IMEA Form 9

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

IMEA NO. 4640

✓ Application (Denied
(~~Withdrawn~~
(After disposition, delete items not applicable)

Contract (Terminated - not Certified
(Cancelled
(Terminated - Certified
(Royalty Agreement

This is the official contract file containing all official records of the project. The records contained in the files are checked and are arranged in this order:

Left Side

Interim Royalty Audits
Reports of Royalty Review
Certification of Discovery
Certificate of Audit (Final)
Interim Audit(s)
Report of Review
Termination Notice or Agreement
Recision Notice
Assignment of Contract
Contract Amendments (latest on top)
Contract with all exhibits and annexes
Owner's Consent to Lien
Subordination Agreement
✓ Leases and assignments of leases
✓ Application and attachments
(3) Envelope for maps

Right Side

Project summary
Work completed analysis
All other material is filed in chronological order with correspondence including the following reports as checked:

Final Field Team Report (Tab)
Operator's Final Report
(2R) Interim Reports
(2R) Operator's monthly reports and all attachments (latest on top)
✓ On-site Exam Report(s) (Tab)
(4) Settlement Sheets

When the volume of records is expected to warrant additional folders, or when convenience of reference warrants separate folders for certain records, they should be set up in this order:

Left Side

Folder No. 2: (In chron. order)
Interim Summary Reports by W. O. Engineers

Right Side

Operator's Semi-Annual Report for Certified Project, Field Team Interim Reports, Operator's Monthly Report with transmittal, narrative, maps, and Field Team review.

Folder No. 3: Maps (Use pocket folder or envelope. Fold maps with title block out and show reference to related document or correspondence.)

Folder No. 4: Settlement Sheets

Folder No. 5: Drill Logs

9775

MF-103
(Revised April 1952)

RECEIVED FEB 18 1957 D.M.E.A.

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. 4640
Metal or Mineral Manganese
Date Received 2-18-57
Estimated Cost $54,350.00
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: JOLYN ASSOCIATES, a partnership, organized in the State of Arizona.
P. O. Box 1106
Wickenburg, Arizona

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract

(*b*) State any mine name by which the property is known. GLOBE MANGANESE MINE

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise
LEASEHOLDERS IN PARTNERSHIP WITH OPTION TO PURCHASE

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property. COPY OF LEASE AGREEMENT ATTACHED

(*e*) If you own the land, describe any liens or encumbrances on it NONE

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. PATENTED CLAIMS

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore MANGANESE

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc. Two proposals are given, A is preferred. See encl.geologic maps

(*c*) The work will start within 15 days and be completed within 18 months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations. See attached Exhibit "1"

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project: None

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.). INDEPENDENT CONTRACT

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants. NONE CHARGED TO THIS WORK

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel. FURNISHED BY MINING COMPANY

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be. FURNISHED BY MINING COMPANY

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project. NONE TO BE DONE

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project. NONE

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs. NO CONTINGENCIES - CONTRACTOR FURNISHES ALL ITEMS

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)? YES

(*b*) How do you propose to furnish your share of the costs? FROM PRODUCTION OF ORES FROM PRESENT WORKINGS.

[✓] Money [✓] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated February ~~16~~ 15, 1957

Johnson Associates, a Partnership
(Applicant)

By Granville S. Borden

Box 1166

Wickenburg Ariz

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

1. (d) LIST OF PARTNERS

GRANVILLE S. BORDEN - 225 Bush Street, San Francisco, California

MRS. JANE L. BRADLEY - 660 Market Street, San Francisco "

HERBERT K. CAMERON - Box 547, Wickenburg, Arizona

W. R. EASLEY - 10 South Oxbow, Wickenburg, Arizona

H. E. GAUNT - 4885 Calle del Medio, Phoenix, Arizona

C. F. HEISE - Wickenburg, Arizona

MR. & MRS. T. HELLBERG - Box 694, Wickenburg, Arizona

A. J. HENRY - Wickenburg, Arizona

FRANK E. KOHLER - 1427 College Avenue, Tempe, Arizona

LANNING MACFARLAND - 34 North LaSalle Street, Chicago, Illinois

P. G. MILLIKEN - Wickenburg, Arizona

ROBERT MONNAHAN - 765 La Golondrina, Wickenburg, Arizona

REGINA A. PATE - Wickenburg, Arizona

A. HAWLEY PETERSON - Cady, Roberts & Co., 488 Madison Ave., N. Y.

D. J. PICKRELL - 155 Montgomery Street, San Francisco, California

DONALD ROYCE - 640 South Spring Street, Los Angeles 14, California

3. (a)

The claims included in the lease are the FIERO, MANGANESE, PICK, SPECK, UNO, DICK and CLAUD, all patented claims, U. S. Mineral Survey No. 3659, located in Sections 10 and 11, Township 1, North, Range 15½ East, Gila and Salt River Base and Meridian, in the Globe Mining District, Gila County, Arizona. It is probable that the exploration work will be confined to the FIERO, MANGANESE, and DICK claims.

3 (d)

MINING LEASE AND OPTION

THIS LEASE AND OPTION made this 15th day of October, 1956, by and between THOMAS F. KIBBLE and MARY M. KIBBLE, husband and wife, of Miami, Gila County, Arizona, hereinafter referred to as "Lessors", and JOHN A. [illegible], a Partnership, hereinafter referred to as "Lessee",

WITNESSETH:

1. That for and in consideration of the sum of Ten Dollars ($10.00) in hand paid by the Lessee to the Lessors, the receipt of which is hereby acknowledged, other good and valuable consideration, and the royalty and rental to be paid by Lessee to Lessors, and of the covenants and conditions hereinafter set forth, Lessors hereby lease and let to Lessee and its successors and assigns, upon the terms and conditions hereinafter set forth, the following described patented mining claims, to-wit:

> Those certain patented lode mining claims situate in the Globe Mining District, Gila County, Arizona, and known and designated as CLAUD, FLORO, [illegible], UNA, [illegible] and SICK, United States Patent No. 853815, recorded in Book 14, Deeds to Mines, at Page 350; containing 111.18 acres, and being the same property conveyed by Thomas A. Long and Ruth E. Long, husband and wife, by a Quit-Claim Deed dated February 5th, 1944, to T. F. Kibble, of Miami, Arizona, and recorded in the office of the County Recorder of Gila County, Arizona, in Book 19, Deeds to Mines, at Page 61.

2. The term of this Lease and Option, unless sooner forfeited, cancelled, terminated or surrendered as hereinafter provided, shall be from the date of this Lease and Option to and including the 15th day of October, 1961.

3. Lessee has and will spend not less than Ten Thousand Dollars ($10,000.00) on or before six (6) months from the date of this Agreement in the performance of work in rehabilitating the above described mining claims. Lessee, however, shall be under no obligation to conduct any

mining operations on the leased property if such mining operations cannot be reasonably anticipated to yield lessee a profit, but lessee may continue to hold such claims under this lease and option until such time as they can produce at a profit. The Lessee agrees that it will, in the working of said mining claims, cause the work to be done in a careful and miner-like manner and to conform, in all respects, to the mining laws and regulations of the State of Arizona.

4. The Lessee shall have and it is hereby given and granted the right to enter into and take over immediately the sole and exclusive possession and control of the above described mining claims, and the whole and every part thereof, and during the term of this lease and option to remain in the sole and exclusive possession and control thereof, and to investigate, measure, sample, examine, test, develop, work, mine, operate, use, manage, control the same, and to mine, extract and remove from said mining claims the ores and minerals therein and appurtenant and belonging thereto, and to treat, mill, ship, sell or otherwise dispose of the same and to receive full proceeds therefrom.

5. Lessee shall allow the said Lessors or their agents or representatives from time to time and at all reasonable times, to enter upon and into all parts of said mining claims and premises for the purpose of inspection and to take samples of ore from all places where any work is being performed by the Lessee.

6. Lessee shall occupy and hold all cross parallel ledes, spurs or mineral deposits of any kind which may be discovered by the said Lessee or any person under them in any manner by working within or from the demised premises as the property of the said Lessors, with the privilege to the Lessee of working the same as part and parcel of said demised premises.

7. Lessee shall furnish at its own expense all tools, material, machinery and supplies necessary to work the said mine or premises as hereby leased, and to supervise and fully do and perform all work hereunder according to their own manner, method and system, including the right of Lessee to have part or all of the operations on the leased property done by independent contractors.

8. Lessee or any contractor performing work on the leased premises shall carry insurance as follows:

A. Workmen's Compensation Insurance and Occupational Disease Disability Insurance, as required by the laws of the State of Arizona.

B. Comprehensive Public Liability Insurance with limits of not less than $100,000/$300,000 and Property Damage $50,000.00.

9. Lessee shall promptly pay for all labor, material and supplies to be done for or furnished to the said Lessee, or to any person or persons under or in privity with them upon said premises, and in the event the Lessee shall fail to pay for such labor, material and supplies, then the Lessors may, at their election, declare a forfeiture of this lease, as hereinafter provided.

9.(A) All ores shall be weighed and sampled for metal and moisture content promptly by Lessee according to standard practice. Weighing and sampling of ore for metal and moisture content will be on scales of Lessee. Lessors or their representatives shall have the right to be present to witness these operations and the absence of Lessors or their representatives shall be deemed a waiver of this right. After weighing and sampling, the ores may be placed in process to be commingled with other ores. Lessee shall assay, at its expense, a sample of each truck-load of ore for metal and moisture content and unless Lessors also assay,

at their expense, a sample of the truckload, the assay of Lessee shall be accepted as final.

If Lessors elect to assay a sample and the assays of Lessors and Lessee are within the limits of permissible variation, then the average of the two assays will be taken as the assay for the truckload of ore. The limits of permissible variation shall be 0.5% for metal content and 0.5% for moisture content. If the difference in the two assays exceeds the limits of permissible variation, then a sample shall be sent to an Umpire selected by mutual agreement of the parties. The Umpire's assays will be final if within the limits of permissible variation and, if not, the assay of the party nearer the assay result of the Umpire will prevail. The cost of the Umpire's assay will be borne by the party whose assay result is farther from that of the Umpire.

10. Lessee agrees to pay to the Lessors as royalty from the net returns of all manganese ores mined and shipped from the above described premises after deductions have been made for transportation charges and treatment or milling costs in accordance with the following schedule:

0 to 20% manganese	-	7%
20 to 25% "	-	8%
25 to 30% "	-	9%
Above 30% "	-	10%

Payments to be made thirty (30) days after receipt of ores at the mill or processing plant where such ores are treated in order that they may meet the specifications under the Government Carload Lot program. A report shall accompany each monthly settlement showing all calculations in detail.

11. The Lessee shall keep posted upon the property described in paragraph 1, notices of nonliability for labor or materials furnished by Lessors pursuant to laws of the State of Arizona, stating that neither Lessors nor the said property shall be liable for labor or materials performed on or furnished to be used upon said property.

12. The Lessee expressly reserves the right to cancel, terminate and surrender this Lease and Option and to relinquish all rights, privileges and obligations hereunder at any time during the term hereof after having given the Lessors thirty (30) days' written notice of its intention, and after having fully discharged all obligations previously incurred by Lessee under this Lease and Option to the date of such cancellation, and all the obligations and liability of Lessee under said Lease and Option shall terminate without further liability on the part of the Lessee as of the date of said cancellation, termination and surrender.

13. It is mutually understood and agreed that all buildings and stationary equipment constructed on foundations on said premises by the lessee, shall, upon the expiration or other termination of this Lease, otherwise than by purchase, become the property of the Lessors, and shall not be removed from said premises, but that all other tools, machinery and equipment, may be removed by the Lessee from said premises at any time within thirty (30) days after the expiration or other termination of this Lease, and if not so removed, shall thereupon become the property of the Lessors.

14. It is hereby agreed that the Lessors before declaring forfeiture of this Lease and Option, shall give the Lessee a thirty (30) day notice of any violation by them or either of them of any provision of said Lease and Option, in order that the Lessee may have an opportunity to correct the same.

15. The Lessee hereby further covenants and agrees with the Lessors that they will not assign this Lease or any interest thereunder, and that they will not sublet the premises or any part thereof without the written assent of said Lessors, provided, however, that the provisions of this paragraph shall not preclude Lessee from having all or part of the work on the leased property done by independent contractors.

16. The Lessors, in consideration of the mutual covenants and agreements herein contained, and for the further consideration of ONE DOLLAR ($1.00), lawful money of the United States of America, in hand paid by the Lessee, the receipt of which is hereby acknowledged to hereby give, and grant unto the said Lessee the exclusive right and option to purchase the above described patented lode mining claims and premises on or before five (5) years after the date hereof, for the sum of ONE THOUSAND DOLLARS ($1,000.00), in lawful money of the United States of America, to be paid in cash before the expiration of the contract as provided in paragraph 2, page 1 above; provided that the royalties at the time of exercise of the option shall not be less than FIFTY THOUSAND ($50,000) DOLLARS.

Upon payment of the purchase price in full, Lessors shall deliver to Lessee their Warranty Deed to the property described in paragraph 1 of this Lease and Option. Lessors shall warrant in said deed their title to this property, subject only to reservations contained in the patent and the lien for real property taxes for 1957 and subsequent years.

17. It is further agreed that if, by reason of the violation of any of the covenants and agreements contained in the foregoing Lease, the said Lease shall become forfeited under the terms hereof, then the forfeiture of said Lease shall likewise operate to terminate this Option and release the said Lessors from any obligations herein contained.

18. And finally, in the event said Lessee shall fail to make payment of said purchase price, or any royalty which may become due and payable under the terms hereof, or shall fail to keep or perform any one of the agreements, stipulations, covenants or conditions to be done or performed by them under the terms hereof, then, in any of such events, the right to purchase and receive conveyance of said property and premises, and the right to possession thereof at the option of the said Lessors, shall at once cease and terminate, (subject, however, to paragraph 14 of page 5 hereof), and in any such event, the said Lessee shall without demand or notice, other than the notice mentioned in paragraph 14 of

page 5 hereof, yield and deliver up the possession of said premises, appurtenances and property, and the said Lessors may take possession of the same, using such force as may be necessary so to do, without being liable to suit, action, claim or demands of the said Lessee, by reason of anything so done, and in such event, any and all sums of money theretofore paid by the Lessee unto the said Lessors, as royalties or on account of said purchase price, shall be, and become the property of the said Lessors as liquidated damages, and the said Lessors, thereupon shall be released and discharged from any further liability or obligation to carry out any of the terms and conditions hereof.

19. The Lessee shall pay, when due and before delinquent, all taxes upon said mining claims falling due during the term of this Lease and Option and while the same is in force and effect, and shall pay, when due and before delinquent, all taxes levied or assessed against any and all personal property, machinery and equipment placed upon said mining claims by the Lessee during the term of this Lease and Option. The Lessee shall also pay all sales taxes and other taxes of every kind, character and description levied or imposed during the term of this Lease and Option upon the ores, minerals, concentrates or products of ores, produced, sold or otherwise disposed of by the Lessee.

In the case of taxes for the calendar year in which the Lease and Option ends, there shall be an apportionment between the parties, the Lessors to bear the proportion of such taxes applicable to that part of the calendar year not included hereunder, and the Lessee to bear the balance of said taxes: PROVIDED, however, that the Lessors shall in no event be responsible for any portion of any taxes on machinery, equipment, or improvements placed by Lessee upon the mining claims hereinabove described, unless such machinery, equipment or improvements shall be left upon the mining claims and shall inure to the benefit of the Lessors.

20. In case Lessee shall be prevented from carrying out any of the provisions of this Agreement by reason of strikes of any kind affecting its operation, floods, unavoidable accidents, acts of God or the public enemy, shortage of cars or any other traffic interruption, wars or insurrection, Government demands, regulations or requirements, restraint by injunction or other legal process from which Lessee cannot reasonably relieve itself by giving security or other procedure, or by reason of any other cause whatsoever beyond the reasonable control of Lessee, which shall disable said Lessee in the mining or processing of the ores as provided herein, Lessee shall not be liable to Lessors for damages on account of such failure to mine or process Lessors' ores but Lessee shall use due diligence and good faith to remove such impediment and to resume compliance with this Agreement as soon as possible.

Each and every clause and covenant of this Lease, where the context requires it, shall extend to and include the heirs and assigns of the Lessors, and the executors, administrators, and assigns of the Lessee.

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

_____
THOMAS A. KIMBLE, LESSOR

ATTEST:

_____

_____
MARY A. KIMBLE, LESSOR

STATE OF ARIZONA } ss.
County of

JOLYN CONSOLIDATED

By_____
Lessee

On this the day of October, 1926, before me, the undersigned Notary Public, personally appeared THOMAS A. KIMBLE and MARY A. KIMBLE, husband and wife, known to me (or satisfactorily proven) to be the persons whose names are subscribed to the within instrument, and acknowledged that they executed the same for the purposes therein contained.

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

_____
Notary Public

My Commission expires:

_____

-6-

STATE OF ARIZONA)
) ss.
County of)

On this the _____ day of October, 1956, before me, the undersigned officer, personally appeared _____, known to me 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.

_____
Notary Public

My Commission Expires:

_____

STATE OF)
)
County of)

On this the _____ day of October, 1956, before me, the undersigned officer, personally appeared _____, known to me 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.

_____
Notary Public

My Commission Expires:

_____

4. (a) Existing mine workings include the operating shaft, which is a two compartment shaft sunk on an incline of 65 degrees to a depth of 162 feet. At the 100 foot level drifts have been driven approximately 60 feet in each direction from the shaft and stoping has begun above the west drift. Old workings include shafts on the vein having depths of 80 feet, 120 feet, and 20 feet, respectively. The two deepest shafts and the present operating shaft are connected by various drifts and stopes having an aggregate area in the plane of the vein of approximately 18,000 square feet. There are at least 8 superficial open cuts on various showings of manganese ore adjacent to the main working area.

4. (b) Past production is probably a few thousand tons. Records are available for 962 tons which had an average analysis of 32.17% manganese, 11.58* Fe, and 3.01 Cu plus Pb plus An. This ore was mined between March 1953 and June 1954 and shipped to the Deming depot.

Present ore reserves are roughly estimated at 2,700 tons assaying 25% Mn.

4. (c) The orebody occurs as a replacement of crushed and sheared diabase in a fault which strikes N. 75 degrees E and dips 65 to 80 degrees north. The footwall of vein is quartzite of the PreCambrian Pioneer formation, and the hanging wall is diabase of Cretaceous or Tertiary age. There are indications that the vein is passing into diabase on both walls in the deeper parts of the mine. The ore consists principally of wad, with smaller amounts of manganite. Gangue minerals are limonite, calcite, and unreplaced parts of the diabase. The vein varies from 1½ to 5 feet in width, averaging 3 feet. It can be traced on the surface for at least 1,000 feet.

4. (d)

The mine is located five miles from Globe, Arizona, which is a supply, residence, and shipping point in an established mining district. The mine is reached via a county maintained dirt road passing through the Globe Hills, with no severe grades.

EXHIBIT "1"

5. (d) Operator, Ralph Henderson, was born near Globe and has been engaged in mining as miner to superintendent for many years. He has successfully operated this mine in the production of manganese on the depot program in the past.

Mohave Mining & Milling Company, one of the largest custom sinter producers of manganese under the "carload lot" program of the United States Government, has contracted to process these ores for a fee. As part of its services, it provides its geologic, mining and metallurgical services on a cost basis.

6 (a) PROJECT A (Preferred)

1110' @ $35.00 per foot	$38,850.00
100' shaft @ $150.00 per foot	15,000.00
Station on 250' level	500.00
TOTAL COST PROJECT A	$54,350.00

PROJECT B

990' Drifting	$35,550.00
100' Shaft	15,000.00
Station at 250' level	500.00
TOTAL COST PROJECT B	$51,050.00

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
6-7	Chapman	400
6-7	Martin	400
6/12	Selfridge	130
6/12	Lamb	130
"	Johnson	110
13	Mittendorf	100
		220
6/12	Kilsgaard	(130)

JUN 13 1957

Jolyn Associates
P. O. Box 1106
Hickenburg, Arizona

Re: Docket No. DMEA-4640 (Manganese)
Globe Manganese Mine
Gila County, Arizona

Gentlemen:

Your application for exploration assistance and other data available to us in Washington concerning the referenced property have been reviewed.

Projects approved by the Defense Minerals Exploration Administration must, in its judgement, show definite promise of yielding materials of acceptable grade in quantities that will significantly improve the mineral supply position of the National Defense Program.

Careful study of all our information, although noting past production of a limited tonnage of ore of a moderate grade from the property, indicates to us that the probability of disclosing significant ore reserves is not sufficiently promising to justify Government participation. Under these conditions we regret to advise that your application is denied.

We wish to thank you for your interest in the Defense Minerals Exploration Administration program and for bringing the property to our attention.

Sincerely yours,

C. O. Mittendorf

Administrator

TLChapman/bih
6/7/57
cc to: Docket
Adm. Reading File
Operating Committee
Field Team, Region III
Messrs. Gilbert DeHuff, Jr.
T.H.Kiilsgaard
Code 400

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
6-7	Chapman	400
6-7	Martin	400
		100
		220

Memorandum

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of the subject application for exploration assistance in the amount of $54,350.00 or $51,050.00
Docket No. DMEA-4640 - Manganese
Globe Manganese Mine - Jolyn Associates
Gila County, Arizona

Denial of the subject application is recommended by this Division based on the following information:

The applicant, Jolyn Associates, requested exploration assistance to the amount of $54,350.00 or $51,050.00 on February 15, 1957, drifting and/or crosscutting, shaft sinking and station cutting. A field examination of the property was made on April 16, 1957, by T. M. Romslo, Bureau of Mines, and W. L. Emerick, Geological Survey. Charles H. Jonas a member of Jolyn Associates accompanied the examining team for part of the time.

APPLICANT Jolyn Associates
P. O. Box 1106
Wickenburg, Arizona

Jolyn Associates, a partnership, has the following members:

Granville S. Borden, 225 Bush Street, San Francisco, Calif.
Mrs. Jane L. Bradley, 660 Market Street, San Francisco, Calif.
D. J. Pickrell, 155 Montgomery Street, San Francisco, Calif.
Herbert K. Cameron, Box 547, Wickenburg, Arizona
W. R. Easley, 10 South Oxbow, Wickenburg, Arizona
C. F. Heise, Wickenburg, Arizona
A. J. Henry, Wickenburg, Arizona
P. J. Milliken, Wickenburg, Arizona
Regina A. Pate, Wickenburg, Arizona
Robert Monnahan, 765 La Golondrina, Wickenburg, Arizona
Mr. and Mrs. T. Hellberg, Box 694, Wickenburg, Arizona
H. E. Gaunt, Calle del Medio, Phoeniz, Arizona
Frank E. Kohler, 1427 College Avenue, Tempe, Arizona
Lanning MacFarland, 34 North La Salle Street, Chicago, Ill.
A. Hawley Peterson, Cady, Roberts adn Co., 488 Madison Ave., New York, N. Y.
Donald Royce, 640 South Spring Street, Los Angeles 14, Calif.
Charles H. Jonas, Sands Hotel, Phoenix, Arizona

PROPERTY OWNERSHIP

The property owned by Thomas W. Kimble and Mary M. Kimble, Miami, Arizona, is under Lease and Option dated October 16, 1956, to Jolyn Associates and consists of 7 patented lode mining claims as follows:

Fiero, Dick, Uno, Speck, Claud, Manganese and Pick, Patent No. 852815, recorded in Book 14, Deed of Mines, page 350, Gila County, Arizona. They are located in sections 10 and 11, T. 1 N., R. 15½ E. Globe Mining District.

GEOLOGY

Diabse of late Cretaceous or early Tertiary predominates as the rock outcrop of the mine area, where it has been intruded principally as complex sills at various horizons in the Late Precambrian Apache group of quartzites, conglomerates and limestones. Numerous faults in this area trend mainly to the northeast, dips ranging from 50 degrees to vertical.

The vein worked in the Globe Manganese mine occupies the south diabase-quartzite fault contact, and dips about 65 to 75 degrees north. The vein varies from stringers to 24 inches in width. When in the diabase the vein pinches and splits and becomes lower in grade. The ore in the vein consists of pyrolusite, wad and possibly some manganite. Associated with the ore are hematite, limonite and calcite, with small amounts of lead zinc and copper. At depths of 100 feet the vein appears to pinch and become lower in grade.

DEVELOPMENT

The work on the property consists of several shafts on the vein, the deepest being 162 feet. Most of the drifting has been on the 75 foot level (about 150 feet) and on the 100 foot level (about 300 feet). The main stope of the mine is above the 75 foot level. The stopes on the 100 foot level are in the form of relatively small pods and pockets.

PROPOSED WORK

The applicant proposes to sink the main shaft an additional 100 feet, cut a station at the 250 foot level and drift or crosscut 1,110 feet or 990 feet in programs A or B. The application does not state where the drifting and/or crosscutting is to be done, but assumedly most of it must be on the 250 feet level. The relative costs of the two programs A and B are $54,350.00 and $51,050.00

HISTORY AND PRODUCTION

This property was first worked as a silver property. During World War I the first manganese was shipped and the total mined amounted to about 1,500 tons averaging 30 percent manganese. From 1941 through 1945 about 1,350 tons were mined averaging 35 percent manganese. From 1953 to April

1957 production amounted to 1,342 tons averaging 20 to 26 percent manganese. It is estimated that the total production has amounted to 5,631 tons averaging 30 percent manganese.

RESERVES Present indications are that no significant reserves appear to remain in the mine. It is estimated that about 1,000 to 2,000 tons of indicated and inferred ore, averaging about 20 percent manganese form the present reserves.

COMMENTS AND CONCLUSIONS The Field Team believes that the present workings on the property have outlined the ore possibilities and that there is little possibility of making a significant discovery, and recommend denial of the application. The Commodity Divisions of the Geological Survey and the Bureau of Mines, concur in the conclusions and recommendations of the Field Team.

TLChapman/bih
6/7/57

cc to: Docket
Adm. Reading File
Operating Committee
Code 400

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 22 1957

DATE	INITIALS	CODE
5/22	JWD	220
		400

Mailed Sent to
Department of the Interior
Bureau of Mines
Washington 25, D. C.

Date May 21, 1957

DMEA Report No. 4640
DMEA Contract No.
Commodity Manganese
Name of applicant Jolyn Associates
Name of property Globe Manganese Mine
Location of property Gila County, Ariz.
Estimated cost of project $54,350

Mines

To: W. S. Martin, DMEA

From: G. L. DeHuff, Jr., Commodity Specialist
Branch of Ferrous Metals and Ferroalloys

Subject: Review of
(Preliminary, Field Team Report, ---)

1. Date of project information: 5/7/57 2. Date received by reviewer: 5/14/57

3. Mineral [illegible] on this property known to reviewer: Yes [x] No [ ]

4. Other reports on adjoining properties known to reviewer: Yes [ ] No [ ]

5. Data further available on past production: Yes [x] No [ ]

6. Other pertinent Reports known to reviewer: Yes [ ] No [ ]

7. Explain items marked yes above: Please see my memorandum of 2/25/57. Field Team states that recent operations have produced an additional 1,342 tons, containing 20 to 26 percent Mn, to April 1957.

8. Factors meeting special consideration:
a. Location [ ]
b. Ownership [ ]
c. Evidence of mineralization
d. Geology [ ]
e. Proposed exploration method [ ]
f. Alternate exploration method [ ]
g. Costs [ ]
h. [ ]

9. Action advised:
a. Obtain information from applicant [ ]
b. Refer to Field Team [ ]
c. Final [x]
d. Agree with Field Team [x]
e. Disagree with Field Team [ ]
f. Suggest alternate plan [ ]
g. Request another examination [ ]
h. Approval [ ]
i. Consult with Mr. _____ at _____ AEC office.

10. Remarks: (Use back of page if necessary)

G L DeHuff Jr

FILE COPY
DMEA
MAY 20 1957
CODE
5/20 C 220
5/21 WSM 400

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

May 17, 1957
Re: DMEA 4640
Jolyn Associates
Globe Manganese Mine
Gila County, Arizona
$54,350 - Manganese

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of Field Team Report

The applicant requested assistance in exploring a narrow manganese-bearing vein, from which about 5,631 tons of 30% manganese ore has been produced. The proposed work would have extended the shaft 100 feet and drifting 1,000 feet.

In the opinion of the examiners, the grade and extent of the ore in the vein has diminished with depth due to the vein entering diabase and, based on results, no extensions laterally should be expected. A limited quantity of ore remains in the mine, but the total potential is believed to be small.

The property was the subject of an application for assistance in 1943. The application was denied. The examiners and the Field Team recommend that the application be denied.

I concur with the recommendation.

N. E. Nelson

N. E. Nelson

Referred by George Swithenbank

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
224 New Customhouse
Denver 2, Colorado

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 10 1957

DATE	INITIALS	CODE
5/10	C	220
	[illegible]	130
5/16	JWD	220
17	WSM	400
DMEA		

May 7, 1957

Memorandum

To: Secretary to the Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Joint Report of Examination Docket DMEA 4640 (Manganese) Jolyn Associates (Globe Manganese Mine) Gila County, Arizona

Enclosed are the original and three copies of the Joint Report of Examination on the subject property by T. M. Romslo, USBM, and W. L. Emerick, USGS.

The field examiners conclude that the probability for making a significant discovery is not sufficiently promising to justify Government participation. Accordingly they recommend that the Applicant's work proposal be denied to which the Field Team concurs.

The Field Team notes that the authors of the report list the property to be located variously in Graham, Gila and Pinal Counties, Arizona. The correct location of the property, however, is Gila County, Arizona.

E. N. Harshman

E. N. Harshman
Acting Executive Officer

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
5/15/57
(date)

MINERAL DEPOSITS
DMEA
RECEIVED
MAY 6 1957
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

Box 4126 University Station
Tucson, Arizona

May 3, 1957

Memorandum

To: E. N. Harshman, Acting Executive Officer,
DMEA Field Team, Region III

From: T. M. Romslo
W. L. Emerick

Through: W. R. Storms
E. N. Harshman

Subject: Docket DMEA 4640 (Manganese) Jolyn Associates
(Globe Manganese Mine), Graham County, Arizona

Enclosed are the original and 8 copies of a joint field examination report on the above property, recommending denial of the application.

Also enclosed is the Bureau copy of the docket, as instructed. The Survey copy of transmittals only, as received in the Tucson office, is being sent under separate cover to E. N. Harshman's office.

Original signed by
T. M. Romslo

T. M. Romslo, Mining Engineer
U. S. Bureau of Mines

W L Emerick

W. L. Emerick, Geologist
U. S. Geological Survey

TMR:WLE:ms
cc: Acting Executive Officer (8)
E. N. Harshman
W. R. Storms
W. H. King
W. L. Emerick

DMEA
DEPARTMENT OF THE INTERIOR
MAY 6 - 1957
REGION III
DENVER, COLORADO

TRANSMITTED
MAY 7 1957

Reviewed by
DMEA OPERATING COMMITTEE
5/15/57
(date)

FOR UNITED STATES GOVERNMENT USE ONLY

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA-4640 (Manganese) Jolyn Associates

(Globe Manganese Mine)

Gila County, Arizona

T. M. Romslo, Mining Engineer
U. S. Bureau of Mines

W. L. Emerick, Geologist
U. S. Geological Survey

On Site EXAM

May 1957

TRANSMITTED
MAY 7 1957

Reviewed by
DMEA OPERATING COMMITTEE
5/15/57
(date)

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Jolyn Associates applied to the Defense Minerals Exploration Administration for aid in exploring the Globe Manganese mine in secs. 10 and 11, T. 1 N., R. 15½ E., Globe Mining District, ~~Pinal~~ Gila County, Arizona, for manganese. The application was received February 18, 1957, and a field examination of the property was made on April 16, 1957, under docket number DMEA-4640. Two plans of exploration were proposed by the application, which were (1) a preferred plan, at a total estimated cost of $54,350.00, comprising 1,100 feet of drifting from the 100-foot level of a 162-foot deep shaft and sinking the shaft an additional 100 feet, and (2) an alternate plan at a total estimated cost of $51,050.00, comprising 980 feet of drifting from the 150-foot level and the 100 additional feet of shaft sinking.

The Globe Manganese mine was originally worked many years ago for silver. It was first worked for manganese during World War I. Since then it has been intermittently worked to the present time. Total production of ore and rough concentrates is 5,631 tons containing about 30 percent manganese.

Mining operations at present are contracted to an individual employing a crew of 3 men. Ore is mined from small open stopes, dumped directly into a 5-ton surface bin from the main shaft skip,

and truck-hauled a short distance to a screening plant on the property. Three tons of mine ore are treated to yield about 1 ton of oversize material containing 2 to 4 percent manganese and 2 tons of minus 1/2-inch material assaying about 26 percent manganese. The oversize is stockpiled and the undersize shipped for beneficiation by flotation and sintering to a plant near Wickenburg, Arizona. Major equipment at the mine consists of a compressor, single drum hoist, gasoline engine, 3000 watt generator, jackhammers, stopers, hoist house, and wooden headframe.

In the area of the Globe Manganese mine a narrow wedge-shaped mass of diabase lies along faults between two blocks of southeasterly dipping quartzite. Faults trend east to northeast and dip steeply to the north and northwest. The vein worked in the mine occupies the south fault and dips about 65 to 75 degrees north. Quartzite forms the footwall of the vein to about 65 feet from the surface but below this point the vein is entirely in diabase. In the mine, the vein width varies from less than a foot to 2 or 3 feet and averages about 18 inches. On the surface the vein width varies from narrow stringers of less than an inch to about 18 to 24 inches in places, but the vein appears to pinch out and fade in mineralization within a short strike distance to both the east and west in the vicinity of the main workings. The best ore is in the oxidized zone 20 to 65 feet below the surface along the

diabase quartzite contact, and history shows, and examination seems to confirm, that where an oxidized vein lies wholly in the diabase the grade, quality and extent of a deposit diminishes.

Ore consists of the manganese oxides pyrolusite, wad, and possibly some manganite, with associated specular hematite, limonite and calcite. Small amounts of lead, zinc and copper may be present. The average grade of the manganese oxides now being mined is about 20 percent manganese.

Manganese oxides have been stoped by the applicant from several small pockets on the 100-foot level. Occurrence as small pods or pockets, or as discontinuous stringers, seems to be characteristic of the deposition and enrichment in the diabase on this level, and it does not appear geologically probable that the ore deposit will increase further in size, extent or grade below the 100-foot level.

No significant reserves appear to remain in the mine because of the pinching of the vein to the east, west, and at depth. It is estimated that about 1,000 to 2,000 tons of indicated and inferred manganese ore averaging about 20 percent manganese forms the reserves of the vein on the south fault. A few hundred tons might potentially be extracted along the north fault. Earlier examination in 1943 recommended no government aid of this mine because of the limited quantity of ore.

Considering several factors, namely: (1) that surface and underground geological conditions indicate a pinching and discontinuity of the ore body to the east and west along the strike of the vein, (2) that underground geological conditions indicate a diminishing of the vein in grade, quality and extent with depth in the diabase, and (3) that only a limited quantity of ore remains in the mine, the field examiners conclude that significant amounts of ore are not geologically probable, and therefore recommend denial of the application.

DMEA-4640 (MANGANESE) JOLYN ASSOCIATES
(GLOBE MANGANESE MINE)
GILA COUNTY, ARIZONA

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Topography, physical features and climate	2
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Extent and ownership of the property	4
Present status	5
Geology	6
Reserves	10
Summary and conclusions	11

ILLUSTRATIONS

Figure No.	Following page
1. Location map	1
2. Claim map	4
3. Geology and sections	In folder

INTRODUCTION

Jolyn Associates applied to the Defense Minerals Exploration Administration for aid in exploring the Globe Manganese mine, Gila County, Arizona. The application was received February 18, 1957. It was given docket number DMEA-4640, reviewed by the Operating Committee and referred to the Field Team, Region III for a field investigation and report.

Two plans of exploration were proposed by the applicant. The first and preferred plan comprised 1,100 feet of drifting from the 100 level of a 162-foot deep shaft and sinking the shaft an additional 100 feet. Total cost of this work was estimated at $54,350.00. The alternate plan comprised 980 feet of drifting from the 150 level, and the 100 additional feet of shaft sinking. Total cost of the second plan was estimated at $51,050.00.

The field investigations were made April 16, 1957 by W. L. Emerick, geologist, U. S. Geological Survey and T. M. Romslo, mining engineer, U. S. Bureau of Mines. Charles H. Jonas, a member of Jolyn Associates, accompanied the examining team for a small portion of the time they were on the property.

LOCATION AND ACCESSIBILITY

The Globe Manganese mine is about 3.5 airmiles northeast of Globe, Arizona in secs. 10 and 11, T. 1 N., R. 15½ E., Globe Mining District, ~~Pinal~~ Gila County, Ariz. (fig. 1). Globe, the County seat of ~~Pinal~~ Gila County, is located on U. S. Highway 60 and 70 and is the western terminus of a branch line of the Southern Pacific.

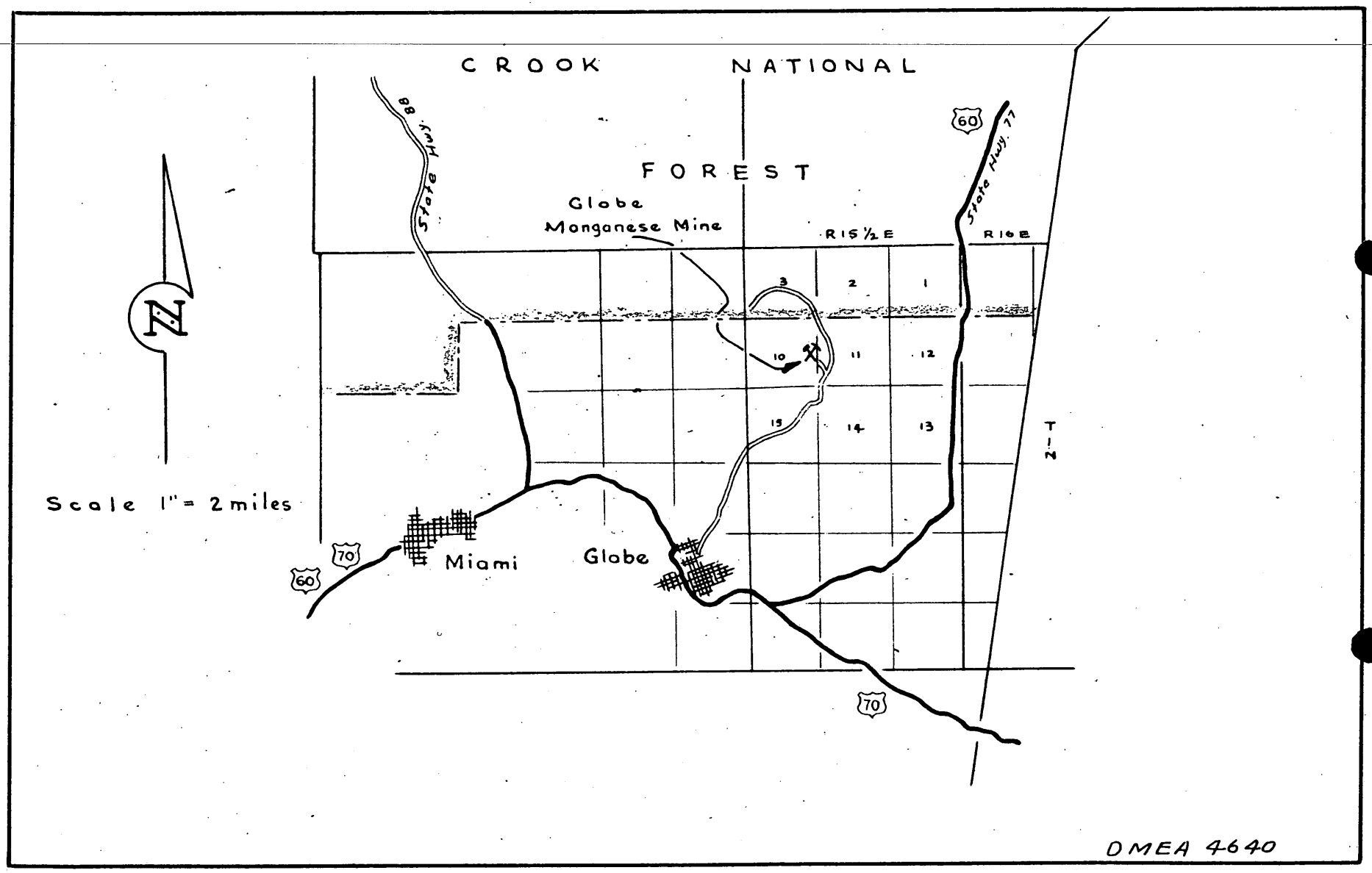


Fig. 1 Location map, Jolyn Associates
Gila County, Arizona

The mine may be reached from the Old Dominion Hotel, Globe, Ariz. by traveling to the Copper Creek road at the north city limits. The Copper Creek road then is followed northeasterly to its junction with a left branching access road at 4.2 miles from the hotel. Proceed 0.5 miles on the access road to a parking area that is a few hundred feet from the main shaft.

TOPOGRAPHY, PHYSICAL FEATURES AND CLIMATE

The Globe Manganese mine is at an altitude of about 4,100 feet above sea level in the southeastern portion of a small manganese bearing area of the Globe Hills. Low hills rise a few hundred feet above the deposits that crop out at the base of the hills. Black Peak, altitude 4,795 feet, is the highest point of the area. It is about 0.5 mile southwest of the Globe Manganese mine.

There are no permanent streams in the area. Drainage on the west side of the deposits is northward via Pinal Creek. On the east side, gulches drain east and south.

The climate and vegetation are characteristic for regions of intermediate altitudes of the Southwestern states. Summers are hot and winters are not severe. Annual precipitation of about 10 inches mainly occurs as heavy summer rains and light rain and snowfalls in the winter. Vegetation principally consists of sparse growths of forage grasses and desert type shrubs.

HISTORY AND PRODUCTION

The Globe Manganese mine probably is the same as the California group of the Globe Commercial Copper Company described by Jones and Ransome.[1]

It is said to have been first worked many years ago for silver. The first recorded production of manganese ore was by 2 lessees during World War I. The first lessee produced 24 cars of ore from September 1916 to February 1917. The other lessee produced 9 cars of ore to June 1917 when work was suspended. In all about 1,500 tons of ore containing about 30 percent manganese was produced and shipped to the Miami Metals Co., Chicago, Ill. and to the Seaboard Steel and Manganese Corporation, Temple, Pa.

Production during what is believed to be the next period of activity, 1941 to 1943, is described by Crittenden.[2] In July and August 1941 about 200 tons of ore was trucked to the Metals Reserve stockpile, Phoenix, Ariz. From July through December 1942, the property produced 750 tons of ore. During the first 3 months of 1943, an additional 400 tons was shipped. Most of the 1,150 tons of 35 percent manganese ore produced in 1942 and 1943 was shipped to the Metals Reserve stockpile, Deming, N. Mex. It is possible that a small additional amount of ore may have been produced during 1943 and 1944.

1/ Jones, E. L. Jr., and Ransome, P. L., Deposits of Manganese Ore in Arizona: U.S.Geol. Survey Bull. 710-D, pp. 165-169, 1920.

2/ Crittendon, Max D., Jr., The Globe Manganese Mine, Gila County, Arizona, U. S. Geological Survey Memorandum Report, March 24, 1953.

The mine is believed to have been inactive from 1943 or 1944 to 1953 when Ralph Henderson, a lessee, started mining and shipping ore to the Government's stockpile at Deming, N. Mex. The operation was discontinued in December 1955 when the Purchasing Program was terminated. Production during this 3-year period amounted to 1,439 tons of 31 percent manganese ore. As far as known, the mine then was idle to December 1956 when the operations later described in this report were started. Mr. Jonas stated that shipments from then to April 1957 totalled approximately 1,342 tons of ore containing 20 to 26 percent manganese. A record of these shipments which he said would be mailed to us had not been received at this writing.

The total production, based on records believed to be essentially complete, is 5,631 tons of ore and rough concentrates averaging about 30 percent manganese.

EXTENT AND OWNERSHIP OF THE PROPERTY

The property of the proposed explorations comprises a group of 7 patented lode mining claims (fig. 2). The group of claims are covered by U. S. Patent No. 852815. It is recorded in Book 14, Deed to Mines, page 350, of the County Recorder of Gila County, Ariz.

The property is owned by Thomas W. Kimble and Mary M. Kimble, husband and wife, of Miami, Arizona. It is held by the applicant under a mining lease and option agreement dated October 15, 1956.

The applicant, Jolyn Associates, P. O. Box 1106, Wickenburg, Ariz., is a partnership organized in Arizona. The partners are:

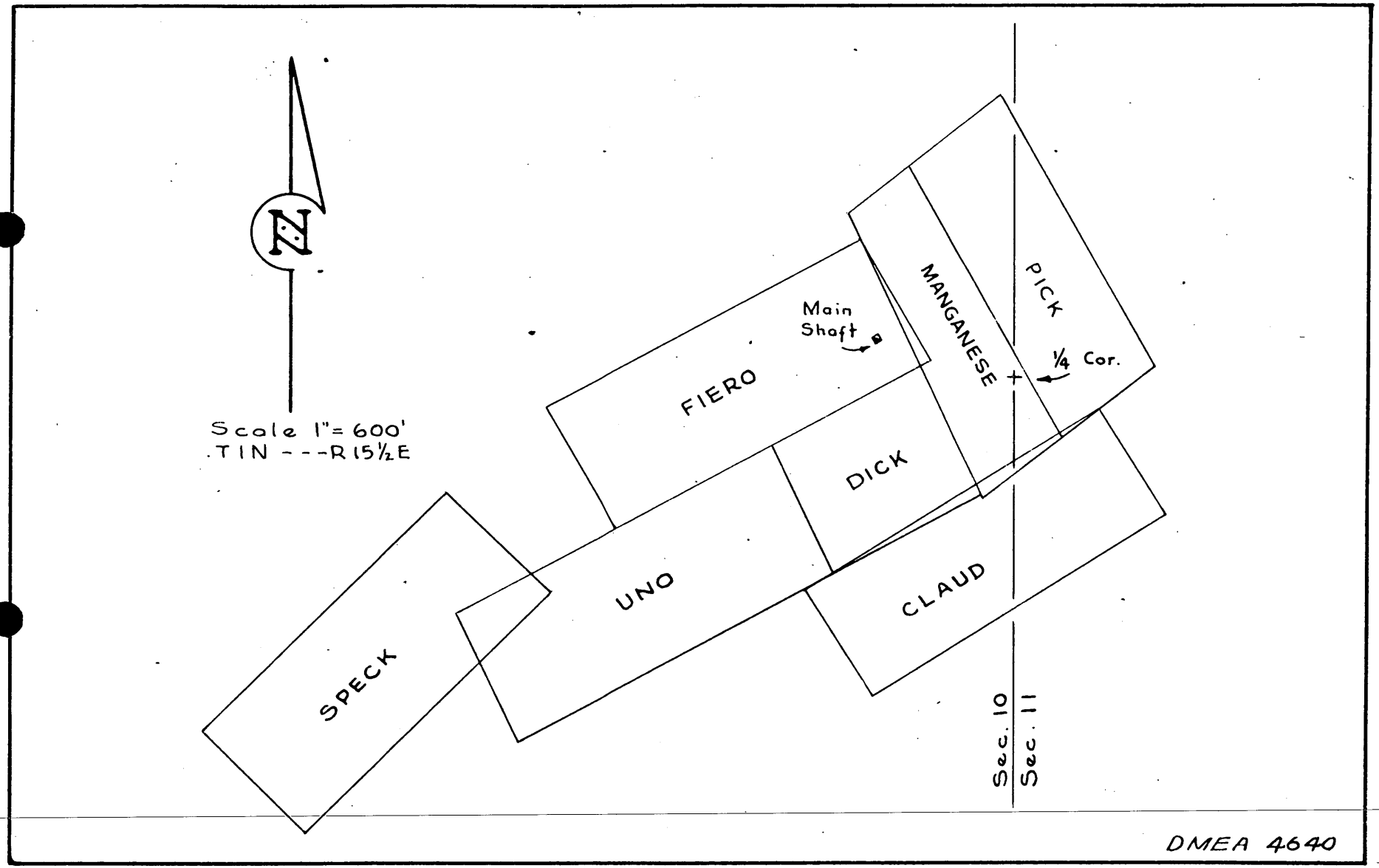


Fig. 2 Claim map, Jolyn Associates

Globe Manganese Mine, Gila County, Arizona

Granville S. Borden, 225 Bush St., San Francisco, Calif.
Mrs. Jane L. Bradley, 660 Market St., San Francisco, Calif.
D. J. Pickrell, 155 Montgomery St., San Francisco, Calif.
Herbert K. Cameron, Box 547, Wickenburg, Ariz.
W. R. Easley, 10 South Oxbow, Wickenburg, Ariz.
C. F. Heise, Wickenburg, Ariz.
A. J. Henry, Wickenburg, Ariz.
P. J. Milliken, Wickenburg, Ariz.
Regina A. Pate, Wickenburg, Ariz.
Robert Monnahan, 765 La Golondrina, Wickenburg, Ariz.
Mr. & Mrs. T. Hellberg, Box 694, Wickenburg, Ariz.
H. E. Gaunt, 4885 Calle del Medio, Phoenix, Ariz.
Frank E. Kohler, 1427 College Ave., Tempe, Ariz.
Lanning MacFarland, 34 North La Salle St., Chicago, Ill.
A. Hawley Peterson, Cady, Roberts & Co., 488 Madison Ave., New York, N. Y.
Donald Royce, 640 South Spring St., Los Angeles 14, Calif.
*Charles H. Jonas, Sands Hotel, Phoenix, Ariz.

* Shown on attached supplement to application.

PRESENT STATUS

The principal workings of the Globe Manganese mine are shown on figure 3.

Information regarding operation of the mine and an ore screening plant was supplied by Mr. Jonas. All mining operations are under contract to Ralph Henderson who employs a crew of 3 men at the Globe Manganese mine and several others at a nearby open pit. The crew at the Globe mine consists of 2 miners and a hoist-compressor man. Ore is mined from small open stopes. It is drawn from chutes into 1-ton cars that are hand trammed to the main shaft and directly dumped into a skip of about 1-ton capacity. Trucks haul the ore from a 5-ton surface bin to a screening plant on the property.

The screening plant comprises a 4-inch slot grizzly and a single deck, $\frac{1}{2}$-inch mesh vibrating screen. Three tons of mine ore are treated to yield about 1 ton of oversize material containing 2 to 4 percent manganese and 2 tons of minus $\frac{1}{2}$-inch material assaying about 26 percent manganese. The oversize is stockpiled. The undersize is shipped for beneficiation by flotation and sintering at the Mohave Mining and Milling Co.'s plant near Wickenburg, Ariz. Shipments are made under a contract with Wells Cargo, a trucking firm.

Major mining equipment of the Globe Manganese mine consists of 210 cfm Schramm compressor, a single drum hoist powered by an International Harvester gasoline engine, jackhammers and stopers.

Buildings at the mine are confined to a small hoist house and a 30-foot high headframe of timber construction.

Water for mining and domestic purposes is hauled from Globe and stored in small steel tanks near the mine.

An Onan, 3000-Watt electric generator furnishes lights for the surface mine plant and shaft.

GEOLOGY

The Globe Manganese mine lies in the southern part of the Globe Hills block of the Globe Quadrangle as mapped by Peterson.[3/] Diabase of late Cretaceous or early Tertiary age predominates as the rock outcrop in this block, where it has been intruded principally as complex sills at various horizons into the Late Precambrian

3/ Peterson, N. P., Geology of the Globe Quadrangle, Arizona: U. S. Geol. Survey Map Series GQ41,1954.

Apache group of quartzites, conglomerates and limestones. The sediments have dips ranging from about 15 to 55 degrees to the south and southeast. Numerous faults in this part of the block trend principally to the northeast. Their dips range from about 50 degrees to vertical.

In the area of the Globe Manganese mine (fig. 3) a narrow wedge-shaped mass of diabase lies along faults between two blocks of southeasterly dipping quartzite. The fault contacts trend east to northeast and dip steeply to the north and northwest. Along the north fault, diabase forms the footwall and quartzite the hanging wall, whereas along the south fault quartzite forms the footwall and diabase the hanging wall.

The vein worked in the Globe Manganese mine occupies the south diabase-quartzite fault contact, and dips about 65 to 75 degrees north as exposed in the main shaft (fig. 3). From the surface to about 65 feet, the dip of the vein appears to be about 75 degrees north but from that point to the 100-foot level the dip flattens slightly to around 65 degrees north. It is believed that the 65 degree north dip continues below the 100-foot level although the shaft is inaccessible for examination below that point. Quartzite forms the footwall to about 65 feet in the shaft but below this point the vein is entirely in diabase, suggesting that possibly

the vein diverges from the main fault. It has also been suggested by Peterson[4] that the cut-out of the quartzite at about 65 feet might indicate the total thickness of the quartzite formation in the mine area, with the diabase cutting back under the quartzite (Section A-B, fig. 3). The vein, with widths varying from narrow stringers of less than an inch to about 18 to 24 inches in places, can be traced on the surface for 600 to 700 feet through several old shafts, pits and trenches.

In the mine the vein varies from less than a foot to 2 or 3 feet and averages about 18 inches. Crittenden[5] cites a width of 8 feet in one place in the mine in the upper oxidized zone. The best ore in the vein appeared to be in the upper oxidized zone along the diabase-quartzite contact from 20 to 65 feet from the surface. Where the vein lies wholly in the diabase it pinches and splits, becomes discontinuous, and lower in grade. Peterson[6] indicated that in this area history shows that where the oxide veins leave the diabase-quartzite contact and are wholly in the diabase, the grade, quality and extent of a deposit diminishes.

The ore consists of the manganese oxides pyrolusite, wad and possibly some manganite. Associated with the ore are specular hematite, limonite and calcite. Small amounts of lead, zinc and copper are said to be present in the ore. The grade of the ore presently being mined from small pockets and pods averages about 20 percent manganese.

4/ Peterson, N. P., oral communication, 1957.
5/ Crittenden, M. D., Memorandum report on Globe Manganese mine: U. S. Geol. Survey, 1943.
6/ Peterson, N. P., oral communication, 1957.

On the 100-foot level (fig. 3) the manganese oxides have been stoped by the applicant from several small pockets in the west drift and a small stope in the east drift. Elsewhere on the 100-foot level small pods and stringers of a mixture of manganese oxides, specular hematite and secondary calcite occur along fractures in the diabase. Occurrence as small pods or pockets, or as discontinuous stringers, seems to be characteristic of deposition and enrichment of the ore in the diabase on this level. It does not appear geologically probable that the ore deposit will increase further in size, extent or grade below the 100-foot level, and no significant occurrences of manganexe oxides were seen on this level. An examination of the west drift on the 100-foot level, where the face is in practically barren diabase, suggests that the limits of the ore body were passed in that direction. On the surface an examination of the vein exposure to the west of the main shaft disclosed a pinching out of the vein and fading of mineralization in that direction along the fault. The fault becomes obscure beyond a shallow trench about 120 feet west of the Main shaft (fig. 3).

Further to the west near the map limits a few tons of manganese ore have been mined by the applicant from a small pit. Here the manganese oxides occur as stringers and pods in quartzite along a fracture striking almost north and dipping 80 degrees W. It is probable this occurrence is surficial.

To the east the 100-foot level was driven through essentially barren diabase to a connection with an old level (Longitudinal section, fig. 3). The old level apparently was fairly well stoped

out and driven to the western limits of the ore on that level during an earlier period of mining. Absence of any indicated work east of the East (100') shaft (fig. 3) in this part of the mine probably suggests a pinching of the vein in that direction. An examination of surface exposures of the vein toward the east, beyond the East shaft, indicated that the vein pinches out in that direction or simply becomes a mineralized shear zone, and that significant amounts of ore would not be expected to the east along the vein.

RESERVES

Based on present observations no significant reserves appear to remain in the mine. Pinching of the vein to the east, west, and at depth along the south fault plus the fact that most of the known ore body has already been mined, confines any estimation of reserves to small pockets and pods in the deeper levels and to scavenger ore in the old workings. It is estimated that about 1,000 to 2,000 tons of indicated and inferred or of suitable grade probably averaging 20 percent, forms the reserves of the vein on the south fault. Crittenden,[7] among other reasons, recommended no government prospecting of this mine in 1943 because of the limited quantity of ore. Although the diabase-quartzite contact along the north fault has not been explored to any great degree or to any depth the possibility exists that a few hundred tons of ore might potentially be extracted along it.

7/ Crittenden, M. D., op. cit., 1943.

SUMMARY AND CONCLUSIONS

Considering several factors, namely: (1) that surface and underground geological conditions indicate a pinching and discontinuity of the ore body to the east and west along the strike of the vein, (2) that underground geological conditions indicate a diminishing of the vein in grade, quality and extent with depth in the diabase, and (3) that only a limited quantity of ore remains in the mine, the field examiners conclude that significant amounts of ore are not geologically probable, and therefore recommend denial of the application.

Jolyn Associates
P. O. Box 1106
Wickenburg, Arizona

Re: Docket No. DMEA 4640 - Manganese
Globe Manganese Mine
Gila County, Arizona

Gentlemen:

The above docketed application for exploration assistance for manganese ores has been reviewed by the Iron and Ferro-Alloys Division, of the Defense Minerals Exploration Administration, and referred to Mr. R. N. Marshman, Acting Executive Officer, DMEA Field Team, Region III, 224 New Hunter House, Denver 2, Colorado, for review and a possible field examination of the property.

Any assistance you can give the members of the Field Team will be appreciated.

Sincerely yours,

C. O. Mittenhart

Administrator

TL:Chapman:mm 3-5-57
cc to: Docket
Code 406
Admr. Read. File
Oper. Comm.
FT REG III
Messrs. G. DeRuff, Jr. USBM
T. Killagnard, USGS

MAR - 6 1957

Mr. E. N. Marshman
Acting Executive Officer
DMEA Field Team, Region III
224 New Custom House
Denver 2, Colorado

Re: Docket No. DMEA 4640 - Manganese
Jelyn Associates
Globe Manganese Mine
Gila County, Arizona

Dear Mr. Marshman:

The above docketed application for exploration assistance is being referred to your office for review and a field examination of the property if necessary.

Copies of memoranda dated February 25, 1957, by N. E. Nelson, Geological Survey, and G. L. DeHuff, Jr., Bureau of Mines, respectively, relating to the project are enclosed. Also enclosed are two extra copies of the application for the use of the Field Team.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

APPROVED:

Frank D. Lamb

Member, Bureau of Mines

Thor H. Kiilsgaard

Member, Geological Survey

TLChapman:sm 3-5-57
cc to: Docket
Code 400
Admr. Read. File
Oper. Comm.
FT REG III
Messrs. G. DeHuff, Jr. USBM
T. Kiilsgaard, USGS

Enclosures

DMEA
DEPARTMENT OF THE INTERIOR
MAR 14 1957
REGION III
DENVER, COLORADO

March 14, 1957

Memorandum

To: W. R. Storms

From: Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA 4640 (Manganese) Jolyn Associates (Globe Manganese mine) Gila County, Arizona

Enclosed please find the application for Jolyn Associates Docket DMEA 4640, in the amount of $54,350.00, which was received in this office on March 14, 1957.

A field examination and suitable report are required. The completed report should be forwarded directly to the Executive Officer with a copy of the memorandum of transmittal to this office.

W. H. KING

W. H. King

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 21 1957

DATE	INITIALS	CODE
3/21	C	220
3/21	WSM	400

cc: Executive Officer (3)
E. N. Barahman
W. L. Emerick

WO (2)

DMEA

DEPARTMENT OF THE INTERIOR

MAR 14 1957

REGION III

DENVER, COLORADO

March 14, 1957

EXTRA COPY.

DMEA

RECEIVED MAR 21 1957

DATE	INITIALS	CODE

Memorandum

To: W. R. Storms

From: Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA 4640 (Manganese) Jolyn Associates (Globe Manganese mine) Gila County, Arizona

Enclosed please find the application for Jolyn Associates Docket DMEA 4640, in the amount of $54,350.00, which was received in this office on March 14, 1957.

A field examination and suitable report are required. The completed report should be forwarded directly to the Executive Officer with a copy of the memorandum of transmittal to this office.

W. H. King

cc: Executive Officer (3)
E. N. Harshman
W. L. Emerick

WO

DATE		CODE
2/15	C	220
3/18	WSM	400

224 New Customhouse
Denver 2, Colorado

March 13, 1957

Memorandum

To: W. H. King w/copy of application, Chairman's letter, review memoranda, and green routing control sheet

W. L. Emerick w/copy of Chairman's letter, review memoranda, and green routing control sheet

From: DMEA Field Team, Region III

Subject: Docket DMEA-4640 (Manganese) Jolyn Associates (Globe Manganese mine) Gila County, Arizona

Enclosed are the subject application, memoranda of review by N. E. Nelson, Geological Survey, and G. L. DeHuff, Jr., Bureau of Mines, and the Chairman's letter in transmittal thereof, dated March 6, 1957. A field examination and a joint report of findings and recommendations in conjunction with the Operator's work proposal are requested.

If it is recommended that the Government participate in an exploration program, please submit twelve extra copies of each map used in the joint report, which show the land to be subordinated and the location and extent of recommended work shown in relation to property boundaries. Please return the Bureau of Mines' copy of the application to this office with the Report of Examination.

DMEA Field Team, Region III

Original signed by
E. N. HARSHMAN

E. N. Harshman
Acting Executive Officer

Enclosures
JWT:jy
cc: Sec. Op. Comm. (2)
Harshman) w/copy of Chm.'s letter
King) and review memoranda
Docket 4640
Chron.

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
3/5	Chapman	400
3/5	Martin	400
3/6	Selfridge	130
"	Johnson	110
"	Rattenbury	100
3-7	C	220

400

MAR - 6 1957

Mr. E. N. Harshman
Acting Executive Officer
DMEA Field Team, Region III
224 New Custom House
Denver 2, Colorado

Re: Docket No. DMEA 4640 - Manganese
Jolyn Associates
Globe Manganese Mine
Gila County, Arizona

Dear Mr. Harshman:

The above docketed application for exploration assistance is being referred to your office for review and a field examination of the property if necessary.

Copies of memoranda dated February 25, 1957, by N. E. Nelson, Geological Survey, and G. L. DeHuff, Jr., Bureau of Mines, [redacted] relating to the project are enclosed. Also enclosed are two extra copies of the application for the use of the Field Team.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (HB)

APPROVED:

Frank D. Lamb (HB)
Member, Bureau of Mines

Thor H. Kiilsgaard (HB)
Member, Geological Survey

TLChapman:am 3-5-57
cc to: Docket
Code 400
Admr. Read. File
Oper. Comm.
FT REG III
Messrs. G. DeHuff, Jr. USBM
T. Kiilsgaard, USGS

Enclosures

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
3/5	Chapman	400
3/5	Martin	400
3/6	Selfridge	130
"	Johnson	110
"	Mittendorf	100
		220

MAR - 6 1957

Jolyn Associates
P. O. Box 1106
Wickenburg, Arizona

Re: Docket No. DMEA 4640 - Manganese
Globe Manganese Mine
Gila County, Arizona

Lamb
Kilsgaard

Gentlemen:

The above docketed application for exploration assistance for manganese ores has been reviewed by the Iron and Ferro-Alloys Division, of the Defense Minerals Exploration Administration, and referred to Mr. E. N. Harshman, Acting Executive Officer, DMEA Field Team, Region III, 224 New Custom House, Denver 2, Colorado, for review and a possible field examination of the property.

Any assistance you can give the members of the Field Team will be appreciated.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

TLChapman:am 3-5-57
cc to: Docket
Code 400
Admr. Read. File
Oper. Comm.
FT REG III
Messrs. G. DeHuff, Jr. USBM
T. Kiilsgaard, USGS

8623

OFFICIAL FILE COPY DMEA RECEIVED FEB 26 1957		
DATE	INITIALS	CODE
2/26	C	220
2/27	WSM	400

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Washington 25, D. C.

Date February 25, 1957

DMEA Docket No. 4640
DMEA Contract No.
Commodity Mn
Name of applicant Jolyn Associates
Name of property Globe Manganese Mine
Location of property Gila County, Arizona
Estimated cost of project $54,356

Memorandum

To: W. S. Martin, DMEA

From: G. L. DeHuff, Jr. Commodity Specialist, Branch of Ferrous Metals and Ferroalloys

Subject: Review of Application
(Application, Field Team Report, etc.)

1. Date of subject document: 2/15/57. 2. Date received by reviewer: 2/18/57.

3. Prior reports on this property known to reviewer: Yes [x], No [ ].

4. Prior reports on nearby properties known to reviewer: Yes [ ], No [ ].

5. Information available on past production: Yes [x], No [ ].

6. Other pertinent factors known to reviewer: Yes [ ], No [ ].

7. Explain items marked yes above: Examined by Bureau of Mines Engineer 12/12/56, who reports that about 1500 tons of 30% ore were produced during World War I, some 1150 tons of 36% ore shipped during World War II, and 1439 tons of 31% ore shipped 1953-55 to Deming depot

8. Factors needing special consideration:
   a. Location [ ]
   b. Ownership [ ]
   c. Evidence of mineralization [ ]
   d. Geology [ ]
   e. Proposed exploration method [x]
   f. Alternate exploration method [ ]
   g. Costs [ ]
   h. _____ [ ]

9. Action advised:
   a. Obtain information from applicant [ ]
   b. Refer to Field Team [x]
   c. Denial [ ]
   d. Agree with Field Team [ ]
   e. Disagree with Field Team [ ]
   f. Suggest alternate plan [ ]
   g. Request another examination [ ]
   h. Approval [ ]
   i. Consult with Mr. _____ at _____ AEC office.

10. Remarks: (Use back of page if necessary)

G L DeHuff Jr

IN REPLY REFER TO:

OFFICIAL FILE COPY
D M E A
RECEIVED FEB 27 1957

DATE	INITIALS	CODE
2/27	C	220
2/27	WSM	400

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

February 25, 1957

Re: DMEA 4640
Jolyn Associates
Globe Manganese Mine
Gila County, Arizona
$54,350 - Manganese

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of application

The applicants request assistance in exploring a narrow (3-°-foot) manganese-bearing vein, from which a few thousand tons of ore has been produced. The vein has been opened to a depth of 162 feet by one shaft and to various lesser depths by other shafts.

Stoping has been done over a length of 250 feet and to an average depth of 84 feet. Analyses of shipments totalling 962 tons, show the material contained 32.17% Mn, 11.58 Fe, and 3.01% Cu + Pb + Zn. The manganese occurs principally as wad, according to the application, and judging by the sampling and stoping the manganese values may decrease as the depth nears the 120-foot point. A map and sections in reports by Max Crittendon (1943 and 1944) at which time the shaft was 105 feet deep, suggest the vein pinches going westerly and downward. The vein where developed and stoped occurs in a fault in the contact between quartzite and diabase, the latter being in the hanging wall to the 60-foot level and in both the hanging and footwalls of the vein at the 80-foot level. The sampling recorded on the applicants' section concurs somewhat with Crittenden's section as no sampling below the 120 level is shown. The application does not say that the vein has pinched and is wholly in the diabase in the lower levels, but the map shows a vein wholly in diabase 500 feet east of the shaft.

Max Crittenden says...."the ore consists of a mixture of specular hematite and manganese minerals, of which manganite is thought to be the most abundant."....The composition of the ore limits its uses to those in which a high iron content is not a detriment".

The work proposed by the applicants consists of a 100-foot shaft extension and 1,000 feet of drifting on the 100-foot level. If, as may be inferred, from Crittenden's section, A-A', the sampling, and

the slope section, the manganese content of the vein may decrease with depth, and the drifting at the 100-foot level might well be near the average bottom of the oxidized ore. The character of the unoxidized vein, if known, is not told us.

In my opinion, the shaft extension is not now warranted. Drilling should precede both the extension work and the drifting.

Referral of the application to the Field Team for appropriate action is recommended.

N. E. Nelson

N. E. Nelson

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

February 18, 1957

Jolyn Associates
P. O. Box 1106
Wickenburg, Arizona

Subject: DMEA-4640

Dear Mr. Borden:

Your application for exploration assistance, dated February 15, 1957 submitted to our office at Washington, D. C. has been assigned Docket Number DMEA-4640 and referred to the Iron and Ferro Alloys Division in the Washington office. Kindly identify all future correspondence relating to your application by this Docket Number.

Sincerely yours,

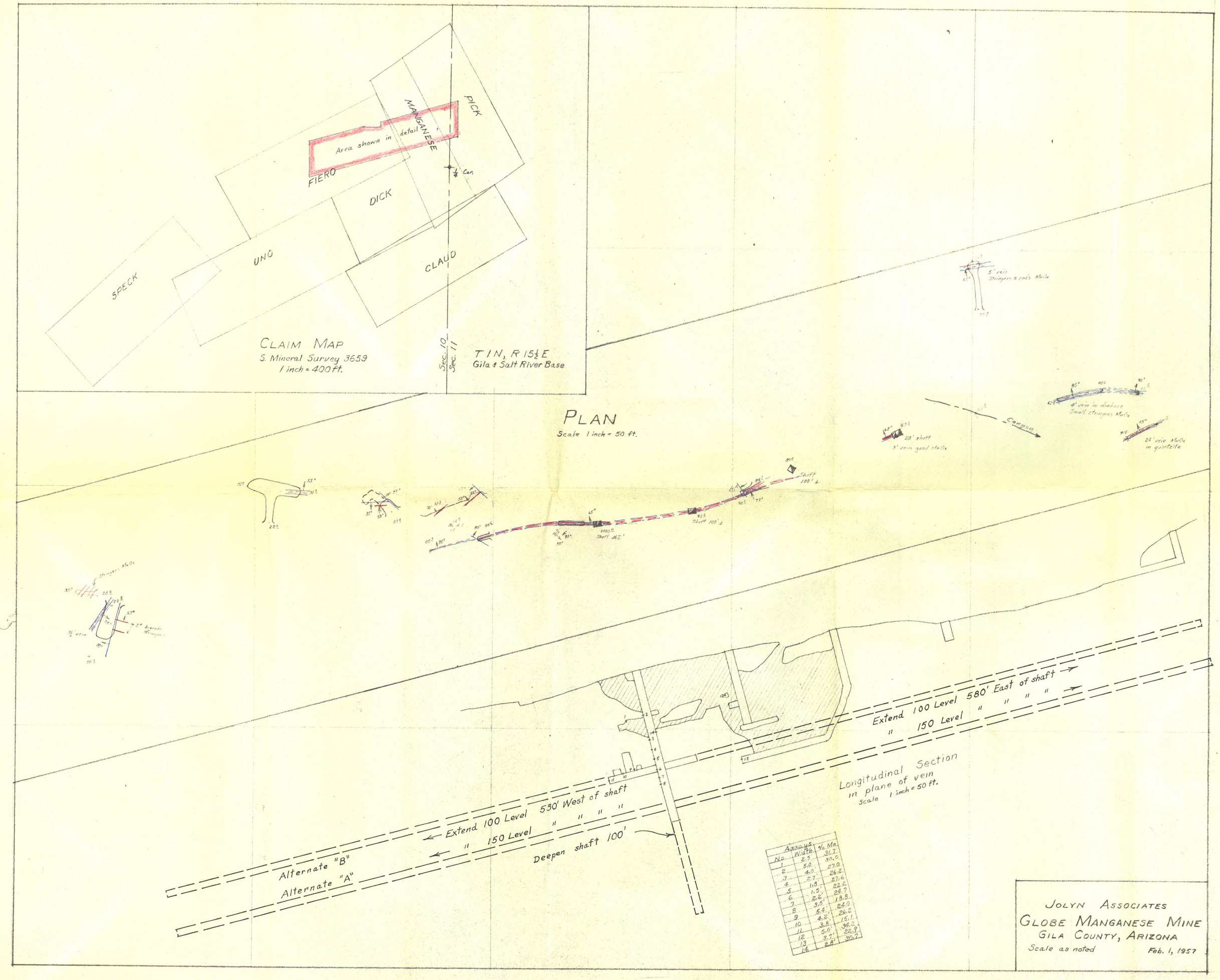
Allen S. Dakan, Director
Operations Control and
Statistics Division

Copy to: Region III
Code 400

6416

U. S. GEOLOGICAL SURVEY
SUITE 157 HOWARD ST.
SPOKANE 4, WASHINGTON

Mr. George C. Selfridge
Chairman, Operating Committee
Defense Minerals Expler. Admin.
Department of the Interior
Washington 25, D. C.



Assays		
No.	Width	% Mn.
1	2.9	31.7
2	5.0	30.0
3	4.0	27.0
4	2.7	26.2
5	1.8	27.6
6	1.5	22.2
7	2.2	24.7
8	3.5	19.8
9	5.4	24.0
10	4.2	26.2
11	3.8	15.1
12	5.0	34.2
13	3.7	22.9
14	2.8	30.7

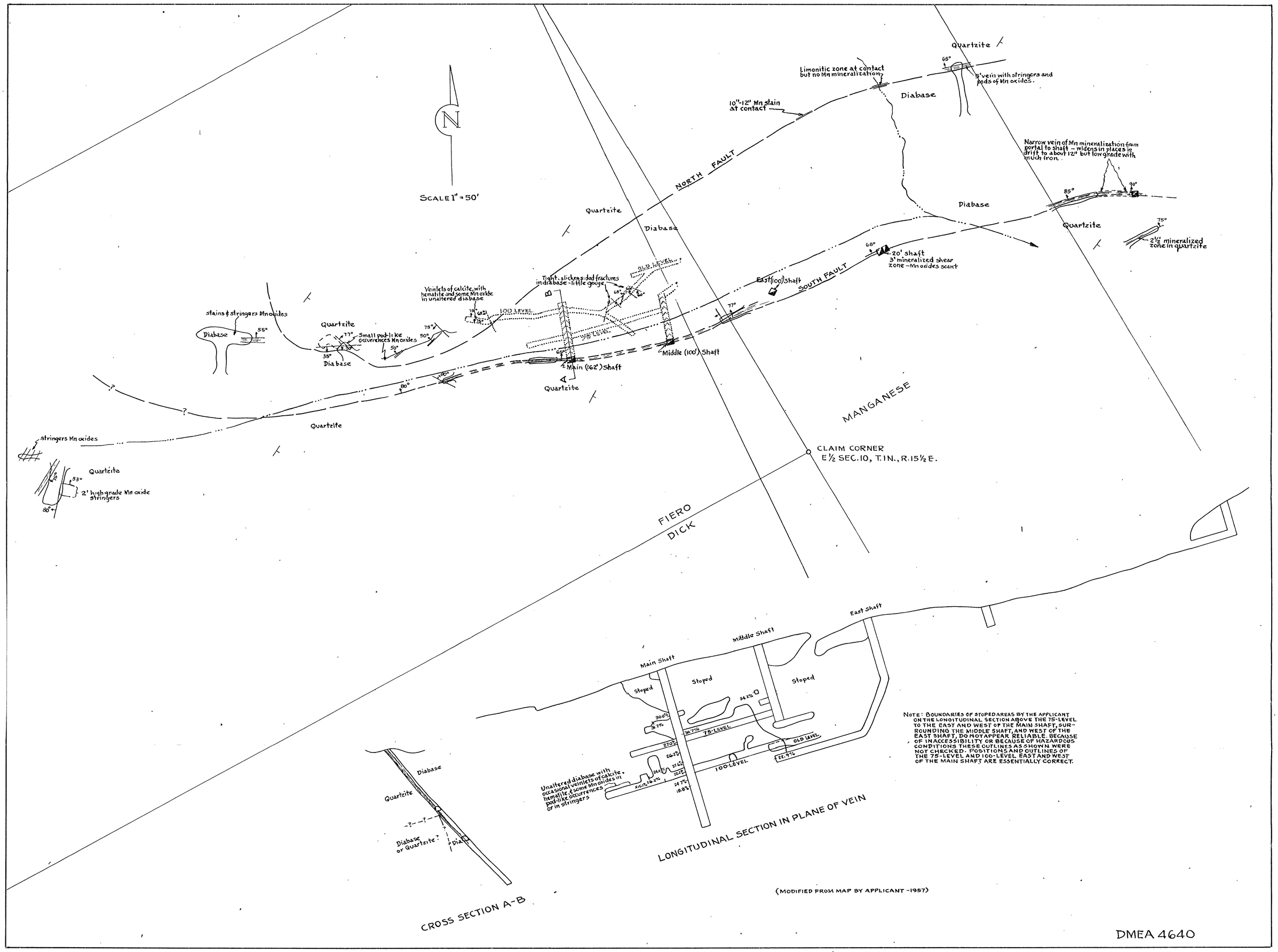


FIGURE 3.- GEOLOGY AND SECTIONS, JOLYN ASSOCIATES, GLOBE MANGANESE MINE, GILA COUNTY, ARIZONA.