

MORTGAGE AND SECURITY AGREEMENT

THIS MORTGAGE AND SECURITY AGREEMENT is given as of the 13th day of July, 1981, by the Mortgagor named below to the Mortgagees named below.

**ARTICLE I
PARTIES, PROPERTY, AND DEFINITIONS**

The following terms and references shall have the meanings indicated:

1.1 **Mortgagor:** EARTH SCIENCES, INC., a Colorado corporation whose legal address is Highway 93 North, Golden, Colorado 80401.

1.2 **Mortgagees:** RAMON E. BISQUE, DUANE N. BLOOM, and DOUGLAS N. STEVENS, each of whose address is Highway 93 North, Golden, Colorado 80401.

1.3 **Note:** The Guaranty Promissory Note of even date herewith by which Mortgagor has promised to pay to each of the Mortgagees all amounts which such Mortgagee shall have paid to The First National Bank in Golden, of Golden, Colorado (the "Bank"), pursuant to certain guaranties (the "Guaranties") by which Mortgagees have severally guaranteed one-third of all obligations of Mortgagor to the Bank, to a maximum amount of \$266,667 each, such promise of Mortgagor under the Note being limited as to all of the Mortgagees in the aggregate to \$800,000 plus interest, costs, expenses, and other items as more particularly provided for in the Note. All terms and provisions of the Note are incorporated by this reference in this Mortgage and Security Agreement.

1.4 **Property:** The property described in Exhibit A attached hereto and incorporated herein, together with the following:

(a) All buildings, structures, and improvements now or hereafter located thereon, as well as all rights of way, easements, and other appurtenances thereto;

(b) All of Mortgagor's right, title and interest in any land lying between the boundaries of said land and the center line of any adjacent street, road, avenue, or alley, whether opened or proposed;

(c) All water, ditch, well, and reservoir rights which are appurtenant to or which have been used in connection with said land;

(d) All minerals, crops, timber, trees, shrubs, flowers, and landscaping features now or hereafter located on, under or above such land;

(e) All machinery, apparatus, equipment, fittings, fixtures (whether actually or constructively attached, and including all trade, domestic, and ornamental fixtures) now or hereafter located in, upon, or under said land or improvements and used or usable in connection with any present or future operation thereof;

(f) All awards and payments, including interest thereon, resulting from the exercise of any right of eminent domain or any other public or private taking of, injury to, or decrease in the value of, any of such property; and

(g) All permits, licenses, and applications for permits and licenses and all environmental impact statements and studies relating to the Property or to Mortgagor's activities thereon, whether now or hereafter issued, granted, or in existence, to the fullest extent that interests in such permits, licenses, applications, statements and studies may be transferred or assigned by Mortgagor.

(i) All other or greater rights and interests of every nature in said property and in the possession or use thereof and income therefrom, whether now owned or subsequently acquired by Mortgagor.

1.5 Chattels: Except to the extent included within the definition of "Property" set forth above, all goods, fixtures, building and other materials, supplies, and other tangible personal property of every nature now owned or hereafter acquired by Mortgagor and used or intended for use in the construction, development, or operation of the Property, together with all accessions thereto, replacements and substitutions therefor, and proceeds thereof.

1.6 Security Documents: The Note, this Mortgage and Security Agreement and any financing statements executed in connection herewith, together with each other security agreement or document executed and delivered from time to time by Mortgagor as security for the Note or in connection with the transaction pursuant to which the Note has been executed and delivered. The term "Security Documents" also includes all modifications, extensions, renewals, and replacements of each document referred to above.

1.7 Secured Obligations: All present and future obligations of Mortgagor to Mortgagees evidenced by, contained in, or arising under the Note.

ARTICLE II GRANTING CLAUSE

2.1 Grant to Mortgagees. As security for the Secured Obligations, Mortgagor hereby grants, bargains, sells, conveys and mortgages the Property to Mortgagees, subject to all provisions hereof.

2.2 Security Interest to Mortgagees. As additional security for the Secured Obligations, Mortgagor hereby grants to Mortgagees a security interest in the Chattels.

**ARTICLE III
MORTGAGOR'S DISCLAIMERS**

3.1 Disclaimers of Warranties. By accepting the benefits of this Mortgage and Security Agreement, Mortgagees each acknowledge that they are substantial shareholders of, and are officers and directors of, Mortgagor, and are familiar with its affairs and particularly with the Property and the Chattels. Accordingly, Mortgagor disclaims any warranty or representation to Mortgagees concerning the Property or the Chattels, including any warranty or representation concerning Mortgagor's rights in or title thereto, the condition thereof, or the existence of prior liens or encumbrances thereon. Nothing in this Mortgage and Security Agreement shall be construed to preclude Mortgagor from assigning, transferring, or further encumbering the Property or the Chattels while the lien hereof remains in effect.

**ARTICLE IV
MORTGAGOR'S AFFIRMATIVE COVENANTS**

4.1 Payment of Obligations under Note. Mortgagor will pay all sums payable under the Note in accordance with its terms.

4.2 Performance of Other Obligations. Mortgagor will perform and comply with all other covenants, conditions, and prohibitions required of Mortgagor by the terms of the Security Documents.

4.3 Payment of Taxes.

(a) **Property Taxes.** Mortgagor will pay, before delinquency, all taxes and assessments, general or special, which may be levied or imposed at any time against the Property or the Chattels.

(b) **Right to Contest.** Notwithstanding any other provision of this section, Mortgagor will not be deemed to be in default solely by reason of Mortgagor's failure to pay any tax, assessment or similar governmental charge so long as, in Mortgagor's reasonable judgment, each of the following conditions is satisfied:

(i) Mortgagor is engaged in and diligently pursuing in good faith administrative or judicial proceedings appropriate to contest the validity or amount of such tax, assessment, or charge; and

(ii) Mortgagor's payment of such tax, assessment, or charge would necessarily and materially prejudice Mortgagor's prospects for success in such proceedings; and

(iii) Nonpayment of such tax, assessment, or charge will not result in the loss or forfeiture of any property encumbered hereby or any interest of Mortgagees therein.

4.4 Further Assurances. Mortgagor will execute and deliver to Mortgagees upon demand, and pay the costs of preparation and recording thereof, any further mortgages, security agreements, assurances, and other documents which Mortgagees may request to confirm, perfect, or maintain the liens and security interests created or intended to be created hereby.

**ARTICLE V
EVENTS OF DEFAULT**

Each of the following events will constitute a default under this Mortgage and Security Agreement and under each of the other Security Documents:

5.1 Failure to Pay Under Note. Mortgagor's failure to make any payment when due under the terms of the Note; or

5.2 Bankruptcy. The making by Mortgagor of any assignment for the benefit of creditors, or the appointment of a receiver, liquidator, or trustee of the property of Mortgagor, or the filing of any petition for the bankruptcy, reorganization, or arrangement of Mortgagor pursuant to the Federal Bankruptcy Code or any similar state or Federal statute, or the adjudication of Mortgagor as bankrupt or insolvent.

**ARTICLE VI
MORTGAGEES' REMEDIES**

Immediately upon or at any time after the occurrence of any event of default hereunder, Mortgagees may exercise any or all remedies available at law or in equity, including but not limited to those listed below and those listed in the other Security Documents, in such sequence or combination as Mortgagees may determine in Mortgagees' sole discretion, subject, however, to any restriction or provision binding upon Mortgagees pursuant to any other agreement or arrangement;

6.1 Acceleration of Secured Obligations. Mortgagees may, without notice or demand, declare all of the Secured Obligations immediately due and payable in full.

6.2 Suit for Monetary Relief. With or without accelerating the maturity of the Secured Obligations, Mortgagees may sue from time to time for any payment due under the Note.

6.3 Possession of Property. Mortgagees may enter and take possession of the Property without seeking or obtaining the appointment of a receiver, may employ a managing agent for the Property, and may lease or rent all or any part of the Property, either in Mortgagees' names or in the name of Mortgagor, and may

collect the rents, issues, and profits of the Property. Any revenues collected by Mortgagees under this section will be applied first toward payment of all expenses (including attorneys' fees) incurred by Mortgagees, and the balance, if any, will be applied against the Secured Obligations; in the event Mortgagees are not then obligated to make any payment under the Guaranties, such balance shall be paid by Mortgagees to the Bank for application to the indebtedness of Mortgagor to the Bank that is secured by the Guaranties, or if such indebtedness may not be prepaid, shall be held by Mortgagees, without commingling with other funds, for payment on such indebtedness after application of the preceding sentence shall be paid to Mortgagor or applied in such other manner as the court may direct.

6.4 Enforcement of Security Interests. Mortgagees may exercise all rights of a secured party under the Uniform Commercial Code (as enacted in the state in which the Chattels are located) with respect to the Chattels, including but not limited to taking possession of, holding, and selling the Chattels.

6.5 Foreclosure Against Property. Mortgagees may foreclose this Mortgage and Security Agreement, insofar as it encumbers the Property, in accordance with applicable laws and rules of court. The proceeds of any foreclosure sale shall be applied first to the costs and expenses of such sale, then to the repayment of all costs and expenses, including attorneys' fees, incurred by Mortgagees in enforcing or exercising their rights hereunder, then to the payment of interest, and then to the reduction of principal.

6.6 Appointment of Receiver. Mortgagees shall be entitled, as a matter of absolute right and without regard to the value of any security for the Secured Obligations or the solvency of any person liable therefor, to the appointment of a receiver for the Property upon ex parte application to any court of competent jurisdiction. Mortgagor waives any right to any hearing or notice of hearing prior to the appointment of a receiver. Such receiver and his agents shall be empowered (a) to take possession of the Property and any businesses conducted by Mortgagor or any other person thereon and any business assets used in connection therewith, (b) to exclude Mortgagor and Mortgagor's agents, servants, and employees from the Property, (c) to collect the rents, issues, profits, and income therefrom, (d) to complete any construction which may be in progress, (e) to do such maintenance and make such repairs and alterations as the receiver deems necessary, (f) to use all stores of materials, supplies, and maintenance equipment on the Property and replace such items at the expense of the receivership estate, (g) to pay all taxes and assessments against the Property and the Chattels, all premiums for insurance thereon, all utility and other operating expenses, and all sums due under any prior or subsequent encumbrance, and (h) generally to do anything which Mortgagor could legally do if Mortgagor were in possession of the Property. All expenses incurred by the receiver or his agents shall constitute a part of the Secured Obligations. Any revenues collected by the receiver shall be applied first to the expenses of the receivership, including attorneys' fees incurred by the receiver and by Mortgagees, and the balance shall be applied as provided in Section 6.3 with respect to revenues collected by Mortgagees in possession of the Property. Unless sooner terminated with the express consent of Mortgagees, any such receivership will continue until the Secured Obligations have been discharged in full, or until title to the Property has passed after foreclosure sale and all applicable periods of redemption have expired.

**ARTICLE VII
MISCELLANEOUS PROVISIONS**

7.1 Rights and Remedies Cumulative. Mortgagees' rights and remedies under each of the Security Documents are cumulative of the rights and remedies available to Mortgagees under each of the other Security Documents and those otherwise available to Mortgagees at law or in equity. No act of Mortgagees shall be construed as an election to proceed under any particular provision of any Security Document to the exclusion of any other provision in the same or any other Security Document, or as an election of remedies to the exclusion of any other remedy which may then or thereafter be available to Mortgagees.

7.2 No Third Party Rights. No person shall be a third party beneficiary of any provision of any of the Security Documents. All provisions of the Security Documents favoring Mortgagees are intended solely for the benefit of Mortgagees, and no third party shall be entitled to assume or expect that Mortgagees will not waive or consent to modification of any such provision in Mortgagees' sole discretion.

7.3 Preservation of Liability and Priority. Without affecting the liability of Mortgagor or of any other person (except a person expressly released in writing) for payment and performance of all of the Secured Obligations, and without affecting the rights of Mortgagees with respect to any security not expressly released in writing, and without impairing in any way the priority of this Mortgage and Security Agreement over the interests of any person acquired or first evidenced by recording subsequent to the recording hereof, Mortgagees may, either before or after the occurrence of any event of default under any of the Security Documents, and without notice or consent: (a) release any person liable for payment or performance of all or any part of the Secured Obligations; (b) make any agreement altering the terms of payment or performance of all or any of the Secured Obligations; (c) exercise or refrain from exercising, or waive, any right or remedy which Mortgagees may have under any of the Security Documents; (d) accept additional security of any kind for any of the Secured Obligations; or (e) release or otherwise deal with any real or personal property securing the Secured Obligations. Any person acquiring or recording evidence of any interest of any nature in the Property or the Chattels, shall be deemed, by acquiring such interest or recording any evidence thereof, to have agreed and consented to any or all such actions by Mortgagees.

7.4 Subrogation of Mortgagees. Mortgagees shall be subrogated to the lien of any previous encumbrance discharged with funds advanced by Mortgagees under the Security Documents, whether or not such previous encumbrance has been released of record.

7.5 Defeasance. Upon payment and performance in full of all of the Secured Obligations, Mortgagees will execute and deliver to Mortgagor such documents as may be required to release this Mortgage and Security Agreement of record.

7.6 Severability. Wherever possible, each provision of this Mortgage and Security Agreement shall be interpreted so as to be effective and valid under the law of the state in which the Property is located. If any provision hereof is, for any reason and to any extent, invalid or unenforceable, then neither the remainder

hereof, nor the application of the provision to other persons or in other circumstances, shall be affected by such invalidity or unenforceability.

Signed and delivered as of the date first mentioned above.

ATTEST:

EARTH SCIENCES, INC.

Walter M. S.
Secretary

By Peter J. Leveton
Peter J. Leveton, President
and Chief Executive Officer

STATE OF COLORADO)
) ss
COUNTY OF JEFFERSON)

The foregoing instrument was acknowledged before me this 13th day of July 1981, by Peter J. Leveton as President and Chief Executive Officer of Earth Sciences, Inc., a Colorado corporation.

My commission expires _____ My Commission Expires November 6, 1984

Witness my hand and official seal.

Stella J. Vetter
Notary Public

**EXHIBIT A TO
MORTGAGE AND SECURITY AGREEMENT**

ALEX Joint Venture

Paragraph 1.

All of Mortgagor's right, title, and interest, in, under, and to that certain Joint Venture Agreement dated as of May 28, 1974, among Mortgagor, National Steel Corporation, a Delaware corporation; and Southwire Company, a Georgia corporation; (which joint venture agreement supersedes a joint venture agreement dated as of November 28, 1972, among the same parties), as such joint venture agreement now exists or as it may hereafter be amended or modified.

EXHIBIT A
Paragraph 2.

All of Mortgageor's right, title, and interest in and to the following described properties, including, without limitation, all of Mortgageor's right, title, and interest therein and thereto arising under the certain Joint Venture Agreement dated as of May 29, 1974, among Mortgageor, National Steel Corporation, a Delaware corporation, and Southwire Company, a Georgia corporation.

I. The PAT Alunite Property including:

- A. Federal Potassium Prospecting Permits recorded in the Bureau of Land Management State Land Office, Phoenix, Arizona; Preference Right Lease Application filed on October 23, 1975.**

Prospecting Permit #	Permittee	Date	Legal Description	Acres
A7464	Earth Sciences, Inc.	11/1/73	GSR Mer., Santa Cruz Co., Arizona Sec. 25, Lots 3, 4, SW 1/4; T 22 S., R 17 E., Sec. 10, Lots 1 and 2	274.67

* This Exhibit A has been revised and modified to show all properties and interests of the Joint Venture as of March 30, 1977.

** In the preference right lease application, 1978.44 acres of permits A-7464 and A-7465 were relinquished. This relinquishment has been accepted by the Bureau of Land Management.

EXHIBIT A

IV. The CM Alunite Property including:

A. Federal Potassium Prospecting Permit Applications (recorded in the Bureau of Land Management State Land Office, Reno, Nevada):

Permit Application #	Permit Applicant	Date Applied	Legal Description	Acres
86917	Earth Sciences, Inc.	7/26/72	Mt. Diablo Mer., Lincoln Co., Nevada T 7 S, R 70 E, Sec. 4, S4, S4W4; Sec. 5, S5E4; Sec. 9, E4; Sec. 9, All; Sec. 16, All; Sec. 17, E4.	2540.00
86916	Earth Sciences, Inc.	7/26/72	Mt. Diablo Mer., Lincoln Co., Nevada T 7 S, R 70 E, Sec. 2, SW4; Sec. 3, S4, S4W4; Sec. 10, All; Sec. 11, W4; Sec. 13, All.	2240.00

B. Unpatented Lode Mining Claim Locations: Assessment work for the 75 CM claims was not conducted or filed during 1976. As a result, the CM lode claims are no longer valid and have been deleted from this exhibit.

74971

FILED AND RECORDED AT REQUEST OF
BRUCE B. McPHERTERS
APRIL 12, 1982
AT 1 MINUTES PAST 1 O'CLOCK
P M IN BOOK 49 OF C. T. 104
RECORDS, PAGE 365 LINCOLN
COUNTY, NEVADA.

James A. [Signature]
COUNTY RECORDER