

and preserving said premises as a workable mining property, and with due regard to the lessee's covenant herein contained:

(a) Making all working shafts at least four (4) feet by six (6) feet in the clear; all drifts and tunnels at least three and one-half ( $3\frac{1}{2}$ ) feet by six and one-half ( $6\frac{1}{2}$ ) feet in the clear and all winzes and raises at least three and one-half ( $3\frac{1}{2}$ ) feet by seven (7) feet in the clear:

(b) Repairing all old timbering wherever now or hereafter necessary and timbering in a good miner like manner all openings now or hereafter made on said premises, at all points where proper or necessary in accordance with good and safe mining practice; continuing the timbering in the working shafts now on said premises with timber of the same dimensions as heretofore used, unless it becomes necessary for safety to use larger timbers, in which event timbers of sufficient size for safety and permanent mining shall be used, all in accordance with good and safe mining practice:

(c) Keeping at all times all drifts, shafts, tunnels and other workings now or hereafter on said premises thoroughly drained and clear of loose rock and rubbish unless prevented by extraordinary mining casualty, and stowing no waste under ground except to fill, according to good mining practice, places where ore has been extracted and in such manner as will not now or hereafter interfere with the present or future working or development of the property:

(d) Doing no underhand stoping below the bottom of any main working level or winz<sup>v</sup> and stoping or breaking of no rock or ore so near any working shaft as to endanger its stability or permanance.

The lessee shall and does hereby assume all responsibility in case of accident or injury from any cause whatever to himself or his property or to any of his employees or to any other person lawfully on said premises and agrees to indemnify and save harmless the

lessor and said premises of and from any damage, loss, cost or expense by reason of any such accident or injury; and to that end the lessee agrees at his own cost to procure and at all times to maintain sufficient State Liability Insurance against liability for accidents and injuries and any other insurance ordinarily carried by a lessee.

All bills and expenses incurred by the lessee, or those in privity with him, shall be promptly paid by the lessee, and by such prompt payment said lessee shall prevent the filing of any and all liens of miners, mechanics or material men, against said demised premises; and, if by reason of the failure of said lessee to pay such bills or expenses any lien or liens shall be filed against the premises the said lessor may forthwith pay off and discharge the same, and recover from the lessee all sums so advanced or paid to clear said premises from liens filed as aforesaid, and the lessor may also at its election declare a forfeiture of this lease. And the lessee agrees to comply with all the requirements of Sec. 3654, 1913 Civil Code of Arizona, as amended by Chapter 67, Regular Session 1915, Session Laws p. 144, and any other statute of the state of Arizona, which are intended to exempt from the lien therein provided for any mine or mining claim worked by any person under lease from the owner of such mine or mining claim, and will do all things necessary to protect the lessor and said premises from any such lien.

It is expressly understood and agreed that the ownership of the leased property shall remain the property of the lessor; that all cross or parallel lodes, spurs and mineral deposits of every kind which may be uncovered, disclosed or discovered within said leased premises by the lessee or any person or persons under or in privity with him shall be occupied and held as the property of the lessor, with the privilege to the lessee to work the mine the same as part and parcel of the leased premises, and that all ores mined from said premises shall remain the property of the lessor until the royalties

hereinafter reserved thereon have been paid or until said ores or the concentrates therefrom have been sold, delivered and paid for by sampler or smelter pursuant to a bona fide sale thereof.

The lessee, however, shall have the right during the life of this lease to work, extract, ship and sell any and all ores mined from said premises and/or to treat by milling or otherwise on said premises any ores which can be so treated profitably with the right to ship and sell the concentrates.

The said lessee covenants to pay and allow to the lessor royalties on all ores mined and shipped or sold from said premises in any manner during the life of this lease, and on concentrates of all ores treated on said premises, according to the following schedules in which the net value shall be deemed to be the assay value of the said ores or concentrates at sampler or smelter, first deducting the cost of railroad transportation, if any, the cost of trucking the ore or concentrates to the nearest point of shipment or delivery not exceeding one dollar and twenty-five cents a ton, and the smelting charges, but no other deductions:

|  |                   |
|--|-------------------|
| Upon all ores up to \$7.00 per ton net value | 2 $\frac{1}{2}$ % |
| " " " \$7.00 to \$10.00 per ton net value    | 5%                |
| " " " \$10.00 to \$15.00 " " " "             | 10%               |
| " " " \$15.00 to \$25.00 " " " "             | 15%               |
| " " " \$25.00 or over " " " "                | 25%               |

Upon all ores treated on the premises 10% of the net value of the concentrates, said net value to be the value of the concentrates at sampler or smelter after first making the deduction above specified, but no other deductions.

The lessee further covenants and agrees to keep accurate accounts and to render statements monthly, or as often as requested, accompanied by vouchers, to the lessor, showing the amount of all ore taken from said premises, also all ore treated on said premises, and the yeild of the same and to pay to the lessor, on the first day of each month, the royalty computed as aforesaid on all ores and

concentrates shipped from said premises during the preceding month.

The lessee further covenants and agrees:

(a) To allow the lessor or its agent from time to time to enter upon and descend into all parts of said leased premises, for the purpose of inspection, surveys or taking samples therefrom, and to render to said parties proper assistance in making such inspection, surveys or examination. And to report to lessor monthly all work done during the preceding month.

(b) To pay all taxes assessed against said demised premises or the ores mined therefrom or their concentrates, or against this lease.

(c) Said lessee further covenants that no person not in privity with the parties hereto shall be allowed to hold possession of said premises or any part thereof under any pretext whatever.

(d) Further, that he will deliver to said lessor quiet and peaceable possession of said demised premises in good order and condition with all drifts, tunnels and other passages thoroughly drained and cleared of loose rock and rubbish and said premises ready for immediate continued working without demand of further notice on the 26th day of April A.D. 1951, at noon, or upon any sooner termination of this lease in any manner; and it is mutually understood that all machinery and tools which may be placed upon said premises by the said lessee may be removed therefrom within ten days after the termination of this lease, provided, however, that no such tools or machinery shall be so removed while the said lessee may be in any manner indebted to the said lessor under any obligation incurred under this lease.

(e) Upon the violation of any covenant or condition herein contained, ~~this lease shall at the option of said lessor expire, and terminate,~~ and the said premises with the appurtenances and all buildings and other improvements shall become forfeited to the lessor, and the said lessor or its agent may thereupon, after demand in writing for possession, enter upon said premises and disposses all persons occupying the same, with or without force, and with or without process of

*Pa. Su attached her*

law, or at the option of the lessor and said lessee and all persons found occupying said premises or any part thereof may be proceeded against as guilty of unlawful detainer.

Time is the ~~essence~~ of this agreement, and each and every clause of this indenture and all the covenants and conditions contained herein expressed or implied shall extend to the successors, heirs, executors, administrators and lawful assigns of all the parties hereto.

If the lessee for any reason shall desire to terminate this lease at any time he shall have the right so to do, in manner following: provided he is not then in default. ~~(If the lessor shall desire to operate, sell, or otherwise dispose of the property at any time it shall have the right to terminate this Lease in manner following: In either event,~~ this lease may be terminated <sup>by said lessee</sup> as of the 1st day of any month, in any year during its term, by a written notice given by the one desiring to terminate to the other at least one hundred and twenty days previous to the date of termination, and thereupon on the first day of the fourth succeeding month after giving such notice, this lease shall terminate.

IN WITNESS WHEREOF, the parties hereto have hereunto subscribed their names the day and year first above written

REYMERT MINING COMPANY

IN PRESENCE OF:

~~&&&~~

\_\_\_\_\_  
President

\_\_\_\_\_  
For Reymert Mining Company

\_\_\_\_\_  
Secretary

IN PRESENCE OF:

\_\_\_\_\_  
For William J. Forbach

\_\_\_\_\_  
William J. Forbach

*See attached page*



good and valuable consideration, receipt whereof is hereby acknowledged, I do hereby assign, transfer and set over to JAMES TOD and MABEL RAE TOD, his wife, doing business as Reymert Lease, the said Mining Lease Agreement, together with all rights and interest of every kind and character in anywise existing or held by me under and by <sup>virtue</sup> formality of the said Mining Lease Agreement.

TO HAVE AND TO HOLD the same unto the said JAMES TOD and MABEL RAE TOD, his wife, doing business as Reymert Lease, ~~or~~ <sup>their</sup> personal representatives, successors and assigns from and after the delivery hereof subject to all of the obligations and conditions of said Mining Lease Agreement to be kept and performed between said assignees.

IN WITNESS WHEREOF I have hereunto subscribed my name this 11 day of May, 1941.

---

*Reymert*

TO ALL WHOM IT MAY CONCERN:-

Know ye that REYMERT MINING COMPANY hereby claims the Alaska Millsite of five acres as staked on this ground 330 by 660 feet, and referred to the Alaska Lode Mining Claim, patent survey 2878A, owned by the said Reymert Mining Company and located in the same district.

Date of Location May 10th, 1941.

And that the undersigned REYMERT MINING COMPANY, an Arizona Corporation, does hereby declare and publish as a legal notice to all the world that it has a valid right to the occupation, possession and enjoyment of all and singular that tract or parcel of land not exceeding five acres situate lying and being in the Pioneer Mining District, County of Pinal, State of Arizona, bounded and described as follows, to-wit:

The east half of the southeast quarter of the northwest quarter of the northeast quarter of Section Twenty-Two, Township Two South, Range Eleven East, Gila and Salt River Base and Meridian.

Together with all and singular the hereditments, improvements and appurtenances thereunto belonging or in anywise appertaining.

Dated this 10th day of May 1941.

REYMERT MINING COMPANY

By *H. J. Forbach Lesore and agent*

TO ALL WHOM IT MAY CONCERN:-

Know ye that REYMERT MINING COMPANY hereby claims the Asia Millsite of five acres as staked on this ground 330 by 660 feet, and referred to the Asia Lode Mining Claim, patent Survey 2878A, owned by the said Reymert Mining Company and located in the same district.

Date of Location - May 10th, 1941.

And that the undersigned REYMERT MINING COMPANY, an Arizona Corporation, does hereby declare and publish as a legal notice to all the world that it has a valid right to the occupation, possession and enjoyment of all and singular that tract or parcel of land not exceeding five acres situate lying and being in the Pioneer Mining District, County of Pinal, State of Arizona, bounded and described as follows, to-wit:

The west half of the northeast quarter of the southwest quarter of the northeast quarter of Section Twenty-Two, Township Two South, Range Eleven East, Gila and Salt River Base and Meridian.

Together with all and singular the hereditments, improvements and appurtenances thereunto belonging or in anywise appertaining.

Dated this 10th day of May 1941.

REYMERT MINING COMPANY

By W. J. Forbach Lessee and Agent

TO ALL WHOM IT MAY CONCERN:-

Know ye that REYMERT MINING COMPANY hereby claims the America Millsite of five acres as staked on this ground 330 by 660 feet, and referred to the America Lode Mining Claim, patent Survey 2878A, owned by the said Reymert Mining Company and located in the same district.

Date of Location - May 10th, 1941.

And that the undersigned REYMERT MINING COMPANY, an Arizona Corporation, does hereby declare and publish as a legal notice to all the world that it has a valid right to the occupation, possession and enjoyment of all and singular that tract or parcel of land not exceeding five acres situate lying and being in the Pioneer Mining District, County of Pinal, State of Arizona, bounded and described as follows, to-wit:

The west half of the southeast quarter of the northwest quarter of the northeast quarter of Section Twenty-Two, Township Two South, Range Eleven East, Gila and Salt River Base and Meridian.

Together with all and singular the hereditments, improvements and appurtenances thereunto belonging or in anywise appertaining.

Dated this 10th day of May, 1941.

REYMERT MINING COMPANY

BY W. J. Forbach Lessee and Agent

TO ALL WHOM IT MAY CONCERN;-

Know ye that REYMERT MINING COMPANY hereby claims the Australia Millsite of five acres as staked on this ground 530 by 660 feet, and referred to the Australia Lode Mining Claim, patent Survey 2878A, owned by the said Reymert Mining Company and located in the same district.

Date of Location - May 10th, 1941.

And that the undersigned REYMERT MINING COMPANY, an Arizona Corporation, does hereby declare and publish as a legal notice to all the world that it has a valid right to the occupation, possession and enjoyment of all and singular that tract or parcel of land not exceeding five acres situate lying and being in the Pioneer Mining District, County of Pinal, State of Arizona, bounded and described as follows, to-wit:

The east half of the northeast quarter of the southwest quarter of the northeast quarter of Section Twenty-Two, Township Two South, Range Eleven East, Gila and Salt River Base and Meridian.

Together with all and singular the hereditments, improvements, and appurtenances thereunto belonging or in anywise appertaining.

Dated this 10th day of May 1941.

REYMERT MINING COMPANY

By H. J. Forbach Lessee and Agent

*Reymert*

TO ALL WHOM IT MAY CONCERN:-

Know ye that REYMERT MINING COMPANY hereby claims the Alaska Millsite of five acres as staked on this ground S30 by 660 feet, and referred to the Alaska Lode Mining Claim, patent Survey 2378A, owned by the said Reymert Mining Company and located in the same district.

Date of Location May 10th, 1941.

And that the undersigned REYMERT MINING COMPANY, an Arizona Corporation, does hereby declare and publish as a legal notice to all the world that it has a valid right to the occupation, possession and enjoyment of all and singular that tract or parcel of land not exceeding five acres situate lying and being in the Pioneer Mining District, County of Pinal, State of Arizona, bounded and described as follows, to-wit:

The east half of the southeast quarter of the northwest quarter of the northeast quarter of section Twenty-Two, Township Two South, Range Eleven East, Gila and Salt River Base and Meridian.

Together with all and singular the hereditaments, improvements and appurtenances thereunto belonging or in anywise appertaining.

Dated this 10th day of May 1941.

REYMERT MINING COMPANY

By *W. J. Forbach, Lessee and Agent*

TO ALL WHOM IT MAY CONCERN:—

Know ye that REYBERT MINING COMPANY hereby claims the America Millsite of five acres as stated on this ground 330 by 330 feet, and referred to the America Lode Mining Claim, patent survey 2378A, owned by the said Reymert Mining Company and located in the same district.

Date of Location - May 10th, 1941.

And that the undersigned REYBERT MINING COMPANY, an Arizona Corporation, does hereby declare and publish as a legal notice to all the world that it has a valid right to the occupation, possession and enjoyment of all and singular that tract or parcel of land not exceeding five acres situate lying and being in the Pioneer Mining District, County of Pinal, State of Arizona, bounded and described as follows, to-wit:

The west half of the southeast quarter of the northwest quarter of the northeast quarter of section Twenty-Two, Township Two South, Range Eleven East, Gila and Salt River Base and Meridian.

Together with all and singular the hereditaments, improvements and appurtenances thereunto belonging or in anywise appertaining.

Dated this 10th day of May, 1941.

REYBERT MINING COMPANY

By W. J. Forbach Lessee and Agent

NOTICE OF NON-LIABILITY FOR LABOR AND MATERIALS FURNISHED

NOTICE is hereby given to all persons that the undersigned, REYMERT MINING COMPANY, a corporation, is the owner of seven patented mines hereinafter described, with all the improvements thereon. That said mines are now in the possession of and are being worked and operated by WILLIAM J. FORBACH, of Superior, Arizona, under lease made and executed by the undersigned, Reymert Mining Company, in favor of said William J. Forbach, dated the 26th day of April, 1941, said lease to be in force up to and including the 26th day of April, 1951.

The undersigned Reymert Mining Company is not working or operating said mines, or any part thereof, and does not intend to work or operate said mines or any part thereof, or purchase any supplies or materials therefor during the life of said lease with said William J. Forbach.

The names of the said patented mines are as follows: America Lode, Alaska Lode, Asia Lode, Australia Lode, Africa Lode, Europe Lode and Great Pacific Lode, situate, lying and being in the Pioneer Mining District in Pinal County, Arizona, the location notices of said mines being duly recorded in Books as follows:

America Lode, Book 3 of Mines, Page 513; Alaska Lode, Book 11 of Mines, Page 278; Africa Lode, Book 3 of Mines, page 515; Asia Lode, Book 1 of Amended Locations of Mines, page 372; Australia Lode, Book 3 of Mines, page 514; Europe Lode, Book 3 of Mines, page 515; Great Pacific Lode, Book 9 of Mines, page 271; in the office of the County Recorder, Pinal County, Arizona, to which books and pages reference is hereby made for a more particular description of said patented mines and mining claims:

IN WITNESS WHEREOF, the said REYMERT MINING COMPANY has hereunto caused these notices to be signed by its President and attested by its Secretary, and its corporate seal hereto affixed, this 6<sup>th</sup> day of March, 1941.

REYMERT MINING COMPANY

Geo. D. Van Dyke

President

ATTEST:

Joseph R. Clark

Secretary

NOTICE OF NON-LIABILITY  
FOR  
LABOR AND MATERIALS FURNISHED

*John Doe 6/20/41*

*S.M.C. Office Copy*  
*Reymert Legal file*

MINING LEASE AND OPTION TO PURCHASE

This agreement made as of this first day of July 1946, by and between REYMERT MINING COMPANY, a corporation organized and existing under the laws of Arizona, (hereinafter called Lessor) and REYMERT EXTENSION SILVER MINES, also a corporation organized and existing under the laws of Arizona, (hereinafter called Lessee), WITNESSETH:

ARTICLE I: Description of Property

The Lessor, in consideration of the rents, royalties, covenants and agreements to be paid, kept, observed and performed by the Lessee, has leased, let and demised to the Lessee the following described seven (7) patented lode mining claims located in the Pioneer Mining District, Pinal County, Arizona, known as the

|               |                        |    |                                  |           |
|---------------|------------------------|----|----------------------------------|-----------|
| AMERICA       | Lode, recorded in Book | 3  | of Mines                         | Page 513; |
| ALASKA        | " " " "                | 11 | " "                              | " 278;    |
| AFRICA        | " " " "                | 3  | " "                              | " 515;    |
| ASIA          | " " " "                | 1  | " Amended locations of<br>Mines, | Page 372; |
| AUSTRALIA     | " " " "                | 3  | " "                              | " 514;    |
| EUROPE        | " " " "                | 3  | " "                              | " 515;    |
| GREAT PACIFIC | " " " "                | 9  | " "                              | " 271;    |

in the office of the County Recorder, Pinal County, Arizona, and also an unpatented lode mining claim entered upon and located on April 11, 1941, known as the "Reymert", recorded in the office of the County Recorder, Pinal County, Arizona, in Book 52 of Mines, at Page 56; also four (4) mill sites located May 10, 1941, known as "Alaska Mill Site", "Asia Mill Site", "America Mill Site" and "Australia Mill Site", which unpatented lode mining claim and mill sites are in the same mining district as the patented mines aforesaid, and the said mill sites are recorded as above as numbers 85111 to 85114 incl. on pages 398 and 399 of Book 1 of Mill Sites and Water Rights.

ARTICLE II: Term of Lease

TO HAVE AND TO HOLD the above described premises for the purpose of mining and/or milling the ores thereon or therein, for the term of ten (10) years from the date hereof, unless said term be sooner terminated as hereinafter provided. The Lessee shall have no right or power to assign this lease or any part thereof, without the written consent of the Lessor first had and obtained and the termination notice of the prior lease of the said property to the Reymert Lease, a co-partnership, and Quit Claim Deed from said Reymert Lease is attached hereto and made a part hereof.

ARTICLE III: Possession and Operation of Property

The Lessee, in consideration of the premises, has covenanted and agreed, and by these presents does covenant and agree, to and with the Lessor, to commence prior to August 1, 1946, the preparation of the leased property for exploration and development below the water level which is established at a depth of 220' below the collar of the Alaska Shaft and thereafter to continue the same with reasonable diligence and through the expenditure of not less than one thousand dollars (\$1,000) per month up to a maximum of \$50,000. The Lessee also agrees that whenever the price of silver is substantially raised from the present 71.1¢ per ounce to 90¢ or over per ounce, it will resume mining operations on other parts of the property and will carry on the same, in a thorough and workmanlike manner, so as to take out the greatest amount of ore reasonably practicable with due regard to the development and preservation of the mine or mines now or hereafter on said premises, and preserving said premises as a workable mining property. Said work shall be carried on with due regard to Lessee's covenants, as follows:

(a) Making all working shafts at least four (4) feet by six (6) feet in the clear; all drifts and tunnels at least three and one-half ( $3\frac{1}{2}$ ) feet by six and one-half ( $6\frac{1}{2}$ ) feet in the clear, and all winzes and raises at least three and one-half ( $3\frac{1}{2}$ ) feet by seven (7) feet in the clear;

(b) Repairing all old timbering wherever now or hereafter necessary and timbering in a good miner like manner all openings now or hereafter made on said premises, at all points where proper or necessary in accordance with good and safe mining practice; continuing the timbering in the working shafts now on said premises with timber of similar dimensions as heretofore used, unless it becomes necessary for safety to use larger timbers, in which event timbers of sufficient size for safety and permanent mining shall be used, all in accordance with good and safe mining practice:

(c) Keeping at all times all drifts, shafts, tunnels and other workings now or hereafter on said premises thoroughly drained and clear of loose rock and rubbish unless prevented by extraordinary mining

casualty, and stowing no waste under ground except to fill, according to good mining practice, places where ore has been extracted and in such manner as will not now or hereafter interfere with the present or future working or development of the property:

(d) Doing no underhand stoping below the bottom of any main working level or winze and stoping or breaking of no rock or ore so near any working shaft as to endanger its stability or permanence.

ARTICLE IV: Obligations of Lessee

(a) Lessee agrees that all of the annual assessment work on the "Reymert" unpatented lode mining claim shall be performed and affidavits showing performance of said work or intention to hold the said claim shall be recorded by him as required by law during the term of this lease, or so long as said claim remains unpatented.

(b) The Lessee shall and does hereby assume all responsibility for costs, loss or damage which may arise by reason of injury to the property or to any of its employees, or to any other person lawfully on said premises, or which may arise by reason of injury or damage to any persons, live stock or other property as the result of any work or operations of the Lessee, or its possession or occupancy of the premises, and agrees to indemnify and save harmless the Lessor and said premises of and from any damages, losses, costs or expense by reason of any such actions, injury or damage, and to that end also agrees, at its own cost to procure and at all times to maintain sufficient workmen's compensation, public liability and other insurance required by the laws and mining regulations of the State of Arizona, or ordinarily carried by a Lessee.

(c) Lessee shall pay for all supplies, materials and labor furnished or done upon or for the benefit of said premises, and shall pay the taxes assessed against the leased premises and against all personal property placed thereon, or against the operations of the Lessee during the life of this lease as and when the same become due and payable and before they become delinquent, and shall keep posted on the leased premises a notice furnished by Lessor setting forth that the same is being worked under lease, and that neither the said premises nor its owner shall be liable for any debts, claim or claims for liens for labor

or materials or otherwise of any character whatsoever, nor for any claims for damage for accidents to employees or others arising from these operations, and that neither the premises nor the owner thereof can be charged with any responsibility for the same, and Lessee further agrees to comply with any statute of the State of Arizona intended to exempt the premises or owner thereof, from any such lien and will do all things necessary to protect the Lessor and said premises from any such lien, and if any such lien or liens shall be filed against said premises Lessor may forthwith pay off and discharge the same and recover from the Lessee all sums so advanced or paid to clear said premises from liens filed as aforesaid, together with interest at the rate of six (6) per cent per annum of such advances or payments, or Lessor may at its election declare a forfeiture of this lease as hereinafter provided.

(d) It is expressly understood and agreed that the ownership of the leased property shall remain the property of the Lessor; that all cross or parallel lodes, spurs and mineral deposits of every kind which may be uncovered, disclosed or discovered within said leased premises by the Lessee or any person or persons under or in privity with him shall be occupied and held as the property of the Lessor, with the privilege to the Lessee to work and mine the same as part and parcel of the leased premises, and that all ores mined from said premises shall remain the property of the Lessor until the royalties hereinafter reserved thereon have been paid or until said ores or the concentrates therefrom have been sold, delivered and paid for by sampler or smelter pursuant to a bona fide sale thereof.

ARTICLE V: Royalties

(a) The Lessee, however, shall have the right during the life of this lease to work, extract, ship and sell any and all ores mined from said premises and/or to treat by milling or otherwise on or off said premises any ores which can be so treated profitably with the right to ship and sell the concentrates.

(b) The said Lessee covenants to pay or cause to be paid to the Lessor royalties on all ores mined and shipped or sold from said premises in any manner during the life of this lease, and on concentrates of all ores treated on said premises, according to the following schedules in

which the net value shall be deemed to be the assay value of the said ores or concentrates at sampler of smelter, first deducting the cost of railroad transportation, if any, the cost of trucking the ore or concentrates to the nearest point of shipment or delivery not exceeding two dollars a ton, and the smelting charges, but no other deductions. It is further understood and agreed that whenever the market or government price of silver is 90¢ or more per ounce the Lessee shall pay to the Lessor a minimum rental or royalty of one hundred dollars (\$100.00) per calendar month and shall add when necessary a sufficient amount to royalties paid in accordance with the following schedule to make up this minimum payment:

|  |                   |
|--|-------------------|
| Upon all ores up to \$7.00 per ton net value | 2 $\frac{1}{2}$ % |
| " " " \$7.00 to \$10.00 per ton net value    | 5 %               |
| " " " \$10.00 to \$15.00 " " " "             | 7 $\frac{1}{2}$ % |
| " " " \$15.00 to \$25.00 " " " "             | 10 %              |
| " " " \$25.00 to \$35.00 " " " "             | 20 %              |
| " " " \$35.00 and over " " " "               | 25 %              |

Upon all ores treated on the premises 10% of the net value of the concentrates, said net value to be the value of the concentrates at sampler or smelter after first making the deductions above specified, but no other deductions.

(c) The Lessee further covenants and agrees to keep accurate accounts and to render statements monthly, or as often as requested, accompanied by vouchers, to the Lessor, showing the amount of all ore taken from said premises, also all ore treated on said premises, and the yield of the same and to pay to the Lessor, by the fifteenth day of each month, the royalty computed as aforesaid on all ores and concentrates shipped and sampled from said premises during the preceding month.

(d) To allow the Lessor or its agent from time to time to enter upon and descend into all parts of said leased premises, for the purpose of inspection, surveys or taking samples therefrom, and to render to said parties proper assistance in making such inspection, surveys or examination, and to report to Lessor monthly all work done during the preceding month.

(e) To pay all taxes assessed against said demised premises, the improvements thereon, or any personal property placed thereon, or the ores mined therefrom or their concentrates, or against the interest of the Lessee or Lessor in this lease or operations thereunder.

(f) Said Lessee further covenants that no person not in privity with the parties hereto shall be allowed to hold possession of said premises or any part thereof under any pretext whatever, except that whenever market conditions are favorable the Lessor or its agent will permit the Lessee to grant sub-leases to approved and responsible parties for the mining and extraction of pay ore and under the same operation conditions as set forth in this lease for the fulfillment of which the Lessee shall continue to be fully responsible to the Lessor.

ARTICLE VI: (a) Termination of Lease

Upon the expiration of this lease, the Lessee guarantees that it will deliver to said Lessor quiet and peaceable possession of said demised premises in good order and condition with all usable drifts, tunnels and other passes thoroughly drained and cleared of loose rock and rubbish and said premises ready for immediate continued working without demand or further notice on the first day of July, A. D., 1956, at noon, or upon any sooner termination of this lease in any manner, and it is mutually understood that all machinery and tools which may be placed upon said premises by the said Lessee may be removed therefrom within thirty (30) days after the termination of this Lease, provided, however, that no such tools or machinery shall be so removed while the said Lessee may be in any manner indebted to the said Lessor under any obligation incurred hereunder.

(b) Forfeiture of Lease

Upon the violation of any covenant or condition herein contained, the Lessor may give Lessee thirty (30) days written notice thereof, and of its intention to terminate said lease therefor; if said violation or default be not corrected at the expiration of thirty (30) days from the receipt of said notice, this lease shall at the option of said Lessor expire and terminate, and the said premises with the appurtenances and all buildings and other improvements shall become forfeited to the Lessor, and the said Lessor or its agent may thereupon, after demand in writing for possession, enter upon said premises and dispossess all persons occupying the same, with or without force, and with or without process of law, or at the option of the Lessor, the said Lessee and all persons found occupying said premises or any part thereof may be proceeded against as guilty of unlawful detainer.

(c) Surrender of Lease

If the Lessee for any reason shall desire to terminate this lease at any time it shall have the right to do so, in manner following, provided he is not then in default; this lease may be terminated by said Lessee as of the first day of any month, in any year during its term, by a written notice given by the said Lessee to the Lessor at least thirty days prior to the date of termination, and thereupon on the expiration of the thirty days after giving such notice, this lease shall terminate.

(d) Force Majeure

If the Lessee shall at any time be delayed in or prevented from keeping or performing any of the obligations hereunder to be kept or performed according to the provision hereof by strikes, fires, floods, lack of market or transportation, orders of the government or any duly constituted instrumentality thereof or by any similar cause beyond the control of the Lessee; such delay or stoppage of work shall not be deemed a breach of this agreement nor a cause for forfeiture provided that during any such periods the Lessee continues to protect the property and to pay the taxes and that regular operations hereunder are resumed as soon as it is reasonably possible to do so.

ARTICLE VII: Option to Purchase

The Lessor, Reymert Mining Company, does hereby grant unto said Lessee, Reymert Extension Silver Mines, or to its assigns, the option to purchase the above described leased property with all improvements thereon for the sum of fifty thousand dollars (\$50,000) upon the terms and conditions hereinafter set forth.

1. This option shall expire on January 1, 1950.
2. The privilege of exercising this option is conditional on the Lessee, or its assigns, expending not less than forty thousand dollars (\$40,000) prior to January 1, 1950, in exploration and development work carried on below the present water level, which water level is found at a depth of approximately 220 feet below the collar of the Alaska shaft, and approximately 420 feet below the collar of the Australia shaft.

3. Said option shall be exercised by registered letter directed to Reymert Mining Company at its office, 902 Wells Building, 324 East Wisconsin Avenue, Milwaukee 2, Wisconsin, posted at least twenty (20)

days prior to the date for consummation of the transaction, at which date payment shall be made for the premises, and the premises shall be conveyed by Reymert Mining Company to said Reymert Extension Silver Mines or its assigns, by Warranty Deed.

ARTICLE VIII: Legal Interpretation

This agreement of Lease and Option to Purchase has been accepted and will be performed by the parties in the State of Arizona and all questions pertaining to its validity, construction and interpretation shall be determined in accordance with the laws of the State of Arizona.

ARTICLE IX: Inurement

Time is of the essence of this lease and option to purchase and the terms, provisions, covenants and agreements herein contained shall extend to, be binding upon and inure to the benefit of the successors and assigns of the parties hereto.

ARTICLE X: Notices

All notices and communications herein provided for, until otherwise changed by written request shall be given by mail at the following addresses:

To the Lessor; Reymert Mining Company, Room 902 Wells Building, 324 East Wisconsin Avenue, Milwaukee 2, Wisconsin.

To the Lessee; Reymert Extension Silver Mines, C/o Louis B. Whitney, Room 810 Luhrs Tower, Phoenix, Arizona.

IN WITNESS WHEREOF the Lessor and the Lessee have caused their names to be subscribed and their corporate seals to be affixed and attested by their duly authorized officers in duplicate counterparts as of this first day of July, 1946.

REYMERT MINING COMPANY, Lessor

/s/ George D. VanDyke  
President

/s/ Douglass Van Dyke  
Secretary

REYMERT EXTENSION SILVER MINES, Lessee

/s/ Norman De Vaux  
President

/s/ Jackson Diggs  
Secretary

JOHN F. DULING\* discusses

*Legal file*

# Locating and Patenting Mining Claims



MEMO RE: REYMERT

March 23, 1948

Conference with Norman De Vaux and Charles Halton of Los Angeles who is one of his associates.

At the mine there are four men steadily employed and Eckloff comes out at intervals to check on the timbering and they have now placed three sets below the 200" level and a fourth set is framed and will be put in place in the near future. They do not expect that it will be necessary to renew the timbers in the Alaska Shaft below this point as these seem to be in good shape having been continuously under water. This work has certainly dragged along in a very unsatisfactory manner, but De Vaux, as usual, is confident that it will proceed more speedily from this time forward.

Foard has continued his experiments with the treatment of the barium ore but has been handicaped by the difficulty of obtaining satisfactory reagents, particularly amylene dichloride, which the American Cyanamid Co. are now trying to procure and their local representative in Phoenix is a Mr. Tucker.

De Vaux claims that they have recently taken some large samples from workings near the south end of the mine and that the ore in some sections contains 12 oz. of silver and as much as 40% BaSO<sub>4</sub>. These investigations will be continued.

*3 Copy made for*

NOTICE OF NON-LIABILITY FOR LABOR AND MATERIALS FURNISHED

Notice is hereby given to all persons that the Reymert Mining Company, an Arizona Corporation legally represented by the undersigned is the owner of the seven patented lode mining claims located in the Pioneer Mining District, Pinal County, Arizona, known as the:-

|               |   |
|---------------|---|
| AMERICA       | Lode, Recorded in Book 3 of Mines, Page 513;      |
| ALASKA        | " " " " 11 " " " 278;                             |
| AFRICA        | " " " " 3 " " " 515;                              |
| ASIA          | " " " " 1 " Amended Locations of Mines, Page 372; |
| AUSTRALIA     | " " " " 3 " " " 514;                              |
| EUROPE        | " " " " 3 " " " 515;                              |
| GREAT PACIFIC | " " " " 9 " " " 271;                              |

in the office of the County Recorder, Pinal County, Arizona, and also an unpatented lode mining claim entered upon and located on April 11, 1941, known as the "Reymert", recorded in the office of said County Recorder, in Book 52 of Mines, at Page 56; also four (4) mill sites located May 10, 1941, known as "Alaska Mill Site"; "Asia Mill Site", "America Mill Site" and "Australia Mill Site", which unpatented lode mining claim and mill sites are in the same mining district as the patented mines aforesaid.

The said mining claims and mill sites are now in the possession of and are being developed and worked by Reymert Lease, a co-partnership, by virtue of a mining lease made and executed as of September 1, 1944 in favor of William J. Forbach of Superior, Arizona and assigned to the said Reymert Lease with the consent of the Lessor on January 21st, 1945.

During the terms of the said Lease the Owner, Reymert Mining Company, is not working and does not intend to develop, work or operate the said mining claims or any part thereof nor to employ any labor or purchase any supplies or materials therefor, and said Owner will not be liable for the payment of labor so employed or supplies and materials so utilized nor for any loss or damage which may arise by reason of injury to the person or property of employees or others or because of any act or omission connected with operations of the said property, and the said mining claims will not be subject to a lien therefor.

IN WITNESS WHEREOF the said Owner has caused copies of this Notice to be executed by its duly authorized representative and to be posted at conspicuous places on the leased property and recorded in the office of the Recorder of Pinal County, Arizona.

The Lease of September 1st, 1944 is recorded in Book 5 of Leases, page 46 and the Assignment, together with this Notice are recorded in Book 237 Minerals Book 570 in the Office of the Recorder of Pinal County, Arizona.

*Is recorded in Bk 5 of Leases & Assn. Assigned to page 157*  
*S. M. Colverson*  
\_\_\_\_\_  
AUTHORIZED AGENT OF  
REYMERT MINING COMPANY.

*Feb 7th 1945*

REYMERT MINING COMPANY  
902 Wells Building  
Milwaukee 2, Wisconsin

*Reymert Legal file*

August 23, 1946

Mr. George M. Colvocoresses  
1102 Luhrs Tower  
Phoenix, Arizona

My dear Colvo:

This will acknowledge receipt of your letter of August 20th enclosing the following copies of all of the recorded documents executed in connection with the recent lease of the property to the Reymert Extension Mines:

MINING LEASE AND OPTION TO PURCHASE

Date July 1, 1946

Recorded at request of Louis B. Whitney on the 9th day of July A.D. 1946, at 2:00 o'clock P.M. in Book No. 5 of Leases Page 227

QUIT CLAIM DEED

Date June 29, 1946

Recorded at request of G. M. Colvocoresses on the 2d day of August 1946, at 1:55 o'clock P.M. in Book No. 7 of Mining Deeds Page 124

SURRENDER AND CANCELLATION OF LEASE

Date September 1, 1944

Recorded at request of G. M. Colvocoresses on the 2d day of August 1946, at 1:50 P.M. in Book No. 24 Miscellaneous Records Page 284

NOTICE OF NON-LIABILITY

Date July 9, 1946

Recorded at request of G. M. Colvocoresses on 2d day of August 1946, at 1:45 P.M. in Book No. 24 Miscellaneous Records Page 283

We have the above on file here in our office and thank you for sending same.

Yours very truly,

REYMERT MINING COMPANY

By

*W. D. Van Dyke, Jr.*

W. D. Van Dyke, Jr.

ek

STATE OF WISCONSIN )  
                          ) SS.  
MILWAUKEE COUNTY )

On this the 24th day of June, 1946, before me, Minnie A. Burger, notary public, personally appeared George D. Van Dyke and Douglass Van Dyke, who acknowledged themselves to be respectively the president and secretary of Reymert Mining Company, an Arizona corporation, and that they as such officers being authorized so to do, executed the foregoing instrument for the purpose therein contained, by signing the name of the corporation by themselves as such officers and affixing the corporate seal thereto.

IN WITNESS WHEREOF I hereunto set my hand and official seal.

/s/ Minnie A. Burger  
Notary Public, Milwaukee County, Wis.  
My commission expires: May 22, 1949.

STATE OF \_\_\_\_\_ )  
                          ) SS.  
COUNTY OF \_\_\_\_\_ )

On this the \_\_\_ day of \_\_\_\_\_, 1946, before me, \_\_\_\_\_, notary public, personally appeared \_\_\_\_\_ and \_\_\_\_\_, who acknowledged themselves to be respectively the president and secretary of Reymert Extension Silver Mines, an Arizona corporation and that they as such officers being authorized so to do, executed the foregoing instrument for the purpose therein contained, by signing the name of the corporation by themselves as such officers and affixing the corporate seal thereof.

IN WITNESS WHEREOF I hereunto set my hand and official seal.

Notary Public, \_\_\_\_\_ County, \_\_\_\_\_  
My commission expires:

STATE OF WISCONSIN )  
                          ) SS.  
MILWAUKEE COUNTY )

On this the 24th day of June, 1946, before me, Minnie A. Burger, notary public, personally appeared George D. Van Dyke and Douglass Van Dyke, who acknowledged themselves to be respectively the president and secretary of Reymert Mining Company, an Arizona corporation, and that they as such officers being authorized so to do, executed the foregoing instrument for the purpose therein contained, by signing the name of the corporation by themselves as such officers and affixing the corporate seal thereto.

IN WITNESS WHEREOF I hereunto set my hand and official seal.

/s/ Minnie A. Burger  
Notary Public, Milwaukee County, Wis.  
My commission expires: May 22, 1949.

STATE OF \_\_\_\_\_ )  
                          ) SS.  
COUNTY OF \_\_\_\_\_ )

On this the \_\_\_ day of \_\_\_\_\_, 1946, before me, \_\_\_\_\_, notary public, personally appeared \_\_\_\_\_ and \_\_\_\_\_, who acknowledged themselves to be respectively the president and secretary of Reymert Extension Silver Mines, an Arizona corporation and that they as such officers being authorized so to do, executed the foregoing instrument for the purpose therein contained, by signing the name of the corporation by themselves as such officers and affixing the corporate seal thereof.

IN WITNESS WHEREOF I hereunto set my hand and official seal.

NOTary Public, \_\_\_\_\_ County, \_\_\_\_\_  
My commission expires:

Reymert Co

SURRENDER AND CANCELLATION OF LEASE

Reymert Mining Company  
902 Wells Building  
Milwaukee 2, Wisconsin

Gentlemen:

Referring to that certain mining lease executed as of September first 1944, between the Reymert Mining Company, Lessor, and William J. Forbach, Lessee, and recorded in Book 5 of Leases at Page 46, Records of Pinal County and also referring to that certain assignment of the above cited lease from William J. Forbach to the Reymert Lease, a co-partnership which is recorded in Book 5 of Mortgages and Leases Assigned at Page 157, Records of Pinal County and referring particularly to the sub-paragraph (f) of said lease concerning the termination thereof but waiving by mutual consent the provision for 30 day notice of intention.

YOU ARE HEREBY ADVISED AND NOTIFIED that pursuant to the said provision of the said lease and option the undersigned Reymert Lease, a co-partnership, being the lessee therein named, desires to quit and surrender the said mining property and all of its rights therein or under said mining lease and option and this is intended to be and is the written notice to you of its desire and intention to quit and surrender the said mining property and to terminate forthwith the said lease and option and all rights under said contract as of the 30th of June 1946.

SIGNED - Reymert Lease, A Co-partnership

BY

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

BILL OF SALE

KNOW ALL MEN BY THESE PRESENTS:

That I, WILLIAM J. FORBACH, for and in consideration of the sum of Ten and no/100 Dollars (\$10.00) and other good and valuable considerations to him in hand paid by F. E. CARROW, the receipt whereof is hereby acknowledged, has bargained, sold and assigned and by these presents does bargain, sell and assign to the said F. E. Carrow, all of the right, title, interest, claim and demand of the said William J. Forbach in and to that certain lease known as REYMERT LEASE, also all right, title, interest, claim possession and demand of the said William J. Forbach to anything and everything arising under and because of said lease upon the Reymert Mine, executed by the Reymert Mining Company to said William J. Forbach as of September 1st, 1944.

To have and to hold the said described property unto the said F. E. Carrow, his personal representatives and assigns forever.

WITNESS the hand of the said William J. Forbach this 17th day of December, 1945.

/s/ William J. Forbach

STATE OF ARIZONA     )  
                                  ) SS.  
COUNTY OF MARICOPA )

This instrument was acknowledged before me this 18th day of December, 1945, by William J. Forbach.

/s/ Dorothy C. Haire  
Notary Public

My commission expires  
March 23, 1949.

Original recorded in Pinal County, Arizona, in Book #5 of Mortgages and Leases assigned, page 234, on April 3, 1946.

QUIT CLAIM DEED

This Indenture made as of the 29th day of June 1946, between the Reymert Lease, a co-partnership, whose members were F. A. Bennett, Norman De Vaux, William J. Forbach and Frank E. Carrow, First Parties, and the Reymert Mining Company, a corporation organized and existing by virtue of the laws of Arizona, Second Party.

WITNESSETH:

That the said first parties for and in consideration of the sum of One Dollar (\$1.00) to them in hand paid by the said second party, the receipt whereof is hereby confessed and acknowledged, have remised, released and quit-claimed, and by these presents do convey, remise, release and quit-claim unto the said second party and to its successors and assigns forever, all the right, title, interest, claim and demand which the said first parties have in and to the following described patented lode mining claims, situate in the Pioneer Mining District, Pinal County, Arizona, to wit:

|   |                     |
|---|---------------------|
| AMERICA Lode, recorded in Book 3 of Mines | Page 513;           |
| ALASKA " " " " 11 " "                     | " 278;              |
| AFRICA " " " " 3 " "                      | " 515;              |
| ASIA " " " " 1 " Amended locations        | of Mines, Page 372; |
| AUSTRALIA" " " " 3 " Mines                | Page 514;           |
| EUROPE " " " " 3 " "                      | " 515;              |
| GREAT PACIFIC" " " " 9 " "                | " 271;              |

in the office of the County Recorder, Pinal County, Arizona, and also an unpatented lode mining claim entered upon and located on April 11, 1941, known as the "Reymert", recorded in the office of the County Recorder, Pinal County, Arizona, in Book 52 of Mines, at Page 56; also four (4) mill sites located May 10, 1941, known as "Alaska Mill Site", "Asia Mill Site", "America Mill Site" and "Australia Mill Site", which unpatented lode mining claim and mill sites are in the same mining district as the patented mines aforesaid.

TO HAVE AND TO HOLD THE same, together with all and singular the appurtenances and privileges thereunto belonging, or in any wise appertaining, and all the estate, right, title, interest and claim whatsoever, of the undersigned lessee, either in law or

equity, in possession or expectancy to the proper use, benefit and behoof of the said second party, its successors and assigns forever.

IN WITNESS WHEREOF, the first parties have executed this Quit-Claim Deed as of the day and year hereinbefore written.

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BILL OF SALE

KNOW ALL MEN BY THESE PRESENTS:

That I, WILLIAM J. FORBACH, for and in consideration of the sum of Ten and no/100 Dollars (\$10.00) and other good and valuable considerations to him in hand paid by F. E. CARROW, the receipt whereof is hereby acknowledged, has bargained, sold and assigned and by these presents does bargain, sell and assign to the said F. E. Carrow, all of the right, title, interest, claim and demand of the said William J. Forbach in and to that certain lease known as REYMERT LEASE, also all right, title, interest, claim possession and demand of the said William J. Forbach to anything and everything arising under and because of said lease upon the Reymert Mine, executed by the Reymert Mining Company to said William J. Forbach as of September 1st, 1944.

To have and to hold the said described property unto the said F. E. Carrow, his personal representatives and assigns forever.

WITNESS the hand of the said William J. Forbach this 17th day of December, 1945.

/s/ William J. Forbach

STATE OF ARIZONA     }  
                                  } SS.  
COUNTY OF MARICOPA }

This instrument was acknowledged before me this 18th day of December, 1945, by William J. Forbach.

/s/ Dorothy C. Haire  
Notary Public

My commission expires  
March 23, 1949.

Original recorded in Pinal County, Arizona, in Book #5 of Mortgages and Leases assigned, page 234, on April 3, 1946.

REYMERT MINING COMPANY  
MEETING OF THE DIRECTORS

---

COPY

A meeting of the board of directors of Reymert Mining Company was held on June 17, 1946, at 11:00 o'clock, A. M., at its office 902 Wells Building, Milwaukee, Wisconsin, on notice to all directors.

PRESENT:

George D. Van Dyke,  
W. D. Van Dyke, Jr.,  
Douglass Van Dyke,  
John C. Van Dyke,

being all of the directors.

George D. Van Dyke, the president, presided and Douglass Van Dyke, the secretary, acted as such.

The secretary reported that the company had received a communication dated June 12, 1946, from George M. Colvocoresses of Phoenix, Arizona, who has been acting as the representative of the company in Arizona, which communication submitted a proposition from Reymert Extension Silver Mines (recently incorporated in Arizona) for a lease from Reymert Mining Company to said company, upon terms set forth in a draft of said lease, a copy of which is incorporated with these minutes as Exhibit "A", and that the proposal contemplates the surrender and cancellation of the existing lease to Reymert Lease, a co-partnership, the sale by William J. Forbach to Frank E. Carrow of Mr. Forbach's interest in the Reymert Lease, and a quit-claim from Reymert Lease to Reymert Mining Company.

After a full discussion of the proposition aforesaid, and on motion duly made, seconded and unanimously adopted, it was

RESOLVED, That the company accept said proposal, and the president and secretary be and they are hereby authorized and

directed to execute a lease to Reymert Extension Silver Mines substantially in the form of Exhibit "A", after they are assured of the execution of the surrender of the existing lease by Reymert Lease, and that they execute and deliver such other instruments as may be necessary to carry out the proposal aforesaid.

George S. Van Slyke  
Secretary

APPROVED:

George S. Van Slyke  
Langlass Van Slyke  
H. H. Van Slyke, Jr  
J. C. Van Slyke

COPY

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, That REYMERT MINING COMPANY, an Arizona corporation having its office at 324 East Wisconsin Avenue, Milwaukee 2, Wisconsin, has made, constituted and appointed, and by these presents does make, constitute and appoint GEORGE M. COLVOCORESSES, 1102 Luhrs Tower, Phoenix, Arizona, its true and lawful attorney for it and in its name, place and stead, to act until this power is revoked as its attorney in relation to all of its property and other interests in the state of Arizona, and especially in relation to the termination of the lease of its properties to William J. Forbach, which lease was assigned to James Tod and Mabel Rae Tod, and enforcing the rights of said Company against said lessees or assignees of said lease, or against others, giving and granting unto said attorney full power and authority to do and perform all and every act and thing whatsoever requisite, necessary or expedient to be done in relation thereto as fully as could be done by said corporation, hereby ratifying all that said attorney shall lawfully do or cause to be done by virtue thereof.

IN WITNESS WHEREOF, Reymert Mining Company has caused this instrument to be executed by its President and Secretary duly authorized thereto, and its corporate seal to be affixed this 28<sup>th</sup> day of July, 1944.

In presence of:

J. P. Lutz  
Rose P. Rousseau  
J. P. Lutz  
Rose P. Rousseau

REYMERT MINING COMPANY,

By

George D Van Dyke  
President  
W D Van Dyke Jr  
Secretary

STATE OF WISCONSIN )  
MILWAUKEE COUNTY ) ss.

Personally came before me this 28<sup>th</sup> day of July, 1944,  
the above named GEORGE D. VAN DYKE and WILLIAM D. VAN DYKE, Jr.,  
to me known to be the persons who executed the foregoing instru-  
ment as President and Secretary respectively of Reymert Mining  
Company, and acknowledged the same.

Rose P. Rousseau

Notary Public, Milwaukee County, Wis.

My commission expires: Aug. 4, 1946

W L B C O  
QUALITY

No. 1358  
FOR SALE BY  
WISCONSIN LEGAL BLANK CO.  
MILWAUKEE  
14650  
FOLD ON SCORED LINE

W L B C O  
QUALITY

REYMERT MINING COMPANY

To

GEORGE M. COLVOCORESSES

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POWER OF ATTORNEY

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NOTICE OF NON-LIABILITY FOR LABOR AND MATERIALS FURNISHED

Notice is hereby given to all persons that the Reymert Mining Company, an Arizona Corporation legally represented by the undersigned is the owner of the seven patented lode mining claims located in the Pioneer Mining District, Pinal County, Arizona, known as the:-

|               |       |          |    |      |    |    |                      |      |      |
|---------------|-------|----------|----|------|----|----|----------------------|------|------|
| AMERICA       | Lode, | Recorded | in | Book | 3  | of | Mines,               | Page | 513; |
| ALASKA        | "     | "        | "  | "    | 11 | "  | "                    | "    | 278; |
| AFRICA        | "     | "        | "  | "    | 3  | "  | "                    | "    | 515; |
| ASIA          | "     | "        | "  | "    | 1  | "  | Amended Locations of |      |      |
|               |       |          |    |      |    |    | Mines                | Page | 372; |
| AUSTRALIA     | "     | "        | "  | "    | 3  | "  | "                    | "    | 514; |
| EUROPE        | "     | "        | "  | "    | 3  | "  | "                    | "    | 515; |
| GREAT PACIFIC | "     | "        | "  | "    | 9  | "  | "                    | "    | 271; |

in the office of the County Recorder, Pinal County, Arizona, and also an unpatented lode mining claim entered upon and located on April 11, 1941, known as the "Reymert", recorded in the office of the County Recorder, Pinal County, Arizona, in Book 52 of Mines, at Page 56; also four (4) mill sites located May 10, 1941, known as "Alaska Mill Site", "Asia Mill Site", "America Mill Site" and "Australia Mill Site", which unpatented lode mining claim and mill sites are in the same mining district as the patented mines aforesaid.

The said mining claims and mill sites are now in the possession of and are being developed and worked by The Reymert Extension Mines, an Arizona Corporation, by virtue of a ten (10) year mining lease made and executed as of July 1, 1946.

During the term of the said Lease the Owner, Reymert Mining Co., is not working and does not intend to develop, work or operate the said mining claims or any part thereof nor to employ any labor or purchase any supplies or materials therefor, nor to accept any liability for the payment of labor so employed or supplies and materials so utilized nor for any loss or damage which may arise by reason of injury to the person or property of employees or others or because of any act or omission connected with operations of the said property.

IN WITNESS WHEREOF the said owner has caused copies of this Notice to be executed by its duly authorized representative and to be posted at conspicuous places on the leased property and recorded in the Office of the Recorder of Pinal County.

STATE OF ARIZONA )  
 COUNTY OF MARICOPA ) SS

*G. M. Colvocoresses*  
 \_\_\_\_\_  
 AUTHORIZED REPRESENTATIVE OF  
 REYMERT MINING COMPANY

This instrument was acknowledged before me this \_\_\_\_\_ day of July, 1946, by G. M. Colvocoresses known to me to be the party whose name is subscribed hereto.

NOTICE OF NON-LIABILITY FOR LABOR AND MATERIALS FURNISHED

Notice is hereby given to all persons that the Reymert Mining Company, an Arizona Corporation legally represented by the undersigned is the owner of the seven patented lode mining claims located in the Pioneer Mining District, Pinal County, Arizona, known as the:-

|               |       |          |    |      |    |    |                      |      |      |
|---------------|-------|----------|----|------|----|----|----------------------|------|------|
| AMERICA       | Lode, | Recorded | in | Book | 3  | of | Mines,               | Page | 513; |
| ALASKA        | "     | "        | "  | "    | 11 | "  | "                    | "    | 278; |
| AFRICA        | "     | "        | "  | "    | 3  | "  | "                    | "    | 515; |
| ASIA          | "     | "        | "  | "    | 1  | "  | Amended Locations of |      |      |
|               |       |          |    |      |    |    | Mines                | Page | 372; |
| AUSTRALIA     | "     | "        | "  | "    | 3  | "  | "                    | "    | 514; |
| EUROPE        | "     | "        | "  | "    | 3  | "  | "                    | "    | 515; |
| GREAT PACIFIC | "     | "        | "  | "    | 9  | "  | "                    | "    | 271; |

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The said mining claims and mill sites are now in the possession of and are being developed and worked by The Reymert Extension Mines, an Arizona Corporation, by virtue of a ten (10) year mining lease made and executed as of July 1, 1946.

During the term of the said Lease the Owner, Reymert Mining Co., is not working and does not intend to develop, work or operate the said mining claims or any part thereof nor to employ any labor or purchase any supplies or materials therefor, nor to accept any liability for the payment of labor so employed or supplies and materials so utilized nor for any loss or damage which may arise by reason of injury to the person or property of employees or others or because of any act or omission connected with operations of the said property.

IN WITNESS WHEREOF the said owner has caused copies of this Notice to be executed by its duly authorized representative and to be posted at conspicuous places on the leased property and recorded in the Office of the Recorder of Pinal County.

STATE OF ARIZONA )  
 COUNTY OF MARICOPA ) SS

*S. M. Colvocoresses*  
 AUTHORIZED REPRESENTATIVE OF  
 REYMER MINE COMPANY

This instrument was acknowledged before me this \_\_\_\_\_ day of July, 1946, by G. M. Colvocoresses known to me to be the party whose name is subscribed hereto.

November 10, 1947

Reymert Mining Company  
902 Wells Building  
Milwaukee 2, Wisconsin

ATTENTION: W. D. Van Dyke, Jr.

*Reymert (Taxes)*

Dear Van Dyke:

Herewith enclosed is tax receipt for the first installment of 1947 taxes as paid on November 3, by the Reymert Extension Silver Mines.

You will note that the amount of these taxes has been reduced from \$350.98 to \$170.48 as result of the protest which I have been urging De Vaux to make for some-time past.

The amount of the assessment and of the taxes is still far too high, but probably no further concessions can be gained at present and the assessor has promised to examine the situation carefully before making the assessment for 1948 which I hope will be considerably lower.

Yours very truly,

GMC:IM  
Enclosure

*S. M.*

3. Copy with Corrections

Office Copy

July 1946

This mining lease, made as of this first day of September, 1944. by and between REYMERT MINING COMPANY, a corporation organized and existing under the laws of Arizona, (hereinafter called Lessor) and WILLIAM J. FORBACH of Superior, Arizona, (hereinafter called Lessee), WITNESSETH:

*Reymert Silver Mining Inc. also a corporation organized & existing under the laws of Arizona*

*Art I Period of Term*

The Lessor, in consideration of the rents, royalties, covenants and agreements to be paid, kept, observed and performed by the Lessee, has leased, let and demised to the Lessee the following described seven (7) patented lode mining claims located in the Pioneer Mining District, Pinal County, Arizona known as the

|                                |    |                                    |           |
|--------------------------------|----|------------------------------------|-----------|
| AMERICA Lode, recorded in Book | 3  | of Mines.                          | Page 513; |
| ALASKA " " " "                 | 11 | " "                                | " 278;    |
| AFRICA " " " "                 | 3  | " "                                | " 515;    |
| ASIA " " " "                   | 1  | " Amended locations of Mines, Page | 372;      |
| AUSTRALIA " " " "              | 3  | " "                                | " 514;    |
| EUROPE " " " "                 | 3  | " "                                | " 515;    |
| GREAT PACIFIC " " " "          | 9  | " "                                | " 271;    |

(b)

in the office of the County Recorder, Pinal County, Arizona, and also an unpatented lode mining claim entered upon and located on April 11, 1941, known as the "Reymert", recorded in the office of the County Recorder, Pinal County, Arizona, in Book 52 of Mines. at Page 56; also four (4) mill sites located May 10, 1941, known as "Alaska Mill Site"; "Asia Mill Site". "America Mill Site" and "Australia Mill Site", which unpatented lode mining claim and mill sites are in the same mining district as the patented mines aforesaid.

TO HAVE AND TO HOLD the above described premises for the purpose of mining and/or milling the ores thereon or therein, for the term of ten (10) years from the date hereof, unless said term be sooner terminated as hereinafter provided. The lessee shall have no right or power to assign this lease or any part thereof, or to sublet the whole or any part of said premises without the written consent of the Lessor first had and obtained.

*nor to sublet the whole or any part of these premises excepting with the consent & approval of the owner or its representative first had & obtained and with full protection of the owner to all rights & privileges established by this lease.*

Art II *Wm J. Kelly*

The Lessee, in consideration of the premises, has covenanted and agreed, and by these presents does covenant and agree, to and with the Lessor, to commence prior to <sup>August 14</sup> ~~November~~ 1, 1944 the preparation of the leased property for operation, and after <sup>Nov 1</sup> ~~December 1~~, 1944 to work the same continuously with reasonable diligence in a thorough and workmanlike manner, so as to take out the greatest amount of ore reasonably practicable with due regard to the development and preservation of the mine or mines now or hereafter on said premises, and preserving said premises as a workable mining property, unless prevented by labor disputes or strikes, acts of God, Government restrictions, or other causes beyond the control of the Lessee, which work shall be carried on with due regard to Lessee's covenants, as follows:

*Clay  
Can be  
dredged  
depth  
into lead  
7 ft approx  
w/ < 1500  
p.m. - 7  
Art II - 4*

*Clay  
Furn  
Hyman*

(a) Making all working shafts at least four (4) feet by six (6) feet in the clear; all drifts and tunnels at least three and one-half (3½) feet by six and one-half (6½) feet in the clear, and all winzes and raises at least three and one-half (3½) feet by seven (7) feet in the clear;

(b) Repairing all old timbering wherever now or hereafter necessary and timbering in a good miner like manner all openings now or hereafter made on said premises, at all points where proper or necessary in accordance with good and safe mining practice; continuing the timbering in the working shafts now on said premises with timber of the same dimensions as heretofore used, unless it becomes necessary for safety to use larger timbers, in which event timbers of sufficient size for safety and permanent mining shall be used, all in accordance with good and safe mining practice:

(c) Keeping at all times all drifts, shafts, tunnels and other workings now or hereafter on said premises thoroughly drained and clear of loose rock and rubbish unless prevented by extraordinary mining casualty, and stowing no waste under ground except to fill, according to good mining practice, places where ore has been extracted and in such manner as will not now or hereafter interfere with the present or future working or development of the property:

(d) Doing no underhand stoping below the bottom of any main working level or winz and stoping or breaking of no rock or ore so near any working shaft as to endanger its stability or permanence.

(e) Lessee agrees that all of the annual assessment work on the "Reymert" unpatented lode mining claim shall be performed and affidavits showing performance of said work <sup>or interest to hold hold</sup> shall be recorded by him as required by law during the term of this lease, or so long as said claim remains unpatented.

The Lessee shall and does hereby assume all responsibility for costs, loss or damage which may arise by reason of injury to himself, his property or to any of his employees, or to any other person lawfully on said premises, or which may arise by reason of injury or damage to any persons, live stock or other property as the result of any work or operations of the Lessee, or his possession or occupancy of the premises, and agrees to indemnify and save harmless the Lessor and said premises of and from any damages, losses, costs or expense by reason of any such actions, injury or damage, and to that end merely agrees, at his own cost to procure and at all times to maintain sufficient workmen's

compensation, public liability and other insurance required by the laws and mining regulations of the State of Arizona, or ordinarily carried by a Lessee.

(g) Lessee shall pay for all supplies, materials and labor furnished or done upon or for the benefit of said premises, and shall pay the taxes assessed against the leased premises and against all personal property placed thereon, or against the operations of the Lessee during the life of this lease as and when the same become due and payable and before they become delinquent, and shall keep posted on the leased premises a notice furnished by Lessor setting forth that the same is being worked under lease, and that neither the said premises nor its owner shall be liable for any debts, claims or claims for liens for labor or materials or otherwise of any character whatsoever, nor for any claims for damage for accidents to employees or others arising from these operations, and that neither the premises nor the owner thereof can be charged with any responsibility for the same, and Lessee further agrees to comply with any statute of the State of Arizona intended to exempt the premises or owner thereof, from any such lien and will do all things necessary to protect the Lessor and said premises from any such lien, and if any such lien or liens shall be filed against said premises Lessor may forthwith pay off and discharge the same and recover from the Lessee all sums so advanced or paid to clear said premises from liens filed as aforesaid, together with interest at the rate of six (6) per cent per annum of such advances or payments, or Lessor may at its election declare a forfeiture of this lease as hereinafter provided.

(h) It is expressly understood and agreed that the ownership

of the leased property shall remain the property of the Lessor; that all cross or parallel lodes, spurs and mineral deposits of every kind which may be uncovered, disclosed or discovered within said leased premises by the Lessee or any person or persons under or in privity with him shall be occupied and held as the property of the Lessor, with the privilege to the Lessee to work and mine the same as part and parcel of the leased premises, and that all ores mined from said premises shall remain the property of the Lessor until the royalties hereinafter reserved thereon have been paid or until said ores or the concentrates therefrom have been sold, delivered and paid for by sampler or smelter pursuant to a bona fide sale thereof.

The Lessee, however, shall have the right during the life of this lease to work, extract, ship and sell any and all ores mined from said premises and/or to treat by milling or otherwise on said premises any ores which can be so treated profitably with the right to ship and sell the concentrates.

The said Lessee covenants to pay and allow <sup>or cause to be paid</sup> to the Lessor royalties on all ores mined and shipped or sold from said premises in any manner during the life of this lease, and on concentrates of all ores treated on said premises, according to the following schedules in which the net value shall be deemed to be the assay value of the said ores or concentrates at sampler or smelter, first deducting the cost of railroad transportation, if any, the cost of trucking the ore or concentrates to the nearest point of shipment or delivery not exceeding ~~one~~ <sup>two</sup> dollar and ~~twenty-five~~ <sup>and</sup> ~~cents~~ a ton, and the smelting charges, but no other deductions:

|  |         |         |
|--|---------|---------|
| Upon all ores up to \$7.00 per ton net value | 21 1/2% |         |
| " " " \$7.00 to \$10.00 per ton net value    | 5%      |         |
| " " " \$10.00 to \$15.00 " " " "             | 10%     | 7.5%    |
| " " " \$15.00 to \$25.00 " " " "             | 15%     | 10.8%   |
| " " " \$25.00 and over " " " "               | 25%     | 20.9%   |
|  |         | 25 7/8% |

35.00 <sup>38.00</sup> *of ore*

Upon all ores treated on the premises 10% of the net value of the concentrates, said net value to be the value of the concentrates at sampler or smelter after first making the deductions above specified, but no other deductions.

*the Lessee*  
*agrees*

The Lessee further covenants and agrees to keep accurate accounts and to render statements monthly, or as often as requested, accompanied by vouchers, to the Lessor, showing the amount of all ore taken from said premises, also all ore treated on said premises, and the yield of the same and to pay to the Lessor, on the first day of each month, the royalty computed as aforesaid on all ores and concentrates shipped from said premises during the preceding month.

*Art III Lett Pm*

The Lessee further covenants and agrees:

(a) To allow the Lessor or its agent from time to time to enter upon and descend into all parts of said leased premises, for the purpose of inspection, surveys or taking samples therefrom, and to render to said parties proper assistance in making such inspection, surveys or examination. And to report to Lessor monthly all work done during the preceding month.

(b) To pay all taxes assessed against said demised premises, the improvements thereon, or any personal property placed thereon, or the ores mined therefrom or their concentrates, or against the interest of the Lessee or Lessor in this lease or operations thereunder.

?

(c) Said Lessee further covenants that no person not in privity with the parties hereto shall be allowed to hold possession of said premises or any part thereof under any pretext whatever. *except as to land letty*

(d) Further, that he will deliver to said Lessor quiet and peaceable possession of said demised premises in good order and condition with all drifts, tunnels and other passes thoroughly

drained and cleared of loose rock and rubbish and said premises ready for immediate continued working without demand or further notice on the first day of <sup>January</sup> ~~September~~, A.D., <sup>1956</sup> 1954, at noon, or upon any sooner termination of this lease in any manner, and it is mutually understood that all machinery and tools which may be placed upon said premises by the said lessee may be removed therefrom within <sup>thirty 30</sup> ~~ten (10)~~ days after the termination of this Lease, provided, however, that no such tools or machinery shall be so removed while the said Lessee may be in any manner indebted to the said lessor under any obligation incurred under this lease.

(e) Upon the violation of any covenant or condition herein contained, the Lessor may give Lessee thirty (30) days written notice thereof, and of its intention to terminate said lease therefor; if said violation or default be not corrected at the expiration of thirty (30) days from the receipt of said notice, this lease shall at the option of said lessor expire and terminate, and the said premises with the appurtenances and all buildings and other improvements shall become forfeited to the lessor, and the said lessor or its agent may thereupon, after demand in writing for possession, enter upon said premises and dispossess all persons occupying the same, with or without force, and with or without process of law, or at the option of the lessor, the said lessee and all persons found occupying said premises or any part thereof may be proceeded against as guilty of unlawful detainer.

(f) If the Lessee for any reason shall desire to terminate this lease at any time he shall have the right to do so, in manner following, provided he is not then in default: This lease may be terminated by said lessee as of the first day of any month, in any year during its term, by a written notice given by said Lessee to

the Lessor at least thirty days prior to the date of termination, and thereupon on the expiration of the thirty days after giving such notice, this lease shall terminate.

IN WITNESS WHEREOF, the parties hereto have hereunto subscribed their names the day and year first above written.

REYMERT MINING COMPANY

In presence of:

/s/ George D. Van Dyke  
President

/s/ Douglass Van Dyke  
Secretary

WITNESS:

G. M. Colvocoresses

/s/ William J. Forbach  
William J. Forbach

Recorded Cert 18, 44 in Book 5 of Lease  
in p. 46.

from Lib later Recorded  
Cert 18, 44, in Book 20 of  
Miscellaneous Record. p. 503.

3 copies

ASSIGNMENT OF LEASE

KNOW ALL MEN BY THESE PRESENTS:

That I, WILLIAM J. FORBACH, of Superior, Arizona, in consideration of One Dollar (\$1.00) and other valuable consideration, to me paid by REYMERT LEASE, a co-partnership, the members of which are F. A. Bennett, Norman de Vaux, William J. Forbach, and Frank E. Carrow, do assign unto said REYMERT LEASE, a co-partnership, that certain lease dated September 1, 1944, made by Reymert Mining Company, a corporation organized under the laws of the State of Arizona, to the undersigned, William J. Forbach.

TO HAVE AND TO HOLD the same unto said REYMERT LEASE, a co-partnership, from the date hereof for and during all the residue and remainder of the term mentioned in said lease; subject, nevertheless, to the rents, covenants, conditions and provisions therein mentioned;

And I do hereby covenant with said REYMERT LEASE, its successors and assigns, that the covenants and agreements in said lease contained on the part of the undersigned as lessee, to be observed and performed have been, up to the date hereof, duly observed and performed, and that the assigned premises are now free and clear of all charges and encumbrances, grants, leases, taxes and assessments whatsoever, made or suffered by lessee.

This assignment is subject to the written consent of said lessor, Reymert Mining Company.

IN WITNESS WHEREOF, I have hereunto set my hand this  
21st day of January, 1945.

/s/ William J. Forbach

STATE OF ARIZONA, )  
                          ) SS.  
County of Gila.     )

On this the 21 day of January, 1945, before me, \_\_\_\_\_  
\_\_\_\_\_, the undersigned officer, personally appeared  
WILLIAM J. FORBACH, known to me (or satisfactorily proven) to  
be the person whose name is subscribed to the within instrument,  
and acknowledged that he executed the same for the purpose  
therein contained.

In witness whereof, I hereunto set my hand and official seal.

/s/ George W. Clay  
Notary Public  
My commission expires  
Sept. 16th, 1946

In consideration of the above assignment and the written  
consent of the lessor, Reymert Mining Company, thereto, the under-  
signed hereby assumes and agrees to make all payments and to perform  
and keep all promises, covenants, conditions and agreements of  
said lease of September 1, 1944, between Reymert Mining Company,  
a corporation, lessor, and William J. Forbach, lessee, by lessee to  
be made, kept and performed; and it is agreed that said lease of  
September 1, 1944, is hereby incorporated by reference thereto in  
this acceptance, and all of the terms thereof shall be read and  
understood herein in the same manner as they are expressed in said  
lease as now written or as hereafter amended between the parties.

It is likewise further agreed by assignee that no further  
assignment of said lease or sub-letting of the premises described  
in said lease, or any part thereof, will be made without the

written consent of lessor first had and obtained.

IN WITNESS WHEREOF, the undersigned assignee has executed these presents as of the 21 day of January, 1945.

REYMERT LEASE, a co-partnership

By F. A. Bennett

By Norman de Vauxbach

By William J. Forbach

By Frank E. Carrow

Members of co-partnership.

STATE OF ARIZONA, )  
County of Pinal ) SS.

On this the 21 day of January, 1945, before me,

George W. Clay, the undersigned officer, personally appeared F. A. BENNETT, NORMAN DE VAUX, WILLIAM J. FORBACH and FRANK E. CARROW, who acknowledged themselves to be the members of REYMERT LEASE, a co-partnership, and acknowledged that they, as such members, executed the foregoing instrument for the purposes therein contained, by signing the name of the co-partnership by themselves as members.

In witness whereof, I hereunto set my hand and official seal.

/s/ George W. Clay  
Notary Public

My Commission expires: Sept. 16th. 1946

CONSENT TO ASSIGNMENT OF LEASE

Reymert Mining Company, a corporation organized under the laws of the state of Arizona, hereby consents to the assignment of that certain lease dated September 1, 1944, made by Reymert Mining Company, lessor, to William J. Forbach, lessee, and recorded October 18, 1944 in Book 5 of Leases, page 46, in the office of the Recorder for the County of Pinal, State of Arizona, by the foregoing assignment dated January 21, 1945 by William J. Forbach to Reymert Lease, a co-partnership, subject to the following conditions:

(1) This consent shall not be construed as a consent to the assignment of said lease by said co-partnership without the consent in writing of said Reymert Mining Company.

(2) The failure of Reymert Mining Company to enforce any provision of said lease against said assignor shall not be construed as a waiver of such provision of the lease; it being understood that said co-partnership shall perform the covenants and conditions of said lease.

(3) Said co-partnership shall incur no liability for labor or materials until a corrected notice of non-liability of Reymert Mining Company has been posted. Said notices may be executed and posted on behalf of Reymert Mining Company by George M. Colvocoreses, its duly authorized agent.

In presence of:

/s/ J. F. Fisher.

/s/ Elmira M. Nilsson

REYMERT MINING COMPANY,

By /s/ Douglass Van Dyke

Vice-President and Secretary

/s/ W. D. Van Dyke, Jr.

Treasurer

RECORDED DOCUMENTS

RE: Reymert

MINING LEASE AND OPTION TO PURCHASE

Date July 1, 1946

Recorded at request of Louis B. Whitney on the 9th day of July A.D. 1946, at 2:00 o'clock P.M. in Book No. 5 of Leases Page 227

QUIT CLAIM DEED

Date June 29, 1946

Recorded at request of G. M. Colvocoresses on the 2d day of August 1946, at 1:55 o'clock P.M. in Book No. 7 of Mining Deeds Page 124

SURRENDER AND CANCELLATION OF LEASE

Date September 1, 1944

Recorded at request of G. M. Colvocoresses on the 2d day of August 1946, at 1:50 p.M. in Book No. 24 Miscellaneous Records Page 284

NOTICE OF NON-LIABILITY

Date July 9, 1946

Recorded at request of G. M. Colvocoresses on 2d day of August 1946, at 1:45 P.M. in Book No. 24 Miscellaneous Records Page 283

RECORDED DOCUMENTS

RE: Reymert

MINING LEASE AND OPTION TO PURCHASE

Date July 1, 1946

Recorded at request of Louis B. Whitney on the 9th day of July A.D. 1946, at 2:00 o'clock P.M. in Book No. 5 of Leases Page 227

QUIT CLAIM DEED

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Date September 1, 1944

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NOTICE OF NON-LIABILITY

Date July 9, 1946

Recorded at request of G. M. Colvocoresses on 2d day of August 1946, at 1:45 P.M. in Book No. 24 Miscellaneous Records Page 283

*Esbeck*

*Fidelity On*

STATE OF ARIZONA

(  
) as.  
(

County of \_\_\_\_\_

On this the \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_, before me,

\_\_\_\_\_ the undersigned, a Notary Public, personally

appeared \_\_\_\_\_, known to me (or satisfactorily

proven) to be the person \_\_\_\_\_ whose name \_\_\_\_\_ subscribed to

the within instrument and acknowledged that \_\_\_\_\_ executed the

same for the purposes therein contained.

In witness whereof I hereunto set my hand and official

seal.

\_\_\_\_\_

Notary Public

My Commission expires \_\_\_\_\_

August 16, 1946

Esta L. Bayless,  
County Recorder  
Florence, Arizona

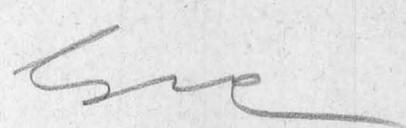
RE: Reymert

Dear Madam:

You have returned to me the Quit Claim Deed from Reymert Lease, a Co-partnership, to Reymert Mining Company, same having been recorded on August 2 in book 7 of Mining Deeds page 124. At the same time you returned the receipted account covering the recording of the said Quit Claim Deed and also the cost of recording the Cancellation of the Reymert Lease and the Non-liability Notice protecting the owner of the property against liability incurred by the lessee.

I presume that you may not have had time to record these last two documents or possibly that they may have been mislaid in your office. I should be very glad to hear from you on this matter and to receive the recorded copies of the Cancellation of Lease and Non-liability Notice at your early convenience.

Yours very truly,



GMC: IM

DOUGLASS VAN DYKE  
ATTORNEY AT LAW

910 WELLS BUILDING  
TELEPHONE DALY 1650  
MILWAUKEE  
2

June 24, 1946

*A 6/27.46*

Mr. George M. Colvocoresses  
1102 Luhrs Tower  
Phoenix, Arizona

My dear Colvo.:

I am transmitting herewith duplicate copies of the lease executed this 24th day of June, 1946, by Reymert Mining Company by George D. Van Dyke, president, and Douglass Van Dyke, secretary. I have attached thereto the acknowledgment taken before a notary public with the certification of the clerk of the court that she was such notary public. I believe this acknowledgment conforms with the requirements of Arizona which has adopted the Uniform Acknowledgment Act.

I am also returning the duplicate copies of the quit-claim deed, etc., which I assume you will have executed, and we will receive a duplicate original thereof for our records. The third copy of the lease has been inserted in our minute book as an exhibit to the resolution of the board of directors authorizing the execution thereof.

Very truly,

*Douglass Van Dyke*

DVD:RPR  
Enclosures

All Fees are required by Law to be paid in advance before instruments are placed on Record

Florence, Arizona, JUL 30 1946, 19 .....

# RECORDER'S OFFICE

PINAL COUNTY, ARIZONA

TO **ESTA L. BAYLESS, Recorder, DE**

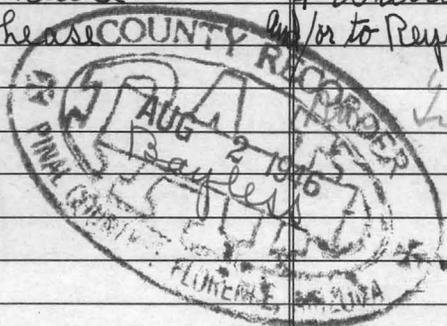
The instrument covered by this bill will not be placed on record until fees are paid. No exceptions. Stamps not accepted.

M. G. M. Colvocoresses

Re: Reymert

TO RECORDING INSTRUMENT AS FOLLOWS:

| INSTRUMENT      |   | FEES        |
|-----------------|---|-------------|
| Cancel of lease | Reymert lease and William J. Forbach        | \$1.75      |
| Quit-Claim deed | Reymert lease for to Reymert Mining Company | 1.95        |
|                 |   | \$3.70      |
|                 |   | 1.00        |
|                 |   | <u>4.70</u> |



SEE ABOVE FOR REASON THIS BILL IS SENT YOU

SEE ABOVE FOR PERSON THIS BILL IS SENT YOU

46

7/8

Only returned  
Claim Land



INSTRUMENT  
TO RECORD INSTRUMENT AS FOLLOWS:  
M. V. ...

Added ...  
...

4/22  
4/22  
4/22

ESTABLISHED BY  
L. T. BAYLESS, Recorder,  
PINAL COUNTY, ARIZONA  
RECORDER'S OFFICE

Florence, Arizona

1911

All Fees are required by Law to be paid in advance before instruments are placed on Record

July 29, 1946

Mrs. S. L. Bayless  
County Recorder  
Florence, Arizona

RE: Reymert

*Legal*

Dear Madam:

I acknowledge your advice to the effect that the cost of the recording of the non-liability notice for the Reymert Mining Claims will amount to \$1.00 and I am herewith enclosing two documents entitled Surrender and Cancellation of Lease and Quit Claim Deed both referring to recent transaction respecting the Reymert Mining Company.

These documents I also desire to have recorded and if you will advise me the cost of same, I will send a remittance to cover and add the \$1.00 required for recording the notice of non-liability.

Thanking you for attention to this matter, I remain,

Yours very truly,

GMC: IM  
Enclosures

*[Handwritten signature]*

*Bill 3.70*

*1.00*

*4.70*

*check sent 7/1 46*

July 26, 1946

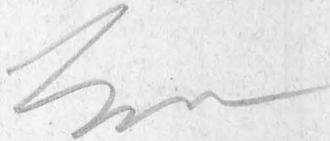


County Recorder  
Pinal County  
Florence, Arizona

Dear Madam:

I desire to have recorded the attached notice of non-liability which is being posted on the Reymert Mining claims. Will you kindly advise me the cost of such recording so that I can promptly transmit the amount?

Yours very truly,



GMC: IM

Enclosure

BILL OF SALE

KNOW ALL MEN BY THESE PRESENTS:

That I, WILLIAM J. FORBACH, for and in consideration of the sum of Ten and no/100 Dollars (\$10.00) and other good and valuable considerations to him in hand paid by F. E. CARROW, the receipt whereof is hereby acknowledged, has bargained, sold and assigned and by these presents does bargain, sell and assign to the said F. E. Carrow, all of the right, title, interest, claim and demand of the said William J. Forbach in and to that certain lease known as REYMERT LEASE, also all right, title, interest, claim possession and demand of the said William J. Forbach to anything and everything arising under and because of said lease upon the Reymert Mine, executed by the Reymert Mining Company to said William J. Forbach as of September 1st, 1944.

To have and to hold the said described property unto the said F. E. Carrow, his personal representatives and assigns forever.

WITNESS the hand of the said William J. Forbach this 17th day of December, 1945.

/s/ William J. Forbach

STATE OF ARIZONA )  
COUNTY OF MARICOPA ) ss.

This instrument was acknowledged before me this 18th day of December, 1945, by William J. Forbach.

/s/ Dorothy C. Haire  
Notary Public

My commission expires  
March 23, 1949.

Original recorded in Pinal County, Arizona, in Book #5 of Mortgages and Leases assigned, page 234, on April 3, 1946.

BILL OF SALE

KNOW ALL MEN BY THESE PRESENTS:

That I, WILLIAM J. FORBACH, for and in consideration of the sum of Ten and no/100 Dollars (\$10.00) and other good and valuable considerations to him in hand paid by F. E. CARROW, the receipt whereof is hereby acknowledged, has bargained, sold and assigned and by these presents does bargain, sell and assign to the said F. E. Carrow, all of the right, title, interest, claim and demand of the said William J. Forbach in and to that certain lease known as REYMERT LEASE, also all right, title, interest, claim possession and demand of the said William J. Forbach to anything and everything arising under and because of said lease upon the Reymert Mine, executed by the Reymert Mining Company to said William J. Forbach as of September 1st, 1944.

To have and to hold the said described property unto the said F. E. Carrow, his personal representatives and assigns forever.

WITNESS the hand of the said William J. Forbach this 17th day of December, 1945.

/s/ William J. Forbach

STATE OF ARIZONA     )  
                                  ) ss.  
COUNTY OF MARICOPA )

This instrument was acknowledged before me this 18th day of December, 1945, by William J. Forbach.

/s/ Dorothy C. Haire  
Notary Public

My commission expires  
March 23, 1949.

Original recorded in Pinal County, Arizona, in Book #5 of Mortgages and Leases assigned, page 234, on April 3, 1946.

\*All Fees are required by Law to be paid in advance before instruments are placed on Record

Florence, Arizona, JUL 27 1946, 19 .....

# RECORDER'S OFFICE

PINAL COUNTY, ARIZONA

TO **ESTA L. BAYLESS, Recorder, DR.**

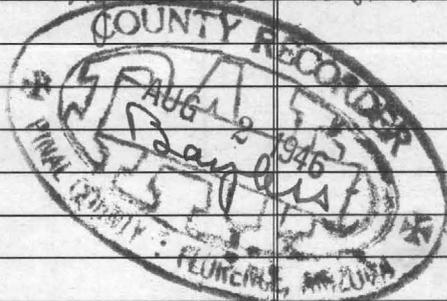
*Reynold*

Mr. G. M. Colvocoresses

TO RECORDING INSTRUMENT AS FOLLOWS:

1102 Luhrs Tower, Phx

| INSTRUMENT                 |  |  | FEES    |
|----------------------------|--|--|---------|
| <i>Notice of Non-Liab.</i> | <i>Reynold Mining Co to the Public re: America et al</i> |  | \$ 1.00 |
|                            |  |  |         |
|                            |  |  |         |
|                            |  |  |         |
|                            |  |  |         |
|                            |  |  |         |
|                            |  |  |         |
|                            |  |  |         |
|                            |  |  |         |
|                            |  |  |         |



SEE ABOVE FOR REASON THIS BILL IS SENT YOU

LAW OFFICES

WHITNEY, IRONSIDE & WHITNEY

LUHRS TOWER

PHOENIX, ARIZONA

July 29, 1946

LOUIS B. WHITNEY  
FRED A. IRONSIDE, JR.  
LORETTA SAVAGE WHITNEY

Mr. G. M. Colvocoresses  
Luhrs Tower  
Phoenix, Arizona

Dear Sir:

As soon as we receive the least back from the County Recorder, we will advise you of the book and page wherein the Reymert Lease was recorded.

The lease should have been recorded on Tuesday, July 9th, as it was mailed to the County Recorder on Monday, July 8th.

Our Mr. Whitney will be out of town for a couple of weeks on a vacation and if you have any further inquiry concerning this matter, please see our Mr. Ironside.

Very truly yours,

WHITNEY, IRONSIDE & WHITNEY

*Patsy Dew*

Secretary

@ 2 P M

ph

Prop 5-7 Leases p. 227  
3-1345

18

18

18

July 23, 1946

Reymert Mining Company  
902 Wells Building  
Milwaukee 2, Wisconsin

ATTENTION: W. D. Van Dyke, Treasurer

Dear Van Dyke:

Yesterday I accompanied the officials of the Reymert Extension Mines, Inc. to the office of the Arizona Corporation Commission where that company made official application for permission to sell 350,000 shares of their newly issued stock at 50¢ per share and thus to provide them with a fund of \$175,000 for the purchase of equipment for development and operation of the property.

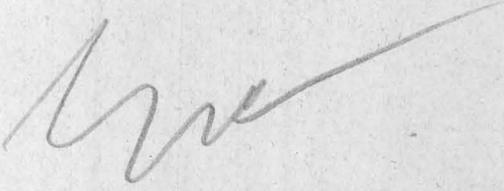
This application was taken under advisement but it seems reasonably certain that there will be favorable action on same and Mr. De Vaux informs me that a large amount of the stock is already subscribed for and that he proposes to start work at the mine just as soon as he can secure the essential equipment some of which he has already arranged to purchase.

It now seems reasonably sure that silver produced from this time forward will be paid for on the basis of 90.5¢ per ounce, and such being the case De Vaux will plan to start one crew of men mining and shipping ore from the Australia workings while another crew will start with the unwatering of the Alaska shaft.

I believe that the minimum royalty of \$100 per month provided for in the new contract will thus apply from August 1 forward, and as soon as I learn that the equipment is being installed, I will visit the property and advise you concerning progress and local conditions.

Yours very truly,

GMC:IM

  
Reymert Extension Mining Co. Box 521, Superior  
N. G. Hartung

REYMERT MINING COMPANY  
902 Wells Building  
Milwaukee 2, Wisconsin

*A* *7/8* *46*

June 29, 1946

Mr. George M. Colvocoresses  
1102 Luhrs Tower  
Phoenix, Arizona

Dear Sir:

Enclosed please find our check payable to your order and in the amount of \$50.00, same being agreed monthly compensation for your supervision of operations now being conducted at our Reymert Mine.

The enclosed check covers your fee for the month of June, 1946.

Very truly yours,

REYMERT MINING COMPANY



W. D. Van Dyke, Jr.  
~~President~~ *Treas.*

ek  
Enclosure

*Copy*  
Florence, Arizona

NOTICE OF INTENTION TO HOLD MINING CLAIMS  
WITHOUT ASSESSMENT WORK, on the **Reymert**

mining claims, **Pioneer**

Mining District, was filed by

**F. E. Carrow**

on **12th**

day of **June**

**46**

~~1945~~ in the office of the County Recorder of Pinal County, Arizona, as  
File No. **2518** of Notice of Holding File.

Esta L. Bayless  
County Recorder

By

*E. W. W. W.*

Deputy

July 8, 1946

Reymert Mining Company  
902 Wells Building  
Milwaukee 2, Wisconsin

Re: Reymert

ATTENTION: W. D. Van Dyke

Dear Van Dyke:

There has been a certain amount of delay and some mix-up in connection with the Reymert documents which however, I believe, is now about to be entirely straightened out.

The original duplicate copies of the contract between the Reymert Mining Company and the Reymert Extension Silver Mines were duly received executed and acknowledged by George D. Van Dyke and Douglass Van Dyke and on presenting these to Mr. Whitney, I obtained the executed and acknowledged copies of the surrender and cancellation of the old lease to the co-partnership and quit claim deed from the co-partnership.

For some reason Mr. Whitney failed to forward the executed copies of the new lease out to Los Angeles for execution by Mr. De Vaux President and Mr. Diggs the Secretary of the new company and everything was at a stand-still during the past few days while Whitney was away on a vacation.

However I now have an original duplicate copy of the new lease in my possession, also the other documents mentioned above, and I understand that Whitney is having a copy of these recorded in Pinal County and will shortly advise me regarding the book and page of record. Same will be noted on one of the copies and returned to your office and I will also arrange to have the new non-liability notice posted on the property. Am enclosing herewith a copy of the Tempe Daily News in which is published the articles of Incorporation of the Reymert Extension Silver Mines, also enclosing a type written copy of a card received from the Pinal County Recorder advising that notice of intention to hold the Reymert unpatented mining claim was duly recorded.

I desire to acknowledge and thank you for remittance of \$50.00 covering my fee for services during the month of June, and I shall be writing you again shortly regarding the progress of work at the Reymert.

Mr. De Vaux advises me that he has already arranged to purchase considerable new equipment for the operation of this property, but same has not yet been installed.

Yours very truly,

GMC: IM  
Enclosures



THIS SIDE OF CARD IS FOR ADDRESS



F. E. Carrow  
Box 521  
Superior, Arizona

NOTICE OF NON-LIABILITY FOR LABOR AND MATERIALS FURNISHED

Notice is hereby given to all persons that the Reymert Mining Company, an Arizona Corporation legally represented by the undersigned is the owner of the seven patented lode mining claims located in the Pioneer Mining District, Pinal County, Arizona, known as the:-

|               |       |          |    |      |    |    |                               |      |      |
|---------------|-------|----------|----|------|----|----|-------------------------------|------|------|
| AMERICA       | Lode, | Recorded | in | Book | 3  | of | Mines,                        | Page | 513; |
| ALASKA        | "     | "        | "  | "    | 11 | "  | "                             | "    | 278; |
| AFRICA        | "     | "        | "  | "    | 3  | "  | "                             | "    | 515; |
| ASIA          | "     | "        | "  | "    | 1  | "  | Amended Locations of<br>Mines | Page | 372; |
| AUSTRALIA     | "     | "        | "  | "    | 3  | "  | "                             | "    | 514; |
| EUROPE        | "     | "        | "  | "    | 3  | "  | "                             | "    | 515; |
| GREAT PACIFIC | "     | "        | "  | "    | 9  | "  | "                             | "    | 271; |

in the office of the County Recorder, Pinal County, Arizona, and also an unpatented lode mining claim entered upon and located on April 11, 1941, known as the "Reymert", recorded in the office of the County Recorder, Pinal County, Arizona, in Book 52 of Mines, at Page 56; also four (4) mill sites located May 10, 1941, known as "Alaska Mill Site", "Asia Mill Site", "America Mill Site" and "Australia Mill Site", which unpatented lode mining claim and mill sites are in the same mining district as the patented mines aforesaid.

The said mining claims and mill sites are now in the possession of and are being developed and worked by The Reymert Extension Mines, an Arizona Corporation, by virtue of a ten (10) year mining lease made and executed as of July 1, 1946.

During the term of the said Lease the Owner, Reymert Mining Co., is not working and does not intend to develop, work or operate the said mining claims or any part thereof nor to employ any labor or purchase any supplies or materials therefor, nor to accept any liability for the payment of labor so employed or supplies and materials so utilized nor for any loss or damage which may arise by reason of injury to the person or property of employees or others or because of any act or omission connected with operations of the said property.

IN WITNESS WHEREOF the said owner has caused copies of this Notice to be executed by its duly authorized representative and to be posted at conspicuous places on the leased property and recorded in the Office of the Recorder of Pinal County.

S. M. Coburn  
 AUTHORIZED REPRESENTATIVE OF  
 REYMERT MINING COMPANY

*State of Arizona }  
 County of Pinal } S.S.  
 This instrument was acknowledged before me this 19th day of July 1946 by S. M. Coburn known & he to be the party whose name is subscribed hereto.*

Reynold Note. 11/10 with Lee <sup>(1)</sup>

Re Manium in, - Special note

New Parsons Pump (125 g.p.m. @ 400' + &  
Allis Chalmers 36 H.P. gas engine should  
arrive early in Dec. & be operating before end of  
year when every effort will be made to hasten  
the denaturing of the mine & opening up the 400'

level. On 200' level drift & X cuts will  
continue to get under the old Falloch  
stop & try to open up the vein in  
which rich pockets of lead-silver ore are  
found at intervals in the broken schist along  
the lode but no continuous body of ore  
has yet been located, (see assay certs)

The so called Bennett Shuff with some  
 very high grade ore is located ~~Set north of~~  
 the Australasia workings, - on Claim #  
 & will be cleaned out and the + 5' run  
 of ore will be followed down as long as  
 it continues to show good values

PHOENIX MINING  
 Telephone 1-0513  
 308 BANKS LOWER  
 Street Level  
 JAMES H. VAN NOBIE

MEMO

RE: Barytes in Reymert Mine

A certain amount of barytes is found in certain sections of the Reymert Mine from which shipments of ore made to the smelters are said to indicate that the average content of this ore is about 25% BaSO<sub>4</sub> and that in certain sections of the orebody the content of BaSO<sub>4</sub> is as much as 40%.

Mr. Ford, one of the metallurgists of the International Smelter at Miami, claims to have developed a process whereby he can separate the silver minerals from the barium and made a concentrate that will carry a very high percentage of BaSO<sub>4</sub>; although an exact average figure was not stated, and he has informed the operator of the mine that such a concentrate could be sold to oil companies operating in California at about \$36.00 per ton.

He further states that he could carry his process somewhat further and produce a high grade barium carbonate which could be sold to the paint companies at some \$44.00 to \$80.00 per ton depending on its purity.

I note in a current issue of the Engineering and Mining Journal that crude Georgia barytes is quoted at \$11.50 to \$12.00 per ton at the mines and that a concentrate with 93% to 94% BaSO<sub>4</sub> is quoted around \$9.00 per long ton at the mines.

I am anxious to learn if there is a free market for barytes or other barium minerals in Southern California and the approximate prices which this material might bring f.o.b. Los Angeles.

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MEMO RE: Uranium Ore at Reymert and Elsewhere

When using a Geiger Counter one must first determine the background or normal rate of clicking due to the radio-activity of the earth. This varies with the locality and also with the temperature - at date of writing the background count is 68 per minute in Phoenix.

The increase in the number of beats or clicks is very rapid when the counter is near any radio-active substance and an ore containing only 1.5% uranium will send the count up to around 500 per minute and it is difficult to keep track of the count when any higher grade material is being tested. The maximum count of 106 noted at the Reymert would not indicate any ore of commercial value but further tests are in order.

Indications of low grade uranium ore have been found at several places in Arizona but so far (November 1948) the only deposit which seems likely to have commercial value is located at Hack's Canyon near Fredonia and this is now being examined by Government engineers who also propose to investigate a reported occurrence at the Bagdad Copper Mine.

Uranium is widely distributed throughout the crust of the earth but until recently it has not been searched for on any large scale. The ores appear to be concentrated in only a few places and have been mined mainly in Bohemia and Canada while promising showings are known to exist in Colorado, South Dakota, North Carolina and Texas.

The principal ores are Uraninite (pitch-blende)  $UO_2$  often associated with Pb, Ca, N, Th, Fe, Cu, or Bi. This is a massive black mineral with botroidal or granular structure and pitch like (greasy) appearance. H 5.5 Sp g 5-9.7. Submetallic lustre with streak gray, olive green or brown,-brittle.

Carnotite

Impure uranyl vanadate canary yellow in color or ochreous,-many other metals in mixture.

All uranium ores are more or less radio-active.

At present they must be sold to the government or some company which is acting as an agent for the government and the price to producer might be around \$2.00 per pound of U. contained if ore was otherwise desirable. Thus a 1.5% ore might be worth \$60.00 per ton. (?)

REYMERT MINE

SUMMARY OF OPERATIONS -- 1948

OUTLINE

- I. SCOPE
- II. SOURCES
- III. OPERATIONS
- IV. GEOLOGY AND MINERALIZATION OF THE 200' LEVEL
- V. RESULTS OF OPERATIONS
- VI. SUMMARY
- VII. RECOMMENDATIONS

SUMMARY OF OPERATIONS -- 1948

Re: Reymert Mine

I. SCOPE: This report generally covers the operations of the Reymert Extension Silver Mines for the year 1948.

II. SOURCES: This report is based on the following:

- A. Correspondence and technical files of G. M. Colvocoresses.
- B. Personal examination of A. P. Colvocoresses.
- C. Written and oral reports of Norman de Vaux.

III. OPERATIONS:

- A. Dewatering. Early in 1948 a Byron Jackson centrifugal pump was installed in an effort to dewater the Alaska shaft. This pump was rated at approximately 150 gallons per minute under 400' lift and its installed cost with motor was in excess of \$3000.00. A second-hand hoisting engine was also purchased and installed during this time. Due to operating conditions it was found that this pump was inadequate. Water was lowered to a shaft depth of 310' but during the last half of the year it was back to normal just below the 200' level. By the close of the year the company was negotiating for a deep well Fairbank Morse Pomona pump to supplement the Byron Jackson installation.
- B. Shaft Repair. In conjunction with the dewatering of the Alaska shaft it was found necessary to replace four complete sets of shaft timber at the water line. In addition, minor repairs such as ladder and guide replacement, new lagging and reblocking from the 200 to 300 level was required, which placed the shaft in serviceable condition to the 300' mark.
- C. Development of the 200' level. Upon recognition that the dewatering would not be successful, the Company instituted a program of drifts and cross-cuts on the 200' level in the vicinity of the Alaska shaft. Annex A indicates the results of this work which represents a total footage of approximately 625 feet. No formal map is presented as part of the sketch was made from a Brunton survey which is not of sufficient accuracy to warrant a detail map. In conjunction with this drifting at least 25 samples were cut. These samples were assayed by the Magma and Eagle Picher Companies and the results of those identified tabulated in Annex B. Because of the lack of data relative to the length and exact location of these samples no sample map is submitted, nor is any attempt made to define commercial ore. Those assays which indicate high values were apparently picked samples or cuts of very narrow stringers.

IV. GEOLOGY AND MINERALIZATION OF THE 200' LEVEL: The development work above indicated exposed the Reymert fissure for over 100' in width, and offered considerable new information relative to the veins and wall rocks in this particular area. The fissure is indicated as the

Mineralized Zone on Annex A and is largely made up of broken schist, diabase, black calcite, quartz and manganese and iron oxides. Lead and Zinc minerals can only be recognized in isolated seams and pockets and no silver mineral can be identified as such. In addition to the Mineralized Zone, two veins are exposed in the hanging wall east of the main fissure. These veins are near vertical, as is also the main fissure, and their mineralization is of a similar nature. In all cases the mineralized veins show considerable evidence of oxidation and leaching, which may have affected the original vein values. Both the foot and hanging wall are schist which is considerably fractured and altered and apparently contains considerable mineralization. It is probable that additional parallel veins exist beyond the limits of the present workings. The presence of radio active material was indicated at the eastern limits of the workings and will require further investigation.

V. RESULTS OF OPERATIONS. The dewatering operation was a failure as such. However, it did result in the repair of the Alaska shaft and provide the data and experience necessary to lay out a proper dewatering program for the future. The development work on the 200 foot level failed in its primary objective of opening up any high-grade ore that might be readily mined and shipped. However, the work done has made accessible a new portion of the Reymert ore body so that accurate determination of value can be made. It is quite possible that a considerable tonnage of ore of mill grade has been exposed by this work, but any tonnage or grade estimates would require considerable additional sampling and perhaps some more drifting.

VI. SUMMARY. During the year the company (lessee) made a considerable, if not wholly successful, effort to fulfill the terms of the operating lease of July 1, 1946. Although the development work below the water level was unduly delayed, the lessee substituted a development program which may prove to be a tangible asset to the property. The work done was accomplished in a proper and workmanlike manner. At the close of the year the lessee had made arrangements that indicate a renewed effort to dewater the Alaska shaft and develop the 400' level in that vicinity.

VII. RECOMMENDATIONS.

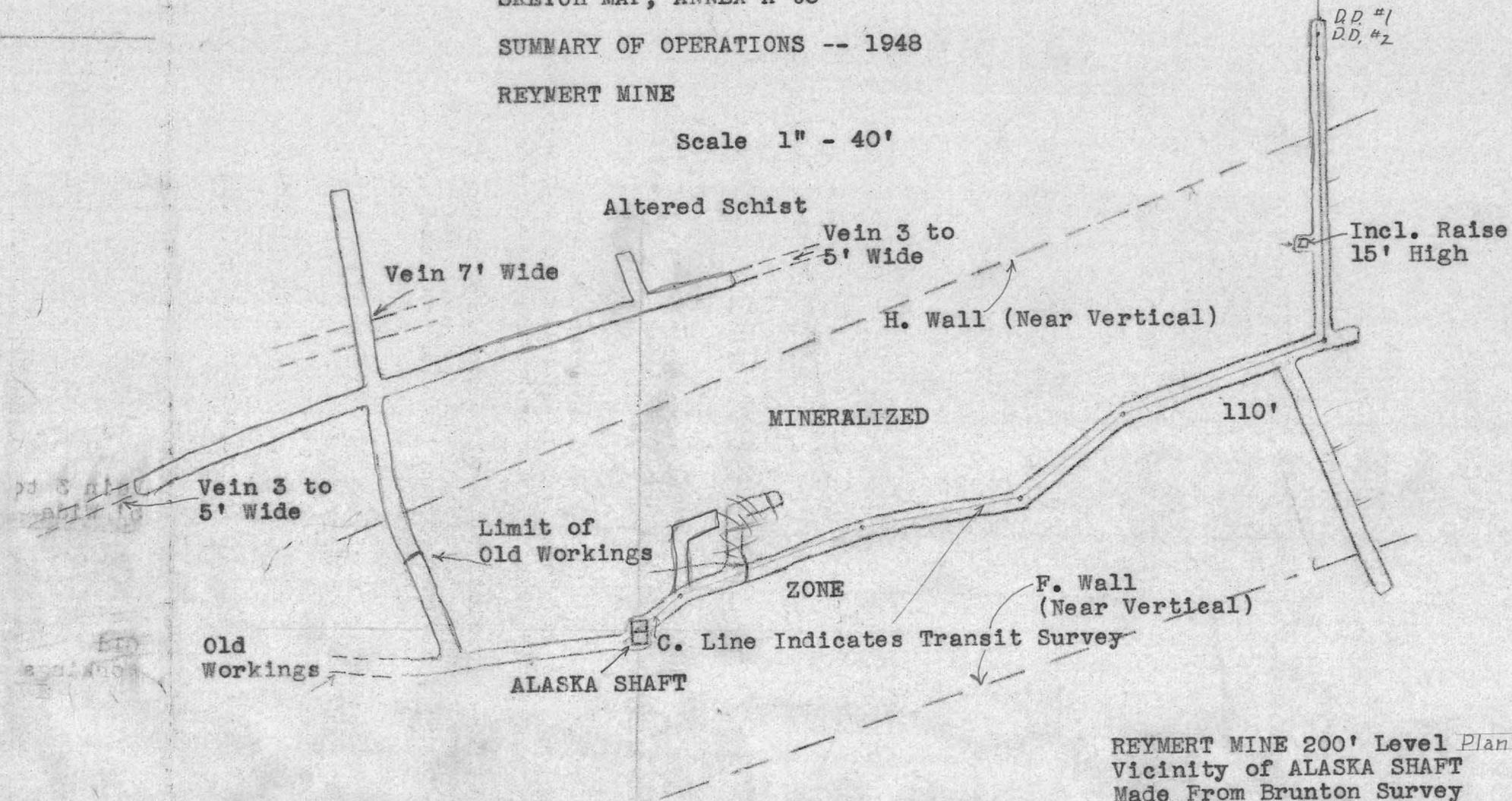
- A. The dewatering of the Alaska shaft and development of the 400' level as previously recommended by G. M. Colvocoresses is of first importance.
- B. The complete and proper sampling of the mineralized portions of the newly developed 200' level is of obvious importance. These samples should be assayed for gold, silver, lead, zinc and barium. The results of the sampling should be incorporated into an assay map of the level, and would determine what additional development work might be justified on that horizon.
- C. Metallurgical tests to determine the feasibility of concentrating the Reymert ore and recovering the barium therefrom should be completed. If successful, a complete re-examination of the ore body should be made to determine the tonnage and values available to support a milling operation.
- D. A continued check for radio active minerals should be made in conjunction with any new development work.

E. The extraction of small remaining pockets of high-grade ore throughout the mine is probably feasible. This work could best be done by sub-lessees working on their own rather than an organized company. Any such sub-leasing would, of course, be subject to conditions laid down by the owners and might require an additional agreement.

Alden P. Colvocoresses  
Local Agent for Reymert Mining Co.

SKETCH MAP, ANNEX A to  
SUMMARY OF OPERATIONS -- 1948  
REYMERT MINE

Scale 1" - 40'



REYMERT MINE 200' Level *Plan*  
Vicinity of ALASKA SHAFT  
Made From Brunton Survey  
of APC Feb., 1949 and  
Transit Survey of Reymert  
Extension Silver Mines -- 1948

ANNEX B

Assays of Samples 200' level vicinity of  
Alaska Shaft

Samples from Cross-Cut and Drift North and East of Alaska Shaft

|   | <u>Au</u><br><u>oz. per ton</u> | <u>Ag</u><br><u>oz. per ton</u> | <u>Pb</u><br><u>%</u> |
|---|---------------------------------|---------------------------------|-----------------------|
| Fines from cross-cut                              | 0.01                            | 6.40                            | --                    |
| Coarse material from cross-cut                    | 0.01                            | 13.00                           | --                    |
| Specimen from lead vein                           | 0.01                            | 77.00                           | 59.5                  |
| Dump material from cross-cut                      | tr                              | 2.00                            | --                    |
| Dump material from cross-cut                      | tr                              | 6.60                            | --                    |
| Picked sample from lead vein                      | 0.01                            | 48.6                            | 38.8                  |
| Picked sample from lead vein                      | --                              | 47.02                           | 45.5                  |
| Drift N of E Cross-cut (Coarse)                   | 0.01                            | 16.40                           | --                    |
| Drift N of E Cross-cut (Fines)                    | 0.01                            | 2.40                            | --                    |
| Vein <sup>Face</sup> <del>pan</del> , E Cross-cut | 0.01                            | 13.40                           | --                    |

*H. Cooper*

*Revised from Milwaukee office records*

REYMERT MINING COMPANY  
Production  
Compiled from Various Reports

| <u>Year</u>   | <u>Tons</u>   | <u>Averaged<br/>Silver oz. per ton</u> | <u>Approximate<br/>Silver Ounces</u> |
|---------------|---------------|--|--------------------------------------|
| 1886          | ?             |  |                                      |
| 1887          | 849           | 22.8                                   | 19.367                               |
| Jan - 1888)   | 5326          | 31.71                                  | 168.886                              |
| Mch - 1889)   |               |  |                                      |
| Mch 25, 1889) | 11890         | 19.30                                  | 228.651                              |
| Feb. 8, 1891) |               |  |                                      |
| ?             |               |  |                                      |
| 1925 and 1926 | 5175          | 16.10                                  | 193.990                              |
| 1927          | 6743          | 18.00                                  | 121.374                              |
| 1928          | 6916          | 16.19                                  | 112.013                              |
| 1929          | 4536          | 17.25                                  | 78.253                               |
| 1930          | 799           | 15.33                                  | 12.074                               |
| 1931          | 217           | 16.00                                  | 3.427                                |
| 1932          | No returns    | -                                      | -                                    |
| 1933          | No returns    | -                                      | -                                    |
| 1934          | 1116          | 19.642                                 | 21.938                               |
| 1935          | 7588          | 14.357                                 | 1108.941                             |
| 1936          | 11497         | 11.29                                  | 129.801                              |
| 1937          | 10051         | 11.348                                 | 114.609                              |
| 1938          | 15195         | 16.229                                 | 246.603                              |
| 1939          | 20908         | 11.598                                 | 242.499                              |
| 1940          | 20609         | 10.259                                 | 212.264                              |
| 1941          | 9147          | 10.02                                  | 91.662                               |
| 1942          | 8057          | 15.043                                 | 121.215                              |
| 1943          | 2980          | 12.50                                  | 37.251                               |
| 1944          | 1454          | 12.83                                  | 19.072                               |
|               | <u>151053</u> | <u>xxx</u>                             | <u>2283.890</u>                      |
|               |               | (15.11 Av.)                            |                                      |

*Company  
operation*

1944

SHIPMENTS  
by  
JAMES F. TODD

| Lot Number   | Dry Tons         | Silver oz. |
|--------------|------------------|------------|
| January 276  | 28.485           | 14.44      |
| 277          | 55.45            | 14.94      |
| 278          | 46.303           | 15.56      |
| 279          | 22.6745          | 12.82      |
| 280          | 47.036           | 14.30      |
| 281          | 44.023           | 14.38      |
| 282          | 52.089           | 15.47      |
| 283          | 51.621           | 12.17      |
| February 284 | 33.578           | 15.48      |
| 285          | 23.613           | 14.06      |
| 286          | 57.8735          | 14.60      |
| 287          | 38.5685          | 15.08      |
| 288          | 21.70            | 13.40      |
| 289          | 50.997           | 14.90      |
| 290          | 55.6065          | 15.76      |
| March 291    | 61.7075          | 14.06      |
| 292          | 63.046           | 12.88      |
| 293-4        | 104.867          | 15.56      |
| 295-6        | 89.606           | 16.80      |
| April 297    | 45.4765          | 14.26      |
| 298          | 51.713           | 11.18      |
| May 299-300  | 67.2735          | 14.08      |
| 301          | 54.4065          | 11.22      |
| 302          | 37.7955          | 10.82      |
| June 303     | 59.231           | 17.44      |
| 304          | 61.9645          | 11.46      |
| 305          | 49.7695          | 11.10      |
| 306          | 25.096           | 10.56      |
| 307          | 52.7155          | 18.25      |
|              | <u>1454.2860</u> |            |

(no back of copy, 2)

Reymert Report File  
Loan to the bank  
Duplicate in file  
April 5th, 1941

Mr. W. S. Van Dyke, Jr.  
Reymert Mining Company  
902 Wells Building  
Milwaukee, Wisconsin

Dear Mr. Van Dyke:

As a supplement to my report on your property dated March 29th, 1941, I beg to submit the following report which is more particularly a partially detailed description of the present workings and conditions with recommendations in respect to certain future development and operations which appear to me advantageous and which I have discussed with Forbach, whose opinions in these matters seem to agree with mine.

This report should be studied in conjunction with the Claim Map of the Lincoln Issues Company and also the map showing the surface plan and underground section of the Alaska Shaft area, both of which were sent you with my first report. At a somewhat later date it may seem to you advisable to obtain, if possible, all of the survey maps made by the Eagle Picher and Anaconda Engineers and to supplement these with some additional surveying and mapping that would permit the preparation of a complete plan and section of all of the workings, brought right up to date, and this could be revised from time to time to show the progress of the stoping and such development work as may be undertaken.

*2 copies*  
Ore Occurrence and Workings

Without attempting to describe in detail all the various ore shoots which are <sup>found</sup> formed above the 200' level and throughout the length of 6000' I will briefly mention the most important, all of which I examined as far as these were accessible.

Starting at the south end of that portion of the vein in which pay ore occurs an outcrop of ore is noted about 200' south of the north end line of the Great Pacific and this apparently continues northward across the line and for about 700' in the Europe Claim forming a showing some 900' in length but pay ore is not continuous for this entire distance.

In most of this section both Black Vein and Blue Vein are noted, lying about 100' apart, and considerable ore has been mined out from surface shafts and adits and in places the workings have gone down to within some 40' of the level of the long adit (which I shall term the Europe Adit) that runs in 200' below the outcrop of the veins.

The adit itself appears to pass through a poor section of the vein between two well defined shoots of pay ore but a five foot width of the Black Vein assayed 13.8 oz. silver in a little drift on the south side of the adit, where width of mineralization is about 30'.

The Blue Vein in this adit is cut 120' further to the east and a raise connects with the workings from an old shaft which is now in poor repair. The width of mineralization is 20' but there is no well defined pay streak and again the adit seems to have cut the vein between the pay shoots that have been stoped on the

upper workings and some of which carried 24 oz. silver over comparatively short lengths.

The Europe Adit is said to have been driven by the old Reymert Company and its portal is over the west line of the claim and on ground which was formerly held by the Lincoln Issues Company and known as the Webster Claim, which has now been abandoned. I recommend that a new claim to cover this ground should be staked and recorded at once.

The adit or tunnel starts on the north side of a gulch and runs North 55 degrees East for a distance of over 700' cutting through both the Black and the Blue Veins at an elevation of some 200' below the outcrops. This work is practically all in schist although a few narrow bands of rhyolite were noted and small stringers of quartz with a little galena. At about 550' from the portal the Black Vein is cut with Black calcite and quartz filling and usual strike and dip to the east. The width of the mineralized fissure at this point is about 30' but the pay streak as shown in the face of a short drift on the north side of the adit is only four feet wide and assayed 13.8 oz. silver. Elsewhere samples of vein matter contained only four or five ounces suggesting that the adit may have passed through the south end of an ore-shoot and suggesting further drifting to the north.

About 120' further to the east the Blue Vein was cut with mineralization extending over a width of some 20' but no well defined pay streak is in evidence although some samples are said to have carried upwards of 20 ounces of silver and considerable lead. From a short drift on the north side of the adit a raise connects

with the old workings from the surface where a comparatively short shoot of 24 ounce ore is said to have been mined to within 40' of the adit level.

In the breast of the adit some 60' further east a 2' vein of quartz makes to the north and is reported to carry 20 ounces silver and some lead in the form of galena.

Considering the adit level in conjunction with such portions of the upper workings as are now accessible and with the records of past production from this section of the mine, I am of the opinion that there are excellent chances to develop additional pay ore between the adit level and the surface and that such development work is well justified. This is also Forbach's opinion and he states that it is his intention to construct a road to the dump at the portal and carry an air line down the old raise from the Blue Vein shaft and then drift north and south on both the Black Vein and the Blue Vein.

The shoots of ore which were mined out in the upper workings in this part of the mine were comparatively short and values apparently somewhat erratic but it is reasonable to suppose that substantial tonnages of ore still remain to be mined particularly in the 100' above the adit and there are also excellent chances of finding ore below that level. I feel that Forbach should be encouraged to proceed with this work as soon as possible and that his results should be watched with interest.

Should good ore be found extending to a greater depth it will probably be advisable to sink one or more winzes in the pay shoots by which means the lower horizon can be developed and worked

to a considerable depth and this location would seem to be the logical point from which to later explore the south section of the vein which is so far from the Alaska Shaft that any deep ore that may be found in the Africa, Europe or Great Pacific Claims would have to be mined and hoisted as a separate operation.

Returning to the surface workings the shaft near the south end of the Europe Claim has a depth of 120' and from the bottom there are drifts running 40' to the north and 120' to the south from which there has been considerable stoping of ore that ran 15-30 ounces for width of three to 15 feet. Much of this ore is on the contact with the rhyolite dike and best values are on the west side of the dike. There is another band of rhyolite and a split from the main vein lying still further west. At this point there is an adit from the mouth of the shaft running south for 200' under the hill which rises about 120' and on which there are several pits that show veins in rhyolite or along the contact and with much quartz.

The south end line of the Europe which is also the north end line of the Great Pacific is 150' south of this shaft and 30' below the top of a hill which is about 100' beyond it to south and here also there are several small open pits in some of which 12 ounce ore was found. This hill rises to about the same level as the hill on the Australia Claim. The bearing of the vein outcrop is North seven degrees West from the Great Pacific summit to the Australia summit, but there is some faulting between. Going south the Great Pacific Hill drops sharply from the summit at a point 100' south of the Europe line and for nearly 400' to a gulch which is 100' lower in elevation and then the slope rises steadily to the next ridge

which is just on the south end line of the Great Pacific and at an elevation some 300' higher than the north end of the claim.

An intrusion of basic greenstone or gabbro comes in on the southern part of the Great Pacific Claim and there are several pits in which the vein shows low values after it has crossed south of the prominent band of silification which lies about 200' south of the north line of the Great Pacific.

Apparently the fissure splits up and feathers out in several stringers going south and the top of the ridge in the Great Pacific may be considered as the south limit of the mineralized section of the fissure, just as the diorite contact on the America may be called the north limit thus making the total length of the ore-bearing zone some 6000', of which distance over 2000' carries pay ore and a greater length would carry milling ore.

The silicious rib which crosses the vein appears to me to be only a silification in the schist.

Proceeding north we next come to an open stope and surface cut on north side of a gulch just beyond the middle of Europe Claim. The stoped vein is here on the west side of the rhyolite dike which has filled part of the fissure but seems to have come in prior to the last period of mineralization. The stope is about six feet wide, east of which lies the dike fifteen feet wide and then the east split of the vein which runs six to twelve ounces and may perhaps be mined later. Forbach intends to test this out, but the grade of ore is probably too low to be marginal.

The next shaft, located 250' south of the north line of the Europe Claim, has also a lot of open cut workings along the sur-

face which are on both sides of the rhyolite dike. Considerable ore was taken out of the stopes that went down 140' below the outcrop. About 120' north of this shaft the rhyolite plays out and no mining was done north of this point for a distance of more than 150'. The next shaft goes down 120' and for a length of some 200' very good ore was mined, while between the two last mentioned shafts there may be ore in the east or hanging wall which should be prospected. The stopes here are often very wide and the values jump from one side of the fissure to the other as is often noted in these workings. The ore carries 22 to 25 ounces and seems to be going down and raking to the south but it was getting low grade near the end of the stope.

This shoot on the Europe Claim could all be developed from the adit and the drift would only have to be extended 150' to the north to get under the middle shaft.

The Blue Vein at this point looks to be 150' from the Black Vein and the shaft which is connected with the adit is sunk on the east side of the ridge.

Within 100' of the line there is an outcrop of ore showing copper in places and two cars averaging 17 ounces in silver were mined and shipped.

There is another outcrop 40' east of the Blue Vein in which there is barium and manganese and perhaps sufficient silver to make mining profitable.

In the first 300' of the Africa claim (going north) the outcrop slopes down to 150' below the level of the north Europe shaft and there are a number of pits in which there is very little good

silver ore but in some of them there is a lot of galena over a narrow width. The Galena may represent a separate and later mineralization.

In the Africa gulch the vein is faulted to the east as it goes north. Near the middle of the Africa Claim a tunnel was driven North 33 degrees East for 200' and cut the Black vein and from this cross-cut drifts run 50' to the south and 350' to the north. Here the ore was stoped both above and below by the old timers and Forbach has continued this work and took out 42 cars of 30 ounce ore but this was sorted to bring it up to high shipping grade. The vein is narrow and should be further prospected, it is said to have carried good ore to a depth of 80' below the tunnel and above and nearly up to the surface for a length of say 200'.

The strike of the schist at this point is North 85 degrees East and dip 80 degrees to south.

The North Africa workings start about 400' south of the north end line and on the slope of the hill where there is an open stope on the Black vein five feet wide and with some underhand stoping which produced 20 ounce ore and a lot of 10 to 12 ounce ore is left in the walls, this last would be very suitable for a mill. The outcrop of this zone is 30 feet wide in places but the pay shoot is generally narrow and near the top of the hill is a cut with a face of 10 ounce ore but as is usually the case the values may be expected to improve a short distance below the surface as good ore is rarely found within 10 to 15 feet of the outcrop.

Here I noted much fine grained spar which probably came in during the second period of mineralization and there is also much hematite which is generally an indication of ore especially where it

occurs in an oolitic form.

At the top of the hill (on end line between the Africa and Australia) the Blue vein and the Black vein are close together but they separate about half way up the Australia.

The surface of the outcrop drops very rapidly going north on the Australia for a length of 500' during which the change in elevation is about 150'. At a point 100' north of the line there is an adit and further north and about 75' below the outcrop is another adit with stoping above and below. Here the Blue and Black veins seem to be very close together but both are narrow and fairly good grade and stoping to the south was extended almost to the end line of the claim. A lot of good ore has been left here and it is a favorable location for future development and production which Forbach intends to start very soon.

*A  
Sup*  
At the foot of the ridge (150' below the crest) is the new Australia shaft which is only 42' deep and at the bottom of this the drift goes 340' south which puts the breast to within 150 to 200' of the north line of the Africa Claim.

There was a lot of difficulty in sinking this shaft because of the character of the vein and similar conditions have always prevailed when any shaft was sunk in the Reymert vein or fissure.

From this shaft the drift goes north nearly all in ore and it is stoped out to a depth of 200'. There is still good ore in the bottom of this drift according to Forbach's statement.

There are two little drifts on the north side of the gulch in which the last mentioned shaft was sunk and the old Australia shaft is 100' beyond. At this point the fissure outcrop is very wide in spots and both the Black and Blue veins are noted. A large tonnage

of fairly good ore was mined in this section during 1938-1939.

In the bottom of these Australia workings the ore is generally about 20' wide but the grade is low, probably not more than 10 ounces along the lowest level. The old Australia shaft is 186' deep and from the level at the bottom there are two winzes about 80' deep so that the lowest level is some 125' below the collar of the new Australia shaft or about 266' below the crest of the ridge on the south side of the claim.

All ore in these workings is very heavily oxidized and at bottom of winze there is a width of five feet of 15 ounce ore and another five feet of seven ounce ore.

This winze which is inclined to follow down the vein should be raised up to the surface which is about 100' above the 40' level from which it is sunk but most of the first 40' would be through an open stope that would merely have to be timbered. The winze should then be sunk 42' where it would hit the top of the very good body of ore which has been mined nearly to this point from the old Australia shaft and in which a lot of good ore has been left in places, running 30 ounces for a width of 10' but these workings are caved and no longer accessible.

To open up this ore body from the winze and convert the winze into a serviceable working shaft would cost close to \$5000, which Forbach cannot afford to spend at present (some road work and installation of equipment would also be involved) but he hopes that he may be able to borrow this money and repay it at so much per ton of ore produced.

The program would seem to be worth while as it would

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2nd

provide access to a body of ore which has been pretty well developed for a length of 550' and is said to contain several shoots of high grade material.

Samples taken a short distance below the Australia outcrop by Eagle Picher Company carried 16 ounces silver and considerable lead.

At the old Australia shaft the Black and Blue veins are still very close together but they split again 100' further north. Up to the point where the stoping stopped (say 500' north of the old Australia shaft) there is very little pay ore left in the old workings but considerable low grade ore might still be mined.

There is a raise to the surface near the north end of these stopes and from this point the outcrop drops gradually about 40' to the gulch which is just north of the end line of the Australia and some low grade ore is found in surface pits.

Here the Blue vein is nearly 200' east of the Black vein and on the south side of this gulch there is a little adit and on the north side there are adits from which the Blue vein has been mined and in this ore there is quite a bit of copper showing. Some have thought that much more copper would make in depth but I cannot agree with this opinion.

At this point the "Ryan Shaft" was sunk on the Black vein. This is a good two compartment shaft which is 80' deep but the lower 40' has caved in. The fissure here is exposed in an open cut with width of 20' and the fines from the ore mined assayed 21 ounces but the coarser pieces only assayed eight to nine ounces.

No stoping was done in this section of the vein which appears to lie between the shoots of pay ore although the low values are continuous. In places the fissure outcrop is 82' wide and in one place the Eagle Picher Company sampled in a trench 11' wide of 12 ounce ore. Again the surface of the outcrop descends as one goes north on the Asia Claim and in a gulch is found the "B" or Asia shaft; - this is located 500' from the south end of the Alaska claim and from this shaft there are drifts on the 65' level which extend south for 600' and north for 70' at which point the drift lacks only some five feet of connecting with a south drift from the South Alaska shaft. Therefore this portion of the vein is practically opened up and partially stoped for a length of 1350'.

From the 65' level of the Asia shaft going south the ore is all fairly good grade, say 12-15 ounce, and it was stoped for a width of 15' with a somewhat lower average grade. Most of the stoping was done for 120' south of the "B" shaft where ore was mined right up to the surface. Below the level not much work was done except for a little underhand stoping in the floor of the drift.

There was also some stoping to the north of the shaft and for a width of eight feet some 30 ounce ore was taken out in short sections. The workings on the north portion of the Asia Claim and on the Alaska are all shown on the map and most of Forbach's work, - aside from the operations of his son on the Europe Claim, - is now concentrated in the Alaska Incline.

This Alaska Incline is on the Blue Vein which lies some 40' east of the Black vein on which the Alaska shaft and old workings are located.

The Incline goes down to the 68' level but there are sub levels between and ore has been partly mined for a length of 200' south of the incline shaft and back north toward the main shaft. There is good ore in the south face some eight feet wide, which is being mined at present.

The dimensions of the Alaska shaft are 10'6" x 5' inside timbers or 12' x 6'6" outside timbers. The hoisting compartment is 4'6" x 5' and the manway is the same size. The long axis of the shaft is east - west and its general condition has been described in my first report.

To the north of the Alaska shaft I was able to visit the 135' and 200' levels but most of the ore in this section appears to have been mined although it may be expected to extend to greater depth and the old workings on the north end of the Alaska and southern section of the America Claim are said to have extended down to a depth of 350' from the collar of the America Shaft which would correspond to a depth of over 450' below the collar of the Alaska shaft.

Some of these workings in the America Claim were once visited by Forbach, who reports that they still contained some excellent ore but they are now entirely caved and inaccessible and could best be opened by a 400' level to be run north from the Alaska shaft and by still deeper levels if pay values are found to continue.

In the Alaska shaft I noted some diorite or diabase but the nature of this occurrence is not well defined and on the surface of the America the diorite intrusion is prominent and its contact

with the schist appears to be nearly vertical and to strike east-west, suggesting that the diorite is an intrusive dike.

Forbach's <sup>by the lenses</sup> mining has nearly always been done by open stoping, which <sup>has</sup> is timbered with square sets, most of which <sup>have</sup> are not filled. In many places the ground has become too heavy for the timbers and there have been caves in which much good ore has been lost or made inaccessible. Only the higher grade ore, 15 ounce or better, has been intentionally taken and a great deal of lower grade ore has been left in the walls or between the ore shoots.

This system of mining has many disadvantages but is probably the only method that could <sup>have been</sup> followed to produce shipping ore but if the average product could be reduced to <sup>say 8</sup> 20 ounces (through building a local mill) and still leave a profit a great many of his <sup>these old</sup> stopes could be reopened and worked for production of a large tonnage. If this improved method of operation is to be followed at any time in future it should be adopted as quickly as possible to prevent the loss or leaving behind of the large tonnage of lower grade material which seems to accompany the pay ore in nearly every location that I inspected.

I am enclosing as Exhibit A a record of the Alaska Shaft from which it is apparent that even though this shaft was started in the vein it must have been located in a nearly barren spot between the ore-shoots since no pay values were found except from a depth of 75 to 100'.

Apparently the vertical shaft entered the footwall and the diorite at nearly the same point.

Cop  
The character of the vein which was found in the cross-cut on the 400' level was decidedly different from that of the vein as noted in the upper workings but Joraleman was quite positive that this represented the Black Vein and it seems probable that the Blue Vein had made a junction at some higher point, although this matter should be further investigated by continuing the cross-cut for another 50' to the east.

I am also enclosing (with the copy of this report which goes forward by regular mail) a set of blue-prints of the seven drill holes sunk by the Magma Company.

The record of these holes is extremely discouraging both because they apparently failed to penetrate pay ore at any point in the vein and because they seem to show that the diorite in some cases is found only a short distance below the surface, giving color to the opinion that this occurs as a sill or laccolith rather than a vertical dike.

In the first report I have discussed this question and pointed to the evidence which favors a different conclusion and it appears to me that the entire situation is confused and can only be clarified by further development, which under the circumstances is fully justified, and absolutely essential in order to prove or disprove the theories of the various geologists and determine the character and quality of the ore below the 200' level.

I am also enclosing herewith my statement of account and shall be very glad to go into further details or answer any questions that may occur to you.

Yours very truly,

*G. H. Colvocozen*

GMC:at

COMPLETE ANALYSIS OF 15 TON SAMPLE OF  
 REYMERT ORE TAKEN BY U. S. BUREAU OF  
 MINES IN 1944 AND TESTED FOR SEPARATION  
 AND RECOVERY OF MANGANESE AND SILVER

-----

|                                |                            |                      |       |            |
|--------------------------------|----------------------------|----------------------|-------|------------|
| Au                             | (Gold)                     | -----                | 0.005 | oz per ton |
| Ag                             | (Silver)                   | -----                | 16.35 | " " "      |
| Mn                             | (Manganese)                | -----                | 4.75  | %          |
| Cu                             | (Copper)                   | -----                | 0.05  | "          |
| Pb                             | (Lead)                     | -----                | 0.80  | "          |
| Zn                             | (Zinc)                     | -----                | 0.70  | "          |
| Fe                             | (Iron)                     | -----                | 4.95  | "          |
| Ca O                           | (Lime)                     | -----                | 6.20  | "          |
| Mg O                           | (Magnesia)                 | -----                | 0.30  | "          |
| Ba O                           | (Barium Oxide)             | -----                | 8.70  | "          |
| Insol                          | (Insoluble Residue)        | -----                | 60.80 | "          |
| Si O <sub>2</sub>              | (Silica included in Insol) | -----                | 51.30 | "          |
| Al <sub>2</sub> O <sub>3</sub> | (Alumina)                  | ---Not determined--- |       |            |
| P                              | (Phosphorus)               | -----                | 0.70  | "          |
| S                              | (Sulphur)                  | -----                | 1.25  | "          |

MEMO RE REYMERT MINE 5/3/45

Charles A. Kumke of U. S. Bureau of Mines called to say that he had completed his investigation of the Reymert Mine with special reference to the content of manganese and other by-products in the ore and had taken a 15-ton sample (330 sax) which was to be shipped to the Bureau of Mines experimental plant at Salt Lake City. This ore had been mined and sacked by Forbach to whom he had agreed to pay \$150.00, based on an expense of \$6.00 per ton for mining, \$2.00 for hoisting and sacking and \$2.00 for trucking and loading car.

This sample shipment was obtained approximately as follows:--

5 tons from a raise which is being put up at the south end of the 300' level from the Australia Shaft in the west or foot-wall vein.

4 tons from trenches in the floor of the drift on west vein along the 250' level.

5 tons cut from a surface tunnel which is located 200' south of the Alaska Shaft.

1 ton from the rejects of samples at the assay office.

Complete details regarding this sample and the results of the test will be furnished at a later date.

Kumke also took several hand samples which have been analyzed with the following results:--

|  | Au.        | Ag.        | Mn       | Cu       | BaSO <sub>4</sub> | SiO <sub>2</sub> | CaO      |
|--|------------|------------|----------|----------|-------------------|------------------|----------|
|  | <u>oz.</u> | <u>oz.</u> | <u>%</u> | <u>%</u> | <u>%</u>          | <u>%</u>         | <u>%</u> |
| (1) Grab Sample from ore bin at mine                               | 0.035      | 8.30       | 1.22     | 0.04     | 5.38              | 71.68            | 5.63     |
| (2) Trenches along west vein on 250' level                         | 0.01       | 27.2       | 1.84     | 0.07     | 13.53             | 71.02            | 3.57     |
| <u>Low grade ore from Crosscut on 300' level, Australia Shaft.</u> |            |            |          |          |                   |                  |          |
| (3) 5' cut across face of west vein                                | Tr.        | 2.45       | 2.40     | 0.05     | 11.83             | 53.26            | 13.50    |
| (4) 10' cut in rock between beins 20'-30' from foot wall           |            | 1.3        | 1.68     |          |                   |                  | 10.31    |
| (5) 10' cut in rock between veins 30'-40' from foot wall           |            | 0.5        | 2.04     |          |                   |                  | 18.25    |
| (6) 10' cut in rock between veins 40'-50' from foot wall.          |            | 0.3        | 1.80     |          |                   |                  | 6.52     |

Results of the above indicate that the average manganese content is only about 2% in the veins, and also in the ore zone between them.

The substantial content of barium sulphate suggests that it might be worth while to further investigate the presence of this compound and consider the possibility of making a separation and recovery of same if the results given above should prove to be representative of any large tonnage of material. However, the quoted price of \$8.50 per ton for barytes containing 94% Ba SO<sub>4</sub> does not appear to make such a procedure attractive from a commercial standpoint.

1/17. 47

MEMO Re: Pumping at Reymert in Alaska Shaft. (Round figures)

The pump is estimated to throw an average of 140 gallons per minute and the inflow is estimated at 40 g.p.m. therefore the dewatering will amount to 100 gallons per minute (144000 gallons per day) while pump is running.

To drain the sump it will be necessary to pump out 200' of shaft with section say 8 x 12' call 100 sq. ft. = 20000 cu. ft. = 160,000 gallons and drift say 7' x 7' = say 50 sq. ft. for 50' length = 2500 gallons. But allowing for delays it will probably take several days to unwater the shaft and drift as the timbers may be in bad condition and require some repairs.

Note Regarding EXHIBIT B

This section of the Alaska Shaft is merely intended to illustrate the relative location of the veins, the diorite and the schist as found in the Alaska Shaft workings. The width of these formations is not known at present but should be proved by the exploration which is recommended in this report.

June 2, 1948

Mr. Norman De Vaux, President  
Reymert Extension Silver Mines  
Post Office Box 521  
Superior, Arizona

Dear Mr. De Vaux:

Since we visited the mine on May 31, I have checked over the old reports and maps in my file and I can find no mention of the station and sump which we saw on the north side of the shaft at a depth of about 265'.

The record indicates that the Alaska Shaft passed through the schist at just about the 200' level and went into the diabase (probably a dike) and continued in that formation to the bottom of the sump which is said to be at 410'. The lowest level according to Joralemon and Browning was driven at 400'. Both reports refer to it as being at a depth of 390' below the collar of the shaft. All reports agree that this level consists of a cross-cut driven east for a total distance of 48' to 50' and passing through some 20' of footwall diabase (Joralemon calls this 30'), then through 8' of vein material and then again into broken up diabase, or according to Joralemon into broken up schist which continued to the face of the drift. *Contin*

Apparently Joralemon did not actually visit this lowest level when he examined the mine in June of 1914 since the shaft work had been completed in May of that year and apparently the water had been allowed to rise in the shaft where the flow is given as 40 gallons per minute; although in one report it is mentioned that for a time this flow increased to 50 gallons per minute after they had cut through the vein.

Browning who was in charge of the work gives the analysis of the vein over a width of 8' as follows:

|        |         |
|--------|---------|
| Gold   | trace   |
| Silver | 1.8 oz. |
| Lead   | 1.7%    |
| Zinc   | 3%      |

and on the footwall of this vein he mentions that there was a streak of lead ore some 2" or 3" in width which assayed 13.5 oz. in silver and 26% lead.

From all the above and particularly from the showing which you have recently opened up on the 200' level, I feel confident that the cross-cut on the 400' level did not actually reach the true hanging wall

of the ore bearing fissure and that it should be extended further east for perhaps 40' or 50' or until either schist or diabase is found to be in place and the hanging wall of the fissure is definitely entered.

According to the <sup>your cross-cut</sup> maps the Alaska Shaft is near to the center of the Alaska Claim and would have to be driven for approximately that <sup>300'</sup> distance in order to be under the vertical projection of the side line of the Alaska Claim. I find on one of the old maps and mentioned in one of the old reports that on the America Claim, which lies to the north of the Alaska, there was an adit tunnel run in some 50' or 60' ~~north~~ of the main vein and an old raise had been brought up from this level to the surface. Very probably this work was on the lead vein which you had recently developed on the 200' level from the Alaska Shaft.

lost

Trusting that the above information will prove useful,

Yours very truly,

*S M C*

GMC:EM

PS The specimen of your new ore which I brought back to Phoenix contains, of course, a great deal of galena and possibly some lead carbonate (cerussite) also there is a certain amount of silver bromide (bromyrite). Of course we all agree that it will be advisable to extend your cross-cut on the 200' level further to the east and to drift both south and north further along the first vein which you opened up.

I consider the present showing extremely encouraging and I am sure that the company officials will be much pleased when they receive my report of your recent activity.

*Excuse haste*

June 3, 1948

Reymert Mining Company  
902 Wells Building  
Milwaukee 2, Wisconsin

ATTENTION: W. D. Van Dyke, Jr., Treasurer

RE: Reymert

Dear Van Dyke:

Let me acknowledge yours of May 26 and thank you for the check for \$50.00 covering my compensation for the month of May.

For several months I have been very much disappointed with the lack of progress that was being made by the lessees at the Reymert Mine and it appeared to me that practically nothing was being accomplished except for the investigation of the barium ore and a very feeble attempt to unwater the Alaska Shaft.

I had planned to go out on several recent occasions when Mr. De Vaux promised to accompany me, but the trip did not actually take place until May 31 when I met him at the mine and it appeared that he had really been anxious to have me postpone my visit since he said that he wanted to "give me a surprise". To this matter I will refer later.

De Vaux himself is entirely ignorant of mining matters and he has fooled around with a number of foremen who were equally ignorant, but recently his associate, Bennett, who is an experienced mining man has recovered from a serious illness and has spent considerable time at the property, and much of the progress which has recently been made can be attributed to his presence. Four men are now employed regularly with pumping on three shifts and development work has been carried on during spare time. It is proposed to increase the crew in the very near future and to put two shifts on development work.

We went down the Alaska Shaft to just about the water level which is now close to 300' below the collar of the shaft. The timbers are all in good shape below those which were repaired at the permanent water level and I anticipate that this condition will continue down to the bottom of the shaft.

At a depth of approximately 265' a station had been cut out on the north side of the shaft, probably at the time that the shaft was sunk, and here an auxiliary sump had been sunk to a depth of over 6' but was largely filled with debris.

The Reymert Extension Company has experienced a great deal of trouble in obtaining pipe, fittings and repair parts for the pump and until recently the pumping was carried on under very inefficient direction. Unfortunately the capacity of the pump was not as large as

it should have been and so far the operators have been unable to obtain larger impellers which would have given them a greater capacity.

During my visit we checked on the present discharge which was just a little over 100 gallons per minute and recently they have been lowering the water in the shaft by approximately 15' in each 24 hours, but nearly an hour is lost each time that it becomes necessary to add a length of pipe to the discharge and to lower the pump and during this period the water rises about 4', also there have been times when the suction became clogged with chips, etc. but De Vaux plans to install a better screen on this suction which should improve this last situation. The net gain on the water does not appear to be more than 10' per day up to the present time, but I think that the shaft may be draining some of the old stopes on the America Claim in which case the flow may decrease and better progress should be made at least until the main vein is opened up on the 400' level.

For a long time no development work was done in spite of my repeated suggestions although the search for barium ore continued also experiments in reference to the treatment of this material; however some weeks ago De Vaux and Bennett decided to start work on the 200' level and they began by extending a cross-cut which branches to the east from the main drift at a point 50' north of the Alaska Shaft. This cross-cut was about 20' long when they started work and has now been advanced by approximately 100', but it is still in the ore bearing fissure which appears to be exceptionally wide at this point.

At a distance of 70' from the main drift a new vein was encountered containing considerable galena and silver ore in pockets although most of the material is comparatively low grade and composed of black calcite and manganese minerals.

The width of this vein is 4' to 8' and it has now been followed for a distance of 25' south and 50' north of the cross-cut. The walls are generally irregular and badly broken up; composed of fragments of schist and probably some diabase none of which are in place.

Further to the east the cross-cut continues through a shattered zone in which there are large blocks of schist with the bedding planes nearly horizontal and in the face of the drift another vein was encountered running north and south and having a width of 9' or perhaps more in places since no drifting has yet been done here. Lead and silver minerals are found in this vein also in pockets, and the material is very similar to that which was found in the first vein mentioned above which presumably was also similar to the ore in the Blue Vein that was opened up in the old workings; although it appears as if there was a larger percentage of lead and perhaps also considerable zinc in the newly developed showings.

These recent discoveries may prove to be of considerable importance and they are certainly encouraging. Bennett, De Vaux and I are all in agreement regarding the further exploration on the 200' level which will consist in extending the cross-cut east until the true hangwall of the fissure has been reached and also in drifting both south and north on the newly discovered veins.

*never*  
This showing leads me to believe that the cross-cut on the 400' level ~~will~~ have actually reached the hanging wall and that one or more parallel veins are likely to be found by an extension of this cross-cut and these may contain good values in lead, zinc and silver although it is probable that the best of the ore will lie between walls of schist rather than diabase.

Aside from developments described above, the operators have been collecting large samples of barium ore from different portions of the property and they are being used for metallurgical tests but this work appears to be progressing very slowly and I think it will be some months before they have worked out a final flow sheet for the proposed mill.

At one point on the Europe Claim a small pocket of copper ore was mined near the surface and perhaps a ton of material was extracted which averages 8% copper and 45 oz. silver. This is not likely to have any commercial importance.

The assessment work on the Reymert unpatented claim has not yet been started but De Vaux promised that this would be done in the very near future and we think that it will be most advantageous to work in the tunnel which has its portal on the Reymert Claim and extends east to connect with the old workings on the Europe. I will make sure that this work is undertaken during the month of June.

Attached is a list of assays of samples recently taken from the new ore showings on the 200' level which I am sure you will find interesting, also I enclose a copy of my letter of June 2 to Mr. De Vaux commenting on the situation and making some suggestions regarding future work.

Yours very truly,

*S. M. C.*

GMC:IM  
Enclosures

June 3, 1948

Reymert Mining Company  
902 Wells Building  
Milwaukee 2, Wisconsin

ATTENTION: W. D. Van Dyke, Jr., Treasurer

RE: Reymert

Dear Van Dyke:

Let me acknowledge yours of May 26 and thank you for the check for \$50.00 covering my compensation for the month of May.

For several months I have been very much disappointed with the lack of progress that was being made by the lessees at the Reymert Mine and it appeared to me that practically nothing was being accomplished except for the investigation of the barium ore and a very feeble attempt to unwater the Alaska Shaft.

I had planned to go out on several recent occasions when Mr. De Vaux promised to accompany me, but the trip did not actually take place until May 31 when I met him at the mine and it appeared that he had really been anxious to have me postpone my visit since he said that he wanted to "give me a surprise". To this matter I will refer later.

De Vaux himself is entirely ignorant of mining matters and he has fooled around with a number of foremen who were equally ignorant, but recently his associate, Bennett, who is an experienced mining man has recovered from a serious illness and has spent considerable time at the property, and much of the progress which has recently been made can be attributed to his presence. Four men are now employed regularly with pumping on three shifts and development work has been carried on during spare time. It is proposed to increase the crew in the very near future and to put two shifts on development work.

We went down the Alaska Shaft to just about the water level which is now close to 300' below the collar of the shaft. The timbers are all in good shape below those which were repaired at the permanent water level and I anticipate that this condition will continue down to the bottom of the shaft.

At a depth of approximately 265' a station had been cut out on the north side of the shaft, probably at the time that the shaft was sunk, and here an auxiliary sump had been sunk to a depth of over 6' but was largely filled with debris.

The Reymert Extension Company has experienced a great deal of trouble in obtaining pipe, fittings and repair parts for the pump and until recently the pumping was carried on under very inefficient direction. Unfortunately the capacity of the pump was not as large as

it should have been and so far the operators have been unable to obtain larger impellers which would have given them a greater capacity.

During my visit we checked on the present discharge which was just a little over 100 gallons per minute and recently they have been lowering the water in the shaft by approximately 15' in each 24 hours, but nearly an hour is lost each time that it becomes necessary to add a length of pipe to the discharge and to lower the pump and during this period the water rises about 4', also there have been times when the suction became clogged with chips, etc. but De Vaux plans to install a better screen on this suction which should improve this last situation. The net gain on the water does not appear to be more than 10' per day up to the present time, but I think that the shaft may be draining some of the old stopes on the America Claim in which case the flow may decrease and better progress should be made at least until the main vein is opened up on the 400' level.

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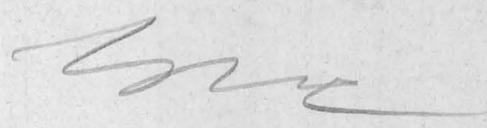
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Yours very truly,

GMC:IM  
Enclosures



*Revised File*

Extracts from reports of G. M. Colvocoresses covering the workings of the Tod Lease at and in the vicinity of the Alaska Shaft.

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-1-

July 1, 1941

(1) Blue vein near South Alaska Shaft. Here the stope which Forbach had started is being continued and from the 140' level the back of the stope is up about 20' for a length of 60' throughout which the vein is about six feet wide and assays 13 ounces silver. This stope has been the source of most of the ore shipped during the month of June, the low grade of which may be attributed partly to lack of familiarity with the ore and partly because some of this material came from development work. Cosgrove and Smith believe that the grade will soon be improved and that it can be maintained at better than 14 ounces average after the middle of July. The timbering in the main Alaska Shaft has been repaired to the 200' level and a cage has been installed and will soon be operating to this depth.

-2-

Alaska Shaft and South Alaska

July 17, 1941

A new collar set has been installed, the head frame straightened and repaired and the timbering put in good shape to the 200' level so that the cage will be working regularly as soon as repairs to the hoist foundation, (which was in bad shape) have been completed. It is next proposed to clean out the drifts on the 200' level and to start mining a large block of ore which appears to be a short distance north of the shaft in the Black Vein and from which samples carry 10 to 14 oz. At the same time they will connect through south of the shaft to the present workings on the Blue Vein. Hoisting through the South Alaska shaft, - which is very badly located, - will then be discontinued and all ore mined in this vicinity and as far south as the B shaft will be hoisted through the main Alaska shaft. Some of the ore from the south stope in the Blue Vein carries better than 12 oz. but the southern extension of the drift has recently run into low grade material which cannot be classed as pay ore.

-3-

July 30, 1941

Alaska Shaft and South Alaska

Repairs to the hoist foundation have been completed and the cage is working down to the 200' level where development and mining should start next week. Stoping will be carried out in the ore shoots both north and south of the shaft on the Black Vein and continued in the Blue Vein. The south drift in the Blue Vein on the 135' level has been advancing steadily toward the B shaft workings on the Asia

Claim and the vein holds a width of about five feet but values have been erratic, varying from six to sixteen ounces and only a small production of ore has been made here. The next development planned is the continuation of the south drift on the 200' level in the Black Vein and it is expected that this work will be done on contract.

Old assay maps and records as well as the more recent developments very definitely indicate the existence of large bodies of ore both to the south and north of the Alaska Shaft, above and probably below the 200' level but the grade of much of this ore is problematical and I am personally of the opinion that the operators will find to their disappointment that large sections of the vein cannot be mined with profit for direct shipment and had better be left in place until milling facilities are provided. I have suggested that it would be wise to carry out a careful preliminary sampling before stopes are started in any ore of questionable grade.

-4-

August 25, 1941

Alaska Shaft and South Alaska.

All repairs to the 200' level have been completed and the cage is working smoothly.

The ore in the south drift on the 135' level proved very low grade and advance at this point has been temporarily discontinued.

However, the south drift on the 200' level has been driven some 50' and is advancing steadily and while it has not yet made pay ore the values are increasing and the main ore shoot on the Black Vein should be reached some 60' farther to the south. This has not previously been mined below the 68' level where values were reported to have been about 15 oz. per ton.

North of the shaft there was practically no pay ore exposed on the 200' level, but the operators plan to fill in portions of the old stopes above in order to mine a considerable tonnage which was left on the walls and in which the samples which they have taken to date have averaged about 12 oz.

From the South Alaska production has been discontinued as the grade of the ore fell to below 10 oz., and no work is now in progress in the B. workings on the Asia Claim.

-5-

September 19, 1941

Alaska Shaft and South Alaska

Work here has been confined to the advance of the south drift on the 200' level, the breast of which was 85' from the shaft.

Assays of muck samples had shown very little values until the 16th when a stringer of heavy galena came into the drift from the west wall and a sample taken that day ran 7.5 oz. silver while on the following day the sample carried 9.1 oz. The width of the galena varied from a few inches to nearly two feet and this showing is encouraging as the stringer may be heading toward the Black Vein which, according to survey, is still some 40' distant from the face of the drift.

A production of ore may be expected from this ore shoot during October.

-6-

November 5, 1941

Alaska Shaft and South Alaska.

On the 200' level the South drift has been advanced to a point 180' from the shaft, and the last 60 feet has followed the Black Vein which was encountered as expected, but proved to be most disappointing, both in width, which has rarely exceeded three feet, and in value, which has run from three to six ounces in silver, being far below a shipping grade. The showing in the breast of this drift seemed a little more promising and the operators intend to continue for the time being. Should they be successful in finding pay ore, they hope to be able to follow this south to the B shaft, but otherwise, they may discontinue this work in the near future.

About 85' South of the shaft a little good ore was found as noted in my report of September 19th, but this appeared to be the top or apex of an ore shoot, as width was greatest along the floor of the drift, and although the showing pinched out in less than 20', Cosgrove believes that it would be much better at greater depth, and somewhat later he hopes to be able to explore this possibility.

No other work is now being done in the Alaska workings.

GEORGE M. COLVOCORESSSES  
MINING AND METALLURGICAL ENGINEER  
1102 LUHRS TOWER  
PHOENIX, ARIZONA

March 29th, 1941

Reymert Mining Company  
902 Wells Building  
Milwaukee, Wisconsin

Gentlemen:

As per instructions from Messrs. W. D. Van Dyke, Jr. and Douglas Van Dyke I have made an examination of the Reymert Mine and the Mining Claims of your Company and herewith submit the following report.

It was understood that my examination was not to include any surveying or sampling of ore reserves, but otherwise I consider that my investigation has been as thorough and complete as physical conditions would permit and it also included an examination of all available maps, records and reports by other engineers. In all the above procedure I paid special attention to the advisability, method and cost of future development, the study of which was the principal object of my work.

Location

Your property consists of seven patented lode mining claims, captioned as follows:

|           |                          |
|-----------|--------------------------|
| America   | Africa                   |
| Alaska    | Europe                   |
| Asia      | Great Pacific            |
| Australia | All patent survey #2878A |

The Great Pacific Mill Site Patent Survey 2878B was also included on the map and I shall later ascertain if a patent to this mill site, on which the camp buildings stand, has actually been issued.

The total area included in the lode claims, some of which are not full sized, is about 120 acres. The property lies on the Pioneer Mining District, Pinal County, Arizona in Sections 15, 22, 23, 26 and 27 of Township 2 South; Range 11 East; Gila and Salt River Base and Meridian. The elevation is from 2700 to 3500 feet above sea level. The camp is 6.5 miles in air line southwest of the town of Superior where the Magma Mine and Smelter are located and with which it is connected by 8 miles of good road, all but 2 miles of which is over a paved highway, - U.S. #60.

The country is rugged with a main ridge extending north and south over the length of the claims on the east side of the gulch in which the camp is located. There is no timber and only the usual semi-desert vegetation of shrubs and grasses.

The climate is excellent and suitable for work at all seasons of the year, the normal annual rainfall is about 18" but so far this year has been much heavier than usual with 14" so far recorded at Superior.

Water from the mine is suitable for all but domestic purposes. The supply would probably be limited to about 50,000 gallons per day, which was reported to have been the flow into the Alaska shaft at 400' depth. Water for drinking and camp requirements is hauled out from Superior as local wells did not prove satisfactory but some water might be secured from the underflow of Queen Creek and from its tributaries, including Reymert Creek which flows through the camp.

### General Geology

The country is mainly a Pre-Cambrian mica and sericite schist, locally known as the Pinal schist with schistosity striking generally north and south and dipping to the east. This basal formation was intruded by dikes of diorite or diabese and near the south end of the claims by a dike of basic greenstone, - probably a gabbro or hornblendite, - and a later intrusion of rhyolite. These intrusive dikes, excepting the rhyolite, strike mostly east and west and they affected the schistosity locally. In places there have been areas of silicification in the schist itself forming bands of hard erosion resistant rock along the surface.

The latest of the intrusions was probably the rhyolite and any sedimentaries that may have been subsequently deposited have been completely removed by erosion, so that only recent gravels and soils represent any later formation.

The only detailed study of the geology of the area has been made at and near the Magma Copper Mine seven miles northeast of the Reymert and here the upper sedimentary rocks are still in evidence while there is an essential difference between the diorite which occurs as intrusive dikes and the diabese which forms a sill lying between two sedimentary formations.

But at the Reymert all of the rocks of this general class, whether diorite or diabese (and their exact classification seems to have no practical importance) appear to have come in as intrusive dikes or stocks and I do not consider that there is sufficient evidence to justify the assumption of some geologists that the diabese found on the America Claim, in the lower portion of the

X of the Alaska shaft and reported in the drill holes represents a laccolith or batholith underlying the schist at a depth of 200 to 400 feet below the surface. This condition is undoubtedly possible and even suggested by the work in the shaft and record of the drilling but the surface outcrops, <sup>but</sup> the nature of the contacts and the very wide distribution of the schist throughout all of this area seem to argue against such a condition and only further exploration and development in the mine itself can tell the story in a convincing manner.

Undoubtedly the ore bearing vein will narrow down and the silver values fade away whenever this vein is actually found to penetrate into the diabase for any long distance and I consider it of the first importance to drift out to the north and south on the 400' level from the Alaska shaft as such drifts may give most valuable information in this respect and at much less expense than would be involved in first sinking the shaft to a greater depth in the diabase and then following a similar procedure which would probably be necessary in any event in order to determine the true relation of the diabase to the schist.

#### Mineralization

The main fissure or shear zone in which the ores occur strikes north 10 degrees west and can be traced for some three miles or more but pay ore seems to be confined to a length of 6000 feet from the south section of the America Claim to the north end of the Great Pacific. This fissure was apparently formed by a violent tectonic movement which was perhaps to some extent connected with the intrusion of the rhyolite and there is evidence of one and

probably two subsequent reopenings of the fissure.

The mineralization appears to have been derived from solutions at low temperature and the first filling seems to have been composed largely of crushed wall rock and massive black calcite associated with only a small amount of silver and with some copper, lead and zinc. The second mineralization, after a reopening of the fissure, - brought in a finer calcite<sup>t</sup> and more quartz and iron oxide and either the latter phase of this process or a third reopening and mineralization introduced still more quartz and iron oxide with barites and the bulk of the silver values which therefore are generally found at points where the evidence of repeated disturbance and successive periods of mineralization is the most pronounced.

Post-mineral faulting is noted at several points and the splitting of the fracture which separated the Black vein and Blue vein in sections probably occurred concurrently with the second or third period of mineralization or may have been due to a separate disturbance which preceded both of these.

The better grade of the ore or pay streak filling is composed largely of fine calcite, quartz, fluorite, barite, manganese and iron oxide. Horn silver (cerargyrite) and argentite (silver-sulphide) have been found in places, usually near the surface, but most of the silver appears to be intimately associated with the barite and manganese leading some geologists to conclude that the silver is in the form of a "silver manganite" although no such mineral is definitely known to exist.

The vein which was reported to have been found in the

cross cut on the 400' level at the Alaska shaft was filled with crushed and altered diabase and carried 1.8 oz. silver but with this exception and perhaps in some of the inaccessible workings on the American claim all of the walls of the developed portions of the vein are schist and all of the ore is heavily oxidized. There is no positive evidence that this upper section of the vein represents a zone of leaching which will be succeeded in depth by secondary enrichment, with primary ore still further below and it is obviously of the greatest importance to the future of the property to determine whether or not such conditions actually exist.

Excepting for the recorded production of high grade ore by the early operators, - which may have been due to sorting, - it is noticeable that the average silver content of the ore has varied very little in the shipments made over a period of many years, but an examination of several accessible ore shoots taken in conjunction with such mining records as could be obtained seems to indicate that by and large the ore grows gradually poorer from the 50 to the 200 ft. level, and this may indicate either the progressive leaching toward a zone of secondary enrichment or the actual petering out of values with depth. Only further exploration can justify any conclusion on this point as well as in regard to the relations and relative location of the diorite and the schist.

The effect of the various types of wall rock upon the vein has been two-fold, physical and chemical. In the schist it has been clearly demonstrated that the three stages of filling took place under favorable conditions and the black calcite was partly replaced or associated with barite and silver values.

From a physical standpoint the schist is a comparatively easily fractured rock and would always be affected by the recurrent reopening of the fracture, whereas the diabese is exceptionally tough and would normally be much less affected by any/<sup>such</sup> disturbances. The fissure, having been originally filled with the black calcite, was readily susceptible to remineralization in the schist while in the diabese such was not the case.

From the chemical standpoint the comparison is not so clear. At the Magma Mine the best values and largest ore shoots are often found in the diabese while the reverse is true at Globe and in some of the other camps. At the Reymert the workings near the south end showed good values along the rhyolite but there are as yet no workings in the diabese and excepting for its occurrence in the Alaska shaft the diorite dikes, which appear on the surface, do not cut through the vein except at the north end of the mine.

Considering the question from both physical and chemical standpoints I think it fair to say that the chances for finding any good ore bodies either in depth or near the surface are very much poorer in the diorite or diabese than in the schist and therefore there is very little incentive to explore in any large

area of diorite which may be found to underlie the schist.

Even in the schist it must be admitted that in all of the accessible workings down to the 200' level the values are growing poorer with depth. In making this statement an exception should be noted in respect to the old workings <sup>h</sup> near the north end of the vein where good ore is reported to have been mined at a depth equivalent to more than 400' below the collar of the Alaska shaft, - at which depth the schist still constituted the wall rock.

This condition must be admitted to point to one of two conclusions:

(a) The vein is definitely pinching out with depth and the ore growing poorer, or

(b) The workings at a depth of 200' are entering into a leached or impoverished zone which may or may not lie above a zone of secondary enrichment.

### History

This district was first prospected in the 1870's and the Reymert Mine was located by John Reymert and associates in 1886 and operated by them until 1891 or 1892, during a portion of which period they treated the ore in a mill by chloridizing and pan amalgamation.

Subsequently Mr. Van Dyke acquired the property but I can find no record of production for many years.

In 1912 an option was given to the Gunn-Thompson people, who sank the Alaska shaft in 1913-1914 to a depth of 410 feet with

discouraging result. Further exploration was carried on by the Lincoln Issues Company (affiliated with the Gunn-Thompson interests) and the Magma Copper Company during 1919 and 1920. This consisted mainly of diamond drilling but the seven holes then drilled failed to find any commercial ore in the vein at depth and, coupled with the record of the Alaska shaft, lead to the conclusion that the values did not continue much below the 200' level.

Mr. Forbach and his associates first took a lease on the property in 1926, discontinued operations in 1927 and resumed them in 1934, since when a steady production has been maintained, the ore being shipped mostly to the Magma Smelter at Superior and to the International Smelter at Miami.

A record of production to the end of 1940 as far as I have been able to obtain the data is appended to this report as Exhibit A.

At date of writing Forbach is working about thirty-five men, mining ore principally in the South Alaska workings on the Blue Vein and on the Europe Claim and he is shipping at the rate of about 1000 tons per month. He plans to develop and work other sections of the property in the near future.

#### Present Workings and Developments on Upper Levels

Water now stands about <sup>200</sup>340' below the collar of the Alaska shaft and all mining since 1926 has been done above that level.

In the near future I shall prepare and forward a supplemental report in which I will describe the more important ore shoots and mine workings and discuss the developments which Forbach

has in mind. Most of these seem well justified and likely to result in finding additional ore and extending the life of the present operations but none of them can be expected to prove up any very substantial tonnage or have any great bearing upon the ultimate value of the property since the maximum amount of ore which is likely to be found above the water level can already be approximately estimated.

In 1937 Engineers of the Eagle Picher Mining Company made a very thorough examination of this mine including surveying and sampling of all accessible workings and prepared a report which I was privileged to examine.

They then estimated a probable ore reserve as 29,817 tons averaging 11.1 oz. silver and possible ore as 71,786 tons @ 11.91 oz. plus a partially sampled additional reserve of 92,913 tons @ 8.15 oz. per ton, - the ore last mentioned is too low grade to be mined with profit under present conditions. Since this examination was made approximately 60,000 tons of 13 oz. ore have been mined and shipped, much of which came from new discoveries.

The data obtained by the Eagle Picher Company was used in part by the Engineers of the Anaconda Copper Company (International Smelting Company) in making their examination in 1940, but even subsequent to their work substantial reserves of new ore have been found. The tonnage of probable and possible ore that can be measured and sampled in the upper 200' of the veins at any given time is always limited by the nature of the <sup>current</sup> present operations which do not include any large amount of development work but I feel

confident that you have reason to expect that 12 oz. ore in substantial quantity can be found and mined for several years to come while a very much larger tonnage could be included if it should prove possible to reduce the critical value of pay ore to say 10 oz. per ton.

However, the future of the mine and its ability to produce for any long period of years must largely depend upon the continuation of ore below the 200' level and therefore it is most important to consider whether or not deeper development is justified.

#### Development in Depth

The potential value of the mine and ore reserve depends upon the conditions which may exist below the water level and these in turn seem to hinge upon three factors:

- (a) The downward extension of the schist.
- (b) The existence of zones of secondary enrichment and primary ore, and
- (c) The grade of such secondary and primary ore as may be found to exist.

These factors have already been made the subject of a general discussion and the means of securing reliable information in their regard and cost of such procedure will be considered in the balance of this report in connection with which a drawing, Exhibit B, will be attached.

As a part of this discussion it should be stated that under present conditions the Reymert ore to be commercially

valuable must have a minimum content of about 12 oz. silver per ton and assuming an entirely satisfactory solution of the metallurgical problem the average content of pay ore may be figured at 10 oz. which would probably permit the mining of all ore with a value exceeding 8 oz. to be mixed with a higher grade from the better stopes.

Obviously the future price of silver is the factor which will determine the value of the ore and should the price of that metal fall to the average of 50¢ per oz. (which prevailed for many years prior to the first World War) it is doubtful if it would pay to develop or mine any ore with a content of less than 10 oz. per ton, since even for treatment in a local mill the average silver content would <sup>then</sup> probably have to be maintained at 12 oz. or better in order that any profit might be realized.

I have pointed out that the actual width and character of the vein and likewise the silver content seem to depend upon both physical and chemical causes and down to the lowest workings which I was able to examine (200' level) the width of the vein and aggregate length of the ore shoots show no appreciable decrease but should the fissure penetrate from the schist into an underlying formation of diabase or diorite it is almost certain that the vein would tend to narrow and wedge out, the mine would be bottomed and further exploration would be futile.

But on the assumption that the schist continues to a much greater depth than the present workings, - excepting where it is cut by the diorite dikes, - the fissure will probably continue to

maintain its width and length and the general character of the filling should not greatly change so that the factor of grade would be the only variable.

All of the ore which I observed is heavily oxidized and I can find no reliable record of any evidence of secondary enrichment which must exist, if at all, in a zone below the now accessible workings but probably at no great depth below the present water level. In any zone of secondary enrichment the values will undoubtedly show a very substantial increase; to what extent it is impossible to predict but one might reasonably visualize the existence of large bodies of 30 to 50 oz. ore in such a zone. Certainly it would be rich enough to be well worth looking for and in my judgment it would be a great mistake to abandon the exploration of this mine without thoroughly testing the possibilities of finding a zone of secondary enrichment. As to the value of the primary ore, if any, we have practically no data on which to base assumption and any estimates would merely be guesses.

I have failed to find any evidence which leads me to believe that there will be any large increase in the copper content of either the Blue Vein or the Black Vein and in my opinion the Reynert will always remain a silver mine only.

It is my carefully considered judgment that the favorable production record of this mine, ~~xxx~~ the geological conditions and the showings in the accessible workings far outweigh the unfavorable record of the shaft and diamond drill holes and amply justify the speculative expenditure required for further development in depth; -

in the hope that the vein will be found to continue downwards in the schist and to contain a large tonnage of pay ore, the mining of which will serve to return the preliminary expenditure with an ample profit.

#### Location of Exploration

After carefully examining the outcrops over the entire length of the mineralized fissures (6000') and practically all of the underground workings now accessible I believe that the best location for future exploration is found in the Alaska shaft and for the following reasons:

(a) This shaft is already sunk nearly 200' below the present water level, thus saving the heavy expense of carrying on a similar procedure at any other point.

(b) This shaft is sunk in diorite, which is much better sinking ground than the vein or the schist but it appears likely that the dike of diabase will extend only a short distance to the north and south and drifts run in those directions should soon reach the schist and find normal conditions in the vein.

(c) Very good ore is found in the vein both north and south of the shaft on the 200' level and should this continue downward it is reasonable to assume that the ore below the old workings might extend some 900' to the north and for a much longer distance to the south. It is true that the Alaska shaft is far to the north of the center of the pay ore shoots but I can see no reason to believe that any better or deeper ore will be found in the southern section of the vein and a separate program of development at that

part of the property can be considered later as conditions may make it advisable to do so.

As to the method of development I am strongly opposed to any drilling at present since local formations seem to make it impossible to point a drill hole with any assurance that it will follow its intended course and there is still less chance that satisfactory cores or even sludge could be obtained from the fissure material or veins. This was the experience of the Magma Company in 1919 and 1920 and it would be folly to repeat their unsatisfactory procedure.

Therefore I am in favor of conducting the development by straight underground mining work and the program which I advocate and is as follows:-

(1) Unwater and recondition the Alaska Shaft to the 400' level, replacing such timbers as may be required and cleaning out any debris that may be found in the sump and cross-cut.

(2) Extend the 75' cross-cut for an additional 50' to the east which should make it quite certain that the Blue Vein or any split in the Black Vein has been penetrated.

(3) Drift on the vein both north and south for a distance of at least 400' in each direction.

(4) Then carefully review the actual conditions as these may then have been found to exist and in the light of these decide upon the nature and extent of further work. If satisfactory results have so far been obtained this may reasonably be expected to involve sinking the shaft to a depth of 500' or 600' below the collar with drifts along the vein in both directions on the lowest level.

It is impossible to closely estimate the cost of the first step in this procedure since so much will largely depend upon the condition of the timbers and the amount of water which will have to be pumped. Forbach and I went over the situation with care and, excluding the cost of the equipment, I do not believe that this work will involve an expenditure of over \$3000.00.

The cross-cutting and drifting on the 400' level should not cost over \$10.00 per foot unless exceptionally unfavorable conditions are encountered and to carry through the maximum advance of 850' an estimate of \$10,000.00 seems liberal.

The equipment necessary to conduct this work will include as larger items a compressor, power unit, station pump, sinking pump, drills and steel.

The present hoist should be entirely serviceable when equipped with a new hoisting rope and Forbach tells me that he has plenty of spare pipe, rails, ore cars and small tools that can be used in the shaft and drift. There is also an old compressor at the mine and a pump at Kirkland Placer which Forbach believes he can repair at small cost and install with advantage and he has a line on a second hand Deisel Engine and generator that can be purchased for less than \$2000.00. This compressor can probably be belt-driven from the engine and the station pump should preferably be electric driven. But considering the probability that further sinking and drifting will be desirable I feel that it would be poor economy to install in the first instance any equipment that would not be serviceable for sinking the shaft and drifting a 600' level and

with all due regard for economy I feel that only new machines or used machines in really first class condition should be purchased or installed. On this basis I shall estimate the maximum cost of purchasing and installing the necessary equipment at \$10,000.00 with the proviso that this figure may be reduced if old machines can satisfactorily be repaired or advantage can be taken of favorable opportunities for purchase.

To recapitulate I will estimate expense involved in acquiring and installing the proper equipment, reconditioning the shaft to the 400' level, extending the cross-cut and drifting 800' along the vein at approximately \$23,000.00, allowing for contingencies etc. I recommend that a fund of \$25,000 should be made available to cover this work, which can probably be completed in six months time.

Should the extension of the 400' level definitely prove the existence of a large body of diabase pinching out the vein and/or cutting off the values or should any other very discouraging condition be developed I do not believe that any further exploration would be justified and it would merely remain to mine out the pay ore in the upper portion of the mine as economically as possible.

But should this proposed work disclose the continued existence of a strong and well mineralized vein, - and that is what I confidently anticipate, - then the further sinking of the shaft and work on a lower level will promptly be in order and can be conducted with far more assurance of success than is justified by all the conditions which can now be noted on the surface and down

to the 200' level.

The 400' level may penetrate a zone of secondary enrichment, although I only mention this as a fair probability; but I am very positive that information obtained from this work will permit some very definite conclusions as to the existence and probably location of such a zone or its entire non-existence.

I should also expect to find that the downward extensions of the ore shoots which have been mined to the north and south of the shaft and in the Black Vein and Blue Vein will contain sufficient pay ore to repay from profits the cost of development which would then become a proper charge against future extraction.

If conditions on the 400' level give promise of a further continuance of ore to greater depth I recommend the further sinking of the shaft to a depth of 500' or perhaps 600'. Developments on the 400' are likely to indicate the proximity of any radical change and if no such change is indicated and good ore seems likely to persist in depth it would probably be as well to sink the full 200', with merely a station on the 500' and to resume drifting on the 600' level.

The cost of sinking the shaft may be liberally estimated at \$55.00 per foot (unless an excessive pumping problem is encountered) so that \$11,000.00 should be allotted to this work and the two stations, 150' cross-cut and 800' of drifting on the 600' level would call for an additional expenditure of about \$13,000.00, bringing the total estimated cost of new equipment and development very close to \$50,000.00.

I wish, however, to make it very clear that I do not at present recommend any work below the 400' level and shall not do so unless and until the drifts on the 400' level had proved the probability of finding substantial bodies of pay ore at greater depth.

#### Metallurgical Treatment of the Ore

Any engineer carefully investigating the Reymert Mine could hardly fail to note that large reserves of material which is just below the critical grade are constantly being developed and left in place and also that as the stoping of the pay streak proceeds the stopes tend to cave and fill with low-grade ore and waste so that the future recovery of ore left behind continuously becomes more difficult and expensive and very large tonnages of say 8 oz. and even 10 oz. ore, which when first developed might have been mined and treated with profit in a local plant, have become progressively more and more difficult to recover and eventually are certain to be lost unless the present method of operations is altered.

Based upon the very conservative estimates of Eagle Picher and Anaconda Engineers, Forbach's intimate acquaintance with the property (although I have heavily discounted his figures) and my personal investigation, I have no doubt that at least 100,000 and more probably 150,000 tons of low grade material, with an average content in the order of 10 oz. silver per ton, remain in and around the old stopes above the present water level but the cost of recovery would be so high that the profit derived from treating this ore would

probably fail to repay the large initial investment required to erect a mill and reopen the stopes for operation.

The present situation does not seem to justify the steps which would be required for its correction but if developments of the 400, 500 and 600' levels should result in proving a large additional tonnage of both high grade and low grade ore the situation would be radically altered and the entire mining problem at the Reymert should be carefully re-examined in the light of the best metallurgical practice and the probable future course of the silver market; with a view to determining the means and methods by which the greatest ultimate profit can be derived from the present reserves and newly developed ore bodies.

I have made no personal study of the Reymert ore from a metallurgical standpoint but noted that the Eagle Picher metallurgist estimated that roasting and cyaniding would serve to recover 85% of the silver values at a milling cost of \$1.50 per ton and from my own experience with similar problems I believe that this estimate is probably correct and might even be somewhat bettered in actual practice. For the time being I can only suggest that this possibility should be further studied while the development work is in progress so that you will be in a position to reach well grounded decisions regarding the entire industrial problem and lay out your future course of action with due consideration to every angle of both the technical and economic phases of any operation that you may then contemplate or to any negotiations with other parties that may have developed or be anticipated.

Yours very truly,

*S. H. Colverson*

EXHIBIT AREYMERT MINESummary of Production (May not be Complete)

| Year  | Operator                           | Tons Prod-<br>uced | Average oz.<br>silver per<br>ton | Total oz.<br>Silver |
|---|------------------------------------|--------------------|----------------------------------|---------------------|
| 1886-88                                     | Reymert Company                    | 1,800              | About 30. (?)                    | 54,000 (?)          |
| 1888-89                                     | " "                                | 5,326              | 31.71                            | 168,887             |
| 1889-93                                     | " "<br>(Mostly treated in<br>mill) | 11,980             | 19.30                            | 230,214             |
| 1893-1925                                   | No record, mostly<br>idle          |                    |                                  |                     |
| 1926-27                                     | Forbach Bros.,<br>lessees          | 11,284             | 20.22                            | 228,162             |
| 1936  | Forbach & Carrow,<br>lessees       | 17,027             | 13.90                            | 236,675             |
| 1936  | Carrow, lessee                     | 4,617              | 11.91                            | 54,988              |
| 1936  | Forbach, Lessee                    | 1,323              | 12.23                            | 16,180              |
| 1937  | Carrow, Lessee                     | 2,145              | 10.60                            | 22,737              |
| 1937  | Forbach, Lessee                    | 9,371              | 12.80                            | 119,610             |
| 1938  | Forbach, Lessee                    | 16,061             | 16.17                            | 259,707             |
| 1939  | Forbach, Lessee                    | 19,766             | 11.70                            | 231,262             |
| 1940  | Forbach, Lessee                    | 20,570             | 13.11                            | 269,673             |
| Total to 1941, - as per<br>Records Obtained |                                    | 121,270            |                                  | 1,892,095           |

*Some  
Copy to be  
Completed  
6/20/46*

Report on the  
REYMERT MINE  
and its future  
Development & Exploration

by  
G. M. Colvocoresses  
June 10, 1946

Revised and condensed from a report  
written on September 15, 1945.

LOCATION & GENERAL CONDITIONS: - -

This property belonging to the Reymert Mining Company, an Arizona Corporation with principal office in Milwaukee, Wisconsin, consists of seven patented lode mining claims, captioned as follows:

- |           |                          |
|-----------|--------------------------|
| America   | Africa                   |
| Alaska    | Europe                   |
| Asia      | Great Pacific            |
| Australia | All patent survey #2878A |

Also one unpatented lode claim known as the Reymert and Four Mill sites known as the Alaska, Asia, America and Australia, on which the camp buildings are located.

The above named claims and mill sites are now in possession of and being worked by the Reymert Lease, - a Co-Partnership, under the terms of a lease agreement executed as of the first day

of September, 1944, for a period of ten years from that date.

However negotiations are now in progress for the termination of the existing lease which is to be superceded by a similar contract at the end of this month to be executed between the owner as lessor and the Reymert Extension Silver Mines Incorporated, successor to the Reymert Lease, as lessee and in this new contract, which has been authorized and agreed to by both parties, there is embodied an Option to Purchase, the text of which is as follows:

"The Lessor, Reymert Mining Company, does hereby grant unto said Lessee, Reymert Extension Silver Mines, or to its assigns, the option to purchase the above described leased property with all improvements thereon for the sum of fifty thousand dollars (\$50,000) upon the terms and conditions hereinafter set forth.

1. This option shall expire on January 1, 1950.

2. The privilege of exercising this option is conditional on the Lessee, or its assigns, expending not less than forty thousand dollars (\$40,000) prior to January 1, 1950, in exploration and development work carried on below the present water level, which water level is found at a depth of approximately 220 feet below the collar of the Alaska shaft, and approximately 420 feet below the collar of the Australia shaft.

3. Said option shall be exercised by registered letter directed to Reymert Mining Company at its office, 902 Wells Building, 324 East Wisconsin Avenue, Milwaukee 2, Wisconsin, posted at least twenty (20) days prior to the date for consummation of the transaction, at which date payment shall be made for the premises, and the premises shall be conveyed by Reymert Mining Company to said Reymert Extension Silver Mines or its assigns, by Warranty Deed."

The area included in the lode claims, (see map Exhibit A) some of which are not full sized, is about 140 acres. The property lies in the Pioneer Mining District, Pinal County, Arizona, in Sections 15, 22, 23, 26 and 27 of Township 2 South; Range 11 East; Gila and Salt River Base and Meridian. The elevation is from 2700 to 3500' above sea level. The camp is 6.5 miles in air line southwest of the town of Superior where the Magma Mine and Smelter are located and with which it is connected by 8 miles of good road, all but 2 miles being a paved highway, - U. S. Highway #60.

The country is rugged with a main ridge extending north and south over the length of the claims on the east side of a gulch in which the camp is built. There is no timber and only the usual semi-desert vegetation of shrubs and grasses.

The climate is excellent and suitable for work at all seasons of the year, the normal annual rainfall is about 18" or somewhat less.

Drinking and domestic water must be hauled out from Superior but water from the mine is suitable for all other purposes. The supply would probably be limited to about 50,000 gallons per day, which was reported to have been the flow into the Alaska Shaft at 400' depth, but additional water if required, might be secured from the underflow of Queen Creek and from its tributaries, including Reymert Creek which runs through the camp but is almost always without surface flow.

GENERAL GEOLOGY: - -

The country is mainly a Pre-Cambrian mica and sericite-schist locally known as the Pinal Schist with schistosity striking generally north and south and dipping to the east. This basal for-

mation was intruded by dikes of diorite or diabase and near the south end of the claims by a dike of basic greenstone, - probably a gabbro or hornlendite, - also a later intrusion of rhyolite. These intrusive dikes, excepting the rhyolite, strike mostly east and west and have locally affected the schistosity to some extent. In places there are areas of silicification in the schist itself forming bands of hard erosion resistant rock along the surface.

The latest of the intrusives was probably the rhyolite and any sedimentaries that may have been subsequently deposited have been completely removed by erosion, so that they are now represented only by recent gravel and top soil.

A detailed study of the geology of the area has been made at and near the Magma Copper Mine seven miles northeast of the Reymert but at Magma the upper sedimentary rocks are still in evidence while there is an essential difference between the diorite, which occurs as intrusive dikes, and the diabase, which forms a sill lying between two sedimentary formations.

At the Reymert all of the rocks of this general class, whether diorite or diabase (and their exact classification seems to have no practical importance) appear to have come in as intrusive dikes or stocks and I do not consider that there is sufficient evidence to justify the assumption of a few geologists that the diabase found on the America Claim, in the lower portion of the Alaska Shaft and reported in the drill holes represents a laccolith or batholith underlying the schist at a depth of 200 to 400' below the surface. This theory is undoubtedly possible and was suggested by the formation in the Alaska Shaft and record of the drilling but the surface outcrops, the nature of the contacts and the very wide distribution of the schist along the

X surface and in other underground workings argue against such a condition and have convinced the majority of those who have studied the area that the diorite occur<sup>S</sup><sub>^</sub> as narrow dikes. Only further exploration and deep development in the mine itself can tell the story in a convincing manner.

MINERALIZATION: - -

The main fissure or shear zone in which the ores occur strikes from north 10° west to due north and can be traced for some three miles or more but pay ore seems to be confined to a length of 6000' from the south portion of the America Claim to the north end of the Great Pacific. This fissure was apparently formed by a violent tectonic movement which was perhaps to some extent connected with the intrusion of the rhyolite and there is evidence of one and probably two subsequent reopenings of the fissure. The width of this fissure is irregular, sometimes narrowing to 10' or less and again swelling to over 100', with an average of perhaps 60'. The dip also varies to some extent but will average about 80° to the east.

The filling of the entire fissure has been impregnated with metallic minerals to a greater or less extent but the pay ore is usually confined to two veins some 3 to 6' in width which sometimes join at points where the fissure is narrow but for the most part follow along the walls; - the so called Blue or East Vein on the hanging wall or the Black or West Vein on the footwall.

The mineralization appears to have been derived from solutions at low temperature and the first filling to have been composed largely of crushed wall rock and massive black calcite associated with only a small amount of silver but with some copper, lead and zinc. The second mineralization which took place after a reopening

of the fissure brought in a finer calcite and more quartz and iron oxide and then either the final phase of this process or a third reopening and mineralization introduced still more quartz and iron oxide with barite and the bulk of the silver values which are generally found at points where the evidence of repeated disturbance and successive periods of mineralization is the most pronounced.

Post-mineral faulting is noted at several points and the splitting of the fracture which separated the Black Vein and Blue Vein in certain sections of the zone probably occurred concurrently with the second or third period of mineralization or may have been due to a separate disturbance which preceded both of them.

The better grade of the ore or pay streak filling is composed largely of fine calcite, quartz, fluorite, barite, manganese and iron oxide. Horn silver (cerargyrite) and argentite (silver sulphide) have been found in places, usually near the surface, but most of the silver appears to be intimately associated with the barite and manganese leading some geologists to conclude that silver is in the form of a "silver manganite" although no such mineral is definitely known to exist.

The vein which was reported to have been found in the cross-cut on the 400' level at the Alaska Shaft was filled with crushed and altered diabase and carried 1.8 oz. silver but with this exception and perhaps in some of the inaccessible workings on the America Claim the walls of the productive portions of the vein are schist and nearly all of the metallic minerals are oxidized. There is no positive evidence as to whether or not this upper section of the vein represents a zone of leaching which will be succeeded in depth by a zone of secondary enrichment, with primary ore still further below; and it is obviously of great importance to determine

whether or not such conditions actually exist.

The effect of the various types of wall rock upon the vein has been two-fold, physical and chemical. In the schist it has been clearly demonstrated that the three stages of filling took place under favorable conditions and the black calcite was partly replaced or associated with barite and silver values.

From a physical standpoint the schist is a comparatively easily fractured rock and would always be affected by the recurrent reopening of the fracture, whereas the diabase is exceptionally tough and would normally be much less shattered by any such disturbances. Therefore the fissure, having been originally filled with the black calcite, was readily susceptible to remineralization in the schist while in the diabase such was not the case.

From the chemical standpoint the comparison is not so clear. At the Magma Mine the best values and largest ore shoots are often found in the diabase while the reverse is true at Globe and in some of the other camps. At the Reymert the workings near the south end showed good values along the rhyolite but as yet no stopes have been opened anywhere in the diabase and although this rock was noted in the Alaska Shaft the diabase dikes, outcropping on the surface, do not cut through the vein except at the north end of the mine.

Considering the situation from both the physical and chemical standpoints I think it fair to say that the chances for finding any good ore bodies either in depth or near the surface are very much poorer in the diorite (or diabase) than in the schist. Therefore there would be very little incentive to explore in any large area of diorite if by chance that rock might be found to underlie the schist while the exploration in the schist below the water-level holds many attractive possibilities.

HISTORY: - -

This district was first prospected in the 1870's and the Reymert Mine was located by John Reymert and associates in 1886 and soon after sold to the Reymert Mining Company, controlled by Mr. John H. Van Dyke of Milwaukee. This company operated until 1891 during a portion of which period they treated the ore in a mill by chloridizing and pan amalgamation.

Mr. Forbach and his associates first took a lease on the property in 1925, and with some interruption operated until the middle of 1941 when James Tod purchased the lease and operated until the middle of 1944. Subsequently the mine was again leased to Forbach who assigned this present lease to the co-partnership doing business as the Reymert Lease. During recent years most of the ore was shipped to the Magma Smelter at Superior or to the International Smelter at Miami.

A complete record of production up to September 1945 is appended to this report.

WATER TABLE: - -

Accepting as accurate the elevations given on the old maps and on those prepared in 1937 by the Eagle-Picher Company, it appears that the collar of the main Alaska Shaft has an elevation of 3097.47' above sea level and it is recorded that when sinking the shaft in 1912 water was first encountered at a depth of 220' equivalent to an elevation of 2877'. In other workings not far from this shaft conducted by Carrow in 1935, water was said to have been found at an elevation of 2900' or some 23' higher, but at times the standing water dropped to 2860' elevation. The geologists of the Eagle-Picher Company state that in their opinion this water did not represent the permanent water level but merely a "perched

water table" and they concluded that any permanent water table existing in this district would only be found at much greater depth; but this opinion has not yet been supported by any actual observations.

The collar of the new A (or Australia) Shaft in which the operators have recently been working is given an elevation of 3320' and water was struck at a depth of 420' equivalent to an elevation of 2900'. The water in the Alaska Shaft, 2200' to the north, - has recently stood continuously at about the 2877' mark, but such a variation in the elevation of a water table is not at all unusual in mountainous country. Therefore, it appears that the present elevation of the water in the country between the Alaska Shaft and the A Shaft is from 2860' to 2900' regardless of whether this represents a "perched" or a permanent water table.

The flow of the water in the Alaska Shaft was reported to have been two gallons per minute at 220', - - or just about the same flow that was encountered in the Australia Shaft, - - but it increased to 30 gallons per minute at 230' and to 40 gallons per minute at 270' below which point it was nearly constant until they crosscut on the 400' level when it increased to 50 gallons per minute after the 8' vein had been cut.

I think that it has been demonstrated that the water table has remained practically constant for over 30 years and neither in the Alaska nor in the Australia workings has there been found any zone of secondary enrichment nor any evidence of primary ore although the percentage of sulphides of lead and zinc appear to have slightly increased in both sections of the mine, while the small percentage of copper seems to have remained fairly constant.

Any real change in the character of the filling of a vein of this nature would normally be expected to occur from 100' to 200' below the point to which the water rises in the workings. It is only in the Alaska Shaft that such a depth has been reached and the shaft at this point is in the diabase.

It is therefore my opinion that the first new exploration should consist of extending the east crosscut on the 400' level for another 40 to 50' to make sure that there is no other vein lying closer to the hanging wall of the fissure and then drifting north and south on the 8' vein, or any better vein that may be found, until the formation changes to schist which should occur within 300' or less in each direction, where additional crosscuts should be run to cut the width of the fissure.

LOW GRADE ORE AND LOCAL TREATMENT: - -

During recent years a number of investigations have been made to determine the total tonnage and average grade of both the shipping ore and the low grade material which might be mined if a satisfactory method of local treatment could be developed or a higher price for silver obtained.

In 1937 the engineers of the Eagle-Picher Company were able to measure and sample above the water level probable ore amounting to nearly 200,000 tons to which they gave an average content of over 8 oz. silver per ton. Some of this ore has since been mined but other reserves of low grade ore have been developed which more than compensate for the tonnage mined.

Mining by the lessees has nearly always been done by open stoping which was timbered with square sets, most of which were not filled. In many places the ground has become too heavy for the timbers and there have been caves in which much good ore has been

lost or made inaccessible. Only the higher grade ore (15 ounce or better) has been intentionally taken and a large tonnage of lower grade material has been left in the walls or between the ore shoots.

This system of mining has many disadvantages but is probably the only method that could have been followed to produce shipping ore, but if the average product could be reduced, to say 8 ounces (through building a local mill) and still leave a profit a great many of those old stopes could be reopened and worked for substantial production.

It is my opinion that a thorough examination of the entire mine down to the water level, which would involve catching up many of the old workings, would probably reveal the existence of over 300,000 tons of ore that would average better than 8 oz. of silver per ton.

FUTURE PRICE OF SILVER: - -

In connection with future plans at the Reymert, special consideration should be given to the probable raise in price of Silver as a bill was approved May 20, 1946, by the Senate Banking Committee raising the price of Silver to 90.3¢ per ounce and at the end of two years, to \$1.29 per ounce. These new prices, if and when they become effective, should make it possible to mine at a profit a large tonnage of low grade ore known to exist above the water level.

PROBABLE CONDITIONS AT DEPTH:

From the upper 200' of the vein, the Reymert Mine has produced in round figures, 160,000 tons of ore containing 2,500,000 ounces of silver. The remarkable strength and persistence of the Reymert Vein <sup>is</sup> of the surface, and the occurrence of numerous shoots of pay ore over a length of 6,000' lying between the surface and the

upper water level seem to call for far more comprehensive exploration at depth than has ever been undertaken.

Obviously the future value of the mine and the total extent of the ore reserve depend largely upon conditions which may exist below the water level and these in turn seem to hinge upon three factors:

- (a) The downward extension of the shear zone in the schist.
- (b) The existence of zones of secondary enrichment and of primary ore, and
- (c) The tonnage and grade of such secondary and primary ore as may be found.

On the reasonably safe assumption that the schist continues to a much greater depth than the present workings, - excepting where it is cut by the diorite dikes, the fissure and shear zone will probably continue to maintain their width and length and the general character of the filling should not greatly change so that the factor of grade would be the only variable.

All of the ore which I have observed is heavily oxidized and I can find no reliable record of any evidence of secondary enrichment which must exist, if at all, in a zone below the workings. In any such zone of secondary enrichment the values will undoubtedly show a very substantial increase; to what extent it is impossible to predict, but one might reasonably visualize bodies of 30 to 40 ounce silver ore. As to the value and character of the primary ore if any, we have little information, but the solutions which mineralized the Reymert Vein appear to have originated from a deep seated magma and in spite of differences in the local geological conditions primary ore bodies similar to those which were found below the oxidized zone and to a depth of three or four thousand feet in the

Magma and the Old Dominion Mine may be hoped for below the permanent water level in the Reymert.

EXPLORATION & DEVELOPMENT RECOMMENDED: - -

X After visiting in 1941 all of the then accessible workings, revisiting many of them since that date, personally watching all of the work which has subsequently been done and discussing the situation with the men most familiar with the mine and with several competent engineers and geologists who are <sup>so</sup> also familiar with the property, it is my opinion that new explorations at depth should be started from the Alaska Shaft which first of all should be re-equipped for operation and cleaned out to the 400' level.

While Col. Tod was operating the mine, the water was pumped out of the Alaska Shaft for a considerable distance and the shaft and timbers were found to be in excellent shape giving every reason to expect that similar conditions will maintain all the way down to the sump and that the total expense of putting the lower part of the shaft in operating condition with piping, guides, ladders, etc. and resuming work in the east crosscut on the 400' level,- (unless this should prove to be badly caved) should not exceed \$5,000. Equipping the shaft for operation will involve the purchase and installation of a new or second-hand power unit, hoist and compressor, pumps and some new drills and steel to supplement the material which is already at the mine. This will likely involve an expenditure of \$20,000 or somewhat less.

The first actual exploration should involve the extension of the crosscut on the 400' level for another 40 to 50' to the east in order to make sure that the entire width of the fissure had been explored and any vein or branch-vein lying close to the hanging wall had been opened up.

The next work, in my judgement, should consist in running a long drift along the already discovered veins, or any better vein that may be found, extending this drift both to the north and south through the diorite and into the schist.

From the showings on the surface and in the upper workings it would not appear that the diorite dike would extend for a total width (North-south) of more than 600 to 800' and I believe that drifting on either direction 400' from the crosscut should surely serve to bring the ends of both drifts into the schist where other crosscuts should be run in that formation for the full width of the fissure, say 100'. Therefore, I visualize that the total drifting and crosscutting on the 400' level will amount to probably a little over 1000' and the cost of this work under present conditions will probably be in the order of \$20.00 per foot.

While I do not advocate the further sinking of the Alaska Shaft until the 400' level has been thoroughly or partially developed in accordance with the above program (which may be modified from time to time as conditions require) yet, unless these conditions should prove to be most discouraging, it will next be in order to continue sinking, preferably to the 600' level, and then to repeat much of the crosscutting and drifting already done on the 400' level.

In support of the program of development which I recommend, I quote from a letter written by Ira B. Joralemon who says, "As a whole the Reymert Vein has a remarkably striking surface showing both in size and in the intensity of mineralization. . . . ."

I would suggest running a long drift south on the vein on the 400' level (from the Alaska Shaft) with cross-cuts to determine the width of the vein and sinking to the 600' level and drifting to the

south there also."

Mr. W. C. Browning formerly general manager of the Magma Company also made the following comment: - "I presume you will wish to start sinking the (Alaska) shaft again and do additional development work, on say the 600' level."

The total maximum expense of the advised exploration and development may thus be estimated as follows:

|  |               |
|--|---------------|
| New equipment and installation                       | \$20,000      |
| Recondition shaft & 400' level station               | 5,000         |
| 1,000' of drifting & crosscutting on 400' level      | 20,000        |
| Sinking Alaska Shaft additional 200' @ \$100 per ft. | 20,000        |
| 1,000' drifting & crosscutting on 600' level         | <u>25,000</u> |
|  | \$90,000      |

I do not anticipate that more than \$50,000 will have to be spent to complete the work on the 400' level after which it should become apparent that either (a) you have been opening up substantial bodies of pay ore against the extraction of which the further work can properly be charged; or (b) that geological conditions are such as to discourage any further exploration at this particular point.

Since we have every reason to believe that good ore was left in the bottom of the old workings both south and north of the Alaska Shaft (where high grade ore was taken from the America claim), it is reasonably certain that by connecting up the 400' level with these old stopes, a fairly large tonnage of shipping ore can be mined above the 400' level and bring in some returns which should partially offset the expense of the new work.

Aside from the net return from such ore as may be taken out below the old stopes, the investment which may be made for the exploration and development at depth must be considered as representing a speculative mining venture but it will be based upon sufficient favorable evidence and indications to make it, in my opinion, a fully justified and attractive speculation.

There are also many sections of the mine above the water level, especially on the America, Australia, Africa and Europe claims, where pay-ore could be further developed and extracted whenever the price of silver is substantially improved and while the tonnage and grade of this material can not at present be estimated with any degree of accuracy, I do not hesitate to predict that ordinary development and mining operations should be profitable whenever a silver price of 90¢ or better per ounce is actually established.

Yours very truly,

*S. H. R.*

EXHIBITS:

- A. Map of Claims of Reymert Mining Company with additional claims owned by Reymert Extension Mines Inc.
- B. Cross-Section (east-west) of formations and workings at Alaska Shaft.
- C. Section (north-south) of surface of claims and principal workings.

REYMERT MINE PRODUCTION

COMPILED FROM VARIOUS REPORTS AND RECORDS OF THE

COMPANY IN MILWAUKEE

| <u>Year</u>     |                         | <u>Tons</u>    | <u>Average Silver<br/>oz. per ton</u> | <u>Approximate<br/>total<br/>Silver Ounces</u> |
|-----------------|-------------------------|----------------|---------------------------------------|--|
| 1886            | }                       | ?              |                                       | *  |
| 1887            |                         | 849            | 22.8                                  | 19,367   |
| Jan - 1888)     | } -Company<br>operation | 5,326          | 31.71                                 | 168,886  |
| Mch - 1889)     |                         |                |                                       |  |
| Mch 25, 1889    | }                       | 11,890         | 19.30                                 | 228,651  |
| Feb 8, 1891     |                         |                |                                       |  |
|                 |                         |                |                                       |  |
| 1925 & 1926     | } -Lessees              | 5,175          | 16.10                                 | 193,990  |
| 1927            |                         | 6,743          | 18.00                                 | 121,374  |
| 1928            |                         | 6,916          | 16.19                                 | 112,013  |
| 1929            |                         | 4,536          | 17.25                                 | 78,253   |
| 1930            |                         | 799            | 15.33                                 | 12,074   |
| 1931            |                         | 217            | 16.00                                 | 3,427  |
| 1932            |                         | No returns     | - -                                   | - -  |
| 1933            |                         | No returns     | - -                                   | - -  |
| 1934            |                         | 1,116          | 19.642                                | 21,938   |
| 1935            |                         | 7,588          | 14.357                                | 198,941  |
| 1936            |                         | 11,497         | 11.29                                 | 129,801  |
| 1937            |                         | 10,051         | 11.348                                | 114,609  |
| 1938            |                         | 15,195         | 16.229                                | 246,603  |
| 1939            |                         | 20,908         | 11.598                                | 242,499  |
| 1940            |                         | 20,609         | 10.259                                | 212,264  |
| 1941            |                         | 9,147          | 10.02                                 | 91,662   |
| 1942            |                         | 8,057          | 15.043                                | 121,215  |
| 1943            |                         | 2,980          | 12.50                                 | 37,251   |
| 1944            |                         | 1,454          | 12.83                                 | 19,072   |
|                 |                         |                | <u>151,053</u>                        | <u>15.11av.</u>                                |
| 1945 Apl to Sep |                         | 11,366         | 15.00(about)                          | 170,490  |
|                 |                         | <u>162,419</u> |                                       | <u>2,454,380</u>                               |

\* Some of these figures may represent only the silver paid for by the smelters.

Note Regarding EXHIBIT B

This section of the Alaska Shaft is merely intended to illustrate the relative location of the veins, the diorite and the schist as found in the Alaska Shaft workings. The width of these formations is not known at present but should be proved by the exploration which is recommended in this report.

*Copy made  
May 15, 47*

Report on the  
REYMERT MINE  
and its future  
Development & Exploration

by  
G. M. Colvocoresses  
June 10, 1946

Revised and condensed from a report  
written on September 15, 1945.

LOCATION & GENERAL CONDITIONS: - -

This property belonging to the Reymert Mining Company, an Arizona Corporation with principal office in Milwaukee, Wisconsin, consists of seven patented lode mining claims, captioned as follows:

- |           |                          |
|-----------|--------------------------|
| America   | Africa                   |
| Alaska    | Europe                   |
| Asia      | Great Pacific            |
| Australia | All patent survey #2878A |

Also one unpatented lode claim known as the Reymert and Four Mill sites known as the Alaska, Asia, America and Australia, on which the camp buildings are located.

The above named claims and mill sites are now in possession of and being worked by the Reymert Lease, - a Co-Partnership, under the terms of a lease agreement executed as of the first day

of September, 1944, for a period of ten years from that date.

However negotiations are now in progress for the termination of the existing lease which is to be superceded by a similar contract at the end of this month to be executed between the owner as lessor and the Reymert Extension Silver Mines Incorporated, successor to the Reymert Lease, as lessee and in this new contract, which has been authorized and agreed to by both parties, there is embodied an Option to Purchase, the text of which is as follows:

"The Lessor, Reymert Mining Company, does hereby grant unto said Lessee, Reymert Extension Silver Mines, or to its assigns, the option to purchase the above described leased property with all improvements thereon for the sum of fifty thousand dollars (\$50,000) upon the terms and conditions hereinafter set forth.

1. This option shall expire on January 1, 1950.

2. The privilege of exercising this option is conditional on the Lessee, or its assigns, expending not less than forty thousand dollars (\$40,000) prior to January 1, 1950, in exploration and development work carried on below the present water level, which water level is found at a depth of approximately 220 feet below the collar of the Alaska shaft, and approximately 420 feet below the collar of the Australia shaft.

3. Said option shall be exercised by registered letter directed to Reymert Mining Company at its office, 902 Wells Building, 324 East Wisconsin Avenue, Milwaukee 2, Wisconsin, posted at least twenty (20) days prior to the date for consummation of the transaction, at which date payment shall be made for the premises, and the premises shall be conveyed by Reymert Mining Company to said Reymert Extension Silver Mines or its assigns, by Warranty Deed."

The area included in the lode claims, (see map Exhibit A) some of which are not full sized, is about 140 acres. The property lies in the Pioneer Mining District, Pinal County, Arizona, in Sections 15, 22, 23, 26 and 27 of Township 2 South; Range 11 East; Gila and Salt River Base and Meridian. The elevation is from 2700 to 3500' above sea level. The camp is 6½ miles in air line southwest of the town of Superior where the Magma Mine and Smelter are located and with which it is connected by 8 miles of good road, all but 2 miles being a paved highway, - U. S. Highway #60.

The country is rugged with a main ridge extending north and south over the length of the claims on the east side of a gulch in which the camp is built. There is no timber and only the usual semi-desert vegetation of shrubs and grasses.

The climate is excellent and suitable for work at all seasons of the year, the normal annual rainfall is about 18" or somewhat less.

Drinking and domestic water must be hauled out from Superior but water from the mine is suitable for all other purposes. The supply would probably be limited to about 50,000 gallons per day, which was reported to have been the flow into the Alaska Shaft at 400' depth, but additional water if required, might be secured from the underflow of Queen Creek and from its tributaries, including Reymert Creek which runs through the camp but is almost always without surface flow.

GENERAL GEOLOGY: - -

The country is mainly a Pre-Cambrian mica and sericite-schist locally known as the Pinal Schist with schistosity striking generally north and south and dipping to the east. This basal for-

mation was intruded by dikes of diorite or diabase and near the south end of the claims by a dike of basic greenstone, - probably a gabbro or hornblende, - also a later intrusion of rhyolite. These intrusive dikes, excepting the rhyolite, strike mostly east and west and have locally affected the schistosity to some extent. In places there are areas of silicification in the schist itself forming bands of hard erosion resistant rock along the surface.

The latest of the intrusions was probably the rhyolite and any sedimentaries that may have been subsequently deposited have been completely removed by erosion, so that they are now represented only by recent gravel and top soil.

A detailed study of the geology of the area has been made at and near the Magma Copper Mine seven miles northeast of the Reymert but at Magma the upper sedimentary rocks are still in evidence while there is an essential difference between the diorite, which occurs as intrusive dikes, and the diabase, which forms a sill lying between two sedimentary formations.

At the Reymert all of the rocks of this general class, whether diorite or diabase (and their exact classification seems to have no practical importance) appear to have come in as intrusive dikes or stocks and I do not consider that there is sufficient evidence to justify the assumption of a few geologists that the diabase found on the America Claim, in the lower portion of the Alaska Shaft and reported in the drill holes represents a laccolith or batholith underlying the schist at a depth of 200 to 400' below the surface. This theory is undoubtedly possible and was suggested by the formation in the Alaska Shaft and record of the drilling but the surface outcrops, the nature of the contacts and the very wide distribution of the schist along the

surface and in other underground workings argue against such a condition and have convinced the majority of those who have studied the area that the diorite occurs as narrow dikes. Only further exploration and deep development in the mine itself can tell the story in a convincing manner.

MINERALIZATION: - -

The main fissure or shear zone in which the ores occur strikes from north  $10^{\circ}$  west to due north and can be traced for some three miles or more but pay ore seems to be confined to a length of 6000' from the south portion of the America Claim to the north end of the Great Pacific. This fissure was apparently formed by a violent tectonic movement which was perhaps to some extent connected with the intrusion of the rhyolite and there is evidence of one and probably two subsequent reopenings of the fissure. The width of this fissure is irregular, sometimes narrowing to 10' or less and again swelling to over 100', with an average of perhaps 60'. The dip also varies to some extent but will average about  $80^{\circ}$  to the east.

The filling of the entire fissure has been impregnated with metallic minerals to a greater or less extent but the pay ore is usually confined to two veins some 3 to 6' in width which sometimes join at points where the fissure is narrow but for the most part follow along the walls; - the so called Blue or East Vein on the hanging wall or the Black or West Vein on the footwall.

The mineralization appears to have been derived from solutions at low temperature and the first filling to have been composed largely of crushed wall rock and massive black calcite associated with only a small amount of silver but with some copper, lead and zinc. The second mineralization which took place after a reopening

of the fissure brought in a finer calcite and more quartz and iron oxide and then either the final phase of this process or a third reopening and mineralization introduced still more quartz and iron oxide with barite and the bulk of the silver values which are generally found at points where the evidence of repeated disturbance and successive periods of mineralization is the most pronounced.

Post-mineral faulting is noted at several points and the splitting of the fracture which separated the Black Vein and Blue Vein in certain sections of the zone probably occurred concurrently with the second or third period of mineralization or may have been due to a separate disturbance which preceded both of them.

The better grade of the ore or pay streak filling is composed largely of fine calcite, quartz, fluorite, barite, manganese and iron oxide. Horn silver (cerargyrite) and argentite (silver sulphide) have been found in places, usually near the surface, but most of the silver appears to be intimately associated with the barite and manganese leading some geologists to conclude that silver is in the form of a "silver manganite" although no such mineral is definitely known to exist.

The vein which was reported to have been found in the cross-cut on the 400' level at the Alaska Shaft was filled with crushed and altered diabase and carried 1.8 oz. silver but with this exception and perhaps in some of the inaccessible workings on the America Claim the walls of the productive portions of the vein are schist and nearly all of the metallic minerals are oxidized. There is no positive evidence as to whether or not this upper section of the vein represents a zone of leaching which will be succeeded in depth by a zone of secondary enrichment, with primary ore still further below; and it is obviously of great importance to determine

whether or not such conditions actually exist.

The effect of the various types of wall rock upon the vein has been two-fold, physical and chemical. In the schist it has been clearly demonstrated that the three stages of filling took place under favorable conditions and the black calcite was partly replaced or associated with barite and silver values.

From a physical standpoint the schist is a comparatively easily fractured rock and would always be affected by the recurrent reopening of the fracture, whereas the diabase is exceptionally tough and would normally be much less shattered by any such disturbances. Therefore the fissure, having been originally filled with the black calcite, was readily susceptible to remineralization in the schist while in the diabase such was not the case.

From the chemical standpoint the comparison is not so clear. At the Magma Mine the best values and largest ore shoots are often found in the diabase while the reverse is true at Globe and in some of the other camps. At the Reymert the workings near the south end showed good values along the rhyolite but as yet no stopes have been opened anywhere in the diabase and although this rock was noted in the Alaska Shaft the diabase dikes, outcropping on the surface, do not cut through the vein except at the north end of the mine.

Considering the situation from both the physical and chemical standpoints I think it fair to say that the chances for finding any good ore bodies either in depth or near the surface are very much poorer in the diorite (or diabase) than in the schist. Therefore there would be very little incentive to explore in any large area of diorite if by chance that rock might be found to underlie the schist while the exploration in the schist below the water-level holds many attractive possibilities.

HISTORY: - -

This district was first prospected in the 1870's and the Reymert Mine was located by John Reymert and associates in 1886 and soon after sold to the Reymert Mining Company, controlled by Mr. John H. Van Dyke of Milwaukee. This company operated until 1891 during a portion of which period they treated the ore in a mill by chloridizing and pan amalgamation.

Mr. Forbach and his associates first took a lease on the property in 1925, and with some interruption operated until the middle of 1941 when James Tod purchased the lease and operated until the middle of 1944. Subsequently the mine was again leased to Forbach who assigned this present lease to the co-partnership doing business as the Reymert Lease. During recent years most of the ore was shipped to the Magma Smelter at Superior or to the International Smelter at Miami.

A complete record of production up to September 1945 is appended to this report.

WATER TABLE: - -

Accepting as accurate the elevations given on the old maps and on those prepared in 1937 by the Eagle-Picher Company, it appears that the collar of the main Alaska Shaft has an elevation of 3097.47' above sea level and it is recorded that when sinking the shaft in 1912 water was first encountered at a depth of 220' equivalent to an elevation of 2877'. In other workings not far from this shaft conducted by Carrow in 1935, water was said to have been found at an elevation of 2900' or some 23' higher, but at times the standing water dropped to 2860' elevation. The geologists of the Eagle-Picher Company state that in their opinion this water did not represent the permanent water level but merely a "perched

water table" and they concluded that any permanent water table existing in this district would only be found at much greater depth; but this opinion has not yet been supported by any actual observations.

The collar of the new A (or Australia) Shaft in which the operators have recently been working is given an elevation of 3320' and water was struck at a depth of 420' equivalent to an elevation of 2900'. The water in the Alaska Shaft, 2200' to the north, - has recently stood continuously at about the 2877' mark, but such a variation in the elevation of a water table is not at all unusual in mountainous country. Therefore, it appears that the present elevation of the water in the country between the Alaska Shaft and the A Shaft is from 2860' to 2900' regardless of whether this represents a "perched" or a permanent water table.

The flow of the water in the Alaska Shaft was reported to have been two gallons per minute at 220', - - or just about the same flow that was encountered in the Australia Shaft, - - but it increased to 30 gallons per minute at 230' and to 40 gallons per minute at 270' below which point it was nearly constant until they crosscut on the 400' level when it increased to 50 gallons per minute after the 8' vein had been cut.

I think that it has been demonstrated that the water table has remained practically constant for over 30 years and neither in the Alaska nor in the Australia workings has there been found any zone of secondary enrichment nor any evidence of primary ore although the percentage of sulphides of lead and zinc appear to have slightly increased in both sections of the mine, while the small percentage of copper seems to have remained fairly constant.

Any real change in the character of the filling of a vein of this nature would normally be expected to occur from 100' to 200' below the point to which the water rises in the workings. It is only in the Alaska Shaft that such a depth has been reached and the shaft at this point is in the diabase.

It is therefore my opinion that the first new exploration should consist of extending the east crosscut on the 400' level for another 40 to 50' to make sure that there is no other vein lying closer to the hanging wall of the fissure and then drifting north and south on the 8' vein, or any better vein that may be found, until the formation changes to schist which should occur within 300' or less in each direction, where additional crosscuts should be run to cut the width of the fissure.

LOW GRADE ORE AND LOCAL TREATMENT: - -

During recent years a number of investigations have been made to determine the total tonnage and average grade of both the shipping ore and the low grade material which might be mined if a satisfactory method of local treatment could be developed or a higher price for silver obtained.

In 1937 the engineers of the Eagle-Picher Company were able to measure and sample above the water level probable ore amounting to nearly 200,000 tons to which they gave an average content of over 8 oz. silver per ton. Some of this ore has since been mined but other reserves of low grade ore have been developed which more than compensate for the tonnage mined.

Mining by the lessees has nearly always been done by open stoping which was timbered with square sets, most of which were not filled. In many places the ground has become too heavy for the timbers and there have been caves in which much good ore has been

lost or made inaccessible. Only the higher grade ore (15 ounce or better) has been intentionally taken and a large tonnage of lower grade material has been left in the walls or between the ore shoots.

This system of mining has many disadvantages but is probably the only method that could have been followed to produce shipping ore, but if the average product could be reduced, to say 8 ounces (through building a local mill) and still leave a profit a great many of those old stopes could be reopened and worked for substantial production.

It is my opinion that a thorough examination of the entire mine down to the water level, which would involve catching up many of the old workings, would probably reveal the existence of over 300,000 tons of ore that would average better than 8 oz. of silver per ton.

FUTURE PRICE OF SILVER: - -

In connection with future plans at the Reymert, special consideration should be given to the probable raise in price of Silver as a bill was approved May 20, 1946, by the Senate Banking Committee raising the price of Silver to 90.3¢ per ounce and at the end of two years, to \$1.29 per ounce. These new prices, if and when they become effective, should make it possible to mine at a profit a large tonnage of low grade ore known to exist above the water level.

PROBABLE CONDITIONS AT DEPTH: - -

From the upper 200' of the vein, the Reymert Mine has produced in round figures, 160,000 tons of ore containing 2,500,000 ounces of silver. The remarkable strength and persistence of the Reymert Vein on the surface, and the occurrence of numerous shoots over a length of 6,000' lying between the surface and the

upper water level seem to call for far more comprehensive exploration at depth than has ever been undertaken.

Obviously the future value of the mine and the total extent of the ore reserve depend largely upon conditions which may exist below the water level and these in turn seem to hinge upon three factors:

- (a) The downward extension of the shear zone in the schist.
- (b) The existence of zones of secondary enrichment and of primary ore, and
- (c) The tonnage and grade of such secondary and primary ore as may be found.

On the reasonably safe assumption that the schist continues to a much greater depth than the present workings, - excepting where it is cut by the diorite dikes, the fissure and shear zone will probably continue to maintain their width and length and the general character of the filling should not greatly change so that the factor of grade would be the only variable.

All of the ore which I have observed is heavily oxidized and I can find no reliable record of any evidence of secondary enrichment which must exist, if at all, in a zone below the workings. In any such zone of secondary enrichment the values will undoubtedly show a very substantial increase; to what extent it is impossible to predict, but one might reasonably visualize bodies of 30 to 40 ounce silver ore. As to the value and character of the primary ore if any, we have little information, but the solutions which mineralized the Reymert Vein appear to have originated from a deep seated magma and in spite of differences in the local geological conditions primary ore bodies similar to those which were found below the oxidized zone and to a depth of three or four thousand feet in the

Magma and the Old Dominion Mine may be hoped for below the permanent water level in the Reymert.

EXPLORATION & DEVELOPMENT RECOMMENDED: - -

After visiting in 1941 all of the then accessible workings, revisiting many of them since that date, personally watching all of the work which has subsequently been done and discussing the situation with the men most familiar with the mine and with several competent engineers and geologists who are also familiar with the property, it is my opinion that new explorations at depth should be started from the Alaska Shaft which first of all should be re-equipped for operation and cleaned out to the 400' level.

While Col. Tod was operating the mine, the water was pumped out of the Alaska Shaft for a considerable distance and the shaft and timbers were found to be in excellent shape giving every reason to expect that similar conditions will maintain all the way down to the sump and that the total expense of putting the lower part of the shaft in operating condition with piping, guides, ladders, etc. and resuming work in the east crosscut on the 400' level,- (unless this should prove to be badly caved) should not exceed \$5,000. Equipping the shaft for operation will involve the purchase and installation of a new or second-hand power unit, hoist and compressor, pumps and some new drills and steel to supplement the material which is already at the mine. This will likely involve an expenditure of \$20,000 or somewhat less.

The first actual exploration should involve the extension of the crosscut on the 400' level for another 40 to 50' to the east in order to make sure that the entire width of the fissure had been explored and any vein or branch-vein lying close to the hanging wall had been opened up.

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Yours very truly,

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- C. Section (north-south) of surface of claims and principal workings.

GEORGE M. COLVOCORESSES  
MINING AND METALLURGICAL ENGINEER  
1102 LUHRS TOWER  
PHOENIX, ARIZONA

Report on the  
REYMERT MINE  
and its future  
Development & Exploration  
by  
G. M. Colvocoresses

September 15th, 1945

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Also one unpatented lode claim known as the Reymert and Four Mill sites known as the Alaska, Asia, America and Australia, on which the camp buildings are located.

The above named claims and mill sites are now in possession of and being worked by the Reymert Lease, - a Co-Partnership, under the terms of a lease agreement ex-

ecuted as of the first day of September, 1944 for a period of ten years from that date. An option to purchase the said property has been requested and terms of same, if granted, will be noted at the end of this report.

The area included in the lode claims, (see map Exhibit A) some of which are not full sized, is about 140 acres. The property lies in the Pioneer Mining District, Pinal County, Arizona in Sections 15, 22, 23, 26 and 27 of Township 2 South; Range 11 East; Gila and Salt River Base and Meridian. The elevation is from 2700 to 3500' above sea level. The camp is 6.5 miles in air line southwest of the town of Superior where the Magma Mine and Smelter are located and with which it is connected by 8 miles of good road, all but 2 miles being a paved highway, - U. S. Highway #60.

The country is rugged with a main ridge extending north and south over the length of the claims on the east side of a gulch in which the camp is built. There is no timber and only the usual semi-desert vegetation of shrubs and grasses.

The climate is excellent and suitable for work at all seasons of the year, the normal annual rainfall is about 18" or somewhat less.

Drinking and domestic water must be hauled out from Superior, but water from the mine is suitable for all other purposes. The supply would probably be limited to about 50,000 gallons per day, which was reported to have been the flow into the Alaska Shaft at 400' depth, but additional water

if required, might be secured from the underflow of Queen Creek and from its tributaries, including Reymert Creek which runs through the camp but is almost always without surface flow.

GENERAL GEOLOGY: - -

The country is mainly a Pre-Cambrian mica and sericite-schist, locally known as the Pinal Schist with schistosity striking generally north and south and dipping to the east. This basal formation was intruded by dikes of diorite or diabase and near the south end of the claims by a dike of basic greenstone, - probably a gabbro or hornblendite, - also a later intrusion of rhyolite. These intrusive dikes, excepting the rhyolite, strike mostly east and west and have locally affected the schistosity to some extent. In places there are areas of silicification in the schist itself forming bands of hard erosion/resistant rock along the surface.

The latest of the intrusions was probably the rhyolite and any sedimentaries that may have been subsequently deposited have been completely removed by erosion, so that they are now represented only by recent gravel and top soil.

A detailed study of the geology of the area has been made at and near the Magma Copper Mine seven miles northeast of the Reymert but at Magma the upper sedimentary rocks are still in evidence while there is an essential difference between the diorite, which occurs as intrusive dikes, and the diabase, which forms a sill lying between two sedimentary formations.

At the Reymert all of the rocks of this general class, whether diorite or diabase ( and their exact classification seems to have no practical importance) appear to have

come in as intrusive dikes or stocks and I do not consider that there is sufficient evidence to justify the assumption of a few geologists that the diabase found on the American Claim, in the lower portion of the Alaska Shaft and reported in the drill holes represents a laccolith or batholith underlying the schist at a depth of 200 to 400' below the surface. This theory is undoubtedly possible and was suggested by the formation in the Alaska Shaft and record of the drilling but the surface outcrops, the nature of the contacts and the very wide distribution of the schist along the surface and in other underground workings argue against such a condition and have convinced the majority of those who have studied the area that the diorite occurs as narrow dikes. Only further exploration and deep development in the mine itself can tell the story in a convincing manner.

MINERALIZATION: - -

The main fissure or shear zone in which the ores occur strikes from north  $10^{\circ}$  west to due north and can be traced for some three miles or more but pay ore seems to be confined to a length of 6000' from the south portion of the American Claim to the north end of the Great Pacific. This fissure was apparently formed by a violent tectonic movement which was perhaps to some extent connected with the intrusion of the rhyolite and there is evidence of one and probably two subsequent reopenings of the fissure. The width of this fissure is irregular, sometimes narrowing to 10' or less and again swelling to over 100', with an average of perhaps 60'. The depth also varies to some extent but will average about  $80^{\circ}$  to the east.

The filling of the entire fissure has been impregnat-

ed with metallic minerals to a greater or less extent but the pay ore is usually confined to two veins some 3 to 6' in width which sometimes join at points where the fissure is narrow but for the most part follow along the walls; - the so called Blue or East Vein on the hanging wall or the Black or West Vein on the footwall.

The mineralization appears to have been derived from solutions at low temperature and the first filling to have been composed largely of crushed wall rock and massive black calcite associated with only a small amount of silver but with some copper, lead and zinc. The second mineralization which took place after a reopening of the fissure brought in a finer calcite and more quartz and iron oxide and then either the final phase of this process or a third reopening and mineralization introduced still more quartz and iron oxide with barite and the bulk of the silver values which are generally found at points where the evidence of repeated disturbance and successive periods of mineralization is the most pronounced.

Post-mineral faulting is noted at several points and the splitting of the fracture which separated the Black Vein and Blue Vein in certain sections of the zone probably occurred concurrently with the second or third period of mineralization or may have been due to a separate disturbance which preceded both of them.

The better grade of the ore or pay streak filling is composed largely of fine calcite, quartz, fluorite, barite, manganese and iron oxide. Horn silver (cerargyrite) and argentite (silver/sulphide) have been found in places, usually near the surface, but most of the silver appears to be intimately associated

with the barite and manganese leading some geologists to conclude that silver is in the form of a "silver manganite" although no such mineral is definitely known to exist.

The vein which was reported to have been found in the crosscut on the 400' level at the Alaska Shaft was filled with crushed and altered diabase and carried 1.8 oz silver but with this exception and perhaps in some of the inaccessible workings on the America Claim the walls of the productive portions of the vein are schist and nearly all of the metallic minerals are oxidized. There is no positive evidence as to whether or not this upper section of the vein represents a zone of leaching which will be succeeded in depth by <sup>a</sup> zone of secondary enrichment, with primary ore still further below; and it is obviously of great importance to determine whether or not such conditions actually exist.

The effect of the various types of wall rock upon the vein has been two-fold, physical and chemical. In the schist it has been clearly demonstrated that the three stages of filling took place under favorable conditions and the black calcite was partly replaced or associated with barite and silver values.

From a physical standpoint the schist is a comparatively easily fractured rock and would always be affected by the recurrent reopening of the fracture, whereas the diabase is exceptionally tough and would normally be much less shattered by any such disturbances. Therefore the fissure, having been originally filled with the black calcite, was readily susceptible to remineralization in the schist while in the diabase such was not the case.

From the chemical standpoint the comparison is not so clear. At the Magma Mine the best values and largest ore shoots

are often found in the diabase while the reverse is true at Globe and in some of the other camps. At the Reymert the workings near the south end showed good values along the rhyolite but as yet no stopes have been opened anywhere in the diabase and although this rock was noted in the Alaska Shaft the diabase dikes, outcropping on the surface, do not cut through the vein except at the north end of the mine.

from both the physical  
Considering the situation/and chemical standpoints I think it fair to say that the chances for finding any good ore bodies either in depth or near the surface are very much poorer in the diorite ( or diabase) than in the schist. Therefore there would be very little incentive to explore in any large area of diorite if by chance that rock might be found to underlie the schist while the exploration in the schist below the water-level holds many attractive possibilities.

HISTORY: - -

This district was first prospected in the 1870's and the Reymert Mine was located by John Reymert and associates in 1886 and soon after sold to the Reymert Mining Company, controlled by Mr. John H. Van Dyke of Milwaukee. This company operated until 1891 during a portion of which period they treated the ore in a mill by chloridizing and pan amalgamation.

In 1912 an option was given to the Gunn-Thompson people, who sank the Alaska Shaft in 1913-1914 to a depth of 410' with a short crosscut run 57' to the east on the 400' level that located, 30' from the shaft, a vein in the diorite which at that point did not contain pay-ore. Further exploration was carried on by the Lincoln Issues Company (affiliated with the Gunn-Thompson interests) and the Magma Copper Company during 1919 and 1920.

This consisted mainly of diamond drilling but the seven holes then drilled were also in diorite and failed to find any commercial ore or to yield satisfactory cores.

Mr. Forbach and his associated first took a lease on the property in 1925, and with some interruption operated until the middle of 1941 when James Tod purchased the lease and operated until the middle of 1944. Subsequently the mine was again leased to Forbach who assigned this present lease to the co-partnership doing business as the Reymert Lease. During recent years most of the ore was shipped to the Magma Smelter at Superior or to the International Smelter at Miami.

A complete record of production up to September 1945 is appended to this report.

WATER TABLE: - -

Accepting as accurate the elevations given on the old maps and on those prepared in 1937 by the Eagle-Picher Company, it appears that the collar of the main Alaska Shaft has an elevation of 3097.47' above sea level and it is recorded that when sinking the shaft in 1912 water was first encountered at a depth of 220' equivalent to an elevation of 2877'. In other workings not far from this shaft conducted by Carrow in 1935, water was said to have been found at an elevation of 2900' or some 23' higher, but at times the standing water dropped to 2860' elevation. The geologists of the Eagle-Picher Company state that in their opinion this water did not represent the permanent water level but merely a "perched water table" and they concluded that any permanent water table existing in this district would only be found at much greater depth; but this opinion has not yet been supported by any actual observations.

The collar of the new A (or Australia) Shaft in which the operators have recently been working is given an elevation of 3320' and water was struck at a depth of 420' equivalent to an elevation of 2900'. The water in the Alaska Shaft, 2200' to the north, - has recently stood continuously at about the 2877' mark, but such a variation in the elevation of a water table is not at all unusual in mountainous country. Therefore, it appears that the present elevation of the water in the country between the Alaska Shaft and the A Shaft is from 2860' to 2900' regardless of whether this represents a "perched" or a permanent water table.

The flow of the water in the Alaska Shaft was reported to have been two gallons per minute at 220', - - or just about the same flow that was encountered in the Australia Shaft, - - but it increased to 30 gallons per minute at 230' and to 40 gallons per minute at 270' below which point it was nearly constant until they crosscut on the 400' level when it increased to 50 gallons per minute after the 8' vein had been cut.

I think that it has been demonstrated that ~~whether~~ the water table has remained practically constant for over 30 years and neither in the Alaska nor in the Australia workings has there been found any zone of secondary enrichment nor any evidence of primary ore although the percentage of sulphides of lead and zinc appear to have slightly increased in both sections of the mine, while the small percentage of copper seems to have remained fairly constant.

Any real change in the character of the filling of a vein of this nature would normally be expected to occur from 100' to 200' below the point to which the water rises in the workings. It is only in the Alaska Shaft that such a depth has been reached

and the shaft at this point is in the diabase where no pay ore has anywhere been found.

It is therefore my opinion in which I concur with Ira Joralemon (see Appendix page 7 ) that the first new exploration should consist of extending the east crosscut on the 400' level for another 40 to 50' to make sure that there is no other vein lying closer to the hanging wall of the fissure and then drifting north and south on the 8' vein or any better vein that may be found until the formation changes to schist which should occur within 300' or less in each direction, where additional crosscuts should be run to cut the width of the fissure.

LOW GRADE ORE and LOCAL TREATMENT: - -

During recent years a number of investigations have been made to determine the total tonnage and average grade of both the shipping ore and the low grade material which might be mined if a satisfactory method of local treatment could be developed.

In 1937 the engineers of the Eagle-Picher Company were able to measure and sample above the water level probable ore amounting to nearly 200,000 tons to which they gave an average content of over 8 oz. silver per ton. Some of this ore has since been mined but other reserves of low grade ore have been developed which more than compensate for the tonnage mined.

A year or two later a similar procedure was repeated by engineers of the Anaconda Mining Company, and I have been informed that their findings were similar although I have never seen their report.

During the spring of 1945 engineers of the Magma Copper Company conducted an examination, and I was informed that their findings generally confirmed those of the Eagle-Picher Company.

In connection with all the above it should be noted that although there is a wide zone of crushed and mineralized rock throughout the entire length of the vein, yet the pay streaks have nearly always been found along the foot and hanging walls and between these streaks the vein-filling, - where sampled, - was often found to contain not more than 3 or 4 ounces of silver, although there may be sections of higher grade.

Mining by the lessees has nearly always been done by open stoping which was timbered with square sets, most of which were not filled. In many places the ground has become too heavy for the timbers and there have been caves in which much good ore has been lost or made inaccessible. Only the higher grade ore (15 ounce or better) has been intentionally taken and a great deal of lower grade material has been left in the walls or between the ore shoots.

This system of mining has many disadvantages but is probably the only method that could have been followed to produce shipping ore, but if the average product could be reduced, to say 8 ounces (through building a local mill) and still leave a profit a great many of those old stopes could be reopened and worked for production of a large tonnage.

It is my opinion that a thorough examination of the entire mine down to the water level, which would involve catching up many of the old workings, would probably reveal the existence of over 300,000 tons of ore that would average better than 8 oz of silver per ton.

CHARACTER OF LOW GRADE ORE AND TREATMENT: - -

No effort has been made to determine an average complete analysis of the ore taken from this mine and many of the shipments and samples have only been assayed for silver. Some

of the ore contains a noticeable amount of barium which presumably has been classed as insoluble.

Based on the analysis of shipments made during the last four years and samples previously sent for metallurgical tests, I give below what I believe to be an approximate analysis, although this varies greatly in different sections of the mine.

|                                |           |     |     |                    |
|--------------------------------|-----------|-----|-----|--------------------|
| Ag                             | - - - - - | say | - - | 8.00 oz to 10 oz   |
| Pb                             | - - - - - |     |     | 0.180 % plus       |
| Zn                             | - - - - - |     |     | 0.15 % plus        |
| Cu                             | - - - - - |     |     | 0.10 % to 0.50 %   |
| Mn O <sub>2</sub>              | - - - - - |     |     | 3.50 %             |
| Fe <sub>2</sub> O <sub>3</sub> | - - - - - |     |     | 28.00 % to 40.00 % |
| Ca CO <sub>3</sub>             | - - - - - |     |     | 20.00 % to 40.00 % |
| Insol                          | - - - - - |     |     | 45.00 % to 65.00 % |

Included in the insoluble is a small and varying percentage of Al<sub>2</sub>O<sub>3</sub> and a larger quantity of Ba SO<sub>4</sub>. Occasionally sulfides of copper, lead and zinc are noted and samples taken near the water level in the Australia Shaft workings carried up to a maximum of 3.40 % Pb, 1.90 % Zn, 1.65 % Cu and gold 0.04 oz per ton. The gold content in many shipments was only a trace but has recently been up to 0.01 oz.

Numerous tests have been made by various parties to determine if it would be possible to economically concentrate or recover the silver in the low grade ore, but all standard methods including leaching, flotation and cyanidation have so far given unsatisfactory results.

E. H. Crabtree, metallurgist for the Eagle-Picher Co. tried out a number of combinations of various processes and concluded that a recovery of 85% of the silver might be ob-

by fine grinding  
tained/in water solution either with or without lime and counter-  
current cyaniding but the cost of such procedure is prohibitive.  
However there is constant progress in the art of metallurgy and  
reason to hope that this problem may yet be solved and eventually  
give some commercial value to the large tonnage of low grade ore  
left in the upper workings of the mine.

I do not believe that anyone has yet attempted to work  
out a method for economically saving any of the by-products such  
as the small quantities of manganese or barium and during the  
past twenty years all of the production from the Reymert Mine has  
been shipped directly to the copper smelters where under certain  
conditions it has some fluxing value.

FUTURE PRICE OF SILVER: - -

In connection with all future plans at the Reymert  
special consideration must be given to the probable market for  
silver, since there is as yet no assurance that any other metal  
will be found in commercial quantity. In this connection I can  
only say that every effort is going to be made by all those in-  
terested in silver to have the government maintain the present  
pegged price of 71.1¢ per oz for several years to come and that  
in all of my calculations I have assumed that they would be suc-  
cessful in that effort.

PROBABLE CONDITIONS AT DEPTH : - -

From the upper two hundred feet of the vein the Rey-  
mert Mine has produced in round figures, 160,000 tons of ore  
containing 2,500,000 ounces of silver. The remarkable strength  
and persistence of the Reymert Vein of the surface, and the oc-  
currence of numerous shoots of pay ore over a length of 6,000'  
lying between the surface and the upper water level seem to call

for a far more comprehensive exploration at depth than has ever been undertaken.

Obviously the future value of the mine and the total extent for the ore reserve depend almost entirely upon conditions which may exist below the water level and these in turn seem to hinge upon three factors :

- (a) The downward extension of the shear zone in the schist.
- (b) The existence of zones of secondary enrichment and of primary ore, and
- (c) The tonnage and grade of such secondary and primary ore as may be found.

On the reasonably safe assumption that the schist continues to a much greater depth than the present workings, - excepting where it is cut by the diorite dikes, the fissure and shear zone will probably continue to maintain their width and length and the general character of the filling should not greatly change so that the factor of grade would be the only variable.

All of the ore which I have observed is heavily oxidized and I can find no reliable record of any evidence of secondary enrichment which must exist, if at all, in a zone below the workings. In any such zone of secondary enrichment the values will undoubtedly show a very substantial increase; to what extent it is impossible to predict, but one might reasonably visualize bodies of 30 to 40 oz silver ore. As to the value and character of the primary ore, if any, we have little information, but the solutions which mineralized the Reymert Vein appear to have originated from a deep seated magma and in spite of differences in the local geological conditions primary ore bodies

similar to those which were found below the oxidized zone and to a depth of three or four thousand feet in the Magma and the Old Dominion Mine may be hoped for below the permanent water level in the Reymert.

While the record of the Alaska Shaft below the 200' level and the log of the Magma Company diamond drill holes are not encouraging they only reflect ~~conditions~~<sup>conditions</sup> in the diorite and therefore they are entirely inconclusive and a thorough exploration of portions of this vein in the schist below the water level would containly be well justified.

Since the physical character of the ore zone is such that no satisfactory drill cores can be obtained until the primary ore is encountered such work should, in my judgment, be carried on by shafts and drifts utilizing as far as possible the existing facilities and previous development. The outcome of such a procedure is, of course, problematical but I am of the opinion that it may be definetely classed as an attractive mining venture.

EXPLORATION AND DEVELOPMENT RECOMMENDED: --

After visiting in 1941 all of the then accessible workings, revisiting many of them since that date, personally watching all of the work which has subsequently been done and discussing the situation with the men most familiar with the mine and with several competent engineers and geologists who are familiar with the property it is my opinion that new exploration should be started from the Alaska Shaft which first of all should be re-equipped for operation and cleaned out to the 400' level.

While Col. Tod was operating the mine the water was pumped down for a considerable distance and the shaft and timbers were found to be excellent shape giving every reason to expect  
in

that similar conditions will maintain all the way down to the sump and that the total expense of putting the lower part of the shaft in operating condition with piping, guides, ladders, etc, and resuming work in the east crosscut on the 400' level,- (unless this should prove to be badly caved) will not exceed \$3,000. Equipping the shaft for operation will involve the purchase and installation of a new or second-hand power unit, hoist and compressor, pumps and some new drills and steel to supplement the material which is already at the mine. This will likely involve an expenditure of \$15,000.00 or somewhat less.

The first actual exploration should involve the extension of the crosscut on the 400' level for another 40 or 50' to the east in order to make sure that the entire width of the fissure had been explored and any vein or branch-vein lying close to the hanging wall had been opened up.

The next work, in my judgment, should consist in running a long drift along the already discovered vein or any better vein that may be found, extending this drift both to the north and south through the diorite and into the schist.

From showings on the surface and in the upper workings it would not appear that the diorite dike should extend for a total width (north-south) of more than 600 to 800' and I believe that drifting on either direction 400' from the crosscut should surely serve to bring the ends of both drifts into the schist. After that crosscuts should again be run, in that formation for the full width of the fissure, say 100'. Therefore visualize that the total drifting and crosscutting on the 400' level will amount to probably a little over 1000' and the cost of this work under present conditions will probably be in the order of \$15.00

per foot.

While I do not advocate the further sinking of the Alaska Shaft until the 400' level has been thoroughly developed in accordance with the above program ( which may be modified from time to time as conditions require) yet, unless these conditions should prove to be most discouraging, it will next be in order to continue sinking, preferably to the 600' level, and then to repeat much of the cross-cutting and drifting already done on the 400' level.

The total maximum expense of the advised exploration and development may thus be estimated as follows:

|  |               |
|--|---------------|
| New equipment and installation                             | \$15 000      |
| Recondition shaft and 400' level                           | 3 000         |
| 1,000' of drifting and crosscutting on 400' level          | 15 000        |
| Sinking Alaska Shaft on additional<br>200' @ \$60 per foot | 12 000        |
| 1,000' of drifting and crosscutting on 600' level          | <u>20 000</u> |
|  | \$65,000      |

I do not anticipate that more than \$50,000 will have to be spent before it will become apparent that either (a) you have been opening up substantial bodies of pay ore against the extraction of which the further work can properly be charged; or (b) that geological conditions are such as to completely discourage any further exploration.

Since we have every reason to believe that good ore was left in the bottom of the old workings both south and especially north of the Australia Shaft where high grade ore was taken from the Alaska and America claims it is fairly certain that by connecting up the 400' level with these old stopes a fairly large

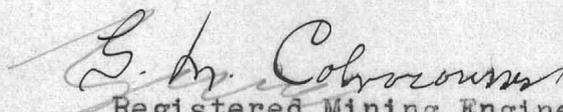
tonnage of shipping ore can be mined above the 400' level and bring in some returns which should partially offset the expense of the new work.

Aside from the net return from such ore as may be taken out below the old stopes, the investment which may be made for the exploration and development at depth must be considered as representing a speculative mining venture but it will be based upon sufficient favorable evidence and indications to make it, in my opinion, a fully justified and attractive speculation.

There is always the chance that the mere extension of the 400' level crosscut will serve to find the true vein further to the east but even so I would not expect it to carry any pay values while the walls are composed of diorite. Joralemon mentions having been informed that iron-stained schist was coming in at the east end of this crosscut but other reports describe these workings as being all in diorite and it will not be prudent to anticipate worthwhile discoveries of ore until the drifts have been advanced for several hundred feet and have definitely passed through the diorite dike in at least one direction.

Yours very truly,

GMC/tar

  
Registered Mining Engineer  
in Arizona # 761

Attached:

- (a) Record of Reymert Mine Production, page 19.
- (b) Appendix 14 pages.

Exhibits:

- Exhibit A - Longitudinal Section Map of Mine (in roll).
- Exhibit B - Cross Section of Alaska Shaft.

REYMERT MINE PRODUCTION

COMPILED FROM VARIOUS REPORTS AND RECORDS OF THE  
COMPANY IN MILWAUKEE

| <u>Year</u>     |                        | <u>Tons</u>    | <u>Average Silver</u><br><u>oz. per ton</u> | <u>Approximate</u><br><u>total</u><br><u>Silver Ounces</u> | * |
|-----------------|------------------------|----------------|---|--|---|
| 1886            | )                      | ?              |   |  |   |
| 1887            | )                      | 849            | 22.8  | 19,367   |   |
| Jan - 1888)     | )-Company<br>operation | 5,326          | 31.71                                       | 168,886  |   |
| Mch - 1889)     |                        |                |   |  |   |
| Mch 25, 1889    | )                      | 11,890         | 19.30                                       | 228,651  |   |
| Feb 8, 1891     | )                      |                |   |  |   |
|                 | )                      |                |   |  |   |
| 1925 & 1926     | )                      | 5,175          | 16.10                                       | 193,990  |   |
| 1927            | )                      | 6,743          | 18.00                                       | 121,374  |   |
| 1928            | )                      | 6,916          | 16.19                                       | 112,013  |   |
| 1929            | )                      | 4,536          | 17.25                                       | 78,253   |   |
| 1930            | )                      | 799            | 15.33                                       | 12,074   |   |
| 1931            | )                      | 217            | 16.00                                       | 3,427  |   |
| 1932            | )                      | No returns     | - -   | - -  |   |
| 1933            | )                      | No returns     | - -   | - -  |   |
| 1934            | )                      | No returns     | - -   | - -  |   |
| 1935            | )                      | 7,588          | 14.357                                      | 198,941  |   |
| 1936            | )                      | 11,497         | 11.29                                       | 129,301  |   |
| 1937            | )                      | 10,051         | 11.348                                      | 114,609  |   |
| 1938            | )                      | 15,195         | 16.229                                      | 246,603  |   |
| 1939            | )                      | 20,908         | 11.598                                      | 242,499  |   |
| 1940            | )                      | 20,609         | 10.259                                      | 212,264  |   |
| 1941            | )                      | 9,147          | 10.02                                       | 91,662   |   |
| 1942            | )                      | 8,057          | 15.043                                      | 121,215  |   |
| 1943            | )                      | 2,980          | 12.50                                       | 37,251   |   |
| 1944            | )                      | 1,454          | 12.83                                       | 19,072   |   |
|                 |                        | <u>151,053</u> | <u>15.11av.</u>                             | <u>2,283,890</u>   |   |
| 1945 Apt to Sep |                        | 11,366         | 15.00(about)                                | 170,490  |   |
|                 |                        | <u>162,419</u> |   | <u>2,454,380</u>   |   |

\* Some of these figures may represent only the silver paid for by the smelters.

## APPENDIX

During my connection with the Reymert Mine I have obtained and carefully studied many reports by other engineers or geologists and have also made previous reports to the owners.

The great bulk of their texts comprised comment on conditions which existed and work which was in progress at the time that these reports were written and of course, there was much repetition in respect to geology, etc.

On the following pages are given extracts which seem to me to cover the most important points and those which have a bearing on the character and probable results of future exploration.

*S. H. Colverson*

(1)

APPENDIX

From the Report of F. W. Oury, M. E. 1891

"The Vein: The distinctness with which the vein outcrops, the fact that it can be traced plainly along its course for a long distance, and the character of the country rock in which it occurs, all make it undoubted that this deposit of ore is a true fissure vein.

The country rock is a highly metamorphic mica schist occurring in distorted forms with perfect cleavage surfaces, which facts are unmistakable signs of the enormous lateral pressure to which it has been subjected and assure the observer at once, that the vein is the filling of a very extensive rupture of the rock, caused by the pressure. The evidences which everywhere appear of this great force which has been at work, and the contortions which it has produced, as well as the firmness and distinctness of the vein, not only on the surface, but as far down as it has been disclosed, are unmistakable proofs of its permanence, and leave no doubt." (in that respect).

From a letter to: Mr. W. H. Aldridge  
14 Wall Street  
New York City

from: W. C. Browning of Lincoln Issues Company  
Superior, Arizona

May 8, 1914

" Dear Mr. Aldridge:

RE: Reymert Mine

We have corsscut the vein on the 400' level at Reymert Mine without securing any very encouraging results. The vein has a width of 8' and a sample taken from that width assayed as follows:

|        |        |
|--------|--------|
| Silver | 1.8 oz |
| Gold   | Trace  |
| Lead   | 1.7 %  |
| Zinc   | 3.0 %  |

On the foot wall is a 2" or 3" streak of material that shows some galena. Sample of this material assayed 13½ ounces of silver and 26% pb. The vein material is quartz and black calcite, showing some manganese and iron stains. The wall rock on both sides of the vein is diorite similar to what you saw when here last. I would like the looks of the vein better if one of the wall rocks was schist. Another surprising feature is that we are not getting more than 10 gallons of additional water per minute since we cut the vein."

From a letter to: Mr. Thomas F. Cole  
c/o Calumet & Arizona Mining Co.  
Bisbee, Arizona

from: Nelson P. Hulst, M. E.

December 4, 1916

"It appears that at the bottom of the shaft the vein was crushed, partly altered diabase in which seams and bunches of calcite, quartz, iron and manganese oxides.

I am led to believe from the tenor of Mr. Browning's letter respecting the exploration work of the Lincoln Issues Co. as per our copy (which says, "I presume you will wish to start sinking the shaft again and do additional development work, on say the 600' level") that Mr. Browning thought it worth while to carry the exploration deeper.

deeper.

To my mind the fact that only 10 gallons of water was the flow from the so called 8' vein in the cross-cut at bottom of the shaft, indicates quite conclusively that the 8' vein in the diabase is not a part of offshoot of the main large vein showing a width of 60' at the surface, because where they had this true vein in the shaft about 180' above the crosscut the flow was 40 gallons per minute. The true vein must be to the east of the face of the cross-cut."

From a report by Ira B. Joralemon on REYMERT MINE 1914

"The Reymert vein outcrops for a length of nearly 3 miles, with a few short interruptions. The rocks cut are diabase (or diorite) <sup>and</sup> schist. The strike of the vein is from due north and south to N. 20° W. and the dip averages 80° east. The seven claims of the Reymert Mining Co. take in about 6,000' along the vein. . . . .

The outcrop of the Reymert vein is made up of black calcite, with varying amounts of manganese and iron oxides. In places there is also more or less quartz, and sometimes barite. Often the vein is in two branches, with horses of country rock between them. In the America, the north claim of the Reymert Group, and in the Knickerbocker Group north of the Reymert, one or both walls of the vein are diabase. In the diabase, the vein is seldom over 15' wide, and often consists only of stringers of iron and manganese, oxides and of calcite. South of the center of the America claim, both walls are schist. Here

the vein greatly widens, reaching in the Alaska claim a width of over 60' of calcite, with bands of manganese and iron.

The Lincoln Issues Co. sunk a 400' shaft on the Alaska claim to develop this part of the vein. The shaft started in vein material. At 150' depth the footwall came in the west end of the shaft, and at 250' left the east end. The vein material cut by the shaft averaged a little over 6 ounces of silver, with insignificant amounts of copper, lead and zinc. It is thoroughly oxidized where the vein leaves the shaft. Although on the surface and on the tunnel, or 30' level, both walls of the vein are schist, the footwall as shown from 150' depth to the bottom of the shaft is all diabase.

On the 400' level a crosscut was run through the diabase to the east to cut the vein. The footwall was encountered 30' from the shaft, almost exactly in line with that above. Although on the surface the vein was over 60' wide, on the 400' level it is only 8' wide. Most of this vein on the 400 is crushed, partly altered diabase. Through this material are scattered seams and bunches of calcite, quartz, iron and manganese oxides. The only visible valuable mineralization is in a three or four inch seam on the footwall, which contains more or less galena. According to the superintendent, the 8' of vein on the 400 level assays 1.8 oz of silver, 1.7 % lead and 3 % zinc. The crosscut passed through about 8' of diabase in the hanging wall, and for the remaining 10 to 12' of it's length cut slightly iron stained schist.

As a whole, the Reymert Vein has a remarkably striking surface showing, both in size and in the intensity of mineralization. The large bodies of 5 to 20 ounce silver ore cannot be recovered without a chloridizing roast, and little of the ore is rich enough to justify this process. The new work done by Lincoln Issues Co. does not leave much hope for finding ore at greater depth at that point. This may be due to the influence of the diabase, which forms the walls of the vein on the 400' level. The outlook where the walls are schist is much more favorable than where the walls are diabase. Further south it seems reasonably certain that the walls will be schist to great depth.

The presence of a little zinc in the oxidized zone makes it likely that the sulphide ore will be base, and hard to treat. There should, however, be places where the silver values are concentrated to form rich ore. In the southern part of the property the copper tends to increase and there may be bodies or enriched copper ore areas at a depth of 500' or more. While not so large as the outcrops on the Alaska claim it seems to me that the veins on the Africa claim have a better chance of containing good ore in depth. . . . .

I should suggest running a long drift south on the vein on the 400' level, with cross cuts to determine the width of the vein, and sinking to the 600 level and drifting to the south there also."

From a letter to: Mr. W. H. Aldridge  
14 Wall Street, New York City

from: Seeley W. Mudd  
Engineer of Mines  
1208 Hollingsworth Building  
Los Angeles, California

July 2, 1914

"I note Mr. Joralemon's reference to the desirability of work at some other point, other than the sinking of the 400' shaft to a greater depth. Perhaps the Africa outcrop may seem a little more favorable to the eye but on the other hand the largest and best stopes are at the north of the deep shaft on the Alaska. Personally, if further work is to be done, I would favor sinking the present shaft and drifting on a still lower level north and south on the vein.

You ask what I think about diamond drilling: Ordinarily I am much inclined toward drilling, but in this case cannot favor it very strongly. The vein is nearly vertical and if drilling were done it is probable you would want to put down inclined holes. There would be danger of deflection and some uncertainty as to where the vein would be found. If the vein retained its calcitic character, I fear you would get comparatively little core. You surely would not get much core, nor very satisfactory material from a broken shattered rock for little core could be expected of it, and there would be a serious danger of losing your water and, therefore, great doubt as to whether you would recover the drillings from the material passed through."

From a letter to: Mr. Thomas F. Cole  
c/o Calumet & Arizona Mining Company  
Bisbee, Arizona

from: Nelson P. Hulst

November 17, 1916

"It appears that at the bottom of the shaft the vein was crushed partly altered, diabase, in which were seams and bunches of calcite, quartz, iron and manganese oxides.

I am led to believe from the tenor of Mr. Browning's letter respecting the exploration work of the Lincoln Issues Company as per our copy (which says, "I presume you will wish to start sinking the shaft again and do additional development work, <sup>on</sup> say the 600' level") that Mr. Browning thought it worth while to carry the exploration deeper.

To my mind the fact that only 10 gallons of water was the flow from the so called 8' vein in the cross cut at bottom of the shaft, indicates quite conclusively that this was not the main vein showing a width of 60' at the surface, because where they had this true vein in the shaft about 180' above the cross cut, the flow was 40 gallons per minute. The true vein must be to the east of the face of the cross cut."

From a letter to: Mr. Thomas F. Cole  
Warren, Arizona

from: Ira B. Joralemon

January 12, 1917

"Dear Sir: -

After going over the correspondence concerning the Reymert Mine, I think my report of June 17th, 1914 covers the situation as well as I can cover it. I think the work suggested in that report is worth doing. In addition it might be worth while to continue the cross cut on the 400' level for about 100' further east, to make sure that there is

not another branch of the vein.

The drift south on the vein on the 400' level should be run for at least 1500' and a similar drift should be run on the 600' level.

It might be well to postpone development of the Africa claim until the results of this drifting are known.

Ira B. Jorelemon"

From a letter to: Mr. J. H. Tweedy  
Milwaukee, Wisconsin

from: W. Tovote of ROOS & TOVOTE  
Consulting Mining Engineers  
Tucson, Arizona

October 24, 1917

"The Reymert has a wonderful showing at and near the surface, where a block of schist produces geologically favorable conditions for ore deposition. In depth the schist leaves the vein or rather the vein leaves the schist and the new work done by the Gunn-Thompson people shows the vein between two diabase walls. The vein here is poor and narrow. While the possibility remains that only a branch of the vein has been opened and that another branch remains in the hanging wall on the 400' level. I would not rely upon this possibility, even if it is worth investigating. It is an established fact in the Globe district, geologically identical with the Reymert country, and which has been explored far more, that the veins are poor and weak where they are found between two diabase walls, but that they improve as soon as one wall is made up by a different rock, immaterial whether foot or hanging wall. The diabase (at Globe) occurs in more or less horizontal sills of varying thickness which are displaced or shifted in relation to each

other by the fault-planes in which the veins were formed. It is, therefore, only a matter of depth or lateral development to find the vein again in favorable place with great probability of improvement in mineralization.

To establish these possibilities a careful geological mapping should be required. My deductions are based on the geology of the Globe district and especially the Old Dominion Mine where I was geologist for nearly three years (1911 to 1914)."

From Report to EAGLE-PICHER COMPANY by Robert M. Hernon  
1937

"The vein is a very prominent fissure vein composed of the minerals: calcite, quartz, barite, Mn oxides, Fe oxides and small amounts of fluorite and some unknown silver mineral. The vein strikes across the schist country rock nearly at right angles to the schistosity. Where the vein crosses diorite int<sup>r</sup>usive or encounters diorite in depth, it tends to narrow, split up, and apparently becomes low grade. Faulting has resulted in a strike-slip of about 280' to the left along the vein. Cross-faults are of little importance, and offsets on them are to the right.

The mineralization occurred in three main periods. First, fissures filling with black calcite; second, reopening and fissure filling quartz; third, reopening and fissure filling with quartz barite and the introduction of the main silver values. The nature and texture of the vein filling indicate it to be of epithermal type.

Information is not available as to whether en-

richment took place or not. . . . .

TOPOGRAPHY - The Reymert mining claims lie in a belt crossing the lateral spurs of a long ridge. The main ridge runs north-south and the claims lie on the west side of the crest. The hills and gulches are steep-sides, but with generally smooth soil covered sides, covered with typical desert vegetation of which the giant sahuaro is the most conspicuous. Elevations vary from 2700 to 3500' above sea-level. . . . .

ADJACENT MINES - Several groups of claims, some patented and some unpatented, lie south of the Reymert group. These include the Woodpecker, Ajax, Ajax #1, and the Tally-Wall group among others. Production is small and silver is the valuable metal. The mineralization is similar to that of the Reymert vein except the Tally-Wall property where the values are silver but the gangue is sugar quartz.

The Magma Mine at Superior is one of the richest copper mines in the state. It's production amounts to about 70 million dollars since 1914, though the figures are not complete. Their ore averaged slightly under 6% copper last year. The ore is milled and smelted locally. "

From a letter to: Mr. W. D. Van Dyke, Jr  
Reymert Mining Company  
902 Wells Building  
Milwaukee, Wisconsin

from: Mr. G. M. Colvocoresses

April 5, 1941

" I am enclosing as Exhibit A a record of the

(8)

September 19th, 1941

Reymert Mining Company  
902 Wells Building  
Milwaukee, Wisconsin

Re: Operations under Tod Lease  
Report #5

Gentlemen:

On the 17th I visited and inspected portions of the Reymert Mine and will comment as follows:

Alaska Shaft and South Alaska

Work here has been confined to the advance of the south drift on the 200' level, the breast of which was 85' from the shaft.

Assays of muck samples had shown very little values until the 16th when a stringer of heavy galena came into the drift from the west wall and a sample taken that day ran 7.5 oz. silver while on the following day the sample carried 9.1 oz. The width of the galena varied from a few inches to nearly two feet and this showing is encouraging as the stringer may be heading toward the Black Vein which, according to survey, is still some 40' distant from the face of the drift.

A production of ore may be expected from this ore shoot during October.

A. Shaft in Australia Claim

The new shaft which was raised through from the adit has been timbered, head frame erected and the ore bin partly completed. The new roads to the collar of the shaft and to the ore bin have been built and foundations were being set for the hoist at the time of my visit.

Production of ore from this shaft, from which a lot of waste must first be cleaned out, should start during October and it is from this portion of the mine that the Lessees are counting on making their main production during the balance of this year although they are as yet far behind their schedule and have obtained no very definite information as to the grade or tonnage

of ore which may be produced from the old Forbach workings which caved in during his operations.

### South workings on Europe Claim

Recent shipments have come entirely from this portion of the mine and neither the tonnage nor grade has been satisfactory as you will note from the settlement sheets. The ore occurrence in the upper levels has proved to be extremely pockety and values erratic so that there has been but little improvement in the grade of the shipments to date.

### Ore Production

Only the eleven cars mentioned in my last report were shipped during August since breaking down of portions of the equipment brought the work to a standstill during the last week of that month and the first week of September. Up to date returns from only three September shipments had been received but as usual the management hope and expect to speed things during the balance of the month.

So far the returns from the smelter continue to fall far below the cost of developing and mining the ore and it does not appear that this condition will change unless and until a much higher grade of ore is found and mined in the A. shaft workings.

### Mill Test

Conditions at the testing laboratory of the University of Arizona made it impossible to carry on this work to date but it is expected that some progress will be made during the next few weeks.

### General

Improvements at the camp continue with the rebuilding of a mess house and additions to the dwellings and office. Also some new mining equipment has recently been purchased and installed.

A crew of 25 men is employed and I was told that expenses were running about \$6000 per month.

Personally, I have been much disappointed that Tod has so far failed to carry out his verbal promise to proceed with development in depth both in the Alaska and in the Europe Claims because I still believe that the future of the mine must depend upon the downward extension of the higher grade of material which has so largely been worked out from the upper levels and I can foresee only a continuing and increasing operating deficit as long as the present policy is followed. I have but little doubt that both Tod and Smith will eventually find themselves in agreement with this opinion but

Reymert Mining Company

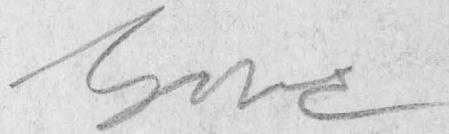
#3

September 19th, 1941

it is a question as to whether or not the faith and financial resources of the former will then be sufficient to permit him to carry out a program which will fully develop the possibilities of the mine.

I will plan to visit the mine again around the end of this month and then advise you further respecting progress.

Yours very truly,

A handwritten signature in cursive script, appearing to read 'GMC', is written in dark ink.

GMC:at

Transcribed and mailed after Mr. Colvocoresses had left Phoenix.

6  
November 5, 1941

Reymert Mining Company  
902 Wells Building  
Milwaukee, Wisconsin

Re: Operations under Tod Lease  
Report #6

Gentlemen:

On November 4th I visited the Reymert Mine and went through the operating portions with Cosgrove, the foremen.

ALASKA SHAFT AND SOUTH ALASKA

6  
On the 200' level the South drift has been advanced to a point 180' from the shaft, and the last 60 feet has followed the Black Vein which was encountered as expected, but proved to be most disappointing, both in width, which has rarely exceeded three feet, and in value, which has run from three to six ounces in silver, being far below a shipping grade. The showing in the breast of this drift seemed a little more promising and the operators intend to continue for the time being. Should they be successful in finding pay ore, they hope to be able to follow this south to the B shaft, but otherwise, they may discontinue this work in the near future.

About 85' South of the shaft a little good ore was found as noted in my report of September 19th, but this appeared to be the top or apex of an ore shoot, as width was greatest along the floor of the drift, and although the showing pinched out in less than 20', Cosgrove believes that it would be much better at greater depth, and somewhat later he hopes to be able to explore this possibility.

No other work is now being done in the Alaska workings.

A. SHAFT IN AUSTRALIA CLAIM

The new shaft described in previous reports is not operating in a satisfactory manner and on what I shall term the first level, (being about 140' below the adit tunnel in the South side of the gulch), the drifts are being run both North and South. The North drift is the best, and has advanced 55' from the shaft all in fairly good ore, running from 10 to 14 oz. The face at the time of my visit was 8' wide.

The South drift has been advanced 70' and in places the ore is good but elsewhere there is a preponderance of soft black manganese oxide, almost like soot, which carries only about 6 oz. in silver; however, all material from this drift has been shipped as ore, and it is hoped that the average grade will improve.

The shaft had been sunk 55' below this level where a station was to be put in and a second level started, both North and South. The bottom of the shaft was in good ore at least 7' wide. The main production of the mine is likely to come from this shoot for several months to come, and this particular operation should be profitable if the grade can be kept up there or 13 oz.

On the Europe Claim, only a little ore is now being produced from a stope above the adit near the upper road; since the grade of this material continues to be generally unsatisfactory, I do not anticipate that this stope will operate much longer.

The mine and camp equipment have been somewhat improved and the hoist at the Alaska shaft is working well, while a new cylinder head has recently been obtained for the compressor.

At the A. shaft, the ore bin has been jacked up to give it a floor slope of 44 degrees, in place of 38 degrees, on which it was originally, and very stupidly, built; and the buckets are now hoisted and dumped rapidly and efficiently.

At the camp, two new dwelling houses are in process of construction, and the office has been enlarged.

#### GENERAL

Since both Tod and Smith had planned to visit the mine on the 4th, I had hoped to have an opportunity to discuss matters with them on the ground, but in this I was disappointed, as they did not show up; however, I shall find an opportunity to see Tod before long.

I was informed that the metallurgical experiments are still being conducted in Tucson, and will likely continue until the latter part of this month. Results are said to be encouraging and a recovery of as much as 88% of the silver has been obtained in the laboratory.

Smith and Cosgrove estimate that there are 200,000 tons of ore above the water level which will average 8 oz. silver and which, at present price for that metal, could be mined and milled with profit, if a better than 80% recovery of values can be assumed. Tod will doubtless accept these estimates, unless it should occur to him that it would be wise to have them checked by some independent engineer.

Personally, and confidentially to you, I do not believe that any profit could possibly be expected from part of this tonnage, which seems to average only about 6 oz., or from other sections of somewhat better grade material which is so located that mining costs will be high; therefore, I should not advise you to invest in such a treatment plant, even if you were otherwise disposed to do so, unless and until a much larger tonnage of pay ore (and by that I mean 10 oz. ore) had previously been developed, either above or below the 200' level.

The production of ore has continued to be disappointing in both tonnage and grade, but if the shoot at the A. Shaft holds out, the rate of production should certainly be improved during November and December, and there is reason to hope for a somewhat higher grade since this is unquestionably the best ore that Tod has opened up since he took over the property.

Yours very truly,

GMC:es

P. S. I take this opportunity to acknowledge and thank you for remittance of \$100.00 covering my fee for the month of October, and also to say that I shall endeavor to visit the property again sometime after the middle of this month, to check up on the metallurgical experiments, and also to obtain information from Mr. Tod regarding his plans for constructing a mill which was referred to in your letter to me of October 23, but which I understand will not be definitely formulated until experimental work has been completed.

G.M.C.

4

August 25th, 1941

Reymert Mining Company  
902 Wells Building  
Milwaukee, Wisconsin

Operations Under Tod Lease  
Report #4.

Gentlemen:

I have recently visited the Reymert Mine and inspected the workings, checked over the operations and discussed the future program with the management. The Lessees continue to comply with all of their obligations under the Lease Agreement, but the results of their mining are still disappointing from the standpoint of production and returns.

Alaska Shaft and South Alaska.

All repairs to the 200' level have been completed and the cage is working smoothly.

The ore in the south drift on the 135' level proved very low grade and advance at this point has been temporarily discontinued.

4. However, the south drift on the 200' level has been driven some 50' and is advancing steadily and while it has not yet made pay ore the values are increasing and the main ore shoot on the Black Vein should be reached some 60' farther to the south. This has not previously been mined below the 68' level where values were reported to have been about 15 oz. per ton.

North of the shaft there was practically no pay ore exposed on the 200' level, but the operators plan to fill in portions of the old stopes above in order to mine a considerable tonnage which was left on the walls and in which the samples which they have taken to date have averaged about 12 oz.

From the South Alaska production has been discontinued as the grade of the ore fell to below 10 oz., and no work is now in progress in the B. workings on the Asia Claim.

A. Shaft in Australia Claim.

During the past month most of the development work has been concentrated at this point. The raise from the adit level has holed through to the surface and has been completely timbered to form a working shaft which is now being equipped with gallows frame and

2- Reymert Mining Co.,

ore bin to which a new road is under construction.

This shaft dips to the east at an angle of 78 degrees and the collar is 52 feet above the adit from which the shaft (formerly the winze) continues to the two lower levels. The operators believe that their best body of easily accessible ore remains in these workings, a portion of which caved in while Forbach was mining there. They are accordingly making all possible speed with two shifts to bring this section of the mine into production and are counting on it to produce steadily by late September or October when they believe that the grade of their output will show a substantial improvement.

#### South Workings on Europe Claim.

But little progress has been made here since I last reported. The south drift on the 70' level ran into such a low grade of material that the advance has been suspended, but it is planned to resume further sampling and development as soon as the A. Workings are brought into production, and meantime Ted is evidently limiting the rate of expenditure, a portion of which has recently been applied to the purchase of some ore cars and other items of equipment and to the repairs of the plant at the Main Alaska Shaft.

Meantime some ore will be mined from the raises and partially worked stopes in the upper levels.

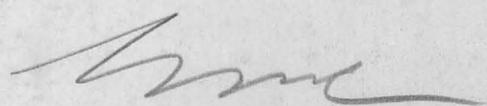
#### Ore Production.

August shipments up to the 23rd had amounted to approximately 600 tons (11 cars) with a possibility that at least four more cars will be shipped before September 1st, making a total of some 15 cars or about 800 tons. In point of tonnage this is a substantial improvement over June and July, and the average grade of August shipments has been so far just a little better than in July, but still falls short of yielding any profit to the Lessee.

#### Mill Test.

Ted and Smith still feel that the final solution of their problem will depend upon the erection of a treatment plant at the mine which should permit them to handle with profit the large tonnage of 8 to 10 oz. ore that cannot be mined for direct shipment to a smelter. Therefore they are continuing the testing of the ore by various milling methods and hope to make substantial and encouraging progress during the next two months.

Yours very truly,



GMC:df

December 21, 1942

Reymert Mining Company  
902 Wells Building  
Milwaukee, Wisconsin

Re: Reymert Report #20

Gentlemen:

On the 18th inst. I visited your mine and checked up on recent work and shipments.

#### DEVELOPMENT (Australia Workings)

Since my last visit development has been confined to the extension of the north and south drifts on the 300' level from the A Shaft.

The south drift now has a length of 113' and the vein has held a width of 3 to 4 feet but the values of samples have been somewhat erratic and have not averaged much better than 12 ozs. silver, so that some sections of the vein may have to be left in place when stoping is started.

The north drift has a total length of 181' from the shaft and the ore is of a somewhat higher grade but samples do not average better than 15 ozs. This drift, as previously mentioned, has followed the eastern branch of the vein whereas it is believed that the work which Forbach did was on the west branch and that his winze and caved stopes which have already been passed, presumably lie some 20 to 30 feet to the west. As soon as the present drifting has advanced another 30 feet or so it is proposed to crosscut in order to pick up this west branch in which it is hoped that the ore will be wider and of better grade; in this event it will be opened up before the south stopes are started.

Plans for additional sinking of the A shaft and also for further exploration in the Africa and Europe Claims have all been postponed by reason of shortage of manpower to which reference will be made below.

#### PRODUCTION

The November shipments comprising lots 208 through 219 amounted to 619.77 tons which represented a tonnage increase over October but the average grade had fallen to less than 15 ozs. which cuts out any substantial margin of profit to the operator.

Aside from ore from the drifts on the 300' level, this production came from two stopes above the 150' level which can hardly be expected

to hold out through January so that the available ore reserve above the 200' level is becoming pretty small and stopes below that level will have to be started during the next few weeks.

GENERAL

The condition of the mine is good but work must be speeded up if development and production are to be maintained. The total number of employees is 17 but of these only 4 are underground miners and efforts to secure additional miners have proved unsuccessful for the obvious reason that the Reymert is only paying \$5.00 for miners and \$4.00 for muckers while the Magma and other copper mines are now paying over \$2.00 more per shift.

The attempt to freeze men to their jobs has not proved successful, as might have been expected, and several of the best of the Reymert crew have quit during the past few weeks. One can understand that Tod is naturally trying to keep down his expenses but it seems that he is facing a situation where the only alternatives are either granting a raise in wages or a complete shutdown. I understand that an advance of \$1.00 per shift will probably be made by January 1st.

Aside from the labor shortage and some complications in regard to priorities, both Tod and Smith seem to be fairly well pleased with the results of recent development and with future prospects. The International Smelter fortunately continues to appreciate the fluxing value of this ore and would be glad to receive and treat a larger tonnage.

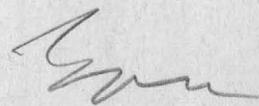
In closing this last report for 1942 may I take the opportunity to express my appreciation of the opportunity to serve your company and also extend to its officials all good wishes for the holiday season and a happy and prosperous New Year.

All in all the situation at the Reymert and its prospects for the future have substantially improved during the last eight months and,-- except as the work may be adversely affected by outside conditions which are beyond the control of any of us,--I believe that one may justly look forward with confidence to the results of future development and operation.

With personal regards and the compliments of the season to you all.

I remain,

Yours very truly,



*Report file*

May 23rd, 1944

Reymert Mining Company  
902 Wells Building  
Milwaukee 2, Wisconsin

REPORT OF LESSEES OPERATIONS #5 FOR 1944

Gentlemen:

On the 19th instant I visited the Reymert Mine.

Special Matters

I was pleased to find that no work is being done in the shaft pillars to which reference was made in recent correspondence with Mr. Smith and Mr. Holeman, of which copies were sent you with my letter of May 11th.

Holeman informed me that he brought the copies of my letters to Phoenix to show to Mrs. Tod and that together they went over the text of the lease and decided that my interpretation of same was correct and that they must not do any work which might impair the condition of the "A" Shaft and drifts. He then assured me that such was not their intention.

After Smith returns from his vacation in June he and I can have a further discussion of this matter to determine what proportion of the pillars, if any, can be safely mined before they abandon this shaft.

As requested in your letter of May 1st I checked over the tax situation with Holeman who showed me the County Tax Collector's

Reymert Mining Company  
May 23rd, 1944

receipts for the payment of the first half of 1943 taxes amounting to \$114.72 made on October 28th, 1943, and for a similar payment representing the second half of the 1943 taxes made on April 24th, 1944. The taxes for 1944 have not yet been assessed.

Holeman had not obtained duplicates of these receipts which could be sent to your office/<sup>but</sup>should they continue to operate he promised to do so in future.

#### Development

Conditions in the mine had changed but little since I last reported and although they have procured some timber they are still very short of men with an underground force of only 5 working at present.

On the 250' level the drift has been advanced to a point 163' north of the shaft on the west vein where it has run out of ore and work has been discontinued. The ore shoot did not extend north of the caved ground as had been expected and although the raise from the 300' level penetrated into this caved area and thus furnished them with better ventilation, no pay ore was encountered in this raise.

At a point about 50' north of the shaft a new raise has been started and pushed up 25' in a small shoot of ore which assays about 17 ounces.

On the 300' level a slight advance was made in the drift on the

until May) and the grade averaged less than 13 ounces per ton.  
Reymert Mining Company  
May 23rd, 1944 about 60 tons had been shipped but not yet sampled

east vein, but this has continued to be narrow and the grade had fallen to about 5 ounces.

The crosscut driven west from near the north end of this drift advanced for 65' and has struck the foot wall schist along which the west vein was found to carry about 10 ounces silver in the back, but practically no values along the floor so that it appears as if the ore shoot had bottomed at this level.

X  
So far they have drifted about 12' in each direction from the crosscut finding similar conditions and they plan to soon start a raise in the hope that the grade will improve as they work upwards toward the better ore which was left along the floor of the 250 level.

This block of ore plus a small shoot further to the south, comprises the only developed reserves (aside from pillars) now left in these workings and unless the values in the output should substantially improve the operation will continue to be unprofitable and may be suspended at most any time, but probably not until after Smith has returned in June.

#### Production

As forecast last month the shipments made during April amounted to only 119 tons (over half of which was not sampled by the smelter until May) and the grade averaged less than 13 ounces per ton. Another lot of about 60 tons had been shipped but not yet sampled