johnson from this ore body, and the spectacular discovery led to a revival of lode-gold mining at Alleghany that was to last for more than 60 years. "H.L.", as Johnson was called, installed Jack Binning, one of the original owners, as his superintendent.

Johnson soon sold a three-quarter interest in the mine to Senator Jones, formerly prominent in Virginia City. However, at the close of the option period Jones turned the property back to Johnson as being too "pockety" for the price asked. "H.L.", who had great faith in the mine, resumed operations. More high-grade ore was found in the winze workings off the south Knickerbocker drift; and by 1907 the Tighner was widely known for the richness of its ore. Tighner miners at that time were paid in gold coin, according to contemporary news items.

In 1908, Johnson consolidated a number of claims, including the Rainbow, Red Star, and El Dorado, but not the Sixteen To One, and applied for patent of the Contract and Contract Extension. The application was protested by the Dead River Mining Company, which owned several placer claims overlying Johnson's lodes. Endorsement by the U.S. Forest Service of Johnson's rights and bona fide operation led to the granting of patent in 1911. "H.L." became a wealthy man from the profits of the Tighner mine. He sold out to O'Brien, Foote, and associates of Grass Valley in 1911 for \$550,000 and moved

to Berkeley. However, his health soon failed, and he died in 1918 from tuberculosis possibly complicated by silicosis, an ironic fate for one who had pioneered in the introduction of modern drilling equipment underground.

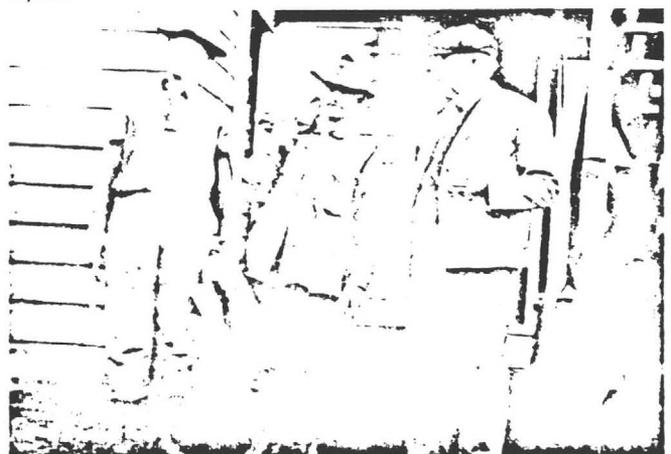
Meanwhile, in 1907-08, Tom Bradbury, with the help of his brother "Cap" (Theodore) and Yeates Lawson, drove a new lower cross-cut (now the No. 2 tunnel) into the vein on the Sixteen To One claim, and drifted south. Then, because of a shortage of funds, they optioned the property to the partnership of Wilson and Vander Beugle. The new operators drifted north and hit a rich high-grade body that yielded about \$100,000. This ore was sacked and taken to the Citizens Bank in Nevada City and then milled. Unfortunately, Wilson allegedly pocketed all the proceeds and hurriedly left the scene. The promising little mine was forced into receivership.

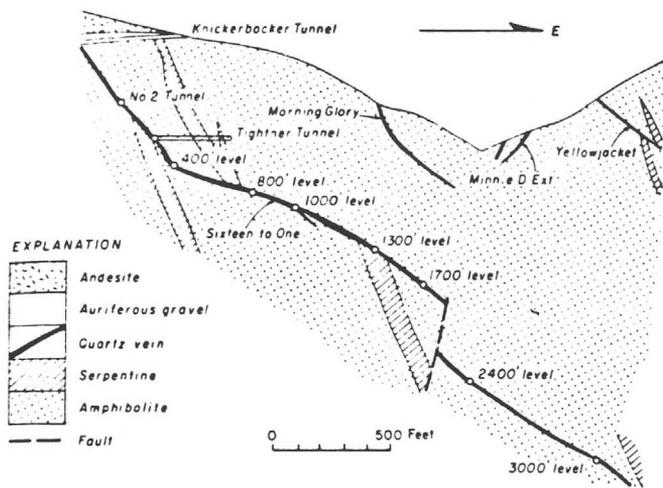
In 1911, J. G. Jury and W. I. Smart made an agreement with the Bradburys and Lawson to lease and option the property. Jury, Smart, and H. K. Montgomery then incorporated the Original Sixteen To One mine, in October of that year. Smart was the first superintendent, but he soon left, and H. J. Langdon, a director, took over. The winze started by Smart under the Wilson pocket was deepened, and new levels turned at 250 and 300 feet. About this time a new stockholder, H. U. Maxfield, was taking an active part in managing the company. Maxfield, a resident of Oakland and a native of Arkansas, was a highly successful financier. He persuaded his associates, in 1915, to appoint a more experienced mine operator, Mark Sullivan, as superintendent. By then, however, Langdon's development work had paid off well, and the mine was already in production.

Next door, the Tighner Mines Company, under the direction of J. M. O'Brien and A. D. Foote, was continuing as a highly profitable operation. Foote, a prominent mining engineer, also was manager of the well-known North Star mine at Grass Valley. "Cap" Hall was the first superintendent, and was succeeded later by George Scarfe. In 1913-14, the Tighner Company and Sierra County jointly constructed an all-season road, named for engineer Foote, down Kanaka and Middle Yuba canyons to North Columbia. Foote's Crossing is a well-known spot on this road where it spans the Middle Yuba River. Foote and O'Brien operated the Tighner until 1918, producing a total of some \$3,000,000, of which \$500,000 was paid out in dividends. The ore was treated in a 20-stamp mill.

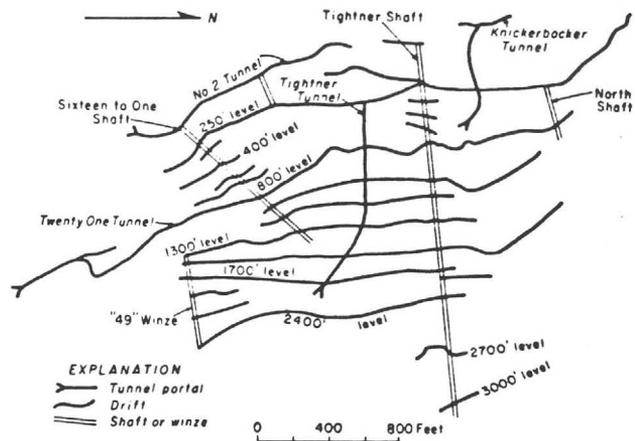
During these years, both the Tighner and the Sixteen had difficulty in mining the 20° to 30° dipping veins. It was necessary to establish levels very close together so that the "muck" could be handled easily in the flat stopes. Where the vein workings were a long distance above main haulage-ways, "go-devils", or gravity-operated skips, were used to bring the muck down to the ore cars in the drift. The main level (later connected to the 250 level of the Sixteen) was the Tighner tunnel, started by Johnson and completed by his successors. The mill was located at the portal of this adit, and mules hauled

Superintendent H. J. Langdon, foreman Tom Bradbury, and director S. B. Conner in 1915, with the first sack of high-grade ore produced by the Sixteen To One Company. Photo courtesy Mrs. Merle Bradbury Myers.





Cross section of the Sixteen To One mine near the Tightner shaft.



Main underground workings of the Sixteen To One mine.

the cars out to the mill or waste dump. Mae West, the last mule to work on the Tightner level, roamed the streets of Alleghany in retirement, dying at a ripe old age only a few years ago.

The Sixteen became involved in litigation with the adjoining Twenty One mine in 1919. Although the latter had been worked first in the early days of the camp, it was never known as a gold producer. About 1914 it was reopened by a cannery operator named Hunt, who found high-grade ore in a new vein in the hanging wall of the Twenty One vein. Shortly after, the Sixteen To One winze broke into Twenty One workings, showing all too clearly that they had both been mining on the same vein. Suit was brought against the Twenty One in the Federal court in San Francisco, the result of which was a judgement against the Twenty One for \$93,000. In payment of this judgement, the mine was sold to the Sixteen To One for \$60,000. In this trial Andrew C. Lawson, eminent professor of geology at the University of California, was an expert witness for the Sixteen To One.

The Tightner was reopened in 1919 by the Alleghany Mining Company, a concern put together by mining engineer Fred Scars. A substantial mine organization was built up with A. F. Duggleby as superintendent and W. H. J. Goldsworthy as engineer. Some \$600,000 in gold was produced over the next four years. By this time it was apparent that the Tightner and the Sixteen veins were one and the same. An agreement was reached between the two companies as to where the property line, modified from a simple extra-lateral projection because of other complications, would lie. The Sixteen drove a heading up their side of this line, aptly called the Compromise Raise. Curiously enough, and much to the satisfaction of the Maxfield group, essentially all of the high-grade ore later found in the area was south of the line on Sixteen ground. Understandably, in 1924, Alleghany's option to the Tightner was sold to the Sixteen To One, and shortly thereafter the operations were combined. Tightner Mines Company retained the Red Star ground, adjoining to the north.

Beginning about 1922, a number of extremely rich ore bodies were found in the Sixteen To One mine. One relatively small body yielded \$2,000,000, another more than \$1,000,000, and several produced more than \$200,000. In 1924 an 80-pound lot of gold-bearing quartz produced \$5,000, and in 1928 some \$28,000 was mortared out of a chunk of ore weighing 160 pounds. In the mid-30s a "bunch" was discovered that contained about \$750,000. The mine was extraordinarily profitable during the twenties and continued to show a very high operating profit during the thirties. For example, it was reported that dividends totaling \$1,238,501 had been paid to 1924; in 1934 alone, bullion receipts were \$578,000 and dividends \$287,000. Two years later, \$246,000 was paid to the stockholders out of a production of \$514,000.

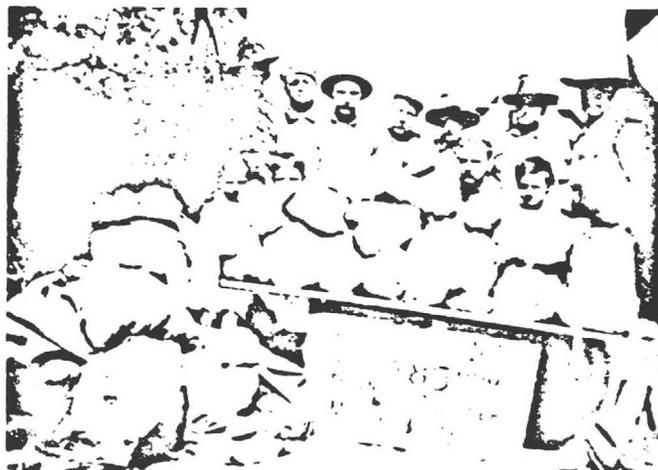
Mark Sullivan retired because of ill health in 1923, and "Cap" Bradbury succeeded him, only to die the following year. Then foreman Tom Bradbury was appointed superintendent. Brad-

bury hired his nephew, C. A. "Dick" Bennett, as mill foreman in 1926. Bennett, the grandson of pioneer Alleghany argonauts, had helped Bradbury lay out the No. 2 tunnel nearly 20 years earlier, when a college student. When Bradbury retired as superintendent in 1929, Bennett succeeded to this position, and continued as superintendent until the mine was finally closed in 1965. H. U. Maxfield, who became president of the company just a few years after it was incorporated, held that post until his death at 87 in 1951. Others associated with the Sixteen over the years were W. W. Kallenberger, mine engineer; Fred Austin, mine engineer and assistant superintendent; Hamilton Eddie, mine foreman; Willard Van Doren, mill and mine foreman; J. B. Hunley, mill foreman; Wilford Hart, mine engineer and later mine foreman; and Tom Hogan, the last mine foreman.

During the depression of the thirties, gold mining in California underwent a considerable "boom" because of low costs and the 1934 increase in the official price of gold from \$20.67 to \$35 an ounce. This was especially true in the Mother Lode region of the Sierra Nevada, where thousands of men found employment in the mines. The Sixteen To One operated continuously during those years, with a payroll averaging between 85 and 100 men. By 1937 reported dividends had reached \$4,027,000, and at the end of the decade, \$4,437,000.

Operations were greatly curtailed during World War II because of the limitations of War Production Board Limitation Order No. 208. The Sixteen was run on a limited basis and permitted to mill 200 tons of ore for each 6-month period. By

Sixteen hundred pounds of high-grade ore containing \$85,000 from the Tightner mine. H. L. Johnson is on right. From H. L. Johnson collection.



continued on page 78



Sacked high-grade ore from the Sixteen To One mine in the Citizens Bank at Nevada City in 1909. The actual value was about \$100,000, not \$400,000, referred to in the caption.

confining operations to the richer parts of the mine, some production was maintained, and the mine kept in good working condition. The Rainbow, South Fork, and Bald Mountain mines were acquired during this period.

In 1945 normal mining operations were resumed, but on a smaller scale than before the war. By selective mining and mechanization, production was maintained, but it was not possible to continue underground development at the pre-war level. In 1954 a bad fire on the 250 level near the main Tightner shaft collar seriously damaged the shaft, and, though the fire was soon brought under control, operations were seriously hampered in this part of the mine thereafter. Continually rising costs, gradual exhaustion of the developed portions of the mine, and the declining rate and productivity of new development work finally caused depletion of working capital, and it became necessary to close the mine. During the post-war period, the crew at the mine averaged about 45 men. The Rainbow and Sixteen To One Extensions were purchased during those years. Another acquisition was the Tightner Mines Company which controlled the Red Star ground. This had recently been worked through the Osceola tunnel by the Yellowjacket Mining Company, Charles J. Ayers, superintendent.

With the auctioning of the beautiful collection of gold-quartz specimens in 1965, and the subsequent selling of the equipment and surplus surface buildings, little remains as evidence of more than 60 years' operation of one of the most productive and profitable gold mines that California has ever known. The final tally showed nearly \$5,750,000 in dividends for the Sixteen To One company alone, a remarkable record. To this must be added the profits of H. L. Johnson, Tightner Mines Company, and Alleghany Mining Company. The closing of the Sixteen To One thus ended a major industry in California that had existed for 110 years: one that provided many thousands of jobs, and tens of millions of dollars of gold annually.

NATION'S MAPPING AIDED BY PHOTOREVISION TECHNIQUE

The nation's standard topographic maps which show elevations, roads, streams, buildings and other detailed features, will be updated more rapidly because of "interim revision," a new photorevision technique, the U.S. Geological Survey announced recently.

The interim revision method represents an attack on a long-standing problem of the mapmaker—keeping maps as current as possible.

George D. Whitmore, chief topographic engineer, U.S. Geological Survey, Washington, D.C., said that new construction, especially in urban areas, poses a vexing problem; some maps are virtually obsolete before they are off the presses. In some cases, man is altering the landscape so rapidly and so drastically that normal revision of topographic maps, about every ten years, cannot possibly keep up with the changes.

In explaining the new technique, he said that revisions will be made periodically on maps by overprinting new data obtained from aerial photography. "These new data involve no field work or changes to contour lines."

"Various features such as new interstate highways," he continued, "industrial plants, suburban housing, dams, shopping centers and relocated streams, which are changes since the date of the previous map edition, are obtained from new aerial photography, and overprinted on the map in magenta."

"Thus, a new dimension—time—is added to the map. The original map data can be seen, and the overprinted color shows clearly the changes and developments that occurred. This provides an historical comparison that is useful to a wide variety of map users such as planning, zoning and construction officials, as well as geographers, earth scientists, engineers and others who are involved in urban development."

First maps to undergo revision using the new technique are located in Baltimore's fast-growing suburbs. Interim revision projects are now in progress for Santa Maria, California, El Paso, Texas, and Des Moines, Iowa, with further projects planned for Oxnard, California, Phoenix, Arizona, Albuquerque, New Mexico, Amarillo and Abilene, Texas, Lawrence, Kansas, Tulsa, Oklahoma, Peoria, Illinois, Mobile, Alabama, and Palm Beach, Florida.

Inquiries regarding the revised maps should be addressed to the Map Information Office, U.S. Geological Survey, Washington, D.C. 20242.

SPACE TRAVELER TO BE CHECKED

Scientists who borrowed a heavy iron meteorite from a Spanish museum hope to start slicing it up soon to study its age and history.

The 290-pound space traveler is named the Colomera meteorite after a small town near Granada, Spain, where it was found in 1912. It has since reposed in the National Museum of Natural Science in Madrid.

Colomera was shipped to the California Institute of Technology, where it will be cut up and studied by Caltech's Gerald J. Wasserburg, D. S. Burnett, and Spain's Hermogenes Sanz.

"Colomera appears to be a uniquely interesting meteorite with silicate inclusions, which indicate it had an interesting history subsequent to its formation," Dr. Wasserburg said. "The Spanish National Museum and the Spanish Atomic Agency generously permitted shipment of this whole object to my laboratory so that Dr. Sanz, Dr. Burnett and I can pursue our investigations."

"Our method," Dr. Wasserburg continued, "will be to study the isotopes of rubidium and strontium that we find in the very small crystals of silicates embedded in the iron. By this procedure we hope to determine the meteorite's history of heating and collisions in space in the past 4.6 billion years."

The study will be made using a new computerized mass spectrometer to determine the exact balance between radioactive rubidium and the daughter product strontium, which are found in the transparent silicate inclusions. The inclusions look like small, irregularly shaped drops mixed into the iron of the pillow-size meteorite.

Earlier experiments indicate that Colomera and some other iron meteorites are about 4.6 billion years old, dating from the time of their original crystallization or cooling. The study of silicate inclusions indicates whether gross melting and chemical differentiation occurred later, caused perhaps by heating or collisions that may have altered the rubidium-strontium clock. Previous work has shown that some meteorites were made rather recently, some being only 3.8 billion years old.

When the crated meteorite arrived at Caltech, it carried a poster-size cartoon initiated by Dr. Sanz' colleagues in Spain, showing Dr. Sanz playing a "mass spectrometry concerto-Colomera bolero" and also a flying saucer bullfight.

Meteorites like Colomera, and the more plentiful stony meteorites, are believed to come from within the solar system, perhaps from the asteroid belt that circles the sun, although some meteorites may originate from the moon.

bends and splits is an unfavorable feature. The vein is well defined where developed in the lower tunnel and may be worthy of further development. The small serpentine mass cut in the upper tunnel lies almost directly above this part of the vein, though, as far as seen, the wall rocks are schist.

SIXTEEN TO ONE MINE

The Sixteen to One mine (pl. 53 and secs. A-A' to G-G', pl. 10), owned by the Original Sixteen to One Mining Co., now includes also the mines formerly known as the Twenty-one and Tightner, and as they develop the same vein and are now worked as a single mine they will be described together.

The Twenty-one mine formerly comprised the portion of the present Sixteen to One mine south of about line G-G' on Plate 53. It was the first of the three mines to be developed and was in operation prior to 1868⁸⁸ but never made any notable production, except from ground afterward determined to be in trespass on that of the Sixteen to One. In 1919 apex litigation with the Sixteen to One resulted in a judgment for \$93,000 against the Twenty-one, and the mine was purchased by the Sixteen to One for \$60,000. The Twenty-one tunnel now forms part of the 800-foot level of the Sixteen to One mine.

The Tightner mine included the portion of the vein lying within the Contract and Contract Extension claims, north of the Sixteen to One claim. The vein had been found during placer operations in the early days of the camp, but no attention was then paid to it. In 1902, in the course of clean-up operations from the old Knickerbocker tunnel, some drifting was done to the north of the tunnel without much success, and the property was bonded to H. L. Johnson, who drifted to the south and in 1907 obtained the first high-grade ore. The old workings of the Tightner, in the vicinity of the Knickerbocker tunnel, yielded the largest high-grade shoot which this portion of the mine has yet produced. At least \$375,000 in coarse gold is said to have been obtained from picked ore, besides lower-grade ore that was left on the dump and later milled at a profit. Later the portion of the Eclipse property lying north of the creek was purchased and the present Tightner tunnel was run. This tunnel cuts the vein at about 400 feet vertical depth below the old Knickerbocker tunnel. The Tightner tunnel now connects with the 250-foot level of the Sixteen to One mine. The mine was sold in 1909 to the Tightner Mines Co. A. D. Foote, of the North Star mine, at Grass Valley, became general manager, and Capt. A. B. Hall superintendent. This company operated the mine until 1918 and is said to have produced \$3,000,000, of which about \$500,000 was paid out in

dividends. The mine was sold in 1920 to the Alleghany Mining Co., but the Tightner Mines Co. reserved the Red Star property. This company continued development in depth down to the present 1,000-foot level. When it was discovered that the apex of the vein beneath the lava left the west side line of the Contract claim instead of passing through the end line, as had been supposed, a compromise was effected with the Sixteen to One mine by which the Tightner withdrew its claim on the vein to the line of the Compromise raise, which was run jointly by the two mines. The ground ceded to the Sixteen to One mine proved exceedingly rich, but though a little high-grade ore was obtained north of the raise the richest ore did not extend into the restricted Tightner territory. As developments in depth were not satisfactory, the mine was sold in 1924 to the Sixteen to One.

The ground covering the present Sixteen to One claim was formerly owned by the Rainbow mine but was never deemed worthy of development. The present claim was located by Thomas Bradbury, the late general manager, in 1908. Mr. Bradbury, assisted only by his brother, drove the present No. 2 tunnel of the Sixteen to One mine. In this portion of the mine the vein is not well defined, and it was some time before his persistence was rewarded by the discovery of small bunches of high-grade ore. The mine was later bonded to some promoters. A little high-grade ore was obtained, but quarrels and lawsuits between the promoters prevented development, and the property reverted to the original owners, who organized the present company. The capital stock consists of 200,000 shares, par value \$1, of which 164,030 are outstanding. Dividends of \$2,706,495 had been paid to February, 1930.⁸⁹ The mine did not become a noteworthy producer until, largely under the stimulus of the conflict with the Twenty-one, the ground between the 250 and 800 foot levels was explored. Since the acquisition of the Tightner property the main development work has been carried on from the Tightner shaft, but in 1925 the Sixteen to One shaft had been deepened to the 1,300-foot level.

The mine has been the most productive in the district, and the total output of the combined properties to 1928 has been about \$9,000,000, of which the greater part has come from the area between the Sixteen to One shaft and the Compromise raise. For each foot of development work on the vein, including shafts and principal raises but excluding development raises, there has been a production of about \$230. The average yield per ton of material mined during the entire history of the mine has been over \$20. @ 2000/03 Am

The mine (pl. 53) is developed by two principal inclined shafts and levels spaced at intervals of approximately 100 feet on the dip of the vein in the upper

⁸⁸ Browne, J. R., Mineral resources of the States and Territories west of the Rocky Mountains for 1868, p. 139, 1869.

⁸⁹ Mines Handbook for 1930, p. 630, 1931.

@ 425/03 Am = 4/11²²/6

workings and 200 feet in the lower workings. The lowest level in 1928, the 2,100-foot level from the Tightner shaft, is 1,100 feet lower than the No. 2 tunnel and 1,360 feet lower than the apex of the vein beneath the lava. (In the summer of 1930 exploration had been carried to the 3,000-foot level, 1,700 feet below the No. 2 tunnel.) At the time of visit (1928) no stoping had been done below the 1,300-foot level. The 1,500-foot level, however, had been carried for some distance from the shaft and showed excellent prospects.

The Tightner formation, here consisting of hornblende schist, in places much altered, forms the hanging wall of the vein. The footwall rocks include both the Kanaka formation and the Tightner formation. Although the strike of the vein is at an angle to that of the inclosing rocks, the Kanaka formation reaches its greatest depth, about the 250-foot level, on the footwall in the southern part of the mine. (See sec. G-G', pl. 10.) From this point northward, owing in part to change in the amount of displacement along the fault followed by the vein, but probably in the main to change in strike of the inclosing rocks, the Kanaka formation does not extend to as great a depth, and north of the line of section D-D', Plate 10, and in the lower workings the vein seems to have the Tightner formation on both walls. However, as the wall rocks are much altered the distinction between the two formations is not everywhere certain. Two dikes of serpentine cut the Tightner formation and are faulted by the vein.

The vein follows a reverse fault whose displacement, measured along the dip, ranges from about 900 feet along the line of the Tightner shaft (sec. C-C') to less than 500 feet in the northern part of the mine (sec. A-A') and less than 300 feet at the south end (sec. G-G'). The only data available for determining the displacement are the positions of the two serpentine dikes faulted by the vein, and as these dikes are nearly parallel to the vein and dip in the same direction, though more steeply, these figures are only approximate. The eastward-dipping vein is cut by two groups of faults, which for the most part dip steeply to the west but in a few places have vertical or even, for short distances, steep easterly dips.

The upper group of faults cuts the fault followed by the vein between the No. 2 tunnel and the 300-foot level in the area between the two shafts. As the average strike of the steep faults, N. 24° W., is at a slight angle to that of the vein, the intersection is at a higher altitude northward. The number of faults present apparently varies in different parts of the mine. This is in part due to incomplete exploration in certain areas, but it is believed that the major part of the displacement in some areas is along a single fault, whereas in others it is divided among a group of small faults.

Like that of the fault followed by the Sixteen to One vein, the displacement along the dip appears to be at a maximum, about 135 feet, in the region of the Tightner shaft (secs. B-B' and C-C', pl. 10) and decreases both to the north and south, to about 50 feet on the lines of sections A-A' and G-G'. As in the upper workings the principal vein tends to branch upward, it is not everywhere certain whether the segment followed on one side of a fault is the same as that on the other side, so these measurements may be in error.

The lower group of westward-dipping faults has been encountered in the shaft between the 1,800-foot and 2,100-foot levels, with a maximum displacement of about 250 feet. At least three faults are present where cut by the shaft (sec. C-C', pl. 10), but owing to lack of data the group is represented on the other sections by a single fault. The fault seems to be a part of the same group that is present in the Morning Glory and Extension of the Minnie D mines.

The faults of both groups contain quartz that grades into that of the main vein (pl. 7, B, C, and figs. 6 and 13), and therefore they must have been formed after the formation of the Sixteen to One fault but prior to the vein filling. The two groups occur at approximately the borders of an area of relatively flat dip on the main vein, and it is possible that this change in dip may have been a factor in determining their position, but both groups of faults seem to be parts of series of westward-dipping fissures that cross a large part of the district.

Throughout most of its developed distance the vein has its apex beneath the lava capping, but it can be traced on the surface from the edge of the gravel-covered area near Alleghany southeastward as far as the Sixteen to One mill, though it nowhere makes a conspicuous outcrop. Southeastward from the mill for 900 feet there is no distinguishable outcrop, owing in part to faulting by the westward-dipping Tightner fault but probably also to pinching out of the quartz. From about the 4,040-foot contour on the point southeast of the mill the outcrop can be followed to the Twenty-one tunnel. A footwall branch, which has not yet been developed, is exposed in the road cut near the mine office. (See pl. 7, B.)

In the southern part of the mine the vein (pl. 53) has an average strike of about N. 30° W.; farther north, in the Tightner workings, the strike is from a few degrees east of north to north as far as the region north of the North shaft, where the northwesterly strike again prevails. The dip also varies greatly, from less than 20° to 60°, but over most of the productive part of the mine the prevailing dip is between 25° and 30° E. To the north, in the vicinity of the North shaft, the dip steepens to 35° and over, and in the workings below the 1,500-foot levels the average dip is about 40°. Steep dips (40° to 60°) also prevail in

the workings above the No. 2 tunnel level in the southern part of the mine. Here, however, there is a suggestion that there is a split in the vein and that the steeper hanging-wall branch has been followed.

The vein is well defined throughout the developed portion of the mine, and quartz is essentially continuous, though the thickness varies greatly. There is no apparent relation between the presence of serpentine in the wall rock and the amount of quartz present, though where serpentine forms both walls, owing to superposition by faulting, the thickness of the quartz present is less than the average. For the most part

a crosscut about 6 feet of banded quartz on the walls and an interior portion consisting of white coarsely crystalline quartz with large vugs. In the sublevel above the 1,000-foot level this interior coarse quartz ends sharply on its strike against horses of slightly altered wall rock.

To the north and south of the productive part of the mine the dip steepens considerably and the vein tends to split up into a number of small stringers. At the north end there is also an increase in the amount of quartz parallel to the structure of the inclosing schists. The faces of some of the drifts south of the shaft in the upper part of the mine show a fading and irregular branching of the vein, with pinching out of the quartz. Quartz is again prominent near the south end of the Twenty-one tunnel.

There are several minor branches. In the Twenty-one workings the vein forks southward, but the point of intersection on the level of the Twenty-one tunnel is in an area in which only a small amount of quartz is present. Possibly the irregular fractures observed on the south end of the 600 and 400 foot levels indicate the neighborhood of the junction. As in the Twenty-one workings the walls of both veins are formed by the Tightner formation, it is not known which branch follows the principal fault.

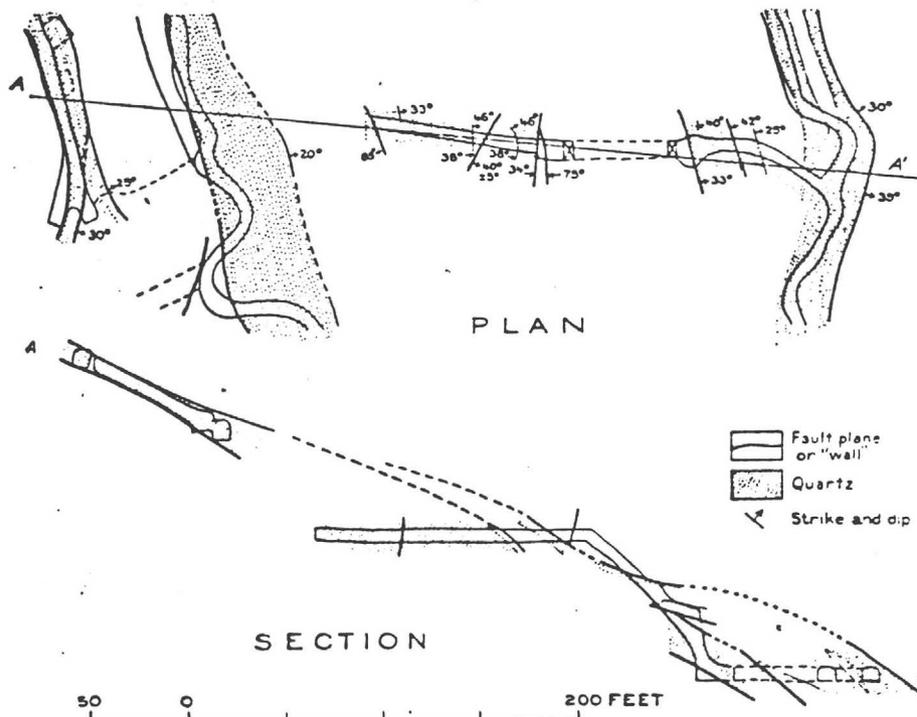


FIGURE 30.—Plan and section of parts of the 900-foot, intermediate, and 1,000-foot levels, Sixteen to One mine

the portions of the vein with flattest dips are those with thickest quartz, but this does not everywhere hold true. There are three lenticular areas where the quartz is several times the average thickness. (See pl. 53.) The largest, which extends southward down the dip from the 600-foot level between the Tightner and North shafts to the 1,500-foot level at the Tightner shaft, has a maximum thickness of 50 feet. Another on the same pitch is intersected by the North shaft and the 250-foot level (Tightner tunnel). The third, which is less regular in outline and pitches about down the dip, lies to the south of the Compromise raise. Each of these enlargements occurs in a region of flat dip and also marks a change in strike of the vein. Neither of them consists exclusively of quartz, but in each quartz greatly predominates over the included horses of country rock. All seem to be associated with minor branching of the vein. The large swelling in the Tightner workings (fig. 30) showed where cut by

The footwall branch that crops out on the road above the mine office has not been certainly identified underground. As far as traced on the surface it seems to be nearly parallel in strike to the principal vein. The steeper average dip in the No. 2 tunnel and workings above suggests that the junction lies at about this level. The drag of the conglomeratic slate at the outcrop of the footwall branch (pl. 7, B) shows that there has been movement in the reverse direction.

The Ophir vein joins the Sixteen to One south of the Sixteen to One shaft. Although of slightly steeper average dip and more westerly strike, the Ophir bends toward the Sixteen to One near the junction, so that the trace of the junction on the Sixteen to One vein, instead of pitching to the south, is irregular and apparently follows the direction of the dip of the major vein. Where connection between the two mines has been established the Ophir vein can be seen grading into the Sixteen to One vein, and as far north

as the Sixteen to One shaft it is identifiable as the hanging-wall strand of the Sixteen to One vein.

A small vein, probably a branch of the Eclipse vein, was followed by the Tightner tunnel for a distance of about 500 feet from the portal. This may be the same vein as that which joins the main vein on the 250-foot level, but if so the strike must change close to the main vein even more sharply than that of the Ophir.

The workings of the Morning Glory mine show that the Morning Glory vein, like the Ophir, bends toward the Sixteen to One, but the point of junction is not certainly established. It is thought likely to be at the north end of the large mass of quartz north of the Tightner shaft.

The high-grade shoots are richer than in most of the other mines. One small shoot yielded nearly \$1,000,000, and several others have yielded over \$200,000 each. A tenor of \$50 and over a pound is not unknown in the richest ore. A lot of 80 pounds from one of the rich shoots mined in 1924 yielded \$5,000, and in 1928 a chunk of ore weighing 160 pounds netted \$28,000. As a rule the gold is not closely associated with the early coarsely crystalline arsenopyrite but occurs in the quartz unaccompanied by other minerals than a little sericite and carbonate. A little coarsely crystalline arsenopyrite was, however, found in most of the shoots, generally below the richest ore. Sulphides of the second generation, principally galena, sphalerite, tetrahedrite, and jamesonite, are present in the productive portions of the mine but are not constant associates of the highest-grade ore. In several of the stopes "headchese" breccia was present above the ore, and in a few places (pl. 39, B) gold could be observed in the cement of such a breccia.

High-grade ore has been mined throughout the portion of the mine in which the vein has a relatively flat dip, from the level of the Knickerbocker tunnel to the 1,300-foot level. The ground about the 1,300-foot level immediately south of the Tightner shaft and between the 1,300 and 1,500 foot levels had not been developed at the time of visit, but some high-grade ore was encountered in drifting on the 1,500-foot level.

There seem to be two poorly marked zones, each with a flat pitch to the south, in which the high-grade ore is particularly abundant. The upper zone extends from the Knickerbocker tunnel to the Sixteen to One shaft between the 250 and 800 foot levels, and the lower zone from the region north of the raise above the North shaft to the Sixteen to One shaft below the 1,100-foot level. (See pl. 53.)

Between these two productive zones from a point at least as far north as the Tightner shaft between the 300 and 600 foot levels to the Sixteen to One shaft between the 800 and 1,100 foot levels lies a zone which,

though physical conditions are apparently as favorable as elsewhere, is completely barren of high-grade ore. It is possible that a similar barren zone bounds the lower productive zone, but development has not gone far enough to determine this point.

Although the best ore seems to be found where there is a fair thickness of quartz, 5 to 15 feet, little high-grade ore has been obtained from the large lenticular swellings described above. The edges of these enlargements, however, particularly where they begin to fade out along the strike, have been very productive.

Junctions of the vein with minor branches seem to have been effective in localizing the high-grade ore. The ore shoots in the upper part of the mine, just below the line where the dip begins to steepen, probably lie near the junction of the vein with the unexplored footwall branch. The quartz-bearing faults in this portion of the mine may have also been effective in localizing the gold. On the 200-foot level, north of the Sixteen to One shaft, very rich ore extended up to the fault vein, but, although the quartz filling was continuous in the two veins, the gold does not enter the fault vein. It is thought possible that the fracturing of the quartz necessary for the introduction of the gold in the main vein was facilitated by the presence of quartz in the fault vein. (See p. 57.)

The small high-grade shoots at the south end of the 250 and 400 foot levels lie near the probable junction of the two branches that fork to the south and crop out above the Twenty-one tunnel. The junction of the Ophir and Sixteen to One veins may have caused the localization of the high-grade ore obtained just south of the Sixteen to One shaft. The Ophir vein was also rich close to the junction. High-grade ore was found close to the vein junction (supposed Eclipse junction) near the Tightner shaft above the 250-foot level, but although the junction is recognizable as far down as the 600-foot level it does not seem to have been productive below the 250-foot level. Another split in the vein, doubtfully correlated with the Morning Glory vein, occurs in the vicinity of the high-grade shoots near the North shaft, above the 250-foot level.

On the other hand, there are several branches from the main vein with which no high-grade ore is associated, and for some of the richest shoots, especially in the area between the Sixteen to One and Tightner shafts, no connection with branching veins can be established. In this area there appears to be some connection between the high-grade ore and small vertical faults. Such a fault, which displaced the quartz about a foot but which did not cut the hanging-wall slip, was seen in the very rich stope above the 800-foot level near the Compromise raise, and another which displaced both quartz and hanging-wall slip crossed the very rich shoot above the 1,300-foot level.

OPHIR MINE

The Ophir mine (figs. 31, 32; sec. G-G', pl. 10), which is reported to have produced over \$60,000, was not being operated at the time of visit to the district. It is now owned by the Original Sixteen to One Mining Co. The vein lies on the hanging-wall side of the Sixteen to One, and has been followed by several tunnels. Two shafts from the lowest tunnel have developed the vein at depth, but the full extent of the

feet the vein is marked only by a slip. Near the northern shaft quartz comes in again and continues to the point where the vein blends with the Sixteen to One. The quartz, however, shows greater continuity on the next level above but nowhere exceeds 5 feet in thickness. The apparent thickening in the curve near the Sixteen to One junction is largely due to the flatter dip.

Two branch veins are known; one leaves the footwall of the main vein about 100 feet from the portal of the main level, and the other on the hanging-wall

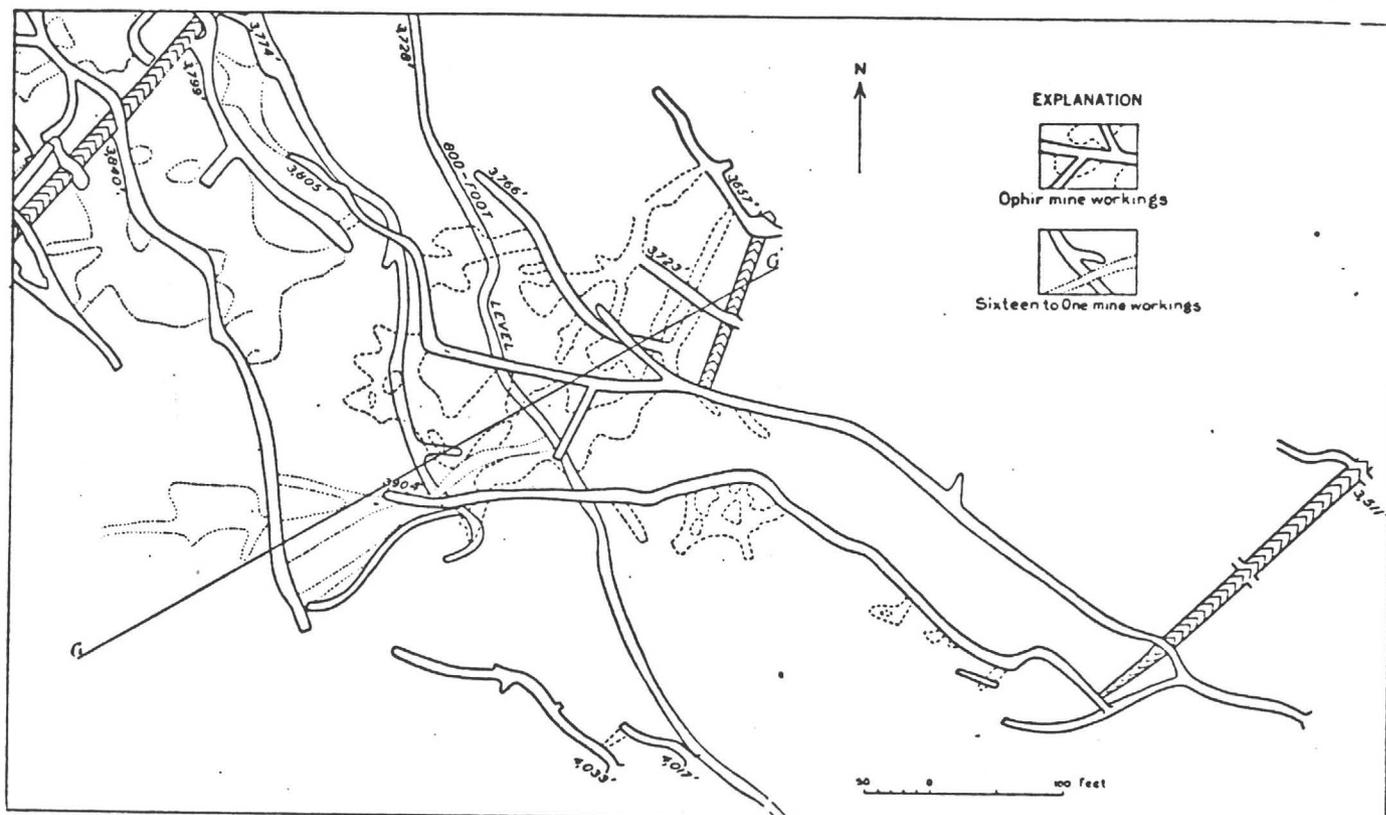


FIGURE 31.—Map of Ophir mine and adjoining workings of Sixteen to One mine. G-G', Line of section G-G', Plate 10

lower workings is not known. Including only the drifts and shafts shown on the accompanying map, the ratio of production to development is about \$20 a foot.

The country rock is schist of the Tightner formation and serpentine. The vein follows a normal fault with a displacement of only a few feet on the hanging-wall side of the Sixteen to One vein. Over most of its course the average strike is N. 62° W. and the dip 50°-70° NE. Near the Sixteen to One vein both strike and dip change sharply toward parallelism with the major vein. (See fig. 31.) Although the Ophir vein follows a normal fault, the portion close to the Sixteen to One vein shows the same type of minor thrusting that characterizes the latter vein.

The quartz is not continuous throughout. On the drain level (fig. 32) there is quartz for about 150 feet from the portal. Thence for a distance of over 300

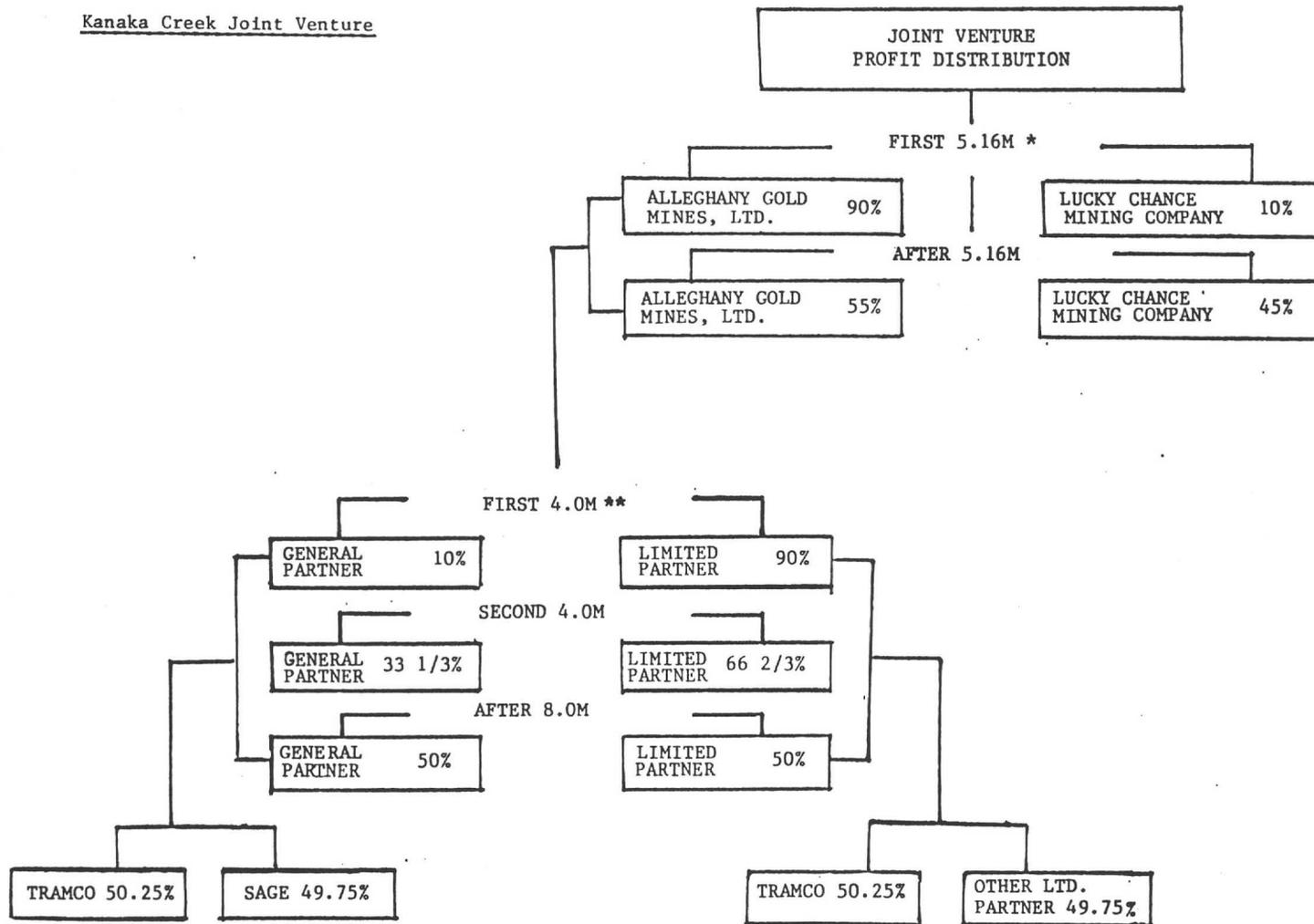
side near the north shaft. Both have been followed by drifts, but the quartz does not appear to continue far from the main vein.

It is believed that practically all the production came from the region of the bend in the vein. Here serpentine forms the footwall and in part the hanging wall also. There are several small stopes above the upper of the two tunnels, but as far as known these yielded only a small production. The main vein near the two branches has been explored by shafts and drifts, apparently without success. Probably the most promising area is that near the junction with the Sixteen to One vein below the present workings. ✓

ECLIPSE MINE

The Eclipse patented claim lies between the Ophir and the Morning Glory and extends across Kanaka Creek and its North Fork. That part lying north of

Kanaka Creek Joint Venture



* TOTAL CAPITAL INVESTMENT PHASE I AND II
 ** CAPITAL INVESTMENT OF LIMITED PARTNERS

TRANSWESTERN MINING COMPANY

P.O. Box 20728
Reno, Nevada 89515

Telec No. (702) 329-2645
Telex No. 354-408

Administration (702) 786-1040
Exploration (702) 786-6365

to Kull-Backman
COPY

MEMORANDUM

TO: C. E. Hunter
FROM: E. W. Renshaw
DATE: May 13, 1985
RE: SIXTEEN TO ONE BUDGET & WORK PLAN - PHASE I

Attached is the budget and subsequent work plan for Phase I (the first \$2,000,000) at the Sixteen to One property. The program is designed with the following objectives:

1. To develop sufficient tonnage of gold bearing vein to justify operating the mill at a minimum rate of 50 tons per shift.
2. To gain a sufficient understanding of the structure and geochemistry of the vein system to allow definition of the gold bearing segments of the vein.
3. To produce gold from specific areas defined by exploration and development work to verify the validity of those efforts.
4. To develop an overall cost data base sufficient to allow projections of production in Phase II.

The timing of the Phase I schedule is being dictated by the funding that is coming from the Limited Partnership. The various Limited Partners will contribute according to a predetermined schedule of note payments thus reducing some of the flexibility that would exist if the funding was available on an "as needed" basis. The fourteen month schedule can therefore be expanded somewhat if it seems appropriate but it is less likely that it could be accelerated into a compressed time frame.

Very truly yours,

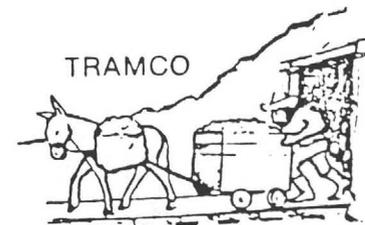
E. W. Renshaw

E. W. Renshaw

EWR/emr
Attachment

cc: T. Bauer
D. Beling
(w/attachment)

1325 AIRMOTIVE WAY, SUITE 340, RENO, NEVADA 89502



PHASE I - EXPLORATION AND DEVELOPMENT PROGRAM
SIXTEEN TO ONE - ALLEGHANY, CALIFORNIA

The Phase I program is designed to allow the Kanaka Creek Joint Venture operating staff to learn how to identify the mineralized portions of the Sixteen to One Mine vein systems and to verify this by mining and milling gold bearing vein material. Accomplishment of these goals will justify continuing into Phase II which will have as its major goal bringing the property into full production.

Phase I has been divided into six work programs plus G&A. They are as follows:

1. Exploration and Drilling - This will involve underground geological studies and will include mapping, sampling, and longhole drilling. There are no major capital items scheduled in this program.

2. Eagle Raise - A specific portion of the Mine known as the Eagle Raise area has been designated for the first mining effort. It lies above the 800 haulage level and it is anticipated that several thousand tons of gold bearing vein material will be produced and ultimately run through the mill.

3. Dewatering and Rehabilitation - Dewatering of the mine will continue as needed. The 49 Winze will be rehabilitated to the minimum extent needed in order to allow for hoisting

of equipment, supplies and bulk samples.

Capital items will include two new pumps, a tugger or a small hoist, additional electrical equipment and ancillary items related to the above.

4. Lower Level Development - As item 3 progresses, sections of the Mine below the 800 level will be available for examination. Several areas below 800 have been tentatively selected for evaluation by the geological staff. When areas of potential gold mineralization are found, they will be tested by drilling and exploratory raises. Bulk samples will be hoisted for mill testing. No capital items are required for this program.

5. Mill Rehabilitation and Production - While the underground evaluations are being conducted, a program in the mill will redesign the crushing circuit and determine whether changes or additions are required in the rest of the mill. During Phase I, the Mill will be furnished with increasing tonnages from the Mine to evaluate ore from specific mining areas with the objective of having the Mill capable of operating at 50 tons per shift by the end of Phase I.

Capital requirements include purchase or rental of a small jaw crusher with a feeder unit.

6. Maintenance and Support - This program will keep the underground and surface equipment and facilities in good repair and working order. In addition, it will be expanded to the extent needed to service a full production operation in Phase II.

Capital items will consist of replacement parts, inventory and contracted services.

G & A - In addition to the accounting and administrative functions, permitting is also included in this item.

Below is a month-by-month narrative of the anticipated progress of the project. The numbers refer to the programs as outlined above.

1985:

April:

The Partnership took over at the beginning of the month. During the month four hourly employees, two salaried staff and a Project Manager were hired. For programs 1, 2, 4, and 5 planning was begun. In program 3, dewatering of the Mine was continued. In program 6, routine maintenance and general clean-up was conducted in anticipation of Phase I activities. Permitting contacts with the county regulatory agencies were initiated.

May:

1 - Mapping in the Eagle Raise area, compilation of existing data from several sources, planning for development of a geological data base suitable for computer enhancement.

2 - Planning will continue.

3 - Dewatering will continue, the 49 Winze rehabilitation will begin with slabbing the ribs near the top and timbering areas needing additional ground support.

4, 5 - Planning.

6 - Minor repairs; general clean-up, initial road grading.

Permitting - preparation of preliminary documents for county and state agencies. Begin rock and water sampling.

June:

1 - Continue mapping and sampling; begin planning of drill program.

2 - Surveying; ordering mining supplies.

3 - Dewatering will continue. Install small air hoist (tugger) in 49 Winze. Continue mining and retimbering.

4 - Work cannot begin until rehabilitation of 49 Winze is more complete.

5 - Planning.

6 - Begin supply inventory, equipment repair, road maintenance, install underground waterline.

Permitting - Submit permit applications to County. Begin planning and reclamation of disturbed slope east of main bench.

July:

1 - Continue mapping and sampling. Dewatering will allow organized program below 800 level. Lay out proposed underground drill program.

2 - Begin mining above 800 level.

3 - Continue dewatering, complete mining and continue retimbering in 49 Winze.

4 - Planning.

5 - Planning; begin stockpiling ore from Eagle Raise.

6 - Underground and surface maintenance.

Permitting - Special use permit and air quality permit on surface installation issued by county and state agencies. Continue slope reclamation.

August:

1 - Continue mapping and sampling; begin underground drilling program.

2 - Continue mining above 800 level.

3 - Continue dewatering and retimbering; begin installation of equipment hoist.

4 - Planning.

5 - Continue stockpiling Eagle Raise ore; begin metallurgical testing program.

6 - Underground and surface maintenance; continue haul road and service area grading.

Permitting - Monitoring programs, begin engineering studies on underground tailings disposal. Complete slope reclamation.

September:

1 - Continue mapping, sampling and longhole drilling.

2 - Continue mining in Eagle Raise.

3 - Continue dewatering, extend equipment hoisting capability.

4 - Planning.

5 - Continue testing ore and mill equipment.

6 - Underground and surface maintenance; complete road and service area repair and upgrade.

Permitting - Continue data gathering on underground tailings disposal. Permit from California allowing limited surface tailings disposal.

October:

- 1 - Continue mapping, sampling, longhole drilling.
- 2 - Continue mining in Eagle Raise.
- 3 - Continue dewatering, extend hoisting capability.
- 4 - Planning.
- 5 - Begin mill operation at limited capacity using stockpiled ore.
- 6 - Underground and surface maintenance.

Permitting - Engineering for tailings disposal. Submit application for permit to dispose tailings underground.

November:

- 1 - Continue mapping, sampling, longhole drilling.
- 2 - Continue mining above 800 level.
- 3 - Continue dewatering, hoisting bulk samples from below 800 level.
- 4 - Exploratory mining of selected targets below 800 level.
- 5 - Operate mill using muck from stockpile, Eagle Raise area and from below 800 level.
- 6 - Underground and surface maintenance.

Permitting - Continue monitoring programs.

December:

- 1 - Continue mapping, sampling, longhole drilling.

- 2 - Continue mining above 800 level.
- 3 - Continue dewatering, hoisting ore from below 800 level.
- 4 - Continue mining below 800 level.
- 5 - Operate mill at 50 tons per shift.
- 6 - Underground and surface maintenance.

Permitting - Anticipate permit for underground tailings disposal by late December to early February.

1986:

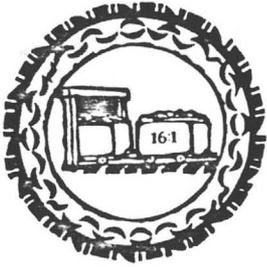
January through March - The last four months of Phase I will be substantially the same as December with the objectives of:

A) Increasing the number of mining targets through the Exploration and Development program. By the end of Phase I, an estimate of available minable reserves will have been made plus a plan for a development program to open up new areas by development drifting in Phase II.

B) Defining mining costs and mining production rates based on mining in Eagle Raise and in selected areas below 800 level. A mining production plan for Phase II will be prepared.

C) Defining milling costs and production rates. A production schedule for Phase II will be prepared that will outline a schedule for increasing production beyond 50 TPD and address any capital requirements to expand mill capacity.

D) Defining the personnel requirements for Phase II as the Mine moves from an Exploration/Development mode to a full Development/Production status.



kanaka creek joint venture

sixteen-to-one mine

MONTHLY REPORT -- April & May, 1985

1.0 ACTIVITY REVIEW

1.1 Surface

Access road surfaces were graded and rough-dressed with a contract dozer. One culvert was removed, cleaned and re-set. Several work areas in the shop and on the main bench were cleaned and re-arranged. Two existing mobile homes owned by the Venture were re-located adjacent to the changehouse. Segments of the electrical cable extending from the surface substation were up-graded to supply 4160 volts underground. The total underground electric supply is now distributed through the cased drill hole collared on the main bench. The engine from the Venture's 1979 Blazer was removed and a re-built long block was purchased. Replacement parts for repairing six rock drills were received and repair work was started. Existing wood stave water tanks were temporarily repaired. These dilapidated tanks will ultimately be bypassed as they are not needed.

1.2 Underground

Segments of the main adit were mucked and timbered where required. The cut-out excavated by LCM was timbered and equipment from the old sub-station was installed and placed into service. Electric cables to the pumps were re-routed, re-wired and fitted with combination switches on the 1300 level. An inoperative 30 hp pump was sent for complete overhaul and returned into service. Pumping operations reached new depths (equiv. to 1540 level). Pumping rates were recently measured at 275 gpm. The crows nest of debris, old skip and car at the 1300 station of the 49 winze was removed to allow surveying and safer, more efficient ingress and egress.

Engineering and design of alternatives for a hoisting facility were started. Although beyond the scope and means of Phase I, a production hoist is being examined to ascertain compatibility and practicality of first installing a smaller, service hoist system. Otherwise, severe economic and physical constraints may be incurred when a larger system is installed after Phase I.

1.3 Exploration and Development

The project staff concentrated on immediate demands and short term plans to define target areas consistent with Phase I programs. The Eagle Raise area was surveyed by establishing primary control in the 400 and 600 level drifts and raises and secondary control in stopes. Primary control on the surface and in the main adit was also verified.

The stopes south of the Sixteen Shaft were examined and mapped for mineralogy and structural features. The three best areas of interest were defined: north rib in Stope #416, south rib in Stope #408 and south side of the 600 level "B" raise. No significant development work is planned until these three areas are tested by mining approximately 3 to 5 rounds each. Based on our examinations and the fact the old timers had access but did not take these areas, our confidence in developing significant ore has diminished but potential of this area justifies the above work.

Geologic examination of potential areas below the 800 level were initiated to establish or develop alternatives to the Eagle Raise area:

- (1) South of the 49 winze between the 800 and 1300 levels. The vein in most of the accessible workings is pinched but the area is relatively large in strike and dip dimensions and may contain vein lenses or extensions of interest.
- (2) Large blocks in 1300 level stopes between the Tightner and Sixteen Shafts.
- (3) Short drifts on the 1300 level Ophir vein.

1.4 Gold Production

April - None.

May - Nil - Less than one pound of rock chips containing approximately 0.2 oz gold were recovered from chipping ribs during geologic examinations on the 1300 level.

1.5 Safety

- (1) An annual, 8-hour refresher safety meeting was conducted by MSHA approved instructors W. Sabo and I. Haley on May 3, 1985 for D. Beling, K. Brogoitti, W. Price, J. Bond, J. Ruetz and R. Spengler.
- (2) Weekly safety meetings and daily inspections were conducted as required.
- (3) Accidents - None.
- (4) Regulatory Inspections - None. Mr. George Constanich, MSHA District Inspector, visited the office in April. Mr. Costanich has been requested to conduct a courtesy inspection tentatively scheduled for June 12, 1985.
- (5) Lists of unsafe conditions were prepared by our staff and corrective actions are progressing.

1.6 Environmental Permitting

Meetings and field examinations were conducted by KCJV personnel and consultants with County, State and USFS officials. In compliance with Sierra County's request, a preliminary plan of development and operations was submitted in mid-May. Additional information and maps were generated in response to preparation of an application for a special use permit. Basic requirements for water, ore and tailings sampling and analytical programs were defined.

2.0 ACTIVITY FORECAST FOR JUNE 1985

2.1 Surface

Continue maintenance and repair of surface and underground equipment and facilities (install Blazer engine, complete repair of six rock drills, install additional electrical systems incident to pumping operations, etc.). A new employee will be acquired to do light maintenance, clean-up, warehousing and generally assist staff and operating personnel. A 2" steel pipeline will be laid from the mill to the portal to supply pressurized water to underground activities and general fire protection.

2.2 Underground

- (1) Continue pumping operations and daily modifications in response to lowering the water level below the 1500 level.
- (2) Install compressed air and water lines, ladders and landings sufficient for limited mining in stopes 408, 416 and 600 "B" raise.
- (3) Complete engineering and design of an equipment hoisting system capable of meeting Phase I requirements. Begin search for used hoisting equipment (50 to 100 hp). Prepare preliminary cost estimates for a service hoist and production hoist, the latter is for reference purposes only.

2.3 Exploration

Continue examination and mapping of the three areas below the 800 level, as described in 1.3. Search for other areas which are of interest to Phase I objectives. Examine accessible drifts, stopes and raises on the 1500 level when dewatered. Evaluate and rank known and new target areas for early test mining or further examination by short and future long-hole drilling. Map in detail all new headings on a round by round basis. Research old production reports, maps and technical publications for leads to areas of interest.

2.4 Manpower

	Actual	Projected
	<u>End of May</u>	<u>End of June</u>
Salary (AGM Ltd.)	3	4
Hourly (KCJV)	4	6-7
Cons. (TW-Full Time)	<u>2</u>	<u>1</u>
Total	9	11-12

2.5 Environmental

Submit special use permit application and supportive documents to Sierra County officials. Complete remaining submittals concerning stabilization/reclamation of the main bench slope and disposal of limited tailings in the existing surface impoundment. Begin examination of areas suitable for underground tailings disposal. Collect samples of tailings and representative vein and water from Kanaka Creek and the mine. Submit samples to a certified laboratory for required environmental analyses.

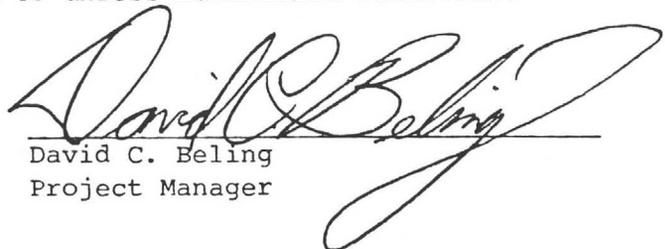
3.0 GENERAL

Considerable time was used in communicating with project personnel and consultants, learning their individual capabilities and determining how each can best contribute to project performance.

Accounts were established with major vendors but additional accounts will be required since the credit rules for a mining company are either credit beforehand or cash on the barrelhead. A local checking account is now needed to handle purchases where prompt credit cannot be obtained or may not be justified for limited or one-time use and for emergencies. An account limit exceeding \$5,000 is requested.

Numerous on-site meetings and examinations were conducted by Venture participants, the Lessor and outside and in-house consultants.

An updated budget was prepared to reflect a spending limitation of \$293,000 for the period of April through July, 1985. This reduction from the original budget may place constraints on proposed activities during July but will be adhered to unless authorized otherwise.


David C. Beling
Project Manager

DCB:clj

xc: T. Bauer
D. Hackman
C. E. Hunter
D. Marting
E. Renshaw

Homestake Mining's Name Still Glitters,

16 to 1

\$140 -

\$160/oz
estimated
cost



WSS 8/15/85

Canadian Gold-Mine Stocks Are Overvalued



Confessions of a Penn Square Borrower



ALLEGHANY GOLD MINES, LTD.

MEMORANDUM

=====

SUMMARY OF PROGRAM

Alleghany Gold Mines, Ltd., a California Limited Partnership, is offering 199 partnership units at a cost of \$10,000 per unit, to a selected group of investors, during Summer, 1985. The Partnership objective is to reopen and place back into production one of the major California Mother Lode gold mines, the 16 to 1 mine in Alleghany, California.

- * 16:1 Mine has produced more than 1 MILLION troy ounces of gold from less than one million tons of free-milling quartz.
- * 16:1 Mine operated continuously from 1907 to 1965.
- * 16:1 Mine was the last mine in California to cease production before gold prices exceeded \$35/Troy ounce.
- * 16:1 Vein system is open to the south (4500 feet) and to depth (indefinite) on the claim group.
- * 201 of 400 units (50.25%) of Alleghany Gold Mines, Ltd. have been purchased by Transwestern Mining Co.
- * Transwestern Mining Co. is a subsidiary of Sunbelt Mining Co., a subsidiary of PNM, which is the holding company for Public Service Company of New Mexico.
- * Gold will be distributed in-kind to Limited Partners.

This mine was selected by the principals of SAGE/Alleghany after several years of gold property evaluation in the Western U.S. The property meets the economic criteria of a high annual rate of return and a relatively low capital requirement to place into production.

=====

This document does not constitute an offer of security and should not be relied upon. It is not complete, omits material information concerning the offering, and may conflict with the Private Placement Memorandum. It is presented only for the purpose of initial introduction. Projections are for illustrative purposes only and should not be relied upon. Projections by their very nature are speculative and no assurance can be made that there will be any return on investments. An offer can only be made by presentation of the Private Placement memorandum and pursuant to strict regulatory procedures and only such confidential Private Placement Memorandum can be relied upon.

16 : 1 DEVELOPMENT PROGRAM

Phase I. The mine will be rehabilitated and dewatered to provide access to lower workings that were driven to the south toward the large high grade stopes of the Rainbow Mine. The existing mine workings will be examined for high grade ore shoots and gold-bearing quartz will be inventoried for milling at the rate of 50 tons per day.

Phase II. Resume historical production rate of 200 tons per day.

MANAGEMENT

=====

Ernest W. Renshaw (age 57), President of Transwestern, received both a Bachelors Degree, 1950, and Masters Degree, 1951, in Geology from Emory University in Georgia. He has been the President of Transwestern since 1982. Prior to that, Mr. Renshaw was Manager of Exploration for Western Gas, Oil and Mining, Ltd., the original parent company of Transwestern. From 1978 through 1981, Mr. Renshaw was Manager of Exploration for Atlas Minerals Company, in Utah. Between 1951 and 1978, Mr. Renshaw worked at various positions in mineral exploration and mine management for AMOCO Minerals, American Cyanamide, New Jersey Zinc Company, and Ideal Basic Industries. He is a member of the Society of Economic Geologists, The Northwest Mining Association, and AIME.

David C. Beling (age 43), Project Manager of Kanaka Creek Joint Venture, received his Bachelors Degree in Mining Engineering from the University of Arizona in 1964. Mr. Beling has worked for a number of companies as either an employee or a consultant in precious metal, base metal, uranium, coal, and oil shale projects. He worked as an engineer in an underground copper mine for Phelps Dodge at Bisbee, Arizona for 5 years. He has managed uranium projects in Wyoming and a copper project in Utah. He was President of Dore' Metals and Mining Corporation with precious metal projects in Nevada and Arizona. As a consultant Mr. Beling has worked on gold projects in Nevada, South Dakota, Arizona, Montana and California. Mr. Beling is a member of the Society of Mining Engineers, AIME, and is a registered professional engineer in Arizona, Nevada and Wyoming.

David B. Hackman (age 43), President and Director of SAGE/Alleghany, is a principal in SAGE Associates, Inc., an Arizona corporation formed in 1976 to devise and carry out precious metal exploration programs in the western United States and Mexico. He received his Bachelors Degree in Geophysical Engineering from the Colorado School of Mines in 1964, his Masters Degree in Geological Engineering from the University of Arizona in 1971 and a Ph.D. in Geological Engineering from the University of Arizona in 1982. From 1964 to 1967, Mr. Hackman worked as a geophysicist for Mobil Oil

in Tripoli, Libya. Between 1968 and 1971, he worked as a geologist for several mineral companies doing reconnaissance mapping and geophysical interpretations and geochemical sampling for precious and base metals in the western United States. From 1971 to 1974, he was a geologist with Alcoa and directed the exploration of a copper deposit at San Antonio de la Huerta, Sonora, Mexico. Since the formation of SAGE Associates in 1976, Mr. Hackman has performed geological consulting, managed exploration programs and organized and financed new mining ventures for that corporation. He was involved in reconnaissance exploration for epithermal precious metal deposits during SAGE Associates' St. Joe Minerals program and managed the drilling program at Como, Nevada. He also conducted the exploration at the disseminated gold deposits at San Antonio de la Huerta, Sonora, Mexico. Mr. Hackman initiated the formation of the limited partnership, ALASKA/NEVADA Gold Mines, Ltd., and managed the exploration of the Little Bald Mountain and Zeke properties in Nevada. He is a member of the Society of Economic Geologists, the Society of Exploration Geophysicists and AIME. He is also a registered professional engineer in Arizona.

Richard A. Bideaux (age 50), Vice President and Director of SAGE/Alleghany, received a Bachelors Degree in Geological Engineering in 1959 from the College of Mines, University of Arizona. He later attended Harvard University, from which he received a Masters Degree in Geology in 1968. In 1978 he was awarded the honorary degree of Professional Geological Engineer by the University of Arizona. Mr. Bideaux's involvement with digital computers began in 1960 with the U.S. Army at Signal Corps Headquarters, Ft. Monmouth, New Jersey, one of the earliest computer centers. Following army service, he joined Cal Tech's Jet Propulsion Laboratory in Pasadena, California, from 1963 to 1967. Here he was in charge of all scientific data processing for the Surveyor I and III Lunar soft-landing missions. In 1969 he returned to Tucson to join the GFI group as Director of Research and Program Development for mining and exploration data processing. In 1971 he became a founder and President of Computing Associates, Inc., which subsequently grew to be the leading source of consulting services and computer programs to the mining industry worldwide. The principal activity of CAI was mineral deposit modeling and ore reserve studies for over 150 mining companies. In 1978 CAI was sold to Control Data Corporation. Mr. Bideaux remained as President of CAI for a year and then became an Executive Consultant to CDC. Since 1978 Mr. Bideaux has been an independent consultant. He specializes in the applications of computers to mineral deposit and ore reserve analysis. In the course of this work, Mr. Bideaux has developed programs for data base management and for a wide variety of mineral deposit models and their evaluations. Mr. Bideaux is a member of AIME, the Arizona Geological Society, the Association for Computing Machinery, the International Association for Mathematical Geology, the Mathematical Geologists of the United States, and is a Fellow of the Mineralogical Society of America.

Willis R. Dortch (age 64), Secretary/Treasurer and Director of SAGE/Alleghany, is a principal in SAGE Associates, Inc. He received his Bachelors Degree in Electrical Engineering from

the University of Arkansas in 1941 and did graduate studies in Geological Engineering at the University of Oklahoma in 1946. From 1941 through 1971, he held various executive and geophysical positions with Mobil Oil in the United States, Venezuela, Colombia, Portugal, Libya and Nigeria. After 30 years with Mobil Oil, he retired in 1971. Since the incorporation of SAGE Associates in 1976, Mr. Dortch has acted as office manager, accountant, financial officer, secretary and treasurer of that corporation. He has also handled courthouse searches, claim staking, contract negotiation and other land work both for SAGE Associates and for other companies. Mr. Dortch has also managed construction projects - road, camp, power plant - in Mexico. Mr. Dortch is a member of the Society of Exploration Geophysicists and is a registered professional engineer in Texas and Arizona.

OFFERING

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The offering is structured to take maximum advantage of current tax regulations, but should not be considered primarily as a tax shelter. Expected pre-tax income in gold bullion qualifies this as a superior investment; distribution of proceeds to the Limited Partners may be taken in kind; that is, physical gold and silver bullion will be delivered, or may be kept on account with a recognized dealer. Note that taxes are not due until the investor sells these distributed metals, allowing considerable flexibility in forward tax planning.

The operating entity is known as the Kanaka Creek Joint Venture; the organizational structure is unavoidably complex, due to combining the interests of several public and privately held companies, along with the private investors in the Limited Partnership. Diagrams of the legal structure and management of the Kanaka Creek Joint Venture and the cash value of the Gold distribution are attached.

Total financing of \$4.0 million is required over the next several years. The managing General Partner, Transwestern Mining Company, has committed to 50.25% of that amount. Their initial contribution has been made, Joint Venture management staff has been hired, and evaluation and mining operations commenced in April, 1985. The Project Manager's report for April and May is attached, as is a more detailed statement of project objectives.

This is a low front-end load investment; only organizational expenses and relatively small management (reporting) fees are being collected. No broker's fees are being incurred. Over 90% of the money contributed will go into the project.

Available are 199 Limited Partnership Units at \$10,000 per Unit for a total of \$1,990,000. Each Limited Partner will pay a purchase price of \$4,750 per unit and \$5,250 per unit in the form of a recourse promissary note ("Subscription Note"). The minimum subscription is 4 Units to cost a total of \$40,000, consisting of an initial payment of \$19,000 plus \$12,000 due March 1, 1985 plus \$9,000 due March 1, 1987.

ALLOCATION OF PROFITS AND LOSSES

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The Limited Partners shall be allocated 90% of the profits and 99% of the losses of the Partnership until they have received distribution equal to their capital contributions, then 66-2/3% of the profits and losses until they have received 200% of their capital contributions. Thereafter they shall receive 50% of the profits and losses of the Partnership. It is estimated that 70% of the funds invested will be tax deductible to the partners.

Feasibility of the Project has been evaluated at a gold price of \$325 per Troy ounce. At this price the project is quite economic; once full production is attained, the cost of production per Troy ounce of gold produced is expected to be between \$140 and \$160. If the price of gold were to rise to levels comparable to those of the past several years, the Project would provide even more attractive rates of return. For example, estimated times to payback of the investor's money and associated discounted cash flow-return on investment are as follows:

Gold Price \$/ounce =====	100% Capital Returned =====	200% Capital Returned =====	Pre-Tax DCF-ROI =====
\$300	4 yr 1 mo	8 yr 1 mo	26.3%
325	3 8	7 8	30.1
350	3 4	6 9	33.8
400	2 11	5 8	41.2
450	2 9	4 11	48.6
500	2 7	4 6	56.0

ALLEGHANY GOLD MINES, LTD.

Pro Forma One Unit Gold Distribution (1)

Calendar Year	Cash Invested	Gold Distributed (2)	Value @ \$325/oz	Cumulative Gold Distribution	Cumulative Value @ \$325/oz
1985	\$4750	0.0	0	0	0
1986	3000	7.1	2293	7.1	2293
1987	2250	11.0	3583	18.1	5876
1988	0	11.3	3665	29.4	9541
1989	0	7.4	2398	36.8	11939
1990	0	7.4	2418	44.2	14357
1991	0	8.0	2600	52.2	16957
1992	0	8.0	2580	60.2	19537
1993	0	6.9	2243	67.1	21780
1994	0	6.2	2028	73.3	23808
Total	10000	73.3	23808		

(1) No consideration of the income tax consequences is included.

(2) Rounded to nearest 0.1 oz.

USE OF PROCEEDS

Transwestern Contribution	\$2 010 000
Limited Partners Capital Contribution	1 990 000
General Partners Capital Contribution	40 404
Sales Commissions	0
Organizational Expenses	(100 000)
Management Fee	(48 000)
	\$3 892 404
Net Proceeds	\$3 892 404
Evaluation	1 097 840
Development	1 868 750
Rehabilitation	727 755
Reserve	198 059
Proceeds Invested	\$3 892 404

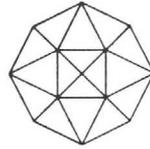
PRO FORMA ONE UNIT CASH FLOW BASED

ON A 50% BRACKET TAX PAYER (1)

(One Unit Investment)

Calendar Year	Cash Invested	Current Taxable Profit (Loss) (2)	Cash Equivalent Distribution (3)	Net Cash Flow After Tax (4)	
				Yearly	Cumul.
1985	4750	(3325)	0	(3088)	(3088)
1986	3000	195	2293	(805)	(3893) (5)
1987	2250	1340	3583	663	(3230)
1988	0	2490	3665	2420	(810)
1989	0	1350	2398	1723	913
1990	0	1300	2418	1768	2681
1991	0	1455	2600	1874	4555
1992	0	1488	2580	1836	6391
1993	0	1293	2243	1597	7988
1994	0	1170	2028	1443	9431 (7)
Total	10000	8756	23808 (6)	9431	—

- (1) Assumes sale at \$325 per ounce of in-kind distribution.
- (2) Based on Limited Partners share of profit or (loss) for year.
- (3) In-kind distribution of 73.3 ounces of gold over the above term through 1994, but does not include distributions thereafter.
- (4) Assumes Limited Partner pays 50% tax on profits.
- (5) Projected net exposure to Limited Partner.
- (6) Projected 30.4% annual rate of return, pre-tax.
- (7) Projected 29.0% annual rate of return, after tax.



Alleghany Gold Mines, Ltd. Private Placement

Under cover of this letter please find enclosed the following papers:

1. "The Quest for Gold and Silver," by Dr. Simon Strauss - a balanced discussion of the place of precious metals in mans' affairs, by a distinguished metals' economist
2. Excerpts from "Gold Districts of California," by William B. Clark, California Division of Mines Bulletin 193, 1970, giving some history of California's Mother Lode Gold District, and the 16 to 1 Mine's place in it
3. "The Original Sixteen to One Mine," Chapter 14 in: "Gold Mines of California," by Jack R. Warner, 1970, best historical overview
4. "The Original Sixteen to One Mine," by W. B. Clark and W. P. Fuller, California Division of Mines, Mineral Information Service, May, 1968: historical and technical information
5. "The Sixteen to One Mine," excerpts from "Gold Quartz Veins of the Alleghany District, California," by H. G. Ferguson and R. W. Gannett, U. S. Geological Survey Professional Paper 172, 1932: more technical but the authoritative reference
6. Private Placement Memorandum, Alleghany Gold Mines, Ltd., including a summary and separate subscription agreements
7. Kanaka Creek Joint Venture Organizational Financing Chart
8. 16 to 1 Budget and Work Plan, Transwestern Mining Company
9. Monthly Report - April and May, 1985, Kanaka Creek Joint Venture
10. Blueprint map of the 16 to 1 mine, showing present workings and the location of high-grade gold ore shoots formerly found

mineral & energy
resources

A Review of Developments

Volume 26 Number 6 November 1983



Colorado School of Mines

The Quest for Gold and Silver:

Including a History of the Interaction of Metals and Currency

Simon D. Strauss

CONFIDENTIALPRIVATE PLACEMENT MEMORANDUM

ALLEGHANY GOLD MINES, LTD.,
A California Limited Partnership

199 Limited Partnership Units @ \$10,000 Per Unit

Minimum Investment: 4 Units (\$40,000)

Maximum Offering: \$1,990,000

This is an offering of limited partnership interests in a California limited partnership which engages in the exploration, development and operation of the Sixteen to One Mine in Alleghany, California for the production of gold and silver.

	<u>Offering Price</u>	<u>Selling Commission (1)</u>	<u>Proceeds to the Partnership (2)</u>
Per Unit	\$ 10,000	\$ 0	\$ 10,000
Total Offering	\$1,990,000	\$ 0	\$1,990,000

(1) See "Compensation of General Partner and Affiliate."

(2) Before deducting expenses, estimated at \$100,000, payable by the Partnership in connection with its formation and the sale of Units. (See "Use of Proceeds.")

THIS OFFERING INVOLVES A HIGH DEGREE OF RISK
(See "Risks and Other Factors.")

The Date of this Private Placement Memorandum is May 28, 1985.

THIS PRIVATE PLACEMENT MEMORANDUM IS SUBMITTED IN CONNECTION
WITH THE PRIVATE PLACEMENT OF THESE SECURITIES AND MAY
NOT BE REPRODUCED FOR ANY PURPOSE

THESE SECURITIES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND HAVE NOT BEEN REGISTERED WITH OR APPROVED OR DISAPPROVED BY THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE. NEITHER THE SECURITIES EXCHANGE COMMISSION NOR THE SECURITIES COMMISSION OF ANY STATE HAS REVIEWED OR PASSED UPON THE MERITS OF THIS OFFERING OR THE ACCURACY OR ADEQUACY OF THIS PRIVATE PLACEMENT MEMORANDUM, NOR IS IT INTENDED THAT IT WILL. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

LIMITATION ON USE OF THIS PRIVATE PLACEMENT MEMORANDUM

This Private Placement Memorandum is intended to assist the General Partner in making a private placement of Limited Partnership Units having an aggregate purchase price of \$1,990,000. The General Partner has not made application with the California Corporations Commissioner, with the Commissioner of Corporations of any other state or with the Securities and Exchange Commission of the United States of America for registration of this Offering and no state or Federal regulatory agency has passed upon or endorsed the merits of this Offering or the accuracy or adequacy of this Memorandum nor is it intended that they will. The General Partner is relying on certain state and Federal laws, regulations, policies and judicial precedents which exempt this Offering from the necessity of registration; specifically, Section 4(2) of and Regulation D under the Securities Act of 1933, and Section 25102(f) of the California Corporations Code. Accordingly, solicitation or sale shall not be made to any person unless the General Partner has reasonable grounds to believe, and does believe, immediately prior to making such offer, solicitation or sale, that such person, either alone or together with one or more of his purchaser representatives (if any), has such knowledge and experience in financial and business matters that he is capable of evaluating the merits and risks of an investment in the Units described in this Memorandum and that such person is able to bear the economic risk of such an investment. Further, these Units are being offered and sold pursuant to exemptions from registration in the various states in which they are being offered and may be subject to additional restrictions on transfer in such jurisdictions.

ALLEGHANY GOLD MINES, LTD. HAS BEEN ORGANIZED AS A LIMITED PARTNERSHIP AS OF THE DATE HEREOF WITH ONE ORIGINAL LIMITED PARTNER. SUBSCRIPTIONS WILL BE RECEIVED SUBJECT TO REJECTION OR TO ACCEPTANCE IN WHOLE OR IN PART AND THE GENERAL PARTNER RESERVES THE RIGHT TO CLOSE THE SUBSCRIPTION BOOKS AT ANY TIME WITHOUT NOTICE.

THERE IS NO PUBLIC MARKET FOR THESE UNITS AND, BECAUSE THERE ARE EXPECTED TO BE ONLY A LIMITED NUMBER OF INVESTORS AND SIGNIFICANT RESTRICTIONS ON THE TRANSFERABILITY OF UNITS, IN ALL PROBABILITY NONE WILL DEVELOP. THE UNITS MAY NOT BE RESOLD WITHOUT REGISTRATION OR QUALIFICATION UNLESS AN EXEMPTION IS AVAILABLE WITH THE APPROPRIATE GOVERNMENTAL SECURITIES AGENCIES. IN ADDITION, THEY WILL NOT BE TRANSFERABLE EXCEPT UNDER CERTAIN LIMITED CONDITIONS SET FORTH IN THE LIMITED PARTNERSHIP AGREEMENT. CONSEQUENTLY, UNITS SHOULD ONLY BE CONSIDERED FOR PURCHASE AS LONG-TERM INVESTMENTS. (SEE "RISKS AND OTHER FACTORS" AND "SUMMARY OF THE PARTNERSHIP AGREEMENT.")

THIS PARTNERSHIP IS A RELATIVELY NEW VENTURE IN A HIGH RISK BUSINESS, AND INVESTORS WHO CANNOT AFFORD A HIGH RISK INVESTMENT, WHICH MAY BE LOST IN ITS ENTIRETY, ARE ADVISED AGAINST AN INVESTMENT IN THE PARTNERSHIP.

THE OBLIGATIONS AND REPRESENTATIONS OF THE PARTIES TO THIS TRANSACTION WILL BE AND ARE SET FORTH ONLY IN THIS PRIVATE PLACEMENT MEMORANDUM, THE LIMITED PARTNERSHIP AGREEMENT ATTACHED HERETO, AND THE SUBSCRIPTION AGREEMENT REQUIRED TO BE SIGNED BY EACH LIMITED PARTNER. THE INFORMATION CONTAINED IN THIS MEMORANDUM HAS BEEN OBTAINED FROM SOURCES DEEMED RELIABLE BY THE GENERAL PARTNER BUT NO REPRESENTATION OR WARRANTY IS MADE AS TO THE ACCURACY OR COMPLETENESS OF SUCH INFORMATION.

ALTHOUGH THE PARTNERSHIP WILL RELY UPON AN OPINION OF COUNSEL THAT, AMONG OTHER THINGS, THE PARTNERSHIP WILL BE CLASSIFIED AS A "PARTNERSHIP" FOR FEDERAL INCOME TAX PURPOSES, THE INTERNAL REVENUE SERVICE HAS NOT BEEN REQUESTED TO ISSUE A RULING. BECAUSE THE OPINION OF COUNSEL IS BINDING ON NEITHER THE INTERNAL REVENUE SERVICE NOR THE COURTS, THERE CAN BE NO ASSURANCE THAT THE PARTNERSHIP WILL NOT BE FOUND TO BE AN ASSOCIATION TAXABLE AS A CORPORATION, IN WHICH CASE CERTAIN OF THE ANTICIPATED TAX EFFECTS ASSOCIATED WITH THIS OFFERING WOULD CHANGE. (SEE "TAX CONSEQUENCES.") FURTHER, PROSPECTIVE INVESTORS SHOULD CAREFULLY REVIEW THE ATTACHED OPINION OF COUNSEL AND SHOULD NOT CONSIDER THE OPINION AS A PREDICTION OF FAVORABLE OUTCOME ON TAX ISSUES CONCERNING WHICH NO FAVORABLE PREDICTION HAS BEEN MADE BY COUNSEL.

THE INTERNAL REVENUE SERVICE AND THE CALIFORNIA FRANCHISE TAX BOARD MAY, AS TO CERTAIN MATTERS DISCUSSED IN THIS PRIVATE PLACEMENT MEMORANDUM, INTERPRET INCOME TAX STATUTES AND REGULATIONS IN A MANNER DETRIMENTAL TO THE PARTNERSHIP AND ONE OR MORE OF ITS PARTNERS. SHOULD THIS HAPPEN, A PARTNER MAY BE REQUIRED TO AMEND HIS INDIVIDUAL INCOME TAX RETURN, LITIGATE THE MATTER AT CONSIDERABLE EXPENSE OR SUBMIT TO AN AUDIT OF HIS INDIVIDUAL INCOME TAX RETURN THAT MIGHT CAUSE OTHER TAX CONSEQUENCES NOT ASSOCIATED WITH THE PARTNERSHIP.

INVESTORS WILL BE REQUIRED TO REPRESENT THAT THEY ARE ABLE TO BEAR THE ECONOMIC RISK OF THEIR INVESTMENT AND THAT THEY (OR THEIR PURCHASER REPRESENTATIVES) ARE FAMILIAR WITH AND UNDERSTAND THE TERMS AND RISKS OF THIS OFFERING. THE CONTENTS OF THIS PRIVATE PLACEMENT MEMORANDUM ARE NOT TO BE CONSTRUED AS LEGAL OR TAX ADVICE. EACH INVESTOR SHOULD CONSULT HIS OR HER OWN ATTORNEY, ACCOUNTANT OR BUSINESS ADVISOR AS TO LEGAL, TAX AND RELATED MATTERS CONCERNING THIS INVESTMENT. ALL FINAL DECISIONS IN RESPECT TO SALES OF LIMITED PARTNERSHIP UNITS WILL BE MADE BY THE GENERAL PARTNER WHO RESERVES THE RIGHT TO REVOKE THE OFFER AND TO REFUSE TO SELL TO ANY PROSPECTIVE INVESTOR, IF, INTER ALIA, THE PROSPECTIVE INVESTOR DOES NOT MEET THE SUITABILITY STANDARDS HEREINAFTER SET FORTH. (SEE "WHO SHOULD INVEST - SUITABILITY STANDARDS.")

NO OFFERING LITERATURE OR ADVERTISING IN ANY FORM SHALL BE EMPLOYED IN CONNECTION WITH THE OFFERING OF THESE UNITS EXCEPT FOR THIS PRIVATE PLACEMENT MEMORANDUM AND THE STATEMENTS CONTAINED IN IT. NO PERSON HAS BEEN AUTHORIZED TO GIVE ANY INFORMATION OR TO MAKE ANY REPRESENTATION NOT CONTAINED IN THIS MEMORANDUM AND SUPPLEMENTAL LITERATURE REFERRED TO HEREIN, AND, IF GIVEN OR MADE, SUCH INFORMATION OR REPRESENTATION MUST NOT BE RELIED UPON AS HAVING BEEN AUTHORIZED BY THE PARTNERSHIP OR THE GENERAL PARTNER. ACCORDINGLY, THE RECIPIENT HEREOF AGREES TO NOTIFY THE GENERAL PARTNER IN WRITING IF HE RELIES ON DOCUMENTATION AND/OR INFORMATION OTHER THAN AS PROVIDED HEREIN. NO PERSONS, EXCEPT THE GENERAL PARTNER OR ITS AGENTS, HAVE BEEN AUTHORIZED TO MAKE REPRESENTATIONS, OR TO GIVE ANY INFORMATION, WITH RESPECT TO THE OFFERING OF THE UNITS OR THE PROPOSED OPERATIONS OF THIS PARTNERSHIP, EXCEPT THE INFORMATION CONTAINED IN THIS MEMORANDUM. NEITHER THE DELIVERY OF THIS MEMORANDUM NOR ANY SALE HEREUNDER SHALL UNDER ANY CIRCUMSTANCES CREATE THE IMPLICATION THAT THERE HAS BEEN NO CHANGE IN THE INFORMATION CONTAINED HEREIN SUBSEQUENT TO THE DATE HEREOF.

ANY DISTRIBUTION OR REPRODUCTION OF THIS PRIVATE PLACEMENT MEMORANDUM, IN WHOLE OR IN PART, OR THE DIVULGENCE OF ANY OF ITS CONTENTS OTHER THAN AS SPECIFICALLY SET FORTH HEREIN, IS UNAUTHORIZED.

THIS PRIVATE PLACEMENT MEMORANDUM DOES NOT CONSTITUTE AN OFFER TO SELL OR A SOLICITATION OF AN OFFER TO SELL IN ANY STATE OR TO ANY PERSON IN WHICH OR TO WHOM SUCH AN OFFER OR SOLICITATION WOULD NOT BE PERMITTED BY LAW.

THE SECURITIES DESCRIBED HEREIN HAVE NOT BEEN REGISTERED UNDER THE ARIZONA REVISED STATUTES, AS AMENDED ("SECURITIES ACT"), IN RELIANCE UPON AN EXEMPTION UNDER SECTION 44-1844, AND CANNOT BE RESOLD OR OTHERWISE TRANSFERRED UNLESS THEY ARE REGISTERED UNDER THE SECURITIES ACT OR AN EXEMPTION FROM REGISTRATION IS AVAILABLE.

THE SECURITIES DESCRIBED HEREIN ARE OFFERED PURSUANT TO AN EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT OF NEW MEXICO. ACCORDINGLY, THE NEW MEXICO SECURITIES BUREAU HAS NOT REVIEWED THE OFFERING OF THESE SECURITIES AND HAS NOT APPROVED OR DISAPPROVED THIS OFFERING. THE NEW MEXICO SECURITIES BUREAU HAS NOT PASSED UPON THE VALUE OF THESE SECURITIES OR UPON THE ADEQUACY OR ACCURACY OF THE INFORMATION CONTAINED IN THIS OFFERING MEMORANDUM.

THE SECURITIES DESCRIBED HEREIN HAVE BEEN ISSUED OR SOLD IN RELIANCE ON PARAGRAPH (13) OF CODE SECTION 10-5-9 OF THE "GEORGIA SECURITIES ACT OF 1973," AND MAY NOT BE SOLD OR TRANSFERRED EXCEPT IN A TRANSACTION WHICH IS EXEMPT UNDER SUCH ACT OR PURSUANT TO AN EFFECTIVE REGISTRATION UNDER SUCH ACT.

THE SECURITIES DESCRIBED HEREIN HAVE NOT BEEN REGISTERED UNDER THE MICHIGAN COMPILED LAWS, 1979, AS AMENDED, IN RELIANCE UPON AN EXEMPTION UNDER SECTION 451.802(b)(9), AND CANNOT BE RESOLD OR OTHERWISE TRANSFERRED UNLESS THEY ARE REGISTERED UNDER THE MICHIGAN COMPILED LAWS, 1979, AS AMENDED, OR AN EXEMPTION FROM REGISTRATION IS AVAILABLE.

THE SECURITIES DESCRIBED HEREIN HAVE NOT BEEN REGISTERED UNDER SECTION 36-485 OF THE CONNECTICUT UNIFORM SECURITIES ACT AND, THEREFORE, CANNOT BE RESOLD UNLESS THEY ARE REGISTERED UNDER THE CONNECTICUT UNIFORM SECURITIES ACT OR AN EXEMPTION FROM REGISTRATION IS AVAILABLE.

THE SECURITIES DESCRIBED HEREIN HAVE NOT BEEN REGISTERED UNDER THE PENNSYLVANIA SECURITIES ACT OF 1972 PURSUANT TO AN EXEMPTION UNDER SECTION 203(d) AND, THEREFORE, CANNOT BE RESOLD OR OTHERWISE TRANSFERRED EXCEPT IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 203(d) AND RULE 203.041(e)(2).

EACH PENNSYLVANIA RESIDENT WHO ACCEPTS AN OFFER TO PURCHASE SECURITIES EXEMPTED FROM REGISTRATION BY SECTION 203(d) DIRECTLY FROM AN ISSUER OR AFFILIATE OF AN ISSUER SHALL HAVE THE RIGHT TO WITHDRAW HIS ACCEPTANCE WITHOUT INCURRING ANY LIABILITY TO THE SELLER OR ANY OTHER PERSON, WITHIN TWO BUSINESS DAYS FROM THE DATE OF RECEIPT BY THE ISSUER OF HIS WRITTEN BINDING CONTRACT OF PURCHASE OR, IN THE CASE OF A TRANSACTION IN WHICH THERE IS NO WRITTEN BINDING CONTRACT OF PURCHASE, WITHIN TWO BUSINESS DAYS AFTER HE MAKES THE INITIAL PAYMENT FOR THE SECURITIES BEING OFFERED.

THE SECURITIES DESCRIBED HEREIN HAVE NOT BEEN REGISTERED UNDER THE TEXAS SECURITIES ACT OF 1957 OR ANY SECURITIES LAWS, AND, THEREFORE, CANNOT BE RESOLD OR OTHERWISE TRANSFERRED UNLESS THEY ARE REGISTERED UNDER THE TEXAS SECURITIES ACT OF 1957 OR AN EXEMPTION FROM REGISTRATION IS AVAILABLE.

PRIOR TO SALE OF THESE SECURITIES THE PURCHASER MUST BEAR THE ECONOMIC RISK OF THE INVESTMENT FOR AN INDEFINITE PERIOD OF TIME BECAUSE THE SECURITIES HAVE NOT BEEN REGISTERED UNDER APPLICABLE SECURITIES LAWS AND THEREFORE CANNOT BE SOLD UNLESS THEY ARE SUBSEQUENTLY REGISTERED UNDER SUCH SECURITIES LAWS OR AN EXEMPTION FROM SUCH REGISTRATION IS AVAILABLE.

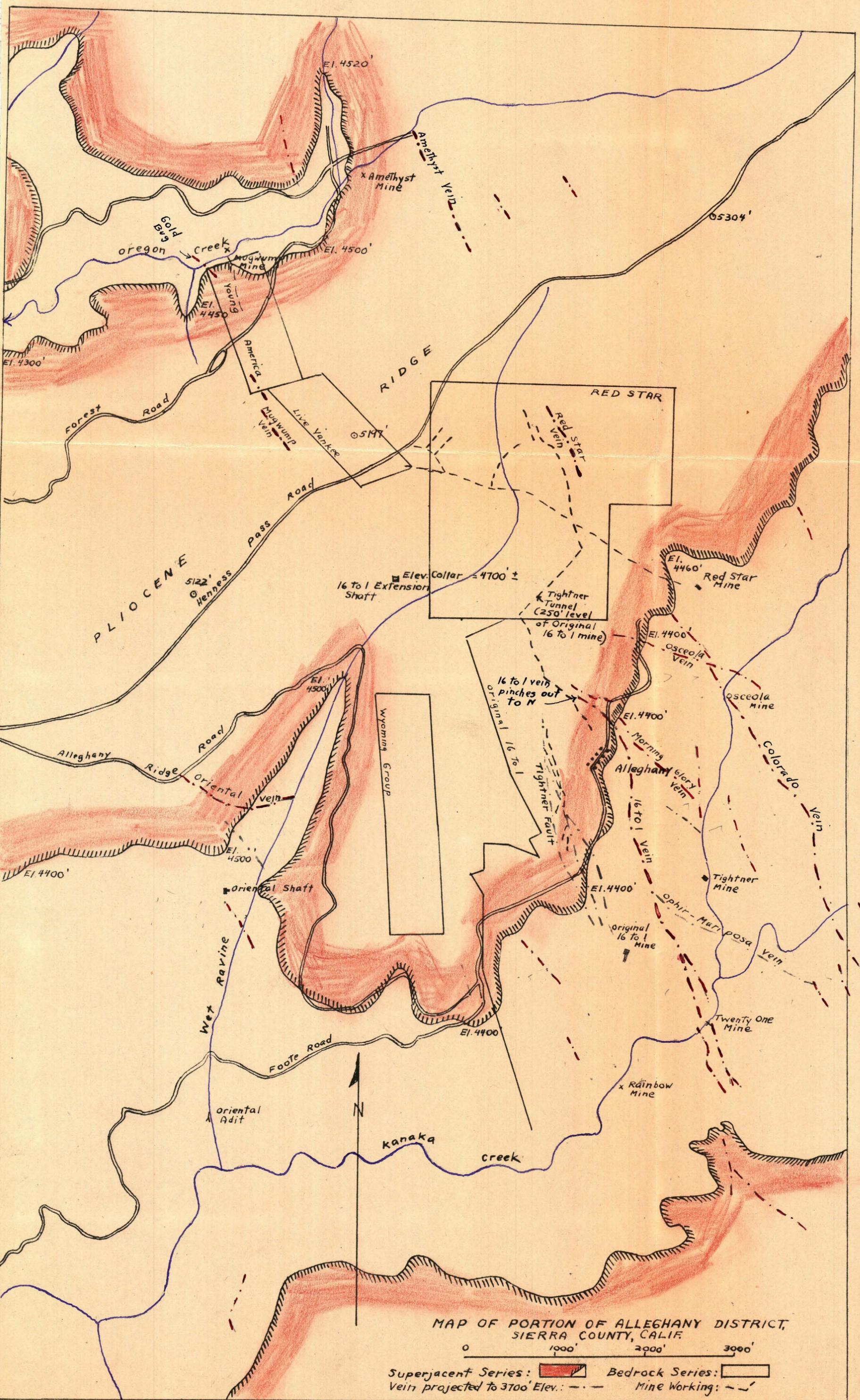
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EXHIBITS

PARTNERSHIP AGREEMENT.....	Exhibit "A"
SUBSCRIPTION AGREEMENT.....	Exhibit "B"
Subscription Note.....	Appendix "I"
Partnership Certificate.....	Appendix "II"
PRE-OFFERING QUESTIONNAIRE.....	Exhibit "C"
OFFEREE QUESTIONNAIRE.....	Exhibit "D"
PURCHASER REPRESENTATIVE QUESTIONNAIRE.....	Exhibit "E"

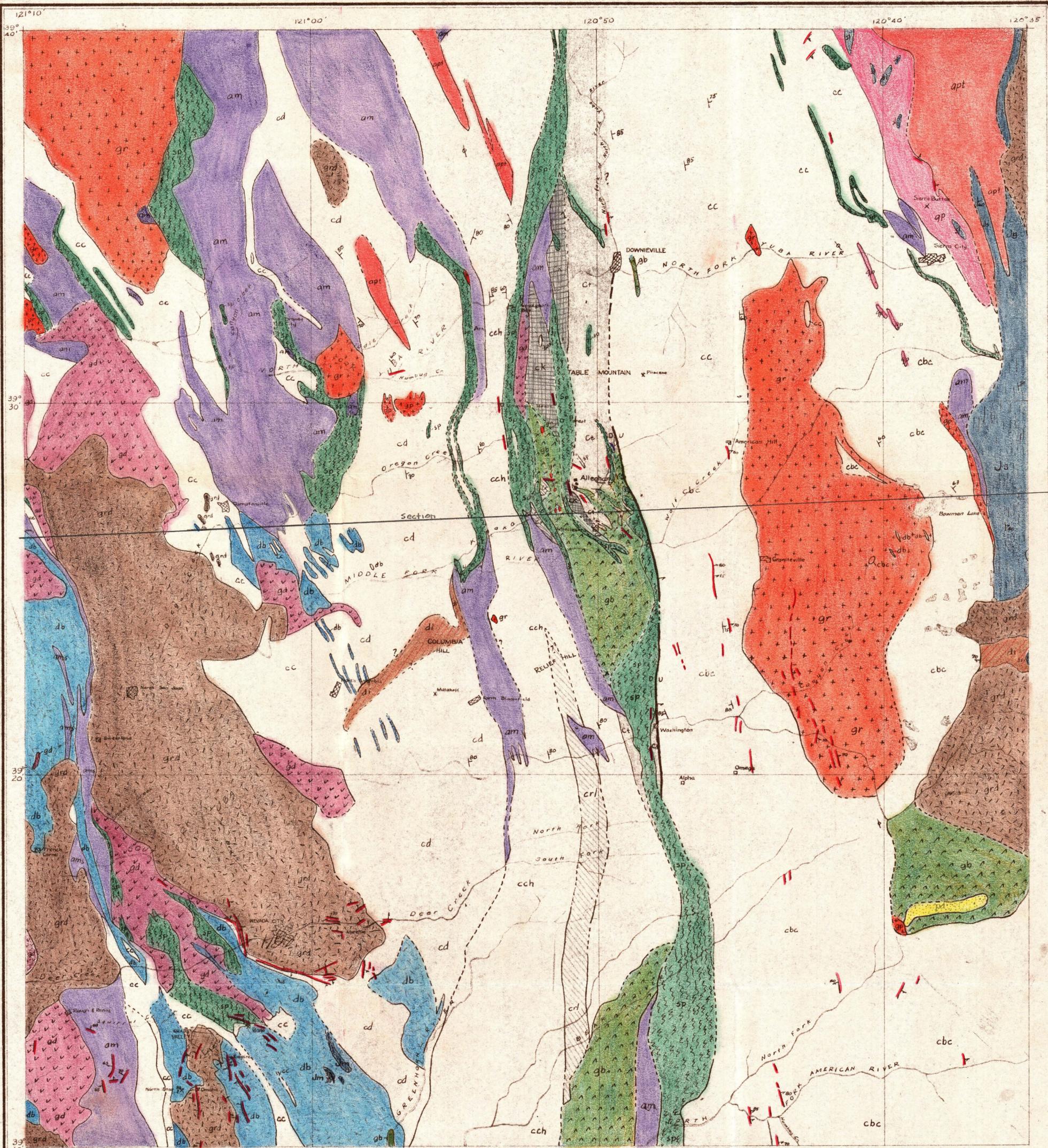
JOINT VENTURE AGREEMENT.....	Exhibit "F"
Mining Lease.....	Appendix "I"
PROJECTED DISTRIBUTIONS.....	Exhibit "G"
TAX OPINION.....	Exhibit "H"



MAP OF PORTION OF ALLEGHANY DISTRICT,
SIERRA COUNTY, CALIF.

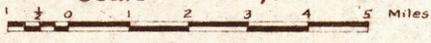
0 1000' 2000' 3000'

Superjacent Series: Bedrock Series:
 Vein projected to 3700' Elev.: - - - Mine Working: - - -



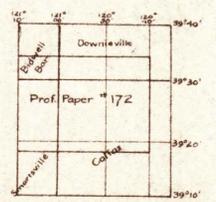
GEOLOGIC MAP OF THE BEDROCK FORMATIONS OF THE ALLEGHANY DISTRICT

Scale: 1:125,000



GEOLOGIC LEGEND

Carboniferous							Triassic	Jurassic	Igneous Rocks (Jurassic-Early Cretaceous?)											
Cc	Cbc	Ct	Ck	Cr (ch)	Cch	Cd	Js	Jm	db	dl	Gd	gb	Sp	apt	Am	pd	gr	grd	Fault	Quartz Vein
Calaveras Form. (Undivided)	Blue Canyon Form. (Slates)	Tightner Form.	Kanaka Form. (Congl.-cherts, Slates)	Relief Quartzite	Cape Horn Slate	Delhi Form.	Sailer Canyon Form.	Maniposa (Slatose)	Diabase	Diorite	Gabbro-diorite	Gabbro	Serpentine	Augite-porphyrity	Amphibolite & amphi-schist	Peridotite	Granite & Gr-porphyrity	Granodiorite		



Note: Contacts projected under the Tertiary lava cap are shown by dotted lines. While these may be, in detail, incorrect, the general picture is thought to be correct.

Compiled from U.S. Geological Survey data by J.W. Harman (Sources of information shown at left lower corner) January, 1949