MME Form 9
Rev. Mar. 59

UNITED STATES
DEPARTMENT OF THE INTERIOR
Office of Minerals Exploration

OFFICIAL DOCKET FILE Contract No. 14-23-_____ Docket No. MME-6508

Application
- [ ] Denied
- [x] Withdrawn

Contract
- [ ] Terminated - Not Certified
- [ ] Terminated - Certified
- [ ] Cancelled
- [ ] Royalty Agreement

The records contained in this file are marked (x) and arranged in this order:

Folder No. 1:

Left Side

- [ ] Royalty Audits
- [ ] Certification of Discovery
- [ ] Closing Letter
- [ ] Cost Audits
- [ ] Termination Notice or Agreement
- [ ] Recision Notice
- [ ] Assignment of Contract
- [ ] Contract Amendments
- [ ] Contract with all exhibits and annexes
- [ ] Owner's Consent to Lien and Subordination Agreement
- [x] Application and Attachments

Right Side

- [ ] Project Summary (final)
- [ ] Work Completed Analysis (final)

All other material filed in chronological order including the following reports if checked:

- [ ] Field Team Semiannual Report for Certified Project
- [ ] Final Field Team Report (Tab)
- [ ] Operator's Final Report (Tab)
- [ ] Interim Field Team Reports
- [ ] Operator's monthly reports and all attachments
- [x] On-site Exam. Report (Tab) Sept. 1966 Field Off.'s memo 9/28/66
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No._____: Reports

- [ ] Analysis of Semiannual Inspection Reports
- [ ] Project Summary (Interim) by MME Engineers

Right Side

- [ ] Field Team Semiannual Report for Certified Project
- [ ] Field Team Interim Reports
- [ ] Operator's Monthly Reports with Transmittal, Narrative and Maps

Folders No._____: Maps (Use pocket folder or envelope)

Folders No._____: Settlement Sheets

Folders No._____: Drill Logs

Folders No._____: Royalty Material

52615

TEXAS MERCURY COMPANY
3806 CEDAR SPRINGS ROAD
DALLAS, TEXAS 75219

MAILING ADDRESS
P. O. BOX 19508

AREA CODE 214
LAKESIDE 1-5145

March 7, 1966

Mr. J. W. Hasler, Field Officer
United States Geological Survey
Office of Minerals Exploration
Region III, Room 2284, Building 25
Denver Federal Center
Denver, Colorado 80225

RE: OME-6507 (Silver)
Texas Mercury Company
Secs. 38, 50 and 60, Block 2
D & P Ry. Co. Survey
Presidio County, Texas

and

OME-6508 (Mercury)
Texas Mercury Company
Secs. 43 to 46 and 56 to 58, incl.
Brewster County, Texas

Dear Mr. Hasler:

In reply to your letter of February 11, 1966, we are enclosing a modification of our application filed under OME-6508 (mercury). This sheet is to be substituted for Page 9 of the original application and reduces the estimate of cost from $100,000 to $72,230. Area One, as shown in the application and the maps attached, has been core drilled at the expense of Texas Mercury Company and is to be eliminated from our application. The core drilling is being contracted to Walters Drilling Company, Inc. at a cost of less than $2.00 a foot compared to our next best bid from Boyles Brothers Drilling Company, a copy of which is enclosed.

With this modification we would appreciate your processing this application and the one for OME-6507 (silver) as previously filed.

If any additional information is needed, please let us know.

Yours very truly,

TEXAS MERCURY COMPANY

W. R. Ransone

W. R. Ransone

WRR:jl

Enclosures

cc: Messrs. John Baker, Roger Davis,
Carroll Deely

7. Estimate of Costs:

(a) Independent Contracts.		
(1) Geochemical Surveys, Dallas Texas- Analysis and interpretation of 400 samples taken with jackhammer @ $10.00	$ 4,000 ? bids	
(2) Walters Drilling Company, Inc., Dallas Texas - Core drill and crew - 161 days @ $150.00/day	24,150	
(3) Bulldozer work	4,000	$ 32,150
(b) Personal services (all available)		
(1) Superintendent (Baker) - 8 mos.	$12,000 ?	
(2) Assistant for assay, survey, etc. - 8 mos.	4,000 ?	
(3) Labor for jackhammer samples - 3 men @ $400.00/mo. - 2 mos.	2,400	
(4) Labor - one man as helper - 8 mos.	3,200	21,600
(c) Operating materials and supplies.		
(1) Bits, 4-1/2" rock, 168 @ $40 each	$ 6,720	
(2) Bags, 5600 @ 6 cents each	336	
(3) Fuel for compressor and truck	3,200	
(4) Miscellaneous	5,824	16,080
(d) Operating equipment (Texas Mercury Co. owned)		
(1) Vacuum Unit		
(2) 4-wheel drive pickup		
(3) Lemaire mercury meter		
(4) Assay equipment 8 mos. rental @ $300/mo. X 60 = 18,000		2,400
(e) Initial rehabilitation and repairs		None
(f) New buildings, fixtures, installations		None
(g) Miscellaneous		None
		$ 72,230

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DIAMOND CORE DRILLING
DIAMOND DRILLING EQUIPMENT
GROUTING
FOUNDATION TESTING
MINING
QUARRYING
SHAFT SINKING
TUNNEL DRIVING
MINE PLANT DESIGN
AND FABRICATION

Boyles Bros.
DRILLING COMPANY

CONTRACTORS-ENGINEERS-GEOLOGISTS

2960 W. 7th Avenue
DENVER, COLORADO 80204
Phones: 255-9244
255-0855

General Offices and Plant
1624 Pioneer Road P. O. Box 58
SALT LAKE CITY, UTAH 84110
Phone 487-7595

BRANCH OFFICES
PHOENIX
RENO
SPOKANE
DENVER
SACRAMENTO
SANTIAGO, CHILE
LIMA, PERU

October 21, 1965

Mr. William Ransone
Texas Mercury Company, Inc.
P. O. Box 6508,
Dallas, Texas

Dear Mr. Ransone:

We submit the following rates and conditions to apply to your rotary drilling program of approximate minimum of 5000 linear feet of drilling on your properties in Brewster and Presidio Counties, Texas.

Mobilization of men and equipment, lump sum, $1,200.00

Drilling:	0 to 150 feet, per linear foot,	$ 2.90
	150 to 300 feet, per linear foot,	3.20

Delays caused by others or malfunction of dust collector, per hour, $15.50

Drill bits will be charged to your account at our cost at job site.

Vacuum dust collector will be furnished at no cost to Boyles Bros.

Roads and drill sites to be prepared and maintained at no cost to us.

In the event the footage drilled exceeds 10,000 feet the mobilization charge will be deleted.

I wish to thank you for the courtesies extended to me on my recent visit to your properties and for your consideration of our company.

Very truly yours,

BOYLES BROS. DRILLING COMPANY

George E. Lensch

George E. Lensch, District Manager

GEL/eg

DIAMOND CORE DRILLING
DIAMOND DRILLING EQUIPMENT
GROUTING
FOUNDATION TESTING
MINING
QUARRYING
SHAFT SINKING
TUNNEL DRIVING
MINE PLANT DESIGN
AND FABRICATION

Boyles Bros. DRILLING COMPANY

CONTRACTORS-ENGINEERS-GEOLOGISTS

2960 W. 7th Avenue
DENVER, COLORADO 80204
Phones: 255-9244
255-0855

General Offices and Plant
1624 Pioneer Road P. O. Box 58
SALT LAKE CITY, UTAH 84110
Phone 487-7595

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BOYLES BROS. DRILLING COMPANY

George E. Lensch

George E. Lensch, District Manager

GEL/eg

Form 40
65

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

Budget Bureau No. 42-R1368
Approval expires Dec. 31, 1968

APPLICATION FOR FINANCIAL ASSISTANCE IN MINERALS EXPLORATION

Pursuant to Public Law 85–701 (72 Stat. 700; 30 U.S.C. 641)

NAME OF APPLICANT *(Full legal name and mailing address as they should appear on contract if one is executed.)*

Texas Mercury Company
P. O. Box 19508
Dallas, Texas 75219

APPLICANT DO NOT USE THIS BLOCK

DOCKET NUMBER: 6508

DATE RECEIVED: 10-8-65

REGION: III

DIVISION CODE: 120M

BUSINESS ORGANIZATION *(Check one)*

- INDIVIDUAL [ ]
- CORPORATION [ ]
- PARTNERSHIP [X]
- OTHER *(Specify)* [ ]

STATE IN WHICH FIRM IS ORGANIZED: Texas

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

NAME	ADDRESS	TITLE
W. R. Ransone	3806 Cedar Springs Rd. Dallas, Texas	Managing Partner
E. C. Reagor	" " "	Partner
C. V. A. Pittman	" " "	"
Eugene McDermott	4701 Drexel Dr., Dallas, Tex.	"
Roger H. Davis	220 Mercantile Continental Bldg., Dallas, Texas	"
Carroll Deely	6210 N. Central Expressway, Dallas, Texas	"

MINERAL(S) FOR WHICH YOU WISH TO EXPLORE: Mercury

ESTIMATED COST OF PROJECT: $ $100,000.00

PROPERTY NAME	LOCATION COUNTY	STATE
Terlingua	Brewster County,	Texas

GENERAL INSTRUCTIONS

Before filling out this application, please read the *OME Regulations for Obtaining Federal Assistance in Financing Explorations for Mineral Reserves* (30 CFR Chap. III). To assure prompt action, your application must provide all applicable material and information specified on the back of this application form. Avoid unnecessary correspondence and delays by submitting complete and accurate information. *Please submit two copies of this application and all accompanying papers* except as otherwise noted. Place your name and address on each sheet. Each item of information, maps, and reports required as a part of this application is described on the back of this form. Identify each attached statement by the item number to which it applies. If an item does not apply to your application, show the item number on your statement and after it write "not applicable." Maps or sketches should be used to supplement narrative descriptions of the property location and boundaries in item 2, existing mine workings and geology in item 3, and the proposed exploration work in item 5. When this information is not too complex, all of it may be shown on one map or sketch. All documents and other attachments submitted as a part of this application, except those in item 3(g) which you mark to be returned, become the property of the Government and will not be returned to the applicant. Send true copies, *not originals*, of leases, contracts, and other documents which are an essential part of your business records. *File this application with the Office of Minerals Exploration, Department of the Interior, Washington 25, D. C., or with the nearest OME Field Office.*

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, and that he would not ordinarily undertake the proposed exploration under current conditions and circumstances at his sole expense.

October 7, 1965
DATED

W. R. Ransone
BY *(Signature)*

W. R. Ransone
Managing Partner
TITLE

A wilfully false statement or certification to any Department or Agency of the United States Government is a criminal offense. U. S. Code, Title 18, Sec. 1001.

INFORMATION REQUIRED WITH THIS APPLICATION

1. Financial Eligibility:

(a) Submit evidence of efforts made within 90 days preceding the filing of this application to obtain credit from your bank of account and at least one other banking institution or other private source of credit. Such evidence shall include true copies of correspondence which show: (1) date of loan request, (2) amount and terms requested, (3) proposed use of loan funds, and (4) the replies from credit sources. If the loan was offered under terms which you consider unreasonable, state why you consider them so.

(b) List names and addresses of affiliated, parent, or controlling companies or organizations and state extent and nature of their interest.

(c) State how you propose to furnish your share of the cost of the exploration work.

2. Applicant's Rights in Land:

(a) State your interest in the land and mineral rights, whether owner, lessee, purchaser under contract, or other. If you are not the owner, submit one true copy of the lease, contract, or other document (with address of owner) under which you control the property. Describe all liens, mortgages, or other encumbrances on the land and state book and page number and official place where recorded.

(b) State the legal description (section, township, and range; metes and bounds; patent number of claims) of the land upon which you wish to explore and all adjacent land which you own or control. Describe any part of the land or workings which should not be subject to Government royalty and liens. If the land consists of unpatented claims, state book and page number for each recorded location notice, including amended locations, and official place where recorded. State all the names by which you know the property.

(c) For all land or mineral rights encumbered or not owned, submit five copies of Lien and Subordination Agreements on MME Form 52. If the agreements cannot be obtained, state reasons and provide copies of letters of refusal.

3. Physical Description:

(a) Describe in detail and illustrate with maps or sketches all mining or exploration operations which you know have been or are being conducted upon the land. Include existing mine workings and all production facilities.

(b) State your interest, if any, in operations described in (a).

(c) State, if you know, the past and current production, supporting your statement with copies of settlement sheets, mine records, or published data if available.

(d) Describe known ore reserves, giving quantities and grades and sampling methods used. Support your statement with copies of assay certificates and assay maps if available.

(e) Describe by narrative and maps or sketches the geologic features of the property, including ore minerals, geologic formations if known, and type of deposit (vein, bedded, etc.).

(f) State your reasons for expecting to find ore, and if you have sampled the area you propose to explore, show where the samples were taken, describe sampling methods used, and provide copies of assay certificates.

(g) Send with your application at least *two* copies of all geologic or engineering reports, assay maps, or technologic information which you have, indicating whether you require their return.

4. Accessibility of Property:

(a) To aid the OME representative who may examine the property, state name and address of person who will meet him; give directions for reaching the property; and describe accessibility of property and of any mine workings.

(b) Name the shipping and supply points and state the distances to the property.

5. Exploration Work:

(a) Describe fully the proposed exploration work giving individual footages and sizes of openings *for each item of work.* Use narrative, maps, plans, and sections as necessary. Show location of the proposed work as related to geologic features such as veins, ore-bearing beds, contacts of rock formations, etc. Show also the relation of the proposed work to any existing mine workings and to *land boundaries* or to the closest identifiable corner.

(b) If an access road must be built, show the proposed location on the property map and state the length, type and construction methods proposed.

(c) If an OME contract is executed, state how soon thereafter work would be started and finished. State your anticipated average daily or monthly rate of progress for each type of work.

6. Experience:

State your operating experience and background to conduct this exploration work and also that of the person who will supervise the work.

7. Estimate of Costs:

Furnish detailed estimates of the necessary costs *for each item of the work proposed in 5(a)* under the headings listed below with a total for each heading and the estimated total cost of the work. Costs for any work to be performed by an independent contractor should be listed separately under category (a) below. Costs for any work that is not to be performed by an independent contractor should be listed under categories (b) through (g).

(a) Independent contracts. State the total cost of any proposed independent contract for all or any part of the work, and the number of units and the unit cost for each type of work, such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, or per cubic yard of material moved. Cost estimates should be supported by bids from three contractors if possible. (*Note*—If none of the work is to be contracted, write "none" after this item.)

(b) Personal services. The cost of supervision, engineering and geological services, outside consultants, and labor should be itemized by numbers and classes of employees; rates of wages, salaries or fees; and periods of employment. State whether these services are available.

(c) Operating materials and supplies. List items of material and supplies giving quantity and cost of each. Include under this heading power, water, and fuel, and units of equipment and tools costing less than $50 each.

(d) Operating equipment. List items of equipment and tools costing $50 or more per unit. Give specifications and indicate how each item is to be acquired—i.e., rented, purchased or provided by the applicant. If rented or purchased, state the estimated rental or purchase price. If furnished by the applicant, state condition and present fair market value.

(e) Initial rehabilitation and repairs. Describe the type and the cost of *initial* rehabilitation or repair of existing buildings, fixtures, installations (exclusive of mine workings), and movable operating equipment now owned by the applicant which will be used in the exploration work.

(f) New buildings, fixtures, installations. Describe each building, fixed improvement, and installation to be purchased, constructed, or installed for the exploration work, stating specifications and cost including labor, materials, and supervision.

(g) Miscellaneous. Describe the type and estimate the cost of repairs and maintenance of the operating equipment listed in 7(d). Do not repeat initial repairs listed in 7(e). Show also the costs of analytical work, accounting, workmen's compensation and employees' liability insurance, payroll taxes, and other required costs that do not fall within the previous categories. [*Note*—The Government will not contribute to costs incurred before the date of the contract, or to costs of or incident to: (1) acquiring, using, or possessing land and any existing improvements, facilities, buildings, installations, and appurtenances, or the depreciation and depletion thereof; (2) general overhead, corporate management, interest and taxes (other than payroll and sales taxes); (3) insurance (other than employees' liability insurance); and (4) damages to persons or property (other than authorized repair to or replacement of equipment or other property used in the work).]

APPLICATION OF TEXAS MERCURY COMPANY TO OME

TERLINGUA PROSPECT AREA

1. Financial Eligibility:

(a) Enclosed are copies of correspondence in a futile attempt to obtain loans from Republic National Bank of Dallas and First National Bank in Dallas.

(b) Texas Mercury Company is a separate company from any other.

(c) The Texas Mercury Company share of the exploration cost is to be supplied by the partners of Texas Mercury Company by capital contribution to a fund reserved for this purpose.

2. Applicant's Rights in Land:

(a) Texas Mercury Company's rights to the minerals are as follows:

(1) Sections 43, 45 and 57: By virtue of a mineral lease from Virginia O. Billings, William H. Billings and Louise V. Waters, a copy of which lease is attached, such lease is subject to a 7½% royalty. There are no other encumbrances.

(2) Sections 46 and 56: By virtue of Prospecting Permits from the State of Texas, convertible to mineral leases, subject to a 6¼% royalty. There are no other encumbrances.

(3) Sections 44 and 58: By virtue of a sub-lease from W. H. Pulliam, the owner of mineral leases from the State of Texas, a copy of which sub-lease is attached, such sub-lease is subject to a 10% royalty. There are no other encumbrances.

(b) Exploration to be conducted shall be in the areas set out on the attached map (Fig. 1).

(c) As to the lands under lease or prospecting permit from the State of Texas, attached is a copy of a letter from the Commissioner of the General Land Office, State of Texas, in which he states that he is not authorized to execute any such lien and subordination as is requested by MME Form 52. Waters and Billings verbally have refused to subordinate.

3. Physical Description:

(a)-(d) The Luisa Mine, last worked in 1957, was placed in operation by Texas Mercury Company in June, 1965. According to published reports of the Bureau of Mines, up to 1957 the Luisa Mine produced one thousand (1,000) flasks of mercury. A total of twenty (20) flasks have been produced since Texas Mercury Company placed the mine in operation. It appears that the mineable ore has been depleted, and operations have been discontinued at this location. Our workings in Section 58 are being placed in operation at this time. The location of the Luisa Mine is shown on the enclosed map (Fig. 2). The ore was processed at the Texas Mercury Company-owned plant, located along the center of the South line in the Northeast Quarter of Section 57. The plant has a total capacity of eighty (80) to one hundred (100) tons per day.

(e)-(g) The Terlingua mercury district of Texas was selected as a site for exploration for new mercury deposits after careful consideration and after on-the-ground examinations of it and other areas. Past performance of its mines, good accessibility, reasonably good terrain, and availability of mineral leases were influencing factors. Of great importance was the written opinion of many authorities that additional commercial deposits could and should exist. This was stated on page 52 in the comprehensive Geological Survey Professional Paper 312, "GEOLOGY AND QUICKSILVER DEPOSITS OF THE TERLINGUA DISTRICT OF TEXAS," as follows: "The future of the Terlingua Quicksilver District depends largely on exploration."

Since ordinary geological techniques and core drill follow-up had found no new deposits during the 1940's and 1950's,

including work done by the U. S. Bureau of Mines (Report of Investigations: "Terlingua Mercury Deposits, Brewster and Presidio Counties, Texas," by A. M. Evans and W. M. Traver, Jr.) and others, it was decided to try near-surface geochemistry, and this to be followed up by a vacuum-type drill on a close-spaced pattern of core holes. The western part of the district, from California Hill in Section 59, Block 12, Brewster County, to the Fresno Mine in Section 106, Block 341, Presidio County, was selected. This area had fewer known mines, apparently had been subjected to less prospecting, and yet appeared to have as interesting geology as the area east of California Hill. It was also thought that there would be less contamination of the near-surface samples from old mine dumps, etc.

Accordingly, a geochemical survey was commenced in December, 1964, taking samples on a grid pattern 528 feet apart, or about 100 samples per square mile. As of September, 1965, thirty-three (33) square miles have been surveyed and 10,516 samples taken. These samples were taken by hand, using a nut auger where soil existed, and a pick where only rock was on the surface, and varied in depth from a few inches to a few feet. This survey was conducted and the samples analyzed by Geochemical Surveys of Dallas, Texas, on a contract basis. All samples were analyzed for mercury, silver and several trace elements. The mercury analysis was done using a Beckman ultra-violet absorption instrument, sensitive to parts per million by weight. All analysis values of 100 or greater were assayed using the potassium thiocyanate method developed by New Idria Mining and Chemical Company and published in Bureau of Mines Information Circular 8033, "MINING AND FURNACING MERCURY ORE AT THE NEW IDRIA MINE, SAN BENITO COUNTY, CALIFORNIA," by R. K. Linn and W. F. Dietrich, 1961. Checks of accuracy of analysis were made by sending samples to outside laboratories and also to New Idria Mining and Chemical Company.

The gross geochemical survey appeared to be very successful because groups of high concentrations appeared over and around the Fresno Mine in Section 106, the Luisa Mine in Section 57, the Mariposa Mine in Section 59, and generally over local closed anticlinal and fault closures along the very large Terlingua monocline which crosses the area plunging from northwest to southeast. Selected areas were then detailed by taking near-surface samples on a grid basis 52.8 feet apart in the areas previously indicated as anomalously high in mercury by the wider-spaced (528' grid) samples. Such fine surveys were carried out in several parts of several sections, including Sections 52, 57, 59, 43, 45, 46, 96, etc.

The next step planned in the exploration program was to take five-foot samples by jackhammer in the high concentration areas delineated by the fine survey (52.8' grid) (Fig. 2). This was to be done on a limited basis, checking only points having a value of 100 or over on the Beckman instrument, and was to serve two purposes: First to completely eliminate all near-surface contamination, and secondly to eliminate any locations where high concentrations did not persist to five-foot depth, thus reducing to a minimum the locations (or area) where follow-up vacuum drilling would be needed. All samples were to be assayed.

The last step planned in the exploration program prior to actual mining (shafting, drilling, etc.) was to employ a relatively new drill, unusually qualified for obtaining good samples. The vacuum drill shown in the attached picture draws all cuttings through the drill pipe by means of a vacuum pump. These are recovered and sacked continuously in transparent polyethylene bags. There is no loss of circulation, as previously experienced in the district, when mud or air were circulated under pressures. Samples from brecciated, faulted zones and from the tops and floors of caves should be obtained rather than lost as they have been in the past. Since the known mercury deposits occur under these conditions, this drill should

sample the most ore-likely parts of the hole. This drill will be used to depths not more than 300 feet.

The vacuum drill has the following unique advantages:

(1) Uncontaminated samples recovered through pipe bore.

(2) Samples not reground between pipe and wall as in conventional drilling.

(3) Uniform pipe bore produces constant uniform velocity to carry cuttings to surface in the same relation to each as they left bottom; i.e., fines stay closely associated with heavier cuttings.

(4) All drilled bore holes vary widely in diameter; consequently, the return drilling medium continuously changes velocity which in turn tends to separate the fine cuttings from the large. This causes the fines from one zone to be sampled with the larger cuttings from a different zone to result in erroneous values. This is eliminated with the vacuum drill.

(5) Vacuum drilling is effective only in dry formations. Terlingua district formations are dry and well suited to vacuum-type drilling.

4. Accessibility of Property:

(a) OME representative may contact Mr. John H. Baker, General Manager, Texas Mercury Company, P. O. Box 61, Terlingua, Texas, Telephone No. Area Code 915, TE-7-4437, Mobile Unit #118. The property is located just north of Highway #170, seven miles west of Terlingua, Texas. The property to be explored is easily accessible. Arrangements can be made to meet the OME representative at Terlingua, Alpine, or Big Bend National Park.

(b) Mail is received at P. O. Box 61, Terlingua, Texas 79852. Freight and supplies are received at Alpine, Texas.

5. Exploration Work:

(a)-(c) Five areas have been selected for ~~core~~ drilling:

(1) Area I is in the northeast portion of Section 57. The map accompanying this report (Fig. 2), scale 1" = 100', has been contoured indicating all values above 200 (Beckman instrument) on samples obtained from six-foot jackhammer holes. We estimate that forty-five (45) 100-foot ~~core~~ holes will be required and five (5) 300-foot ~~core~~ holes. All these will be within the 200 value contour line. As can be seen from the map, there are higher values than 200, and the map could be contoured on higher levels to indicate zones of greatest interest; but it is felt that the number of core holes mentioned above will be all that will be required. Out

Access roads have already been constructed and only a slight amount of bulldozer work will be required on the ~~core~~ hole locations.

(2) Area II, adjacent to and lying immediately southeast of Area I in Section 58, has been delineated on the map attached hereto (Fig. 1), scale 1" = 1000', where the soil samples on 528' centers have been contoured on a 100 value. Before ~~core~~ drilling this area, we estimate that we will need 200 six-foot jackhammer holes on 52.8' grid. These jackhammer holes are necessary to get below surface contamination because the Devils River Limestone outcropping in Area II and Area I is very hard and no penetration is possible without some kind of power drill. These will be analyzed, and we estimate a ~~core~~ drill program to value these will require forty-five (45) 100-foot holes and five (5) 300-foot holes.

Considerable access roads have already been built, but several days' bulldozer work will be required for each ~~core~~ drill location.

(3) Area III, lying in Section 44, is shown on the same map (Fig. 1) as Area II, and here again we will require 200 jackhammer holes for analysis and forty-five (45) 100-foot core holes and five (5) 300-foot holes.

In this area, also, a number of access roads have already been built, but several days' bulldozer work will be required for each core drill location.

(4) In Area IV, a detailed geochemical survey has been completed on a grid of sample points placed 52.8' apart, and a map (Fig. 3) is attached hereto which has been contoured on values of 100 and above. We estimate at least eight (8) 100-foot core holes will be required and two (2) 300-foot core holes. This area lies in Sections 45, 56 and 57.

An access road has already been built to this area. Several days' bulldozer work will be required for each individual location.

(5) In Area V in Section 46, as in Area IV, a detailed geochemical survey has been completed and is shown on the map attached hereto (Fig. 4). We estimate that seven (7) 100-foot core holes and two (2) 300-foot core holes will be required.

There is no access road, but one can be constructed in a few days with a bulldozer, and a few days additional work will be necessary to level each core drill location.

6. Experience:

The partners of Texas Mercury Company, with their background and experience, are as follows:

(1) Eugene McDermott, a director and former President and Board Chairman of Texas Instruments, Inc., and a partner of Geochemical Surveys, Dallas, Texas.

(2) W. R. Ransone, Managing Partner of Texas Mercury Company and of Geochemical Surveys, an oil and mineral exploration firm with over 20 years' experience.

(3) E. C. Reagor, a partner of Geochemical Surveys.

(4) C. V. A. Pittman, a partner of Geochemical Surveys.

(5) Carroll Deely, former President of Drilling and Service, Inc., the inventor and developer of the diamond core bit and a Vice President and director and largest stockholder of New Idria Mining and Chemical Company, Idria, California, the largest domestic producer of mercury.

(6) Roger H. Davis, oil operator and director of Ozark Mahoning Company of Tulsa, the largest fluorspar mining company in the United States.

The General Manager of Texas Mercury Company is John H. Baker, a graduate mining engineer. A listing of his background and experience is enclosed.

7. Estimate of Costs:

(a) Independent Contracts.		
(1) Geochemical Surveys, Dallas, Texas- Analysis and interpretation of 400 samples taken with jackhammer @ $10.00	$ 4,000.	
(2) Walters Drilling Company, Inc., Dallas Texas - ~~Core~~ drill and crew - 233 days @ $150.00/day	35,000.	
(3) Bulldozer work	4,000.	$ 43,000.
(b) Personal services (all available)		
(1) Superintendent (Baker) - 10 mos.	$ 15,000.	
(2) Assistant for assay, survey, etc. - 10 mos.	5,000.	
(3) Labor for jackhammer samples - 3 men @ $400.00/mo. - 2 mos.	2,400.	
(4) Labor - one man as helper - 10 mos.	4,000.	26,400.
(c) Operating materials and supplies.		
(1) Bits, 4½" rock, 210 @ $40 each	$ 8,400.	
(2) Bags, 7000 @ 6 cents each	420.	
(3) Fuel for compressor and truck	4,000.	
(4) Miscellaneous	7,280.	20,100.
(d) Operating equipment.		
(1) Vacuum Unit *	$ 8,000.	
(2) 4-wheel drive pickup	2,000.	
(3) Lemaire mercury meter	300.	
(4) Assay equipment	200.	10,500.
(e) Initial rehabilitation and repairs		None
(f) New buildings, fixtures, installations		None
(g) Miscellaneous		None
		$100,000.

* Available from Griffin Tank and Welding Company, Dallas, Texas.

See revised page 9 with letter of Mar. 7, 1966

$72,230

APPENDIX:

As a test of the vacuum drill, a Houston Drilling Company vacuum drill was employed to drill four core holes at a cost of $5.00 per foot. The performance of the vacuum unit itself was excellent and 100% recovery of cuttings was experienced. The drill itself was mechanically unsound and was so poorly mounted on the truck as to make it very top-heavy and the mast too long for the rugged terrain at Terlingua.

The cuttings were analyzed on the Beckman instrument, and the results were plotted on graph paper and are presented herewith. Comparing these core logs with the geochemical anomaly as mapped (Fig. 2), core hole #1 should not have penetrated any interesting section and did not. Core holes #2 and #4 should have and did. Core hole #2 penetrated a cave about four feet thick, and the drill pipe became stuck at 26 feet. The samples here were pure calcite and showed color. This hole will be re-drilled. Core hole #4 had values (assay) at 64-68 feet averaging six lbs./ton. This hole should be deepened. Core hole #3 was disappointing.

ITEM 1 (a)

Dependable Service Since 1875

FIRST NATIONAL BANK IN DALLAS *P.O. Box 6031 • Dallas, Texas 75222 • 214 RI 9-4011*

LEO PATTERSON, JR.
SENIOR VICE PRESIDENT
RI 9-4467

October 5, 1965

Texas Mercury Company
P. O. Box 19508
Dallas, Texas

ATTENTION: R. S. Usry

Gentlemen:

This is in response to your letter of October 4, 1965 wherein Texas Mercury Company requested a loan of $110,000.00 to be secured by mortgages on certain prospective silver and mercury ore mining tracts in Presidio and Brewster Counties, Texas. The proposed use of the borrowed funds is for exploration and development of the silver and mercury ore.

Texas Mercury Company, according to your letter, is a partnership of several responsible and substantial individuals, and I am certain that loans to these persons could be favorably considered although not in the connection as outlined in your correspondence. The purpose of the loan, the proposed collateral, and the company balance sheet dated July, 1965, prevent our consideration of this specific request.

Yours very truly,

Leo Patterson Jr

Senior Vice President

LP:kp

TEXAS MERCURY COMPANY
P. O. Box 19508
Dallas, Texas 75219

October 4, 1965

Mr. Leo Patterson
First National Bank
Dallas, Texas

Dear Mr. Patterson:

In accordance with our recent conversation, Texas Mercury Company is requesting from First National Bank a loan of $60,000.00. This is to pay for three-fourths of the estimated cost of exploring for silver in and around Section 38, Block 2, D & P Ry. Co. lands, Presidio County, Texas, owned or controlled by Texas Mercury Company. It is anticipated that silver in paying quantities will be discovered.

Texas Mercury Company is also requesting a loan for $50,000.00 to pay for one-half of the estimated cost of exploring for mercury on six areas owned or controlled by Texas Mercury Company in Sections 43, 44, 45, 46, 56 and 58, Block G-12, Brewster County, Texas. It is anticipated that cinnabar (mercury ore) in paying quantities will be discovered.

In connection with this application for credit, we are enclosing a balance sheet of Texas Mercury Company as of July 31, 1965. For your information, Texas Mercury Company is a partnership composed of Messrs. W. R. Ransone, C. V. A. Pittman, E. C. Reagor, Eugene McDermott, Roger H. Davis and Carroll Deely. As security for these loans, Deeds of Trust could be executed on the mineral leases owned by Texas Mercury Company on which exploration will be conducted with the proceeds on these loans.

We would appreciate hearing from you as soon as possible regarding these loan requests.

Yours very truly,

TEXAS MERCURY COMPANY

R. S. Usry

RSU:sg

Enclosure

ITEM 1 (a)

REPUBLIC NATIONAL BANK OF DALLAS

P. O. Box 5961 Dallas, Texas 75222

H. R. SANDERS, JR.
ASSISTANT VICE PRESIDENT

October 5, 1965

Texas Mercury Company
P. O. Box 6508
Dallas, Texas 75219

Attention: Mr. R. S. Usry

Gentlemen:

We have reviewed your application of October 1, 1965 wherein you request a loan in the amount of $50,000 to cover your one-half of the estimated cost of exploring for mercury on six areas owned or controlled by you in Sections 43, 44, 45, 46, 56 and 58, Block G-12, Brewster County, Texas.

As discussed with you, we require that loans of this nature be secured by proven reserves producing sufficient revenue to retire the loan in an orderly manner. In view of this we regret to inform you that we will be unable to grant this loan.

Very truly yours,

HRSJr/jp

TEXAS MERCURY COMPANY
P. O. Box 19508
Dallas, Texas 75219

October 1, 1965

Mr. H. R. Sanders, Jr.
Assistant Vice President
Republic National Bank
Dallas, Texas

Dear Mr. Sanders:

In accordance with our recent conversation, Texas Mercury Company is requesting from Republic National Bank a loan of $50,000.00. This is to pay for one-half of the estimated cost of exploring for mercury on six areas owned or controlled by Texas Mercury Company in Sections 43, 44, 45, 46, 56 and 58, Block G-12, Brewster County, Texas. It is anticipated that cinnabar (mercury ore) in paying quantities will be discovered.

We would appreciate hearing from you as soon as possible regarding this loan request.

Yours very truly,

TEXAS MERCURY COMPANY

R. S. Usry

RSU:sg

ITEM 1 (a)

REPUBLIC NATIONAL BANK OF DALLAS

P. O. Box 5961 Dallas, Texas 75222

H. R. SANDERS, JR.
ASSISTANT VICE PRESIDENT

October 5, 1965

Texas Mercury Company
P. O. Box 6508
Dallas, Texas 75219

Attention: Mr. R. S. Usry

Gentlemen:

We have reviewed your application of October 1, 1965 wherein you request a loan in the amount of $60,000 to cover your three-fourths of the estimated cost of exploring for silver in and around Section 38, Block 2, D & P Ry. Co. lands, Presidio County, Texas.

As discussed with you, we require that loans of this nature be secured by proven reserves producing sufficient revenue to retire the loan in an orderly manner. In view of this we regret to inform you that we will be unable to grant this loan.

Very truly yours,

HRSJr/jp

TEXAS MERCURY COMPANY
P. O. Box 19508
Dallas, Texas 75219

October 1, 1965

Mr. H. R. Sanders, Jr.
Assistant Vice President
Republic National Bank
Dallas, Texas

Dear Mr. Sanders:

In accordance with our recent conversation, Texas Mercury Company is requesting from Republic National Bank a loan of $60,000.00. This is to pay for three-fourths of the estimated cost of exploring for silver in and around Section 38, Block 2, D & P Ry. Co. lands, Presidio County, Texas, owned or controlled by Texas Mercury Company. It is anticipated that silver in paying quantities will be discovered.

We would appreciate hearing from you as soon as possible regarding this loan request.

Yours very truly,

TEXAS MERCURY COMPANY

R. S. Usry

RSU:sg

11/17/68

Mr. Kleman. Tel. Re.
Cinc 6505; advised that
we had received mail pass just
last week, but had not been
able to receive them. Will
get on them promptly and
the would be leaving for, as
soon.

MINING LEASE

THE STATE OF TEXAS)
)
COUNTY OF BREWSTER)

THIS INDENTURE, made and entered this 18th day of January, 1965, by and between VIRGINIA O. BILLINGS, of Los Angeles, California, WILLIAM H. BILLINGS, and LOUISE V. WATERS, joined pro forma by her husband, FLEMING A. WATERS, hereinafter styled LESSORS, and W. R. RANSONE, TRUSTEE, of Dallas, Texas, hereinafter styled LESSEE.

WITNESSETH: That LESSORS for and in consideration of the sum of $7,500.00 cash in hand paid, receipt of which is hereby acknowledged, and of the rentals and royalties hereinafter reserved and the covenants and agreements hereinafter expressed, and by the said LESSEE to be kept and performed, have granted, demised and let, and by these presents do grant, demise and let unto said LESSEE for the purpose of prospecting, exploring, developing, mining and removing by any means, operating in the production of all minerals or metals and of building dams, tanks, power stations, head frames, ore bins, buildings and structures of any kind and of doing any and all things desirable for the search for, production, treatment, processing and marketing of ores, minerals and metals. This Lease shall extend to and cover all of the surface rights used or to be used by the LESSEE herein as he desires, save and except LESSORS' exclusive hunting rights. This Lease covers all of the following described property, situated in the County of Brewster, State of Texas, to wit:

> Sections 43, 45 and 57 in Block G-12, of the G. C. &S. F. Ry. Co. Survey as shown by the records in the office of the County Clerk of said county.

TO HAVE AND TO HOLD unto the said LESSEE for the term of ten years from the date hereof and for so long thereafter as the LESSEE may comply with all of the covenants and agreements herein, unless

sooner forfeited or determined through the violation of any covenant hereinafter against the said LESSEE reserved.

As a further consideration for the said demise, the said LESSEE does covenant and agree with the said LESSORS as follows, to wit:

To enter upon said premises to conduct such prospecting, exploration, development and mining or production operations as in the opinion of the LESSEE may be justified to determine whether or not a commercial occurrence exists in or under the said property with due regard to development of the premises as a workable mine and to the special covenants hereinafter reserved.

SPECIAL CONDITIONS AND AGREEMENTS:

1. LESSEE agrees to pay to LESSORS a royalty in the amount of 7-1/2% of the amount of the proceeds of all of the gross production mined, saved, refined and sold, exclusive of shipping costs and commissions incurred in such sales. LESSEE further agrees to pay to LESSORS on or before the 15th day of each calendar month following the execution of this Lease the sum of $300.00 in rentals. It is agreed and understood that this rental shall be charged against royalties in the calendar month for which royalties are due but not otherwise.

2. Whether or not royalty payments exceed the minimum $300.00 rental provided herein, LESSEE shall furnish LESSORS with a monthly report on or before the last day of each calendar month showing the sales by LESSEE during the preceding calendar month, the amounts received for such sales, and the amounts of the shipping costs and commissions incurred in such sales, and shall pay royalties as herein provided on all proceeds of sales (exclusive of the shipping costs and commissions incurred in such sales) received by LESSEE during the preceding calendar month, less the credit of $300.00 rental. All rentals and royalties payable hereunder may be paid to LESSORS by depositing same in Republic National Bank of Dallas, Dallas, Texas, as follows:

1/3 to the credit of Virginia O. Billings

1/3 to the credit of William H. Billings

1/3 to the credit of Louise V. Waters

All statements and reports herein required to be made by LESSEE to LESSORS shall be mailed to Fleming A. Waters, 418 Reliance Life Building, Dallas, Texas.

3. It is agreed and understood that LESSEE shall pay all taxes rendered or assessed against the demised property on or before due date and furnish LESSORS with receipts therefor.

4. If the proposed prospecting, exploration, development or mining result in the production of minerals in paying quantities, then in that e vent, this Lease shall remain in force and effect so long thereafter as production and the payment of royalties or the payment of the monthly rental, if no royalties, is continued. In lieu of any conditions stated herein, LESSEE shall have the privilege of perpetuating and continuing this Lease in full force and effect by paying the sum of $300.00 per month rental for as long a period as LESSEE shall desire.

5. The books and records pertaining to the mining and refining and sale of all valuable minerals covered by this Lease in whatever form shall be subject to inspection and examination by LESSORS or their duly authorized agent at any convenient time during regular business hours.

6. LESSEE shall have the exclusive right to use free of cost any building, mill, furnace or other structure sites and such use of the surface of said property as may be necessary for or incidental to the purposes of this Lease and for the purpose of processing, milling, treating and refining ore from other premises not covered by this Lease. LESSORS agree that no part of said premises may be used or occupied in any manner detrimental to the interests of LESSEE.

7. At any time during the period of this Lease or within 90 days after its termination LESSEE shall have the right to remove any machinery,

equipment, materials and supplies formerly owned by Lone Star Mercury, Inc. now on the premises and that hereafter may be placed by LESSEE upon the said premises, except such right of removal shall not apply to ladders and timbers placed upon surface or underground.

8. The privilege of assigning or transferring in whole or in part is expressly allowed. If the estate of any party hereto is assigned or transferred, the covenants and agreements herein shall extend to their heirs, executors, administrators, successors or assigns.

9. LESSORS shall have the right to inspect the workings of the said premises described herein either personally or through a duly authorized representative provided such inspection shall be made at such times and under such circumstances as not to endanger the life or well-being of any employee of LESSEE or other persons and provided such inspection shall not conflict with any legal requirement or insurance regulation.

10. LESSEE agrees that any development and operations on the property will be in accordance with accepted mining and engineering practices; and LESSEE further agrees that a true and correct map of all underground workings, together with engineering and geological reports, flow sheets, core tests and assay reports of samples taken will be kept for inspection by LESSORS or their duly authorized representatives.

11. Acts of God and the public enemy, fires, strikes, war emergency or mine disaster shall excuse the LESSEE hereunder in performance of the terms and conditions of this Lease for such period as they may exist, but shall in no manner operate to cancel this Lease.

12. No sale, transfer, conveyance or assignment by LESSORS of any portion of their rights or royalties under this Lease shall be binding on LESSEE for any purpose until LESSEE shall be furnished with a properly executed and acknowledged instrument in writing evidencing such sale, transfer, conveyance or assignment.

13. LESSORS hereby warrant and agree to defend forever the title to said land against any person whomsoever lawfully claiming, or to claim the same, or any part thereof; and LESSORS agree that LESSEE, at LESSEE'S own expense (but without any duty to do so) may pay and discharge any taxes, mortgages, liens, assignments or levies upon or against said land; and, in the e vent of such payment by LESSEE, LESSEE shall be subrogated to such liens, taxes or tax liens, mortgages, assessments or levy liens with full right and power to enforce the same; or in lieu of such enforcement, at LESSEE'S option, may retain for the satisfaction of such lien and all interest due thereon the necessary amount of royalties or rentals accruing under this Lease. Such power and right of subrogation to any such lien, together with the power and right of enforcement thereof, shall extend also to and against any subsequent owner or owners of any part of the surface or subsurface estates of said land where payment of any such taxes, mortgages, liens, assessments or levies is necessary to protect this Lease and LESSEE'S rights hereunder.

14. If LESSORS own any interest in said land less than the clear, unencumbered title thereto, then the royalties to be paid to LESSORS hereunder shall be reduced proportionately. Should the rights or interest of LESSEE hereunder be disputed by LESSORS or by any other person or persons, or should dispute arise as to the interpretation or application of this Lease or any part thereof or as to the payment of any royalties hereunder, or should dispute arise as to any matter in any manner connected with said land or with this Lease or with LESSEE'S or LESSORS' rights hereunder, or as to the operation under this Lease, then the time covered by the pendency of such dispute shall not count against LESSEE, either as affecting the term of this Lease or the time for payment of royalties or for any other purpose set forth in this Lease; and LESSEE may suspend all payments until there has been a final adjudication or determination of such dispute.

15. If LESSEE should fail or refuse to make the payment of any sum for royalty on production if and when it shall become due or of any sum due as rental for deferring production, or if LESSEE or his authorized agent should knowingly make any false return or false report concerning development or mining expenses, production, royalty or mining, as required herein, or if LESSEE or his agent should refuse the LESSORS or their authorized agent access to the records pertaining to operations under this Lease, this Lease shall be subject to termination at the option of LESSORS, provided LESSEE shall be notified of any such default and the nature thereof, and if such default continues thereafter for thirty (30) days, this Lease shall then be declared terminated at the option of LESSORS, but such termination of Lease will not have the effect of releasing LESSEE from any liability theretofore accrued in favor of LESSORS.

IN TESTIMONY WHEREOF the parties hereto have hereunto set their hands on this 15th day of January, A. D., 1965.

Virginia O. Billings

William H. Billings

Louise V. Waters

Fleming A. Waters

LESSORS

W. R. Ransone, Trustee

LESSEE

STATE OF CALIFORNIA)
)
COUNTY OF LOS ANGELES)

BEFORE ME, the undersigned authority, on this day personally appeared VIRGINIA O. BILLINGS, a feme sole, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that she executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the 14th day of January, 1965.

W. D. WOOD

W. D. Wood
Notary Public in and for Los Angeles County, California

My Commission Expires November 14, 1967

W. D. WOOD
NOTARY PUBLIC-CALIFORNIA
PRINCIPAL OFFICE IN
LOS ANGELES COUNTY

STATE OF ARIZONA)
)
COUNTY OF MARICOPA)

BEFORE ME, the undersigned authority, on this day personally appeared WILLIAM H. BILLINGS, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the 13th day of January, 1965.

My Commission Expires Aug. 16, 1967

Marian Williamson
Notary Public in and for Maricopa County, Arizona

STATE OF TEXAS)
)
COUNTY OF DALLAS)

BEFORE ME, the undersigned authority, on this day personally appeared LOUISE V. WATERS, wife of FLEMING A. WATERS, known to me to be the person whose name is subscribed to the foregoing instrument, and the said LOUISE V. WATERS, having been examined by me privily and apart from her husband, and having the same fully explained to her, she, the said LOUISE V. WATERS, acknowledged such instrument to be her act and deed and declared that she had willingly signed the same for the purposes and consideration therein expressed and that she did not wish to retract it.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the 15th day of January, 1965.

Charlene Tangney
Notary Public in and for Dallas County, Texas

CHARLENE TANGNEY, Notary Public
in and for Dallas County, Texas

STATE OF TEXAS)
)
COUNTY OF DALLAS)

BEFORE ME, the undersigned authority, on this day personally appeared FLEMING A. WATERS, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the 15th day of January, 1965.

Charlene Tangney
Notary Public in and for Dallas County, Texas

CHARLENE TANGNEY, Notary Public
in and for Dallas County, Texas

STATE OF TEXAS)
)
COUNTY OF DALLAS)

BEFORE ME, the undersigned authority, on this day personally appeared W. R. RANSONE, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed and in the capacity therein stated.

GIVEN UNDER MY HAND AND SEAL OF OFFICE this the 18th day of January, 1965.

Grace Price
Notary Public in and for Dallas County, Texas

GRACE PRICE
NOTARY PUBLIC
DALLAS COUNTY, TEXAS

THE STATE OF TEXAS
COUNTY OF BREWSTER } I, SARA PUGH, Clerk of the County Court in and for said County, do hereby certify that the foregoing and annexed instrument of Writing dated the 15 day of January A. D. 1965, with its certificate of authentication, was filed for record in my office the 20 day of January A. D. 1965, at 2:30 o'clock P. M., and duly recorded on the 21 day of January A. D. 1965, at 4:00 o'clock P. M., in Deed records of said County, in Volume 149 on Page 339.

Witness my hand and the seal of the County Court of said County, at office in Alpine, Texas, the day and year last above written.

Texas, the day and year last above written.

Sara Pugh
Clerk, County Court, Brewster County, Texas

By Helen Crone Deputy

Helen Crone

ITEM 2 (a) (2)

PERMIT NO. M-57779 TO PROSPECT

Date February 19, 1965

WHEREAS, W. R. Ransone, Trustee of Dallas, Texas, on the 10th day of February, 1965, filed in this office his application to prospect the following area for minerals other than oil, gas, coal, lignite, sulphur, salt, potash, shell, sand and gravel in accordance with the provisions of Article 5421c-7, V. C. S., as amended by Senate Bill 348, Acts of the 55th Legislature, 1957, and has paid the amount of $130.00 as rental provided by law.

Part	Sec.	Blk.	Tsp.	Cert.	Grantee	Acres	County
All but S/2 SE/4 & S/2 S/2 ~~SW/4~~	46	G-12			GC&SF ~~Ry. Co.~~	520	Brewster

NOW THEREFORE, I, JERRY SADLER, Commissioner of the General Land Office of the State of Texas, do hereby issue to the applicant a permit to enter upon said land to prospect for minerals other than those herein named, for a period of one year from and after February 10, 1965.

None of the minerals shall be removed in commercial quantities from the area covered by this permit before a lease is issued.

If the owner of this permit should fail or refuse to prospect the area embraced herein within a reasonable time and in good faith, or if the owner or his authorized agent should make any false report concerning such prospecting, or should fail or refuse to furnish information concerning such prospecting or development of such area to the Commissioner of the General Land Office, or his representative, this permit shall become subject to forfeiture.

IN TESTIMONY WHEREOF, I hereunto set my hand and cause to be affixed the seal of said office on this the date first above written.

JERRY SADLER, COMMISSIONER OF THE GENERAL LAND OFFICE

ACTING

Approved
Audit
Legal
Geology
Execution
Engineering

ITEM 2 (a) (2)

PERMIT NO. M-57780 TO PROSPECT

Date February 19, 1965

WHEREAS, W. R. Ransone, Trustee of Dallas, Texas, on the 10th day of February, 1965, filed in this office his application to prospect the following area for minerals other than oil, gas, coal, lignite, sulphur, salt, potash, shell, sand and gravel in accordance with the provisions of Article 5421c-7, V. C. S., as amended by Senate Bill 348, Acts of the 55th Legislature, 1957, and has paid the amount of $80.00 as rental provided by law.

Part	Sec.	Blk.	Tsp.	Cert.	Grantee	Acres	County
N/2	56	G-12			GC&SF Ry. Co.	320	Brewster

NOW THEREFORE, I, JERRY SADLER, Commissioner of the General Land Office of the State of Texas, do hereby issue to the applicant a permit to enter upon said land to prospect for minerals other than those herein named, for a period of one year from and after February 10, 1965.

None of the minerals shall be removed in commercial quantities from the area covered by this permit before a lease is issued.

If the owner of this permit should fail or refuse to prospect the area embraced herein within a reasonable time and in good faith, or if the owner or his authorized agent should make any false report concerning such prospecting, or should fail or refuse to furnish information concerning such prospecting or development of such area to the Commissioner of the General Land Office, or his representative, this permit shall become subject to forfeiture.

IN TESTIMONY WHEREOF, I hereunto set my hand and cause to be affixed the seal of said office on this the date first above written.

Jack Salomon

JERRY SADLER, COMMISSIONER OF THE GENERAL LAND OFFICE

ACTING

Approved
Audit
Legal VRD
Geology
Execution
Engineering

ITEM 2 (a) (2)

PERMIT NO. M-57781 TO PROSPECT

Date February 19, 1965

WHEREAS, W. R. Ransone, Trustee of Dallas, Texas, on the 10th day of February, 1965, filed in this office his application to prospect the following area for minerals other than oil, gas, coal, lignite, sulphur, salt, potash, shell, sand and gravel in accordance with the provisions of Article 5421c-7, V. C. S., as amended by Senate Bill 348, Acts of the 55th Legislature, 1957, and has paid the amount of $80.00 as rental provided by law.

Part	Sec.	Blk.	Tsp.	Cert.	Grantee	Acres	County
S/2	56	G-12			GC&SF Ry. Co.	320	Brewster

NOW THEREFORE, I, JERRY SADLER, Commissioner of the General Land Office of the State of Texas, do hereby issue to the applicant a permit to enter upon said land to prospect for minerals other than those herein named, for a period of one year from and after February 10, 1965.

None of the minerals shall be removed in commercial quantities from the area covered by this permit before a lease is issued.

If the owner of this permit should fail or refuse to prospect the area embraced herein within a reasonable time and in good faith, or if the owner or his authorized agent should make any false report concerning such prospecting, or should fail or refuse to furnish information concerning such prospecting or development of such area to the Commissioner of the General Land Office, or his representative, this permit shall become subject to forfeiture.

IN TESTIMONY WHEREOF, I hereunto set my hand and cause to be affixed the seal of said office on this the date first above written.

Jack Gibson

JERRY SADLER, COMMISSIONER OF THE GENERAL LAND OFFICE

ACTING

Approved
Audit
Legal VPS
Geology
Execution
Engineering

MINERAL LEASE AGREEMENT

THE STATE OF TEXAS X

COUNTY OF BREWSTER X

THIS AGREEMENT, Made and entered into this the 31st day of August 1965, by and between Robert N. Pulliam, whose mailing address is Post Office Box 330, Alpine, Texas, hereinafter styled "Lessor" and Texas Mercury Company, Post Office Box 19508, Dallas, Texas, a partnership composed of the following partners whose names and addresses are as follows: W. R. Ransone, C. V. A. Pittman, E. C. Reagor, and Eugene McDermott, all of P. O. Box 19058, Dallas, Texas; Roger H. Davis, 220 Mercantile Continental Bldg., Dallas, Texas, and Carroll Deely, 6210 North Central Expressway, Dallas, Texas, hereinafter styled "Lessee".

WITNESSETH: That whereas Lessor herein is owner and holder of a certain mineral lease issued by the State of Texas, a certified copy of which is attached hereto and made a part hereof, covering 498.38 acres, all of the said Section 44, Block G-12, G.C. & S.F. Ry. Co. Survey in the County of Brewster, State of Texas, except the five patented mining claims described elsewhere herein as the Mitchell-Gillett Lease and three certain mining claims originally patented by Frank Duncan and known respectively as: Lindberg M.F. 13454, Spirit of St. Louis M.F. 13455 and Curtis M.F. 13456.

AND WHEREAS Lessor is owner and holder of a certain mineral lease issued by the State of Texas, a certified copy of which is attached hereto and made a part hereof, covering 362.61 acres out of Section 58, Block G-12, G.C. & S.F. Ry. Co. Survey in the County of Brewster, State of Texas, excepting the mining claims known respectively as: Don Juan M-312, Bonanza M-309, Croesus M-313, Monte Cristo M-300, Linton M-13361, Pilkington M-13360, Canyon 25627, Hoover M-14374, Apache 25626, Comanche 25628, Topaz 25630, Opal 25629 and Agate 25631.

AND WHEREAS Lessor is owner and holder of one certain mineral lease made and entered into on October 12, 1938, and recorded in Volume 91, Page 418, of the Deed Records of Brewster County, Texas, to which reference is here made, and the amendment thereto made and entered into on February 16,

1943, and recorded in Volume 103, Page 207, of the Deed Records of Brewster County, Texas, to which reference is here made; both the said lease and amendment shall hereinafter be referred to as the Mitchell-Gillett Lease, which covers property situated in Section 44, Block G-12, G.C. & S.F. Ry. Co. Survey, Brewster County, Texas, described as follows, to wit:

Abstract	Certificate	Survey	Name of Claim	Acres
3529	3143	113	Maggie	20.6
3530	3143	116	Mahatti	20.6
3531	3143	117	Jamachu	20.6
3534	3134	118	Minnie	20.6
3573	3143	112	Kimberly	20.6

The Maggie Claim has sometimes been referred to as Survey 115, patent to which is recorded in Volume 2, Page 196 of the Patent Records of Brewster County, Texas, to which reference is here made. The Minnie Claim has sometimes been referred to as Certificate 3143, and the patent to such claim is of record in Volume 2, Page 198 of the Patent Records of Brewster County, Texas, to which reference is here made. The Kimberly Claim has sometimes been referred to as Survey 122, the patent to such claim is of record in Volume 2, Page 199 of the Patent Records of Brewster County, Texas, to which reference is here made.

Now, therefore, for and in consideration of the sum of Ten ($10.00) Dollars cash in hand paid by Lessee to Lessor, receipt of which is hereby acknowledged, and other good and valuable considerations and the hereinafter recited covenants and agreements on the part of the Lessee to be paid, kept and performed, Lessor hereby leases and grants unto Lessee Lessor's right, title and interest in and to the aforementioned State Mineral Leases and the Mitchell-Gillett Mineral Lease excepting such rights, privileges, rentals, royalties and interests as are herein retained and reserved and as further consideration, Lessee agrees to pay to Lessor a minimum royalty of Four Hundred ($400.00) Dollars per month beginning on or before the tenth day of the fourth month after execution of this lease and on or before the tenth day of each month thereafter throughout the duration of this agreement, it being understood and agreed that in event there is no production or if the royalty on production amounts to less than Four Hundred ($400.00) Dollars, Lessee will pay to Lessor as cash rental any amount required to make up the

minimum monthly payment of Four Hundred ($400.00) Dollars; and if any monthly royalty payment by Lessee to Lessor exceeds the Four Hundred ($400.00) Dollars minimum royalty, any such excess shall not be carried forward or backward in any way to reduce, diminish or defray any royalty, rental or combination thereof previously paid or which may become due, but each month shall be treated separately and apart.

And the parties hereto mutually covenant and agree as follows, to wit:

1. Lessee agrees to pay to Lessor a royalty of ten (10%) percent of the production of all minerals from the lands covered by the State of Texas Mineral Leases except in the event that uranium, thorium or other fissionable minerals are produced from such lands, a royalty of twenty (20%) percent of the production of uranium, thorium or other fissionable minerals shall be paid to Lessor, and the royalties to be paid at the percentages stipulated shall include all royalties which may become due and payable to the State of Texas as provided for under the terms of the State Mineral Leases previously referred to herein.

2. Lessee agrees to pay to Lessor a royalty of twelve (12%) percent of the production of all minerals from the lands covered by the Mitchell-Gillett Lease, and such twelve (12%) percent royalty shall include all royalty payable to the owners of the Mitchell-Gillett Claims as provided for by the terms of the Mitchell-Gillett Mineral Lease.

3. All royalties shall be paid by Lessee to Lessor on or before the tenth (10th) day of the month following the month during which the production was obtained.

4. Lessee agrees to pay to Lessor a royalty of ten (10%) percent of the gross production of quicksilver from the lands covered by the State of Texas Mineral Leases previously described herein, and Lessee agrees to pay to Lessor a royalty of twelve (12%) percent of the gross production of quicksilver from the lands covered by the Mitchell-Gillett Mineral Lease previously described herein; and at the option of Lessor, royalty payments shall be made in metal from production. The previously stipulated percentages of total production from each separate leasehold tract shall be

put in good, clean, standard mercury flasks and delivered to Lessor at 212 North Fifth Street, Alpine, Texas, or to such other Alpine, Texas, address as Lessor may designate by written notification to Lessee at least fifteen (15) days in advance of any royalty payment date. It is agreed that Lessor at his election shall be privileged to authorize Lessee to make royalty payments in kind out of the stipulated percentages of metal produced or out of the stipulated percentages of gross receipts from the sale of production. Unless otherwise instructed by written notification from Lessor, Lessee will make royalty payments of the previously stated percentages of gross proceeds from sales, and each royalty payment shall be accompanied by a statement showing the name of the property from which the quicksilver was mined, the number of tons furnaced, where furnaced, the number of flasks or pounds of mercury produced, the number of flasks sold, to whom sold and the price received for same. Regardless of how royalty payments are received by Lessor whether by cash from the gross sale price of production or in the form of the stipulated percentages of gross production in kind, Lessor will make disbursement out of royalty receipts from Lessee to the respective property owners at such time, in such form and in such manner as may be required under the terms of the respective original lease agreements with property owners, and a copy of each such transaction and letter of transmittal will be delivered by Lessor to Lessee.

5. The term of this lease shall be for a period of four (4) years and eight (8) months from the date hereof and for so long thereafter as there is commercial production from either of the State Mineral Leases or the Mitchell-Gillett Lease and for so long as the Lessee shall comply with all of the terms of this lease agreement unless sooner terminated by forfeiture or voluntary surrender.

6. Lessee agrees to pay to the Lessor herein the rental payments due the State of Texas annually in advance on each of the State Mineral Leases covering the respective tracts of land previously described herein unless such rental payment is not owed because of sustained commercial production and payment of royalties on such production, and such advance annual rental payments shall be paid to Lessor not less than thirty (30) days in advance of the anniversary date of each of the said State of Texas

Mineral Leases. Lessor shall transmit such annual advance rental payments to the Commissioner of the General Land Office of the State of Texas with a copy of Lessor's letter of transmittal to be sent to the Lessee prior to the anniversary date of each State of Texas Mineral Lease.

7. Lessee agrees to maintain full, complete and comprehensive production, operational, sales and accounting records on each of the two State of Texas mineral properties and the Mitchell-Gillett leasehold and from such records to prepare and submit to the Lessor such reports and accounting information as may be required under the terms of the State Mineral Leases and the Mitchell-Gillett Lease; and such reports shall be prepared in such form and in such manner as may be required by the State of Texas and its agencies with respect to mineral production from the lands and development and exploration on the lands covered by the State Mineral Leases previously referred to herein; and such reports shall be prepared in such form and in such manner as required under the terms of the Mitchell-Gillett Lease. All such reports pertaining to production as well as itemized costs for each operational function in the hauling, handling, dressing, furnacing, milling, retorting, refining and delivery to market of all mineral production from the lands covered by the said State Mineral Leases shall be prepared and sworn to by the Lessee or his duly authorized agent whose authority to act for and on behalf of the Lessee shall be supplied in duplicate original by Lessee to Lessor contemporaneously with or in advance of the date on which each such report shall become due.

8. Lessee shall have the right to remove from the leased lands described herein any machinery and equipment placed by Lessee upon the properties by paying all sums due under the terms of this lease agreement and under the respective State Mineral Leases and the Mitchell-Gillett Lease; but such right of removal shall not apply to underground mine timbers, headframes, mine rail, ladders or other structures the removal of which would render the mine workings inaccessible or hazardous; and anything left upon the leased premises beyond the expiration date of either State Mineral Lease or for more than one year past any termination date of this agreement shall be considered abandoned by Lessee and thereafter shall become the property of Lessor if Lessor elects to claim it.

9. Lessee agrees to carry on all exploration, development and mining operations on each of the properties leased by this agreement in accordance with accepted engineering and mining practices with due regard to development and preservation of the premises as a workable mine in compliance with all State and Federal Laws.

10. Lessee will take all reasonable measures to prevent caving and will permit no backfilling of any underground mine opening without having obtained the advance consent of Lessor in writing.

11. Lessee may relinquish and surrender this lease or any portion thereof at any time with the exception of the Mitchell-Gillett Lease and the mining claims described therein which may be relinquished and surrendered as a whole but not in part by giving written notice to Lessor thirty (30) days in advance of any such termination, by executing and delivering to Lessor a formal recordable release and thereupon shall be relieved of all obligations thereafter to accrue with respect to the lease or portion thereof surrendered. Lessee shall not be relieved of any payments or obligations accruing prior to the effective date of such surrender. A partial surrender shall not reduce the minimum royalty payment provided for herein.

12. Lessee agrees to exercise great care in the mining, hauling, dressing and furnacing of all ores from each of the respective properties leased by the terms of this agreement so that the ores from each property shall be kept separate and apart without being comingled with ores of any other property; and Lessee agrees to use the same degree of care in the furnacing or retorting of quicksilver ores so that neither the ore nor the quicksilver recovered therefrom shall be comingled until royalties have been calculated for each property and either delivered or paid to Lessor or set aside for Lessor's account.

13. Lessee agrees to furnace, retort or otherwise process the quicksilver ores from the properties leased herein at The Texas Mercury Company processing plant in Sec. 57, Blk. G-12, G.C. & S.F. Ry. Co. Land, Brewster County, Texas; and the Lessor or his authorized agent shall have the right at any time to enter upon the premises to inspect the operation and the books, accounts and records which shall be kept by Lessee to show a true and correct account by weight or measure of the number of tons of ore

treated from each specific leasehold property, the number of pounds of quicksilver recovered therefrom the assay value of furnace or retort heads and the assay value of the slag or burned ore.

14. Lessee agrees to prepare and maintain true and correct maps of surface and underground workings, shafts, cuts, core-drilled holes, and surface installations and to make such maps or copies thereof available to Lessor or his authorized agents at any and all reasonable times and to provide Lessor copies thereof if and when requested to do so. Lessee further agrees to keep a true and correct log of all holes drilled and to supply on or before the fifteenth (15th) day of each month a true and correct copy of the log of each and every hole drilled during the preceding month showing the date the hole was started and completed, the location of the hole collar by co-ordinates tied to one or more corners of the property or by survey tied to corners of the section or other established surface landmark, the elevation of the hole collar, the angle and direction of the hole, and results of any assays made of core or cuttings recovered.

15. Lessor or his duly authorized agents shall have the right at any reasonable time to enter upon and inspect the premises and the workings, to take samples, to make surveys and to obtain any and all information concerning operations conducted on the property described herein and to have access to all engineering and geological, geophysical and geochemical reports, log records, assay records and production records. Lessee agrees to provide Lessor if requested to do so with a copy of each geophysical, geochemical or other reports which may be made on the said properties.

16. Acts of God and the public enemy, fires, strikes, war emergency or mine disaster shall excuse the Lessee hereunder in performance of the terms and conditions of this agreement for such period as they may exist, but shall not relieve the Lessee of any duty or obligation under the terms of the State of Texas Mineral Leases or the Mitchell-Gillett Lease.

17. No sale, transfer, conveyance or assignment by Lessor of any portion of his right or royalties under this agreement shall be binding on Lessee for any purpose until Lessee shall be furnished with a properly executed and acknowledged instrument in writing evidencing such sale, transfer, conveyance or assignment.

18. It is agreed that Lessee shall have the use of the water well and mine buildings owned by Lessor on the properties leased by this agreement without additional charge for such facilities for so long as this Mineral Lease Agreement is maintained in full force and effect; but it is expressly agreed that the rotary quicksilver furnace, ore bins, crusher, condenser system and other accessories and appurtenances thereto and the retort now located on the property are not to be used by Lessee. Lessor shall have the right to remove the aforesaid rotary quicksilver furnace, retort, condenser system or any part thereof at any time.

19. If the estate of any party hereto is assigned or transferred, and the privilege of assigning or transferring in whole or in part is expressly allowed, the covenants and agreements herein shall extend to their heirs, executors, administrators, successors or assigns.

20. Lessee agrees to assume all obligations under the terms of both of the State Mineral Leases and upon receipt of evidence of its validity the Mitchell-Gillett Lease; but if the heirs, successors or legal representatives of the original lessors and former fee owners of the Mitchell-Gillett Lease refuse to ratify or fail to honor the validity of the Mitchell-Gillett Lease and Amendment thereto within thirty (30) days from the date hereof, Lessor shall not be liable under the warranty provisions of Paragraph 22 herein, and Lessee may relinquish and surrender the Mitchell-Gillett leasehold in the same manner and with the same effect as provided for in Paragraph 11 herein until such time as Lessor may be able to supply evidence of the validity of the Mitchell-Gillett Lease. Lessee agrees to do all things required to maintain each of the said leases in good standing in the name of Lessor; to make all payments of cash rentals which may become due under the terms of each of the State Mineral Leases at least thirty (30) days prior to the date on which such payments shall become due in lieu of commercial production and the payment of royalty thereon; to make all payments of cash rentals at least ten (10) days in advance of the date on which such payments may become due under the terms of the Mitchell-Gillett Lease if required in lieu of production and the payment of royalty thereon or in lieu of the minimum monthly expenditure of One Thousand ($1,000.00) Dollars for exploration and development work on the Mitchell-Gillett Claims; and it is agreed that each such payment shall be made

to Lessor in addition to the Four Hundred ($400.00) Dollar minimum monthly royalty or cash rental previously provided for herein. Lessor agrees to transmit any and all such rental payments by Lessee to the respective property owners without delay; or at the election of Lessor to be expressed by written notification to Lessee at least ten (10) days in advance of the date for any rental payment, Lessor may authorize Lessee to make such rental payments in the name of Lessor directly to the respective property owners until further notice; and in such event, Lessor shall receive within the advance payment period stated herein a copy of each letter of transmittal.

21. If Lessee should fail or refuse to make the payment of any sum due as royalty on production, minimum royalty or rental or any annual advance payment of rental due the State of Texas or any other payment which may become due under the terms of either the State Mineral Leases or the Mitchell-Gillett Lease, or if the Lessee or his authorized agent should knowingly make any false return or false report concerning this lease, or if Lessee or his agent should refuse the Lessor or his authorized agents access to the records pertaining to operations under this agreement, or if Lessee fails to perform any of his other obligations under this agreement, this agreement shall be subject to cancellation, but Lessee shall be notified in writing of any violation or deficiency and shall have thirty (30) days within which to comply or cure any such violation or deficiency. Termination of this agreement will not have the effect of releasing Lessee from any obligation or liability theretofore incurred in favor of Lessor, the State of Texas or the owners of the Mitchell-Gillett Claims; and in the event of any such termination, Lessee agrees to surrender and vacate promptly and peaceably all of the property leased by this agreement.

22. Lessor hereby warrants that he is the owner and holder of the interest in the lands hereinabove described and by Special Warranty agrees to defend the title thereto unto the said Lessee, his successor or assigns against the claims of anyone claiming or to claim by, through or under Lessor, binding his heirs, successors or legal representatives hereby.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this the 31st day of August, 1965.

LESSOR

R. N. Pulliam

R. N. Pulliam

LESSEE

THE TEXAS MERCURY COMPANY

By W. R. Ransone

W. R. Ransone, Managing Partner

THE STATE OF TEXAS ⌇
COUNTY OF BREWSTER ⌇

BEFORE ME, the undersigned authority, on this day personally appeared R. N. Pulliam, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 31st day of August, A. D. 1965.

Notary Public in and for Brewster County, Texas

THE STATE OF TEXAS ⌇
COUNTY OF DALLAS ⌇

BEFORE ME, the undersigned authority, on this day personally appeared W. R. Ransone, Managing Partner of The Texas Mercury Company, and known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE, this the 7th day of ~~August~~ September, A. D. 1965.

Mrs Susan K. Green

Notary Public in and for DALLAS County, Texas

SUSAN K. GREEN

MINERAL LEASE M-55669

DATE September 3, 1965

WHEREAS, Mr. R. N. Pulliam

of Alpine on the 27th day of August,

19 65, filed in the General Land Office his application to lease, in accordance with Chapter 497, Acts 54th Legislature, 1955, Article 5421c-7, Vernon's Civil Statutes, as amended by Senate Bill 348, Acts of the 55th Legislature, 1957, the following described tract of land:

Section 58, Block G-12, G C & S F Ry. Co. 362.61 acres, Brewster County, Texas

NOW THEREFORE, I JERRY SADLER, Commissioner of the General Land Office of the State of Texas, by virtue of the authority vested in me, do hereby lease and grant unto Mr. R. N. Pulliam of Box 330, Alpine, Texas 79831 the exclusvie right to prospect for, produce and take out of the aforesaid area for a period of five years and as long thereafter as production in paying quantities is obtained, all minerals except oil, gas, coal, lignite, sulphur, salt and potash, shell, sand and gravel that may be therein, upon the following conditions to-wit:

1. The owner of this lease shall pay the Commissioner of the General Land Office, at Austin, Texas, for the use and benefit of the State of Texas annually in advance One Dollar ($1.00) per acre for the second year and each succeeding year thereafter during the primary term hereof which shall be payable unless production in paying quantities is being obtained and royalty being paid the State thereon.

2. When production in commercial quantities of the minerals covered by this lease is secured, the owner shall pay to the Commissioner of the General Land Office at Austin, Texas, for the use and benefit of the State of Texas one-sixth (1/6th) of the value of uranium, thorium or other fissionable materials and one-sixteenth (1/16th) of the value of all other minerals produced from the area embraced herein, the amount so payable being based on the value of the production at the mouth of the mine.

3. All royalty that may become due the State shall be paid on the twentieth (20th) day of the month following the month in which the minerals, uranium, thorium or other fissionable materials were produced. The payment shall be accompanied by the sworn statement of the owner, manager, or other authorized agent showing the gross amount of production since the last report and the market value of the same, together with a copy of all checks or memoranda of the amount produced.

4. The books, accounts, records and contracts pertaining to the production transportation, sale and marketing of the minerals, uranium, thorium or other fissionable materials, shall at all times be subject to inspection and examination by the Commissioner of the General Land Office, the Attorney General, and the Governor, or the representatives of either of them.

5. The State shall have a first lien upon all production from the area covered by this lease to secure the payment of all unpaid royalty and other sums of money that may become due under said lease.

6. A log of each core test drilled on the area covered by this lease must be filed in the General Land Office within thirty (30) days after such drilling shall have been completed or abandoned, and the correctness of such log shall be sworn to by the owner, manager or driller.

7. All development must be done in such a manner as to prevent, as far as practicable, the pollution of water. When any claim or mine is abandoned, all shafts, mines, or openings of any kind which, if left exposed, would be dangerous to human beings or livestock shall be covered or enclosed in such a manner as to remove the danger.

8. The owner of this lease may fell and remove for mining purposes any timber upon the area included herein, and shall also have the right to occupy within the limits of the lease so much of the surface as may be necessary for the development of the minerals and substances herein; and shall have the right of ingress and egress to and from the area embraced herein.

9. This lease may be assigned in quantities of not less than forty (40) acres unless there be less than forty (40) acres remaining out of the tract originally leased in which case such lesser area may be assigned. Such assignments shall be recorded in the county in which the land is located and a certified copy thereof, certified by the County Clerk from his records, forwarded to the General Land Office within ninety (90) days from the date of recordation, accompanied by a One Dollar ($1.00) filing fee for each tract affected.

10. The owner of this lease may relinquish it back to the State at any time by recording the relinquishment in the county where this area is situated and filing a certified copy, certified by the county clerk, in the General Land Office within ninety (90) days after its execution, accompanied by a filing fee of One Dollar ($1.00). Such relinquishment will not have the effect of releasing the owner from any liability theretofore accrued in favor of the State.

11. If the owner of this lease shall fail or refuse to make payment of any sum due, either as rental on the lease or royalty on production or if such owner or his authorized agent should knowingly make any false return or false report concerning the lease, or if such owner or his agent should refuse the Commissioner or his authorized representative access to the records or other data pertaining to operations under the lease, or if any of the material terms of the lease should be violated, such lease shall be subject to forfeiture by the Commissioner, and when forfeited the area covered thereby shall again be subject to application for a prospect permit under the same conditions controlling the original application.

12. When required by the Commissioner of the General Land Office, the authority of a manager or agent to act for the owner of this lease must be filed in the Land Office.

13. Forfeitures may be set aside and this lease and all rights thereunder reinstated before the rights of another intervene upon satisfactory evidence to the Commissioner of the General Land Office of future compliance with the provisions of the law and of this lease and any rules and regulations adopted relative thereto.

IN TESTIMONY WHEREOF, I have caused the Seal of the General Land Office to be affixed hereto at the City of Austin, on the 3rd day of September, 1965.

JERRY SADLER
COMMISSIONER OF THE GENERAL LAND OFFICE

Approved
Geo
Execution
Engineering

MINERAL LEASE M- 55704

DATE September 3, 1965

WHEREAS, Mr. R. N Pulliam

of Alpine on the 27th day of August,

1965, filed in the General Land Office his application to lease, in accordance with Chapter 497, Acts 54th Legislature, 1955, Article 5421c-7, Vernon's Civil Statutes, as amended by Senate Bill 348, Acts of the 55th Legislature, 1957, the following described tract of land:

Section 44, Block G-12, G C & S F Ry. Co, 498.38 acres
Brewster County, Texas.

NOW THEREFORE, I JERRY SADLER, Commissioner of the General Land Office of the State of Texas, by virtue of the authority vested in me, do hereby lease and grant unto Mr. R. N. Pulliam of Box 330, Alpine, Texas 79831 the exclusvie right to prospect for, produce and take out of the aforesaid area for a period of five years and as long thereafter as production in paying quantities is obtained, all minerals except oil, gas, coal, lignite, sulphur, salt and potash, shell, sand and gravel that may be therein, upon the following conditions to-wit:

1. The owner of this lease shall pay the Commissioner of the General Land Office, at Austin, Texas, for the use and benefit of the State of Texas annually in advance One Dollar ($1.00) per acre for the second year and each succeeding year thereafter during the primary term hereof which shall be payable unless production in paying quantities is being obtained and royalty being paid the State thereon.

2. When production in commercial quantities of the minerals covered by this lease is secured, the owner shall pay to the Commissioner of the General Land Office at Austin, Texas, for the use and benefit of the State of Texas one-sixth (1/6th) of the value of uranium, thorium or other fissionable materials and one-sixteenth (1/16th) of the value of all other minerals produced from the area embraced herein, the amount so payable being based on the value of the production at the mouth of the mine.

3. All royalty that may become due the State shall be paid on the twentieth (20th) day of the month following the month in which the minerals, uranium, thorium or other fissionable materials were produced. The payment shall be accompanied by the sworn statement of the owner, manager, or other authorized agent showing the gross amount of production since the last report and the market value of the same, together with a copy of all checks or memoranda of the amount produced.

4. The books, accounts, records and contracts pertaining to the production transportation, sale and marketing of the minerals, uranium, thorium or other fissionable materials, shall at all times be subject to inspection and examination by the Commissioner of the General Land Office, the Attorney General, and the Governor, or the representatives of either of them.

5. The State shall have a first lien upon all production from the area covered by this lease to secure the payment of all unpaid royalty and other sums of money that may become due under said lease.

6. A log of each core test drilled on the area covered by this lease must be filed in the General Land Office within thirty (30) days after such drilling shall have been completed or abandoned, and the correctness of such log shall be sworn to by the owner, manager or driller.

7. All development must be done in such a manner as to prevent, as far as practicable, the pollution of water. When any claim or mine is abandoned, all shafts, mines, or openings of any kind which, if left exposed, would be dangerous to human beings or livestock shall be covered or enclosed in such a manner as to remove the danger.

8. The owner of this lease may fell and remove for mining purposes any timber upon the area included herein, and shall also have the right to occupy within the limits of the lease so much of the surface as may be necessary for the development of the minerals and substances herein; and shall have the right of ingress and egress to and from the area embraced herein.

9. This lease may be assigned in quantities of not less than forty (40) acres unless there be less than forty (40) acres remaining out of the tract originally leased in which case such lesser area may be assigned. Such assignments shall be recorded in the county in which the land is located and a certified copy thereof, certified by the County Clerk from his records, forwarded to the General Land Office within ninety (90) days from the date of recordation, accompanied by a One Dollar ($1.00) filing fee for each tract affected.

10. The owner of this lease may relinquish it back to the State at any time by recording the relinquishment in the county where this area is situated and filing a certified copy, certified by the county clerk, in the General Land Office within ninety (90) days after its execution, accompanied by a filing fee of One Dollar ($1.00). Such relinquishment will not have the effect of releasing the owner from any liability theretofore accrued in favor of the State.

11. If the owner of this lease shall fail or refuse to make payment of any sum due, either as rental on the lease or royalty on production or if such owner or his authorized agent should knowingly make any false return or false report concerning the lease, or if such owner or his agent should refuse the Commissioner or his authorized representative access to the records or other data pertaining to operations under the lease, or if any of the material terms of the lease should be violated, such lease shall be subject to forfeiture by the Commissioner, and when forfeited the area covered thereby shall again be subject to application for a prospect permit under the same conditions controlling the original application.

12. When required by the Commissioner of the General Land Office, the authority of a manager or agent to act for the owner of this lease must be filed in the Land Office.

13. Forfeitures may be set aside and this lease and all rights thereunder reinstated before the rights of another intervene upon satisfactory evidence to the Commissioner of the General Land Office of future compliance with the provisions of the law and of this lease and any rules and regulations adopted relative thereto.

IN TESTIMONY WHEREOF, I have caused the Seal of the General Land Office to be affixed hereto at the City of Austin, on the 3rd day of September, 1965.

JERRY SADLER
COMMISSIONER OF THE GENERAL LAND OFFICE

ITEM 2 (c)

GENERAL LAND OFFICE
AUSTIN, TEXAS

JERRY SADLER
COMMISSIONER

June 23, 1965

Texas Mercury Company
P. O. Box 6508
Dallas, Texas 75219

Attention: Mr. R. S. Usry

Gentlemen:

In reply to your letter received June 17, 1965, requesting the execution of a subordination agreement to the rights of the mineral interest owner and in favor of the United States Government to secure the payment of royalty on production of this land, this is to advise that I am not authorized to execute any subordination agreement of this nature.

Yours very truly,

JERRY SADLER, COMMISSIONER

JS:kk

TEXAS MERCURY COMPANY
P. O. Box 6508
Dallas, Texas 75219

June 16, 1965

Mr. Jerry Sadler, Commissioner
General Land Office
Austin, Texas

Dear Mr. Sadler:

We are contemplating some additional mineral exploration on that part of Section 52, Block G-12, Brewster and Presidio Counties, Texas on which we hold a prospecting permit in the name of W. R. Ransone, Trustee. This exploration would consist of drilling and sampling three hundred (300) five (5) to six (6) foot test holes for analysis and assay, and core drilling approximately thirty-five (35) two hundred (200) foot holes. To enable us to donduct this exploration, we plan to apply for a loan from the Office of Minerals Exploration, United States Department of the Interior.

We are enclosing a copy of MME Form 52 which is required by the Government and which subordinates the rights of the mineral interest owner to the United States Government to secure the payment of royalty on production from this land.

Please let us know whether such an instrument can be executed by you on behalf of the State of Texas.

Yours very truly,

TEXAS MERCURY COMPANY

R. S. Usry

RSU:aw

Encl.

2 photos

Terlingua 3(e) - (g)

Vacuum sampler

ITEM 6

PERSONAL EXPERIENCE RECORD

Name. . . . . .John H. Baker Address . . . . . Box #367
Idria, California

Birth Date . . . . February 19, 1909 Telephone . . . . Line #7, New Idria Mine
Idria, California

Height . . . . . 5' 10½" Weight . . . 200 Lbs. Health . . .Excellent

Dependents . . . .Lillian D. Baker Children . . .Connie M. Hafen (Married)

Societies, etc. AIMME
Registered Professional Engineer, Utah

Education:

		Year Graduated
Wilburton and Elkhart, Kansas, High School		1926
Colorado School of Mines	E. M. Degree	1935

Job Experience:

1935-1940	Mountain City Copper Co. Rio Tinto, Nevada (Anaconda)	Laborer-Miner Shift Boss, Mine Engr.
1940-1945	Military Service -1st Lt. to Lt. Col. Engrs. Airport Construction, European and Pacific Theatres	
1945-1947	Mountain City Copper Co. Rio Tinto, Nevada	Mine Foreman Chief Engr. & Geologist
1947-1949	American Gilsonite Co. Bonanza, Utah	General Engineering
1949-1956	American Gilsonite Co. Bonanza, Utah	General Superintendent
1956-1959	American Gilsonite Co. Salt Lake City, Utah	Asst. Prod. Mgr.
1959-1961	American Gilsonite Co. Salt Lake City, Utah	Asst. Chief Engr.
1961-1962	Consulting	
1962-1963	American Chemet Corp. Sheridan, Montana	Plant Manager
1963-1964	Calf Springs Ranch St. George, Utah	Partner
1964-March 1965	New Idria Mining & Chem. Co. Idria, California	Manager

Noteworthy Accomplishments:

Co-Patentee of Gilsulate (Hot Pipe Insulation)
Chief Developer of Hydraulic Mining of Gilsonite
Author of Papers on Hydraulic Mining for:
American Mining Congress, AIMME, and National Western Mining Convention.

References:

J. F. Dugan, Consultant Anaconda Company
35 Haxton Place
Salt Lake City, Utah

Clarence F. Hansen, Staff Engineer (Retired)
Standard Oil of California
225 Bush Street
San Francisco, California

L. C. Wooster (Retired)
American Gilsonite Company
924 Conner Street
Salt Lake City, Utah

C. Hyde Lewis, President
New Idria Mining and Chemical Co.
Idria, California

Item 7

WALTERS DRILLING COMPANY, INC.

4519 SOUTH FITZHUGH
DALLAS 23, TEXAS

C. G. WALTERS
PRESIDENT

September 29, 1965

Texas Mercury Company
P. O. Box 6058
Dallas, Texas

Attention: Mr. W. R. Ransome

Dear Mr. Ransome:

The following is our quotation for supplying equipment for your exploration program in west Texas.

We will supply a Mayhew 1,000 drill, drill pipe, pick-up, operating personnel and pay operating expense of the drilling equipment for a price of fifteen dollars ($15.00) per hour of field time.

You will be responsible for designating locations, preparing roads to the location and for bits.

Very truly yours,

C. G. Walters

C. G. Walters

CGW:ap

Item 7

GEOCHEMICAL SURVEYS
3806 CEDAR SPRINGS ROAD
DALLAS, TEXAS 75219

MAILING ADDRESS
P. O. BOX 6508

TELEPHONE
LAKESIDE 1-5145

October 7, 1965

Texas Mercury Company
P. O. Box 19508
Dallas, Texas 75219

Gentlemen:

Where samples are furnished to Geochemical Surveys in Dallas, Texas, we will analyze for mercury content the jackhammer samples, prepare maps and interpretative reports for $10.00 per sample.

Yours very truly,

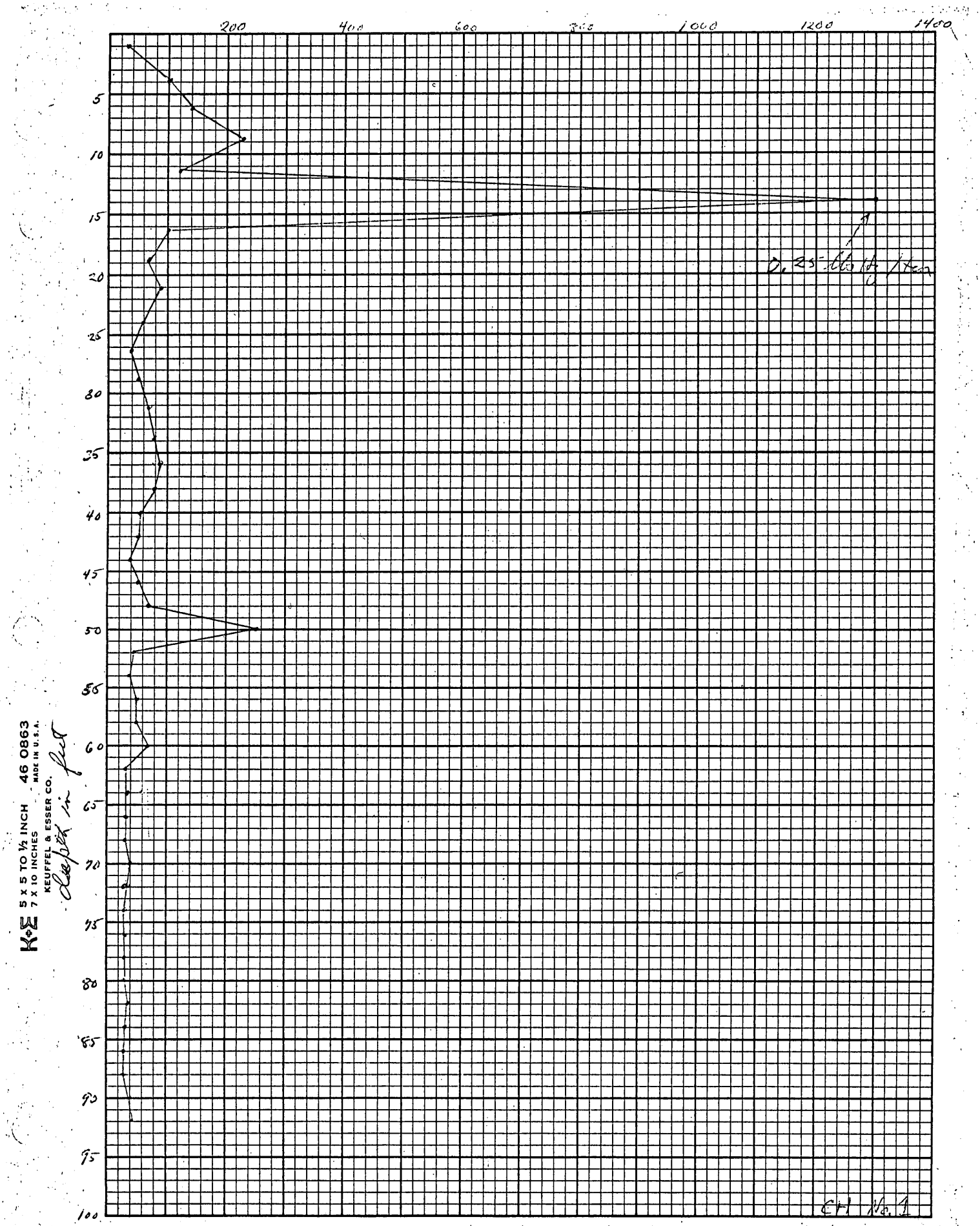
GEOCHEMICAL SURVEYS

H. Trueheart Brown

H. Trueheart Brown

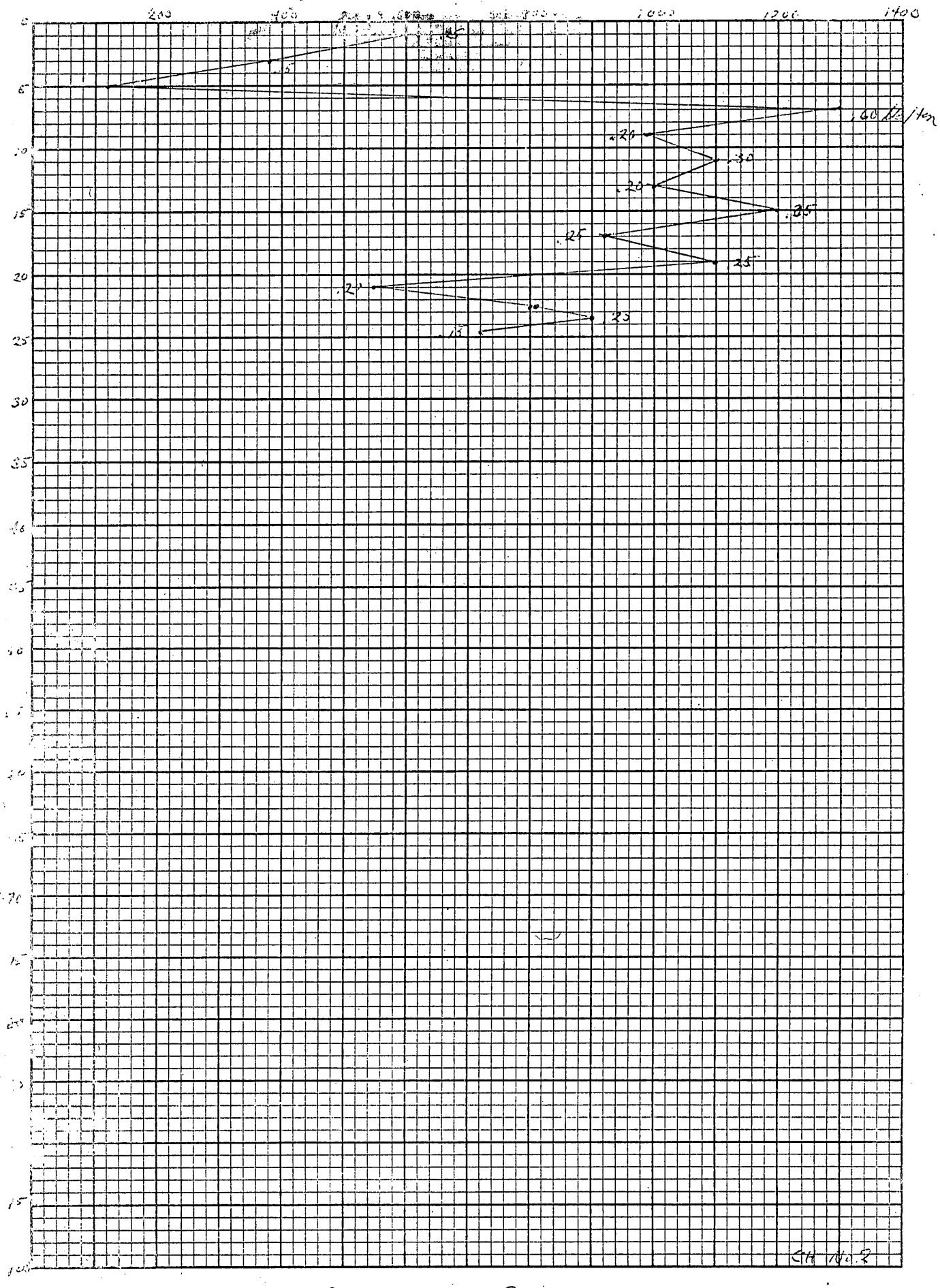
HTB:sg

APPENDIX



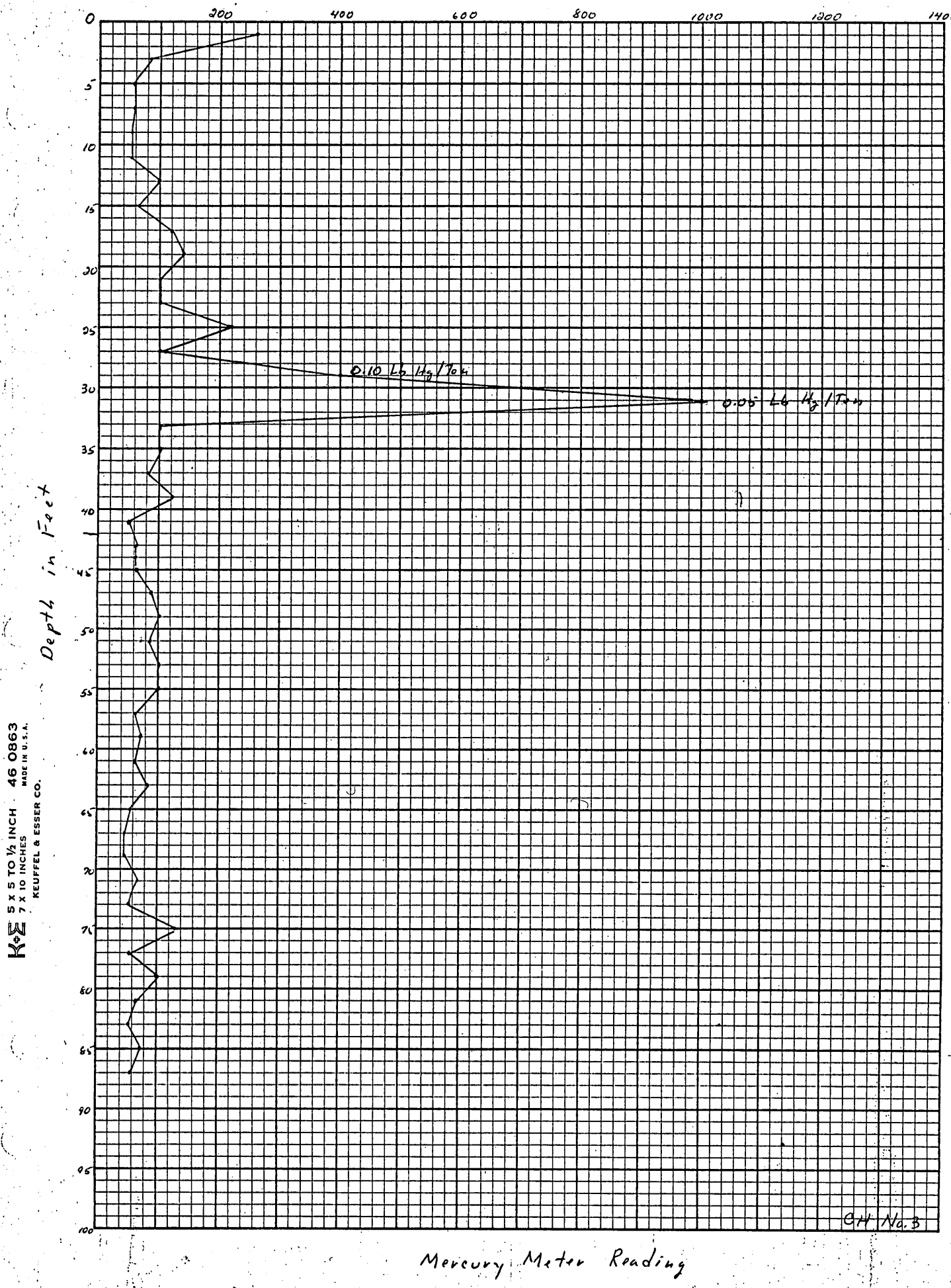
Mercury Meter Reading

APPENDIX



Reversing Meter Reading

APPENDIX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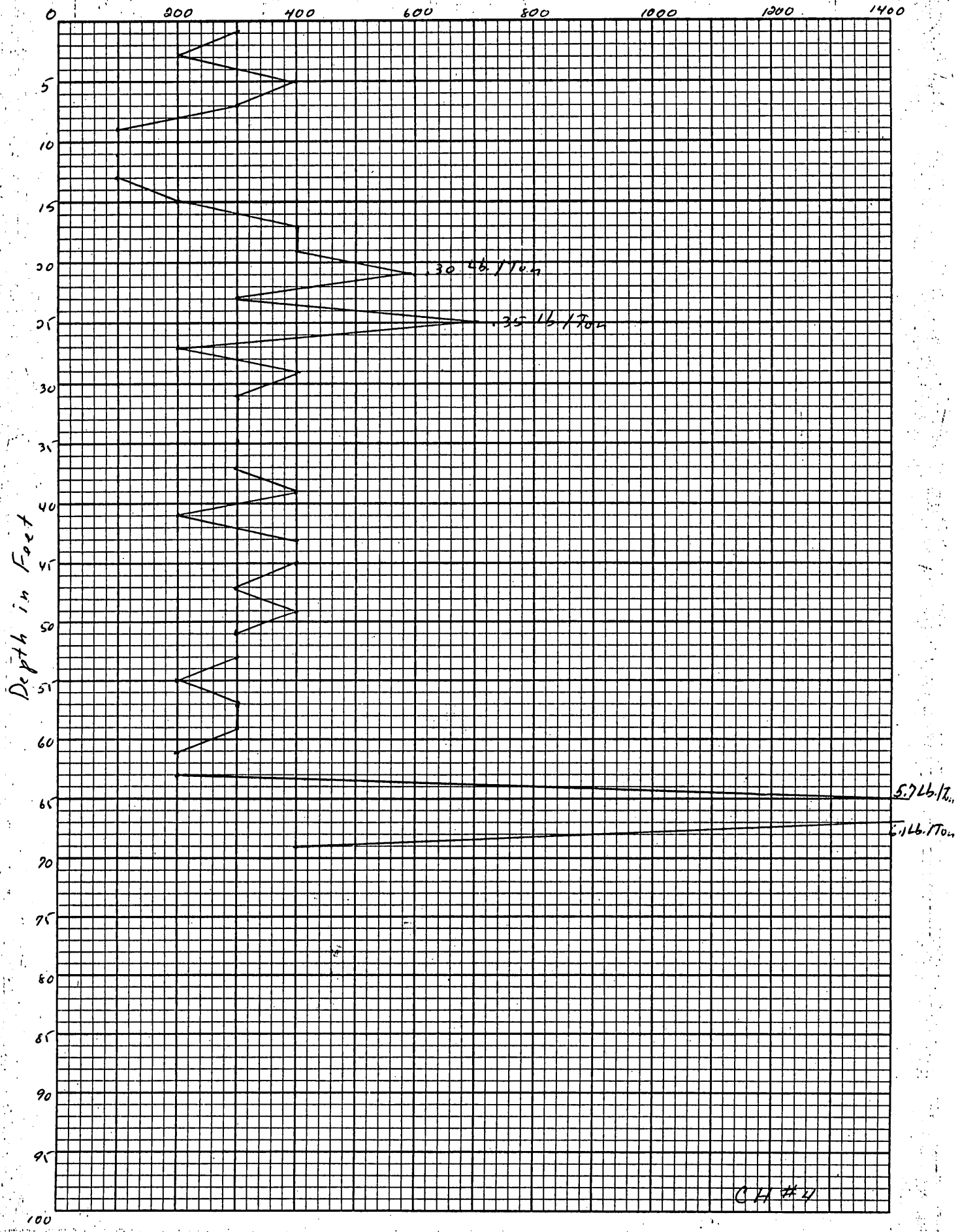
80
85
90
95
100
0.10 Lb Hg/Ton
0.05 Lb Hg/Ton
Depth in Feet
CH No. 3
Mercury Meter Reading
K+E 5 X 5 TO ½ INCH 46 0863
7 X 10 INCHES
KEUFFEL & ESSER CO.
MADE IN U.S.A.

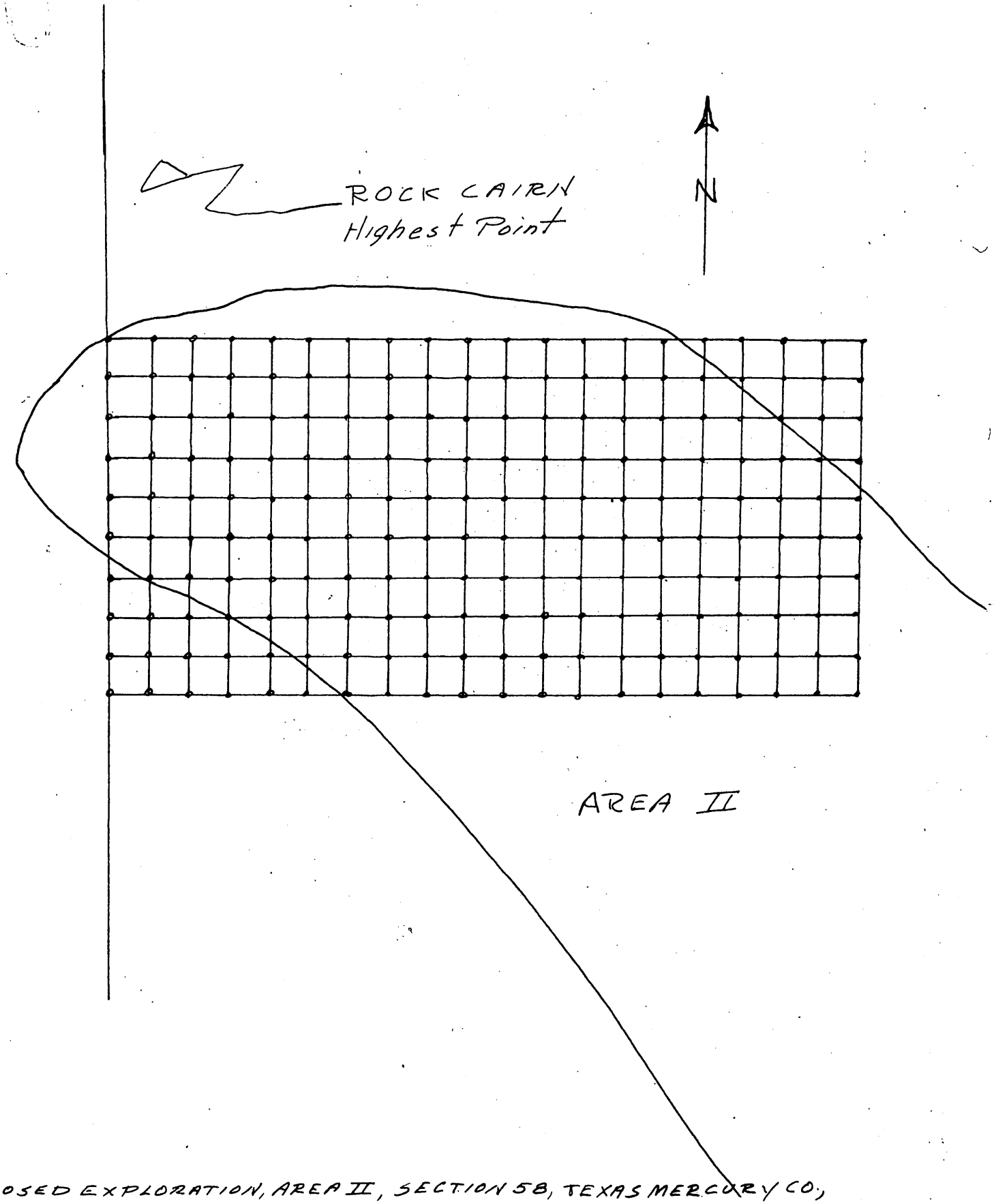
APPENDIX



K+E 5 X 5 TO ½ INCH 46 0863
7 X 10 INCHES MADE IN U.S.A.
KEUFFEL & ESSER CO.

EPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6508



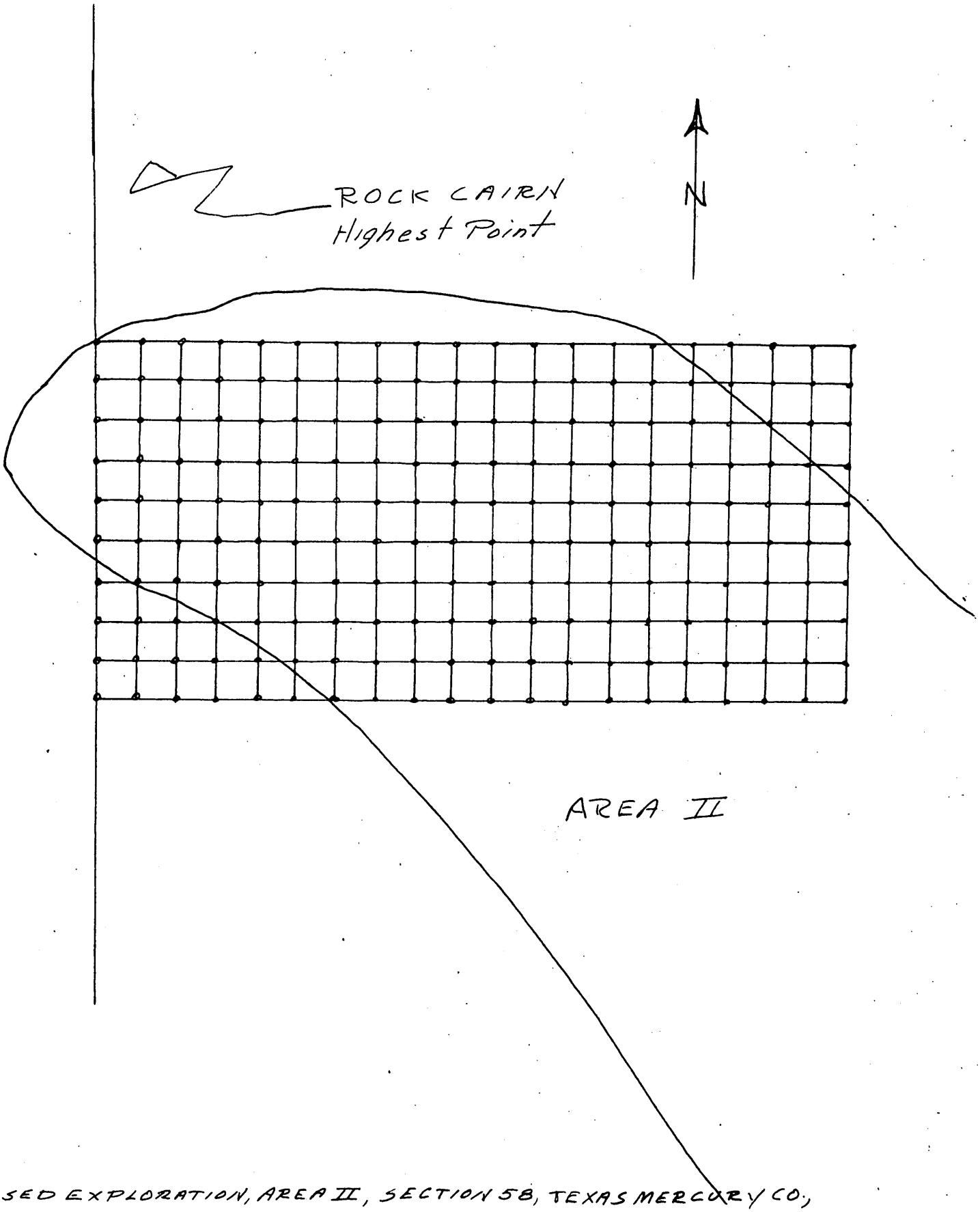
PROPOSED EXPLORATION, AREA II, SECTION 58, TEXAS MERCURY CO.,
BREWSTER CO., TEXAS

0 200 400

SCALE 1" = 200'

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6508



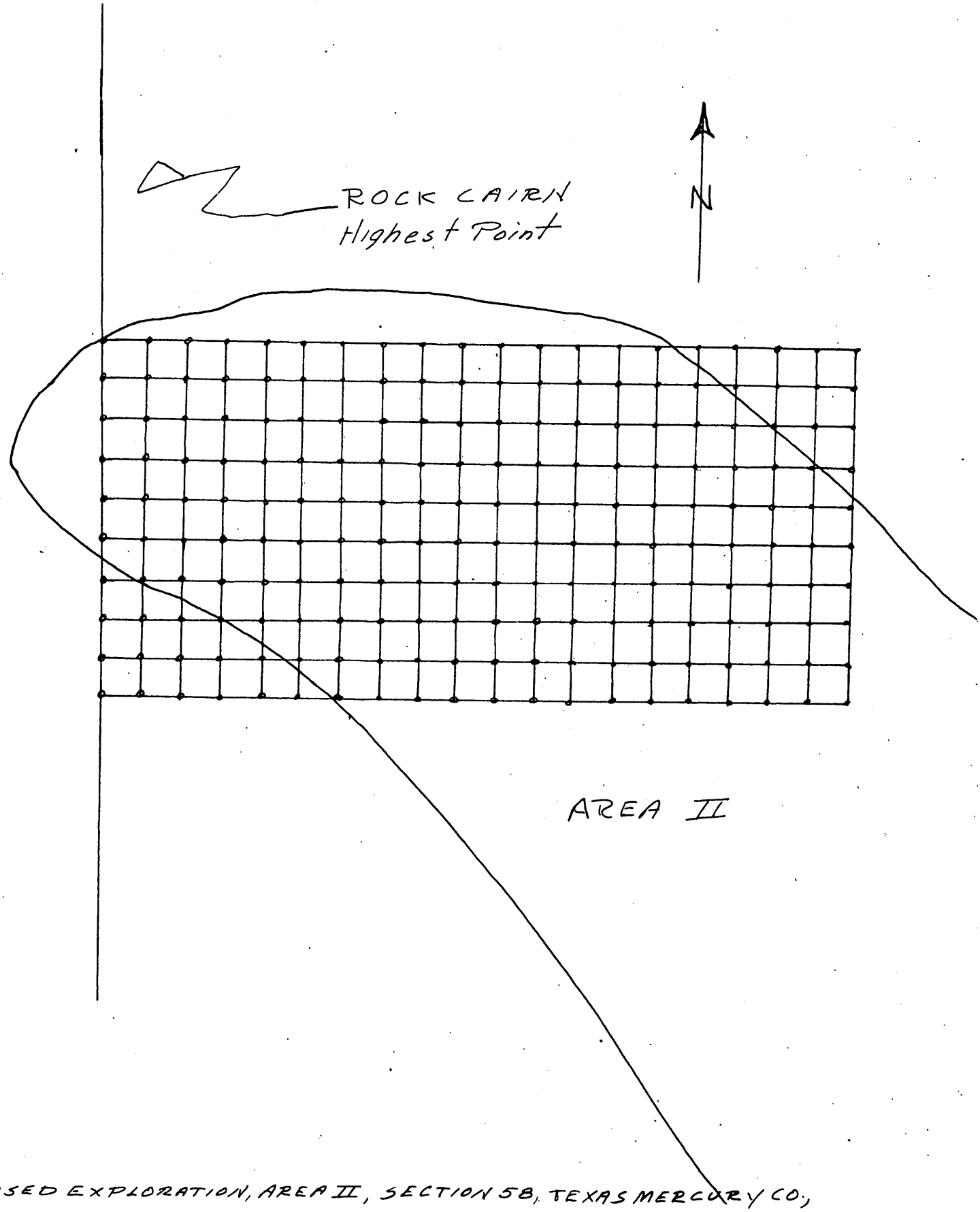
PROPOSED EXPLORATION, AREA II, SECTION 58, TEXAS MERCURY CO.,
BREWSTER CO., TEXAS

0 200 400

SCALE 1" = 200'

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 650B



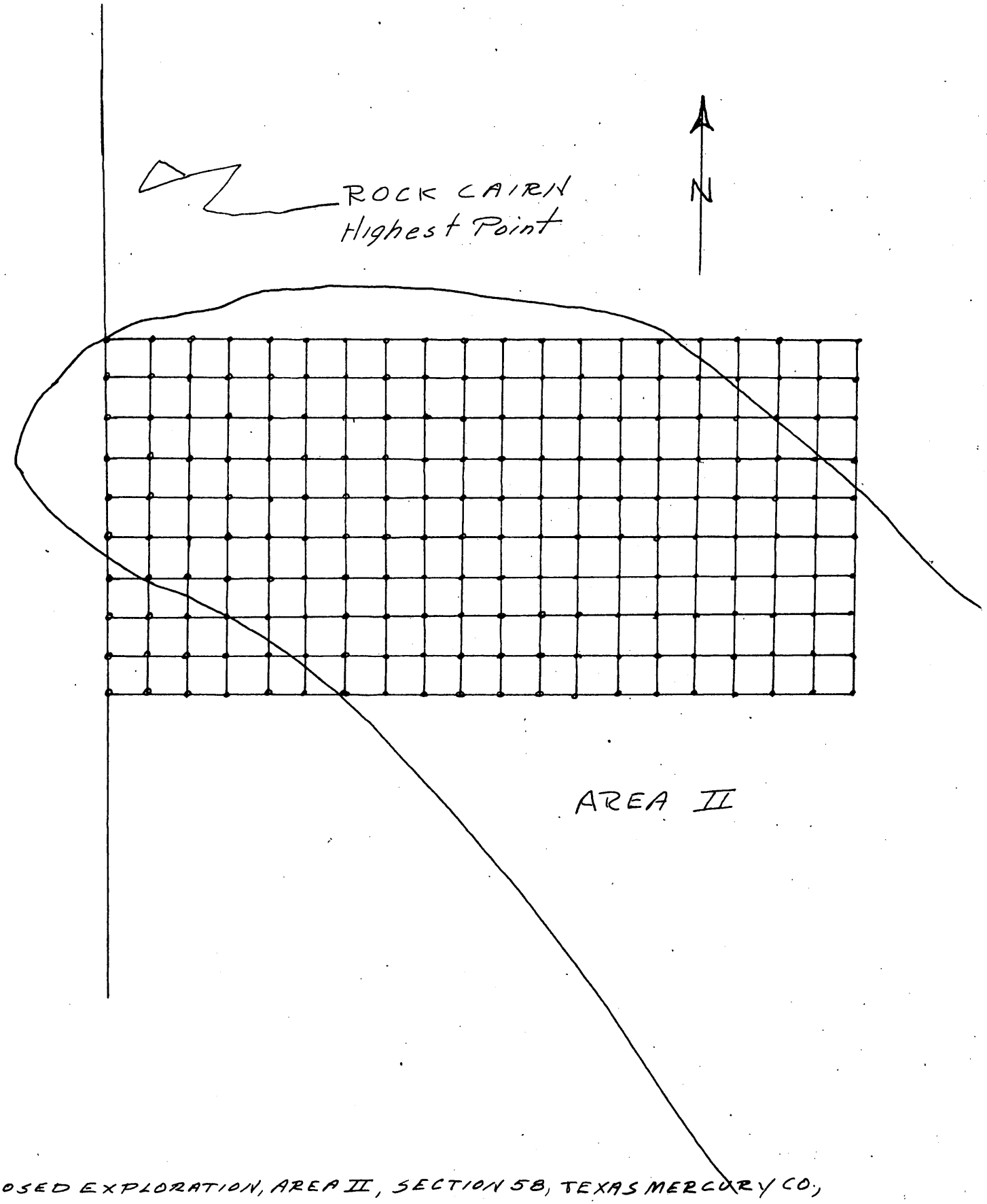
PROPOSED EXPLORATION, AREA II, SECTION 58, TEXAS MERCURY CO.,
BREWSTER CO., TEXAS

0 200 400

SCALE 1" = 200'

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6508



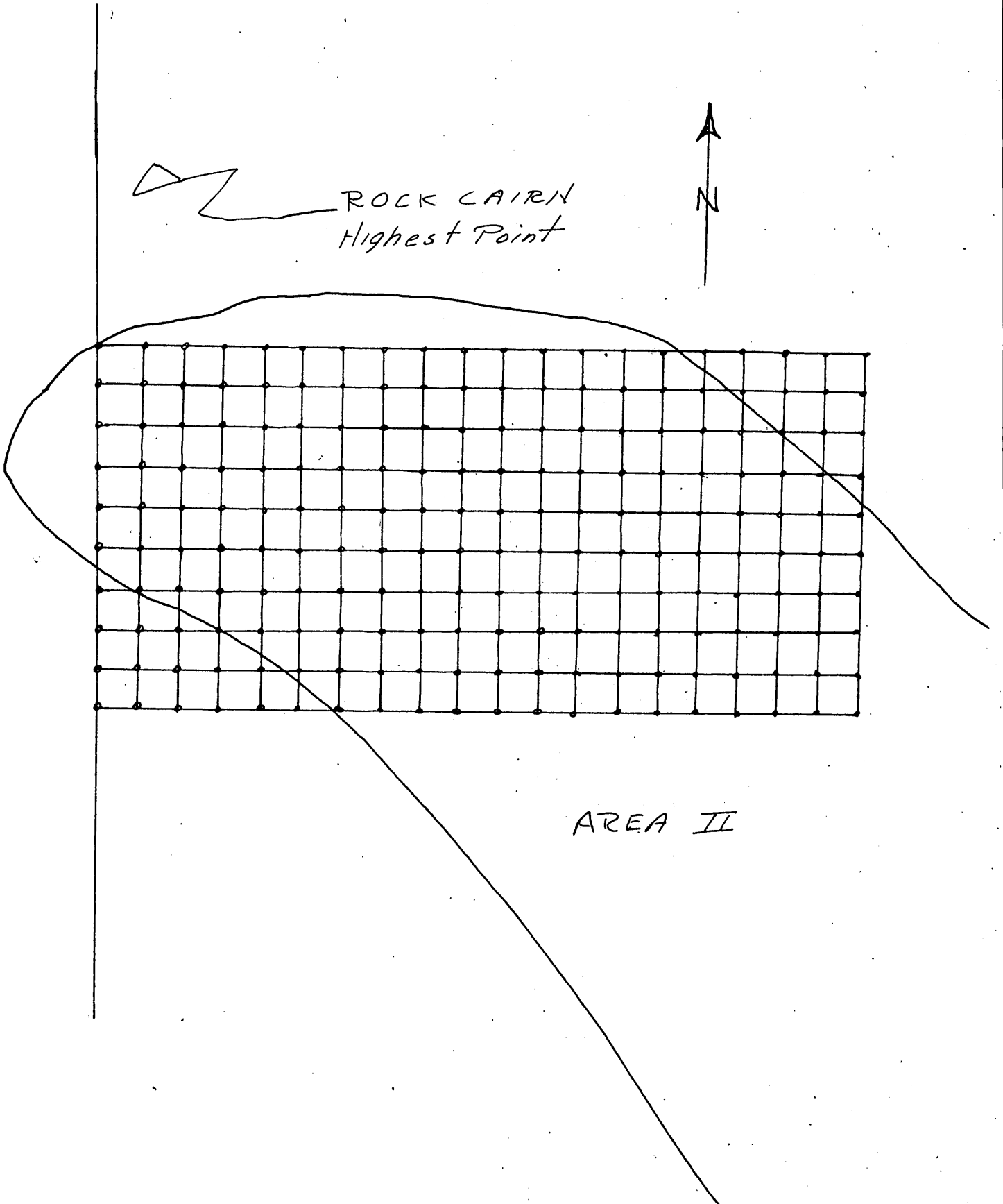
PROPOSED EXPLORATION, AREA II, SECTION 58, TEXAS MERCURY CO.,
BREWSTER CO., TEXAS

0 200 400

SCALE 1" = 200'

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6508



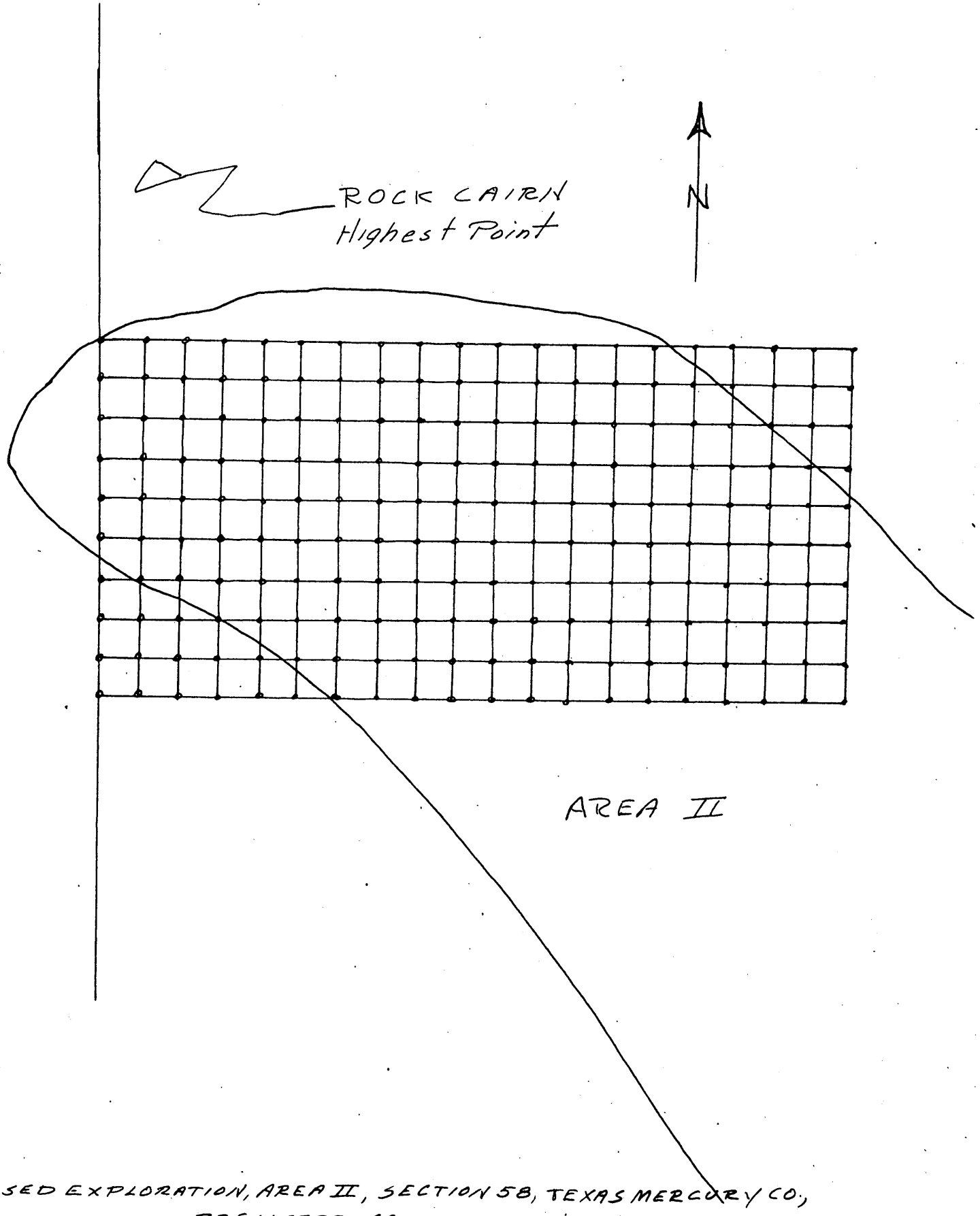
PROPOSED EXPLORATION, AREA II, SECTION 58, TEXAS MERCURY CO.,
BREWSTER CO., TEXAS

0 200 400

SCALE 1" = 200'

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6508



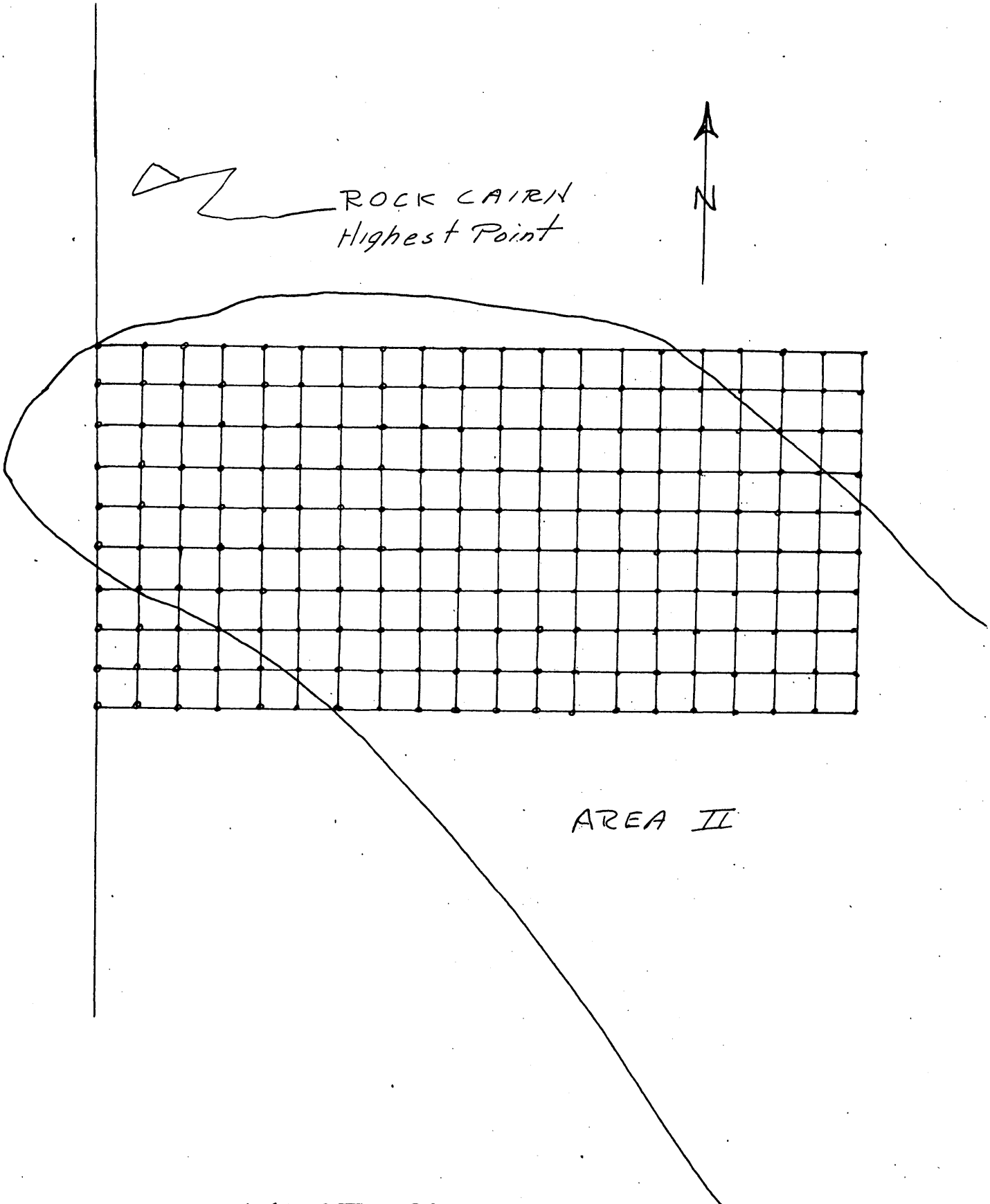
PROPOSED EXPLORATION, AREA II, SECTION 58, TEXAS MERCURY CO.,
BREWSTER CO., TEXAS

0 200 400

SCALE 1" = 200'

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6508



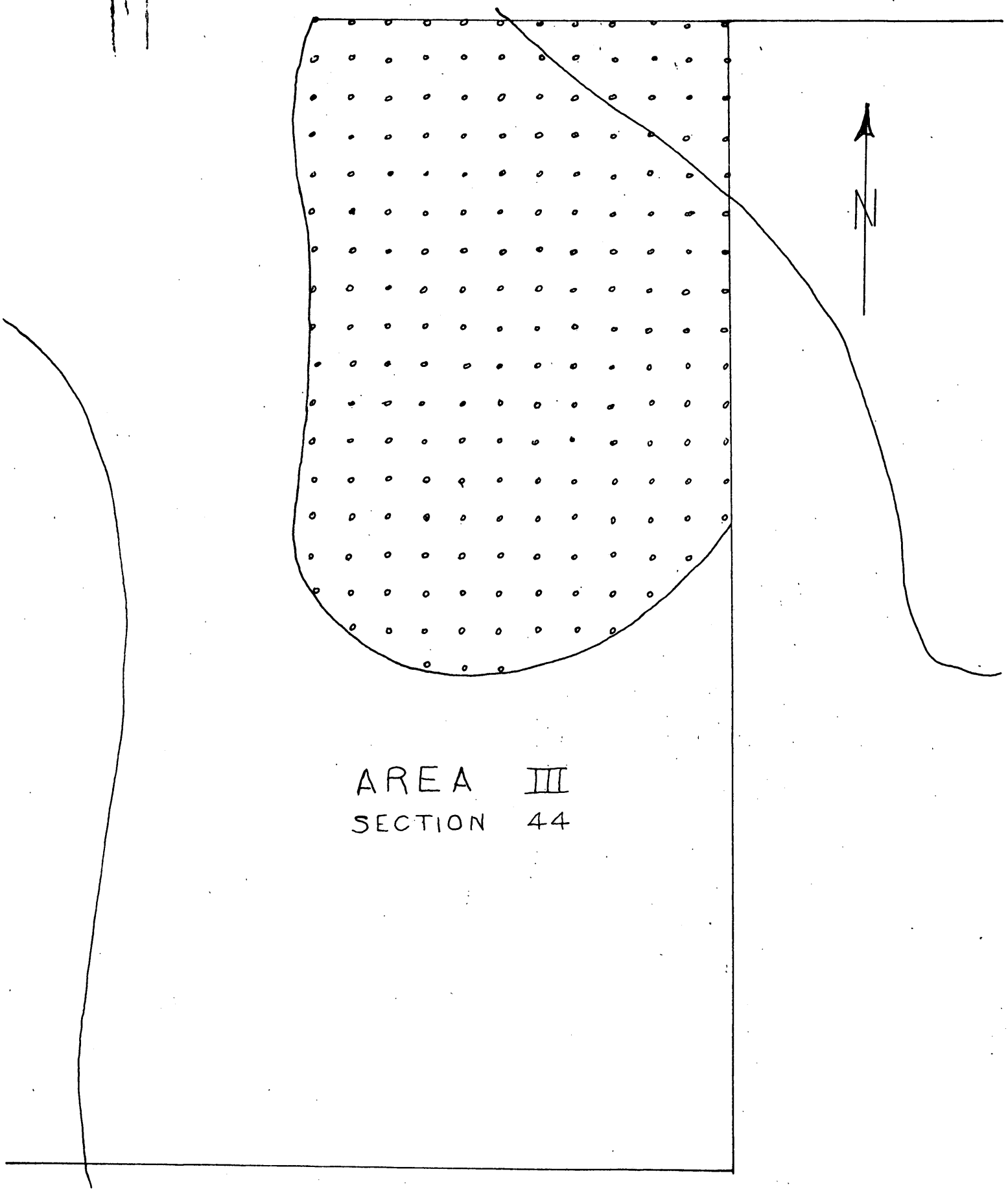
PROPOSED EXPLORATION, AREA II, SECTION 58, TEXAS MERCURY CO.,
BREWSTER CO., TEXAS

0 200 400

SCALE 1" = 200'

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6508



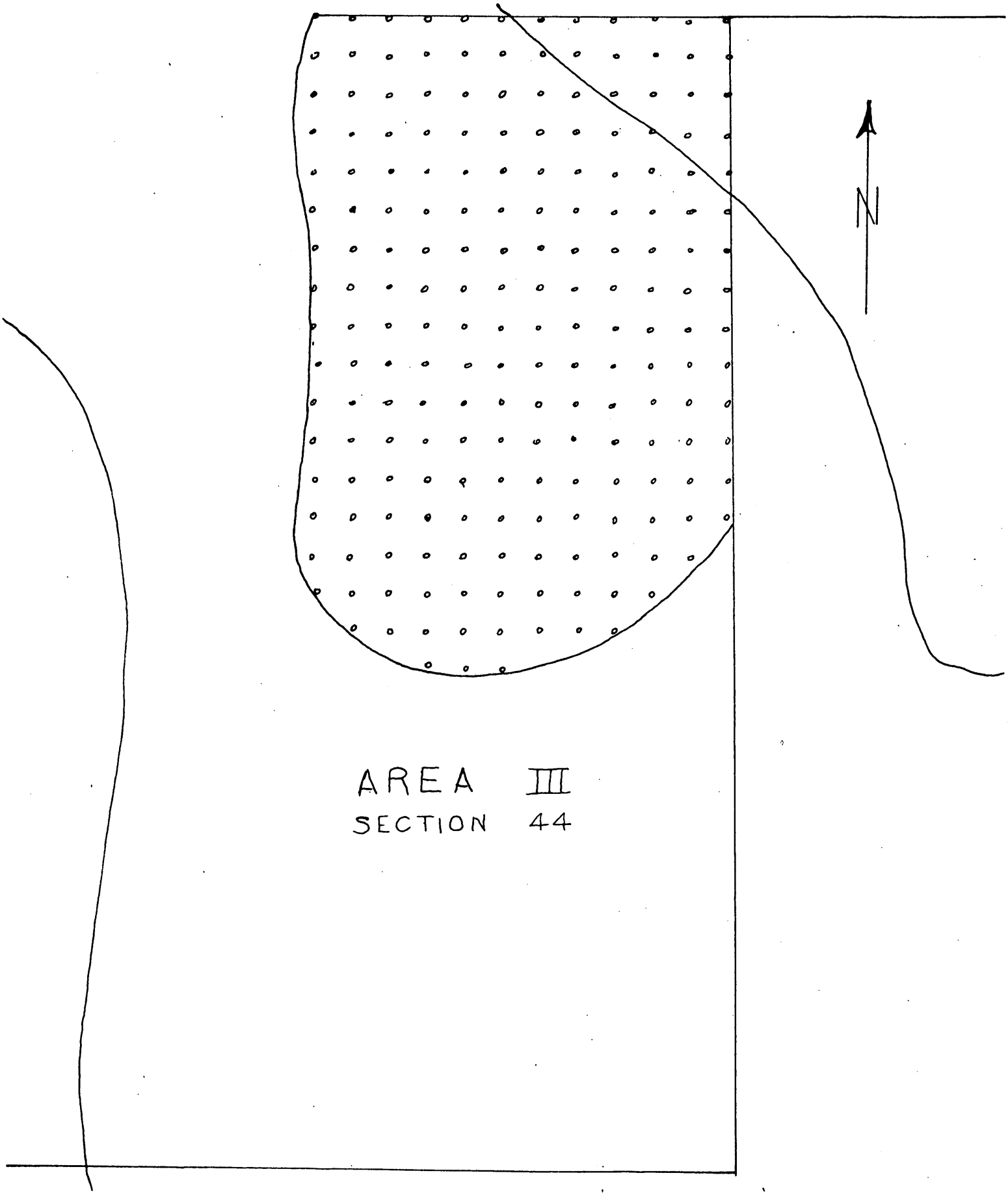
PROPOSED EXPLORATION, AREA III, SECTION 44, TEXAS MERCURY CO.,
BREWSTER CO., TEXAS

0 200' 400

SCALE 1" = 200'

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6508



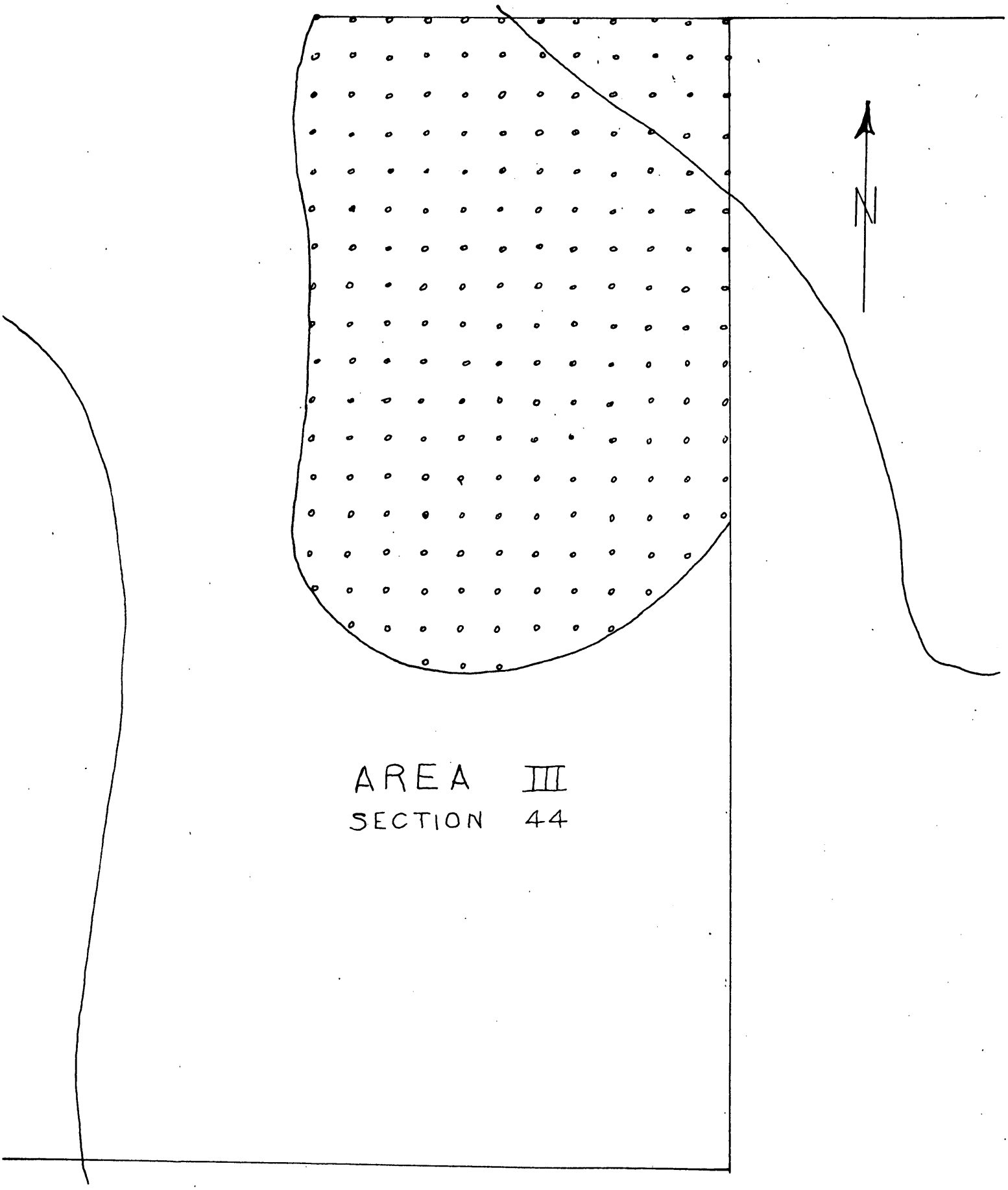
PROPOSED EXPLORATION, AREA III, SECTION 44, TEXAS MERCURY CO.,
BREWSTER CO., TEXAS

0 200' 400

SCALE 1" = 200'

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6508



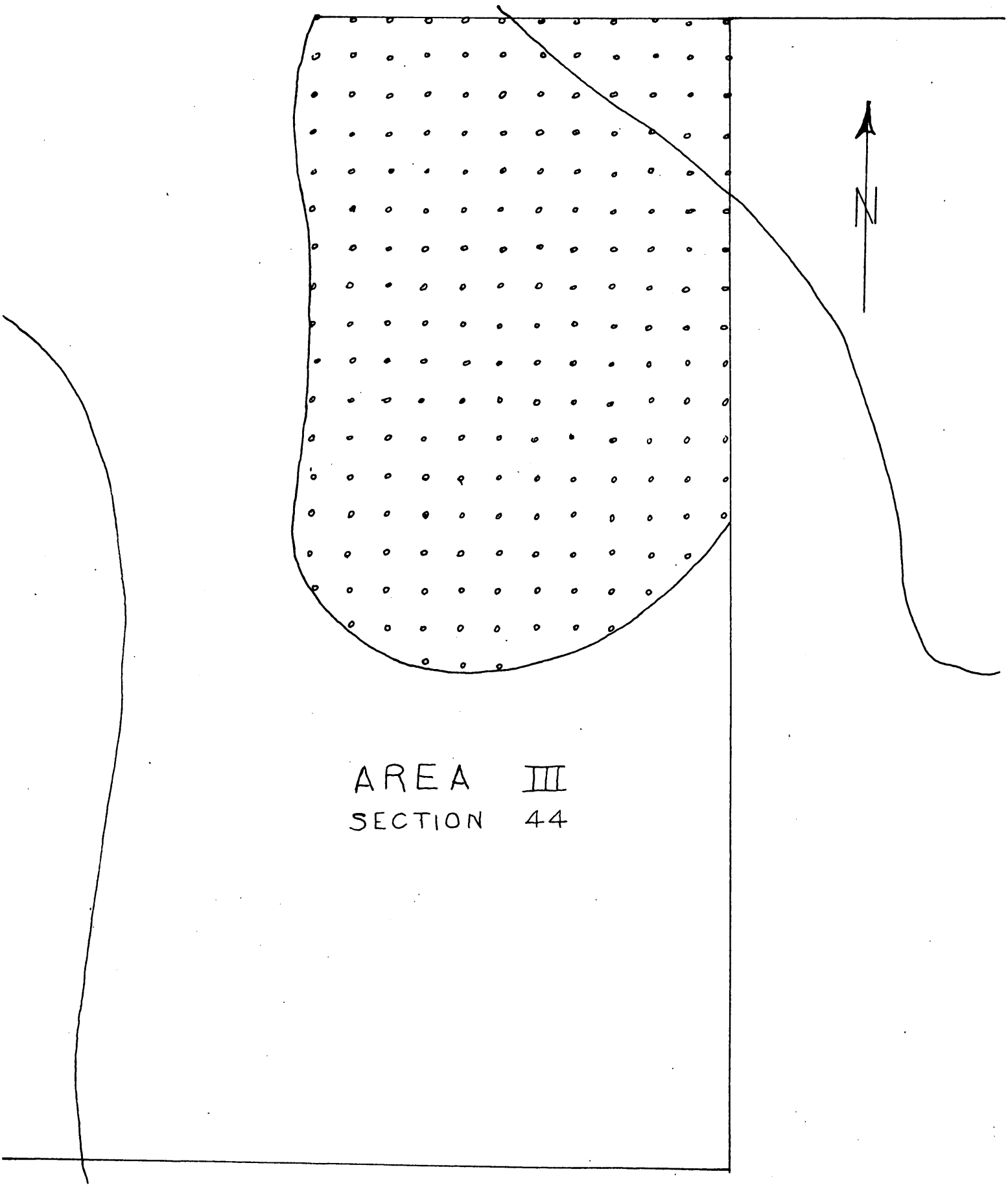
PROPOSED EXPLORATION, AREA III, SECTION 44, TEXAS MERCURY CO.,
BREWSTER CO., TEXAS

0 200' 400

SCALE 1" = 200'

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6508



PROPOSED EXPLORATION, AREA III, SECTION 44, TEXAS MERCURY CO.,
BREWSTER CO., TEXAS

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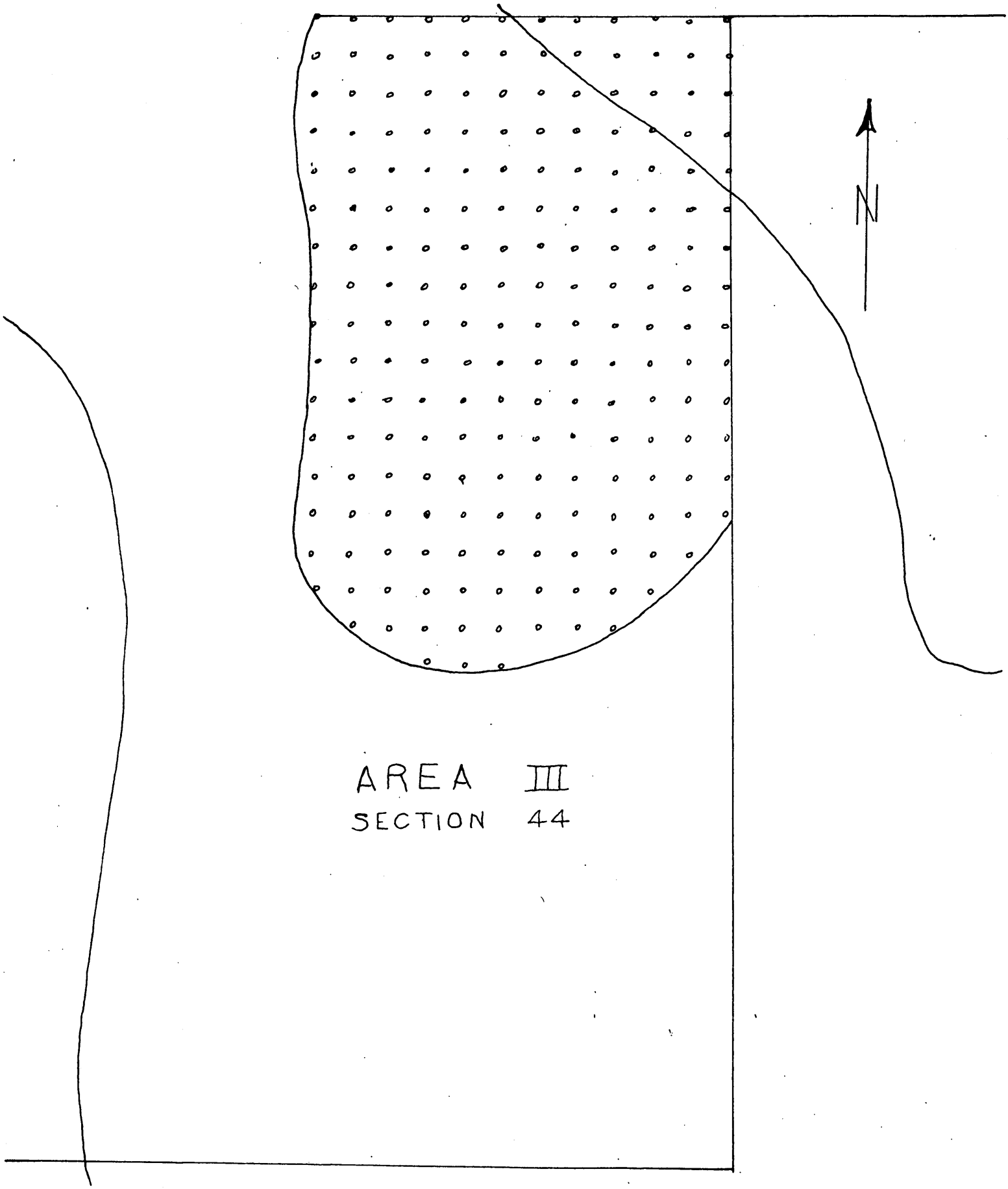
DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6508



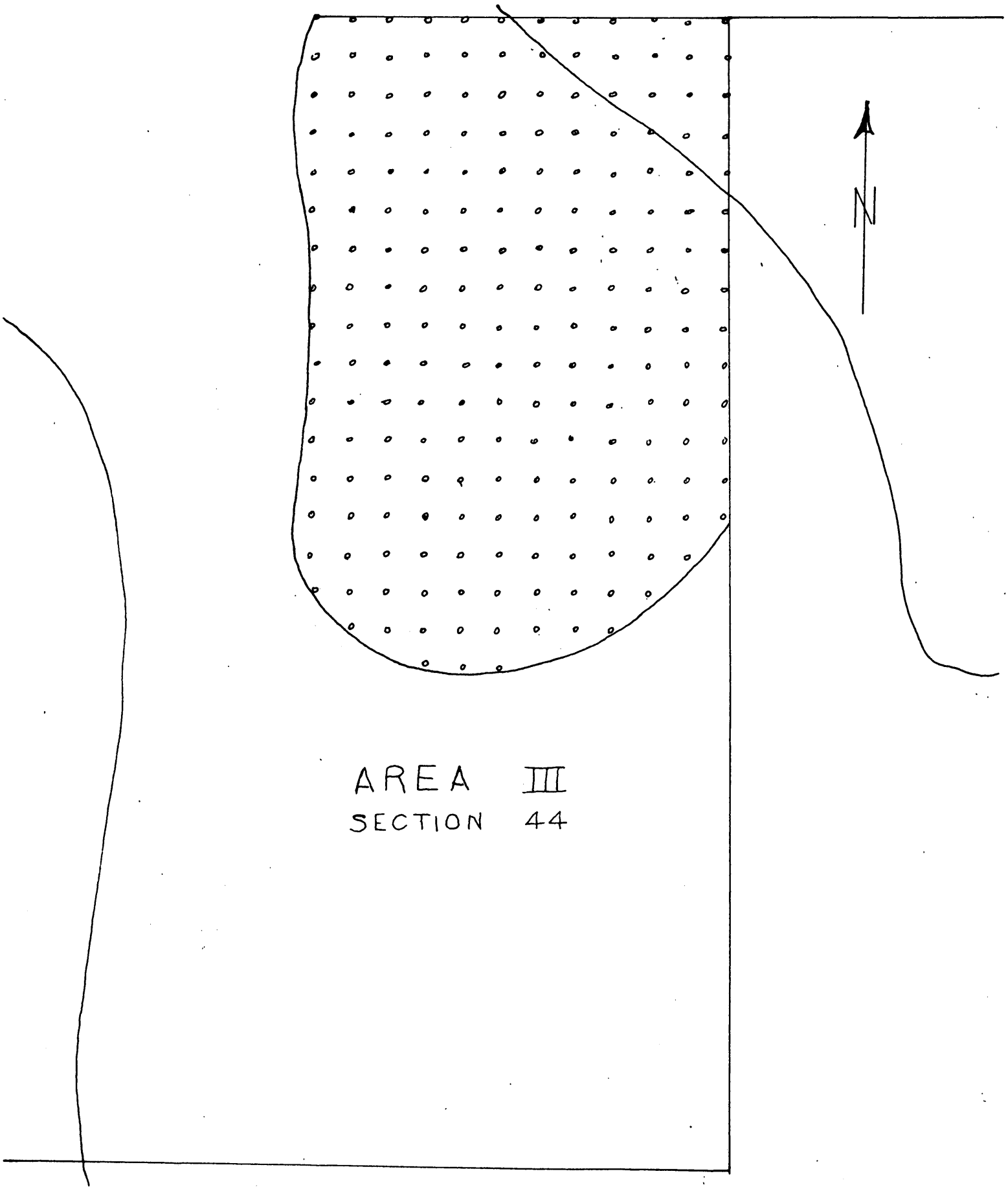
PROPOSED EXPLORATION, AREA III, SECTION 44, TEXAS MERCURY CO.,
BREWSTER CO., TEXAS

0 200' 400

SCALE 1" = 200'

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6508



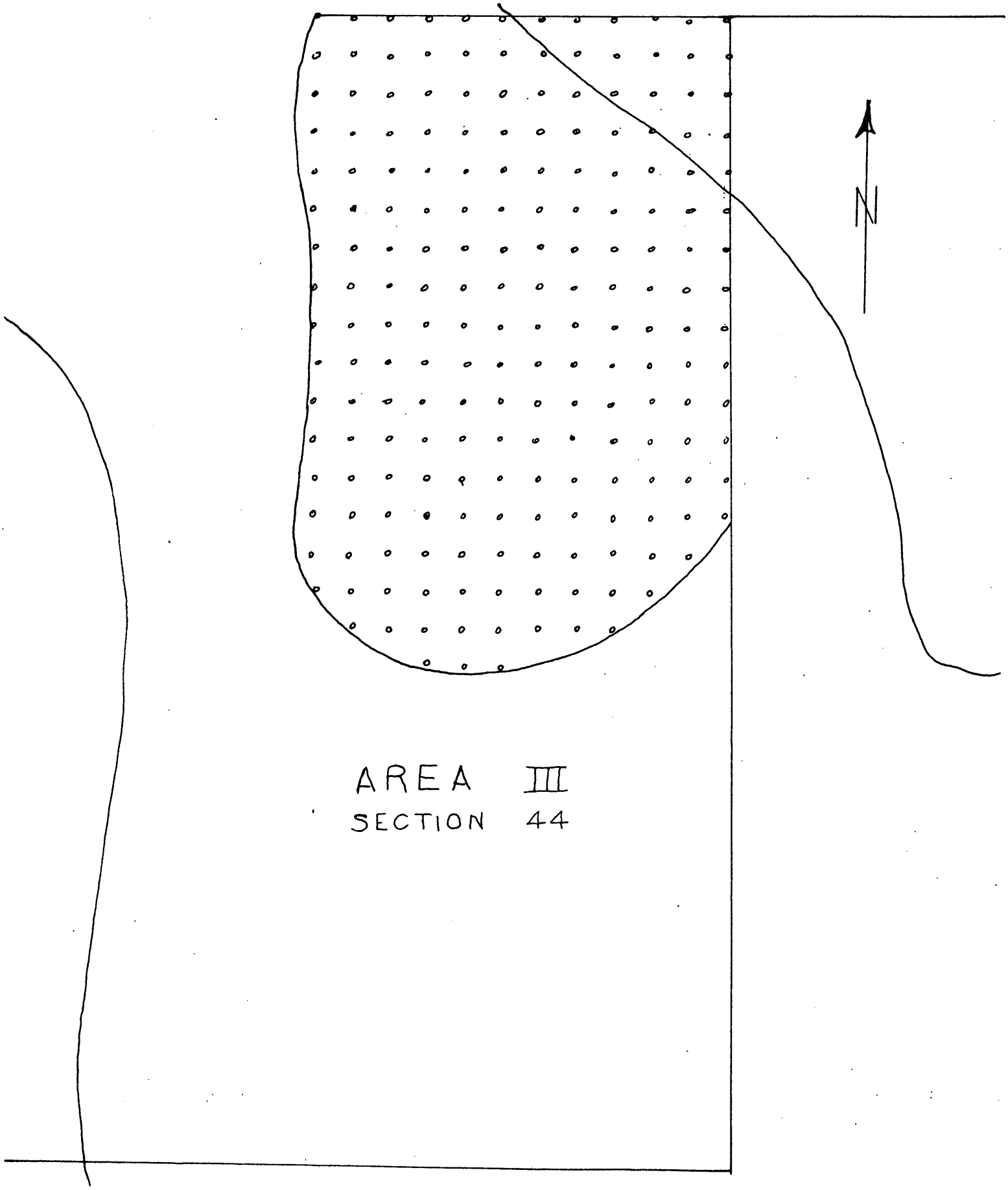
PROPOSED EXPLORATION, AREA III, SECTION 44, TEXAS MERCURY CO.,
BREWSTER CO., TEXAS

0 200' 400

SCALE 1" = 20"

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6508



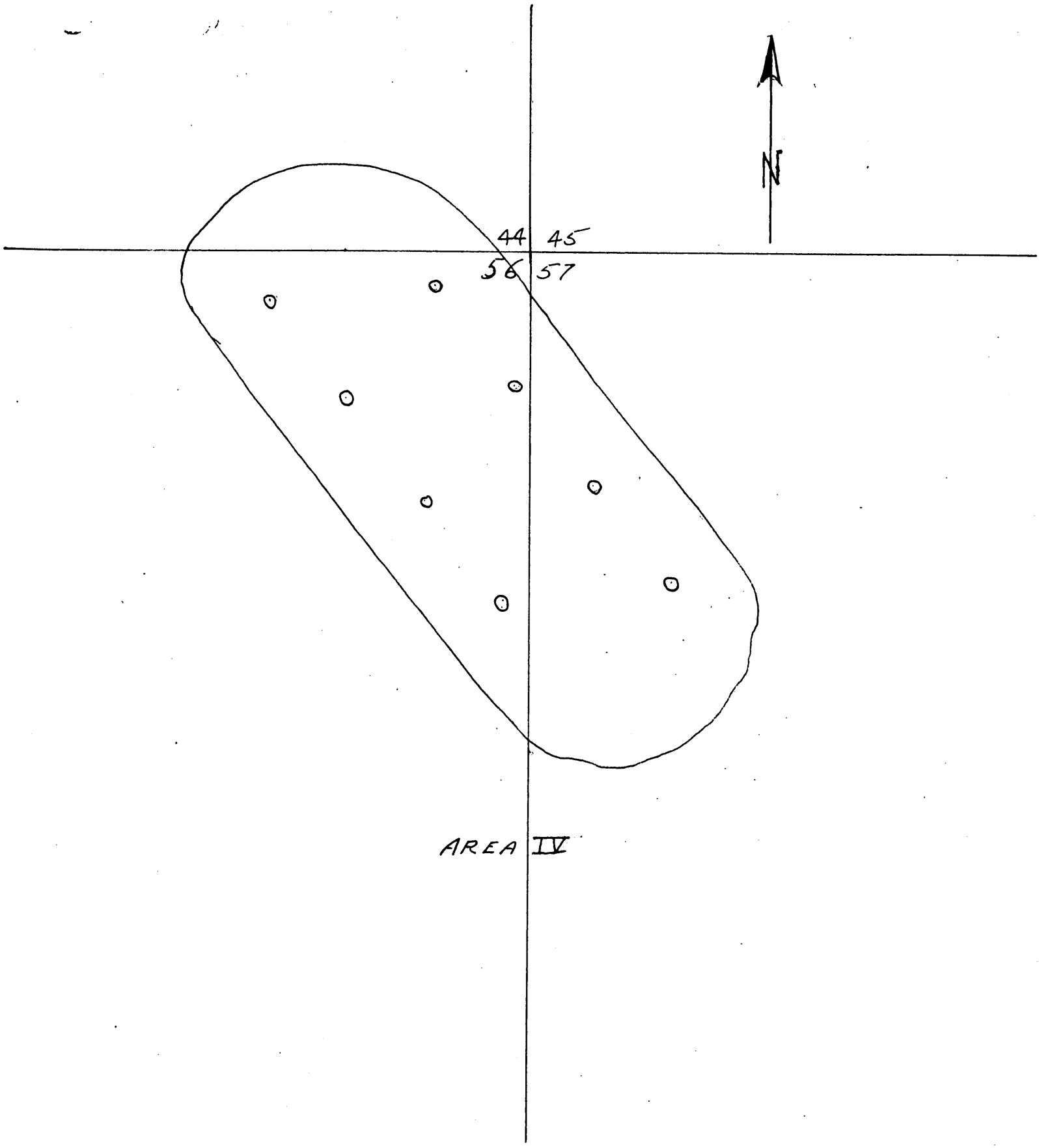
PROPOSED EXPLORATION, AREA III, SECTION 44, TEXAS MERCURY CO.,
BREWSTER CO., TEXAS

0 200' 400

SCALE 1" = 200'

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6508

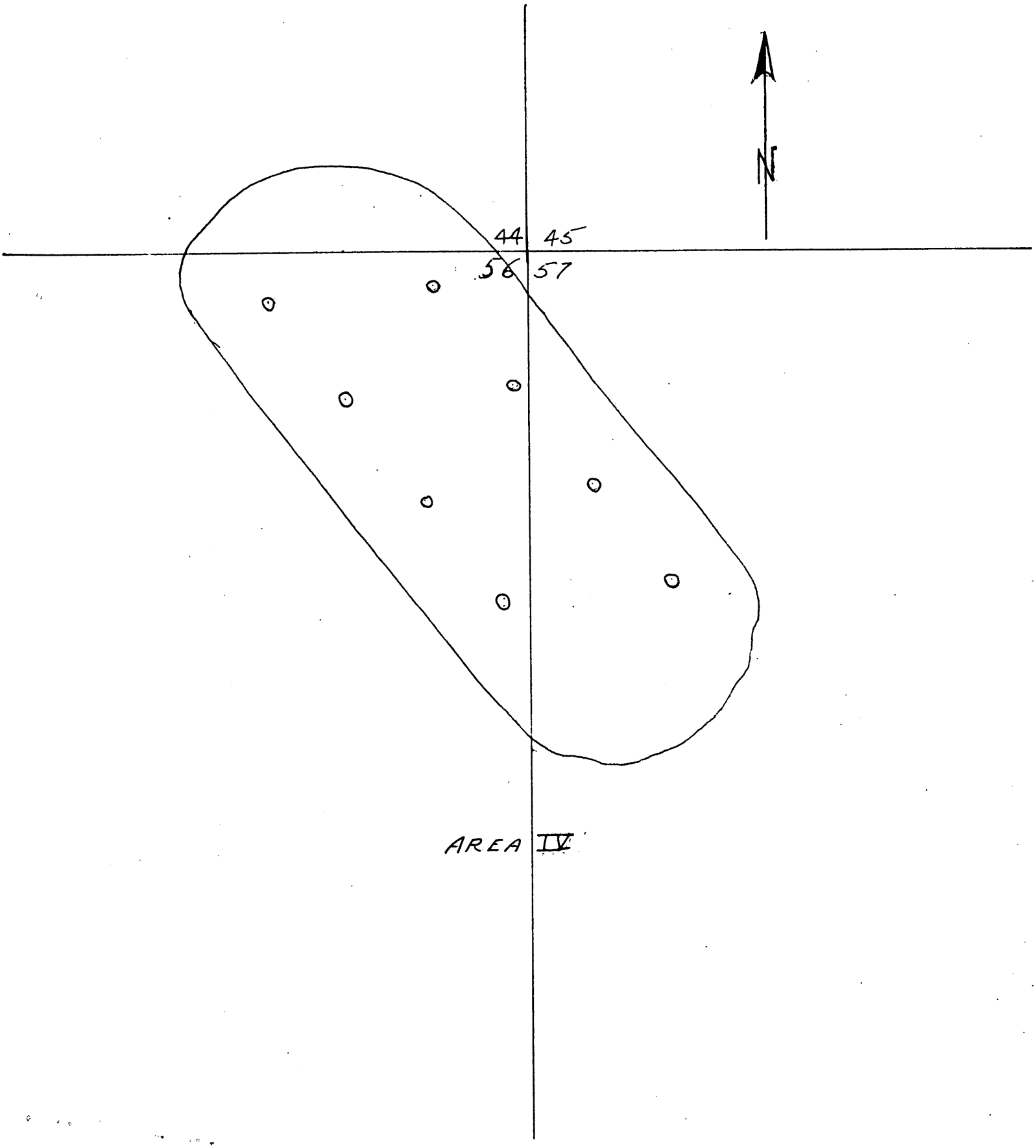


PROPOSED EXPLORATION, AREA IV, TEXAS MERCURY Co.
BREWSTER CO., TEXAS

0 200' 400
SCALE 1" = 200'

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6508



PROPOSED EXPLORATION, AREA IV, TEXAS MERCURY CO.
BREWSTER CO., TEXAS

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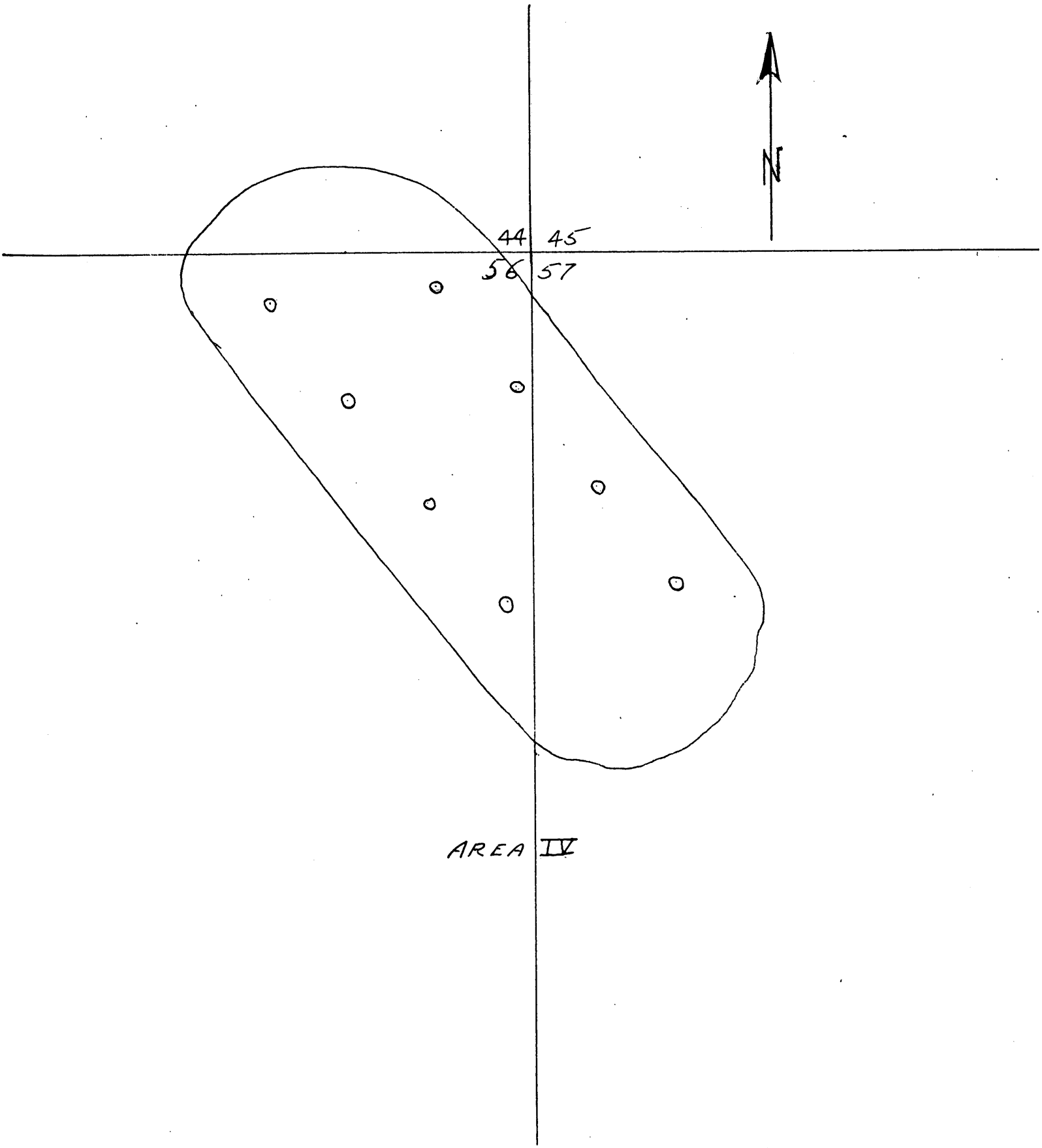
DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6508

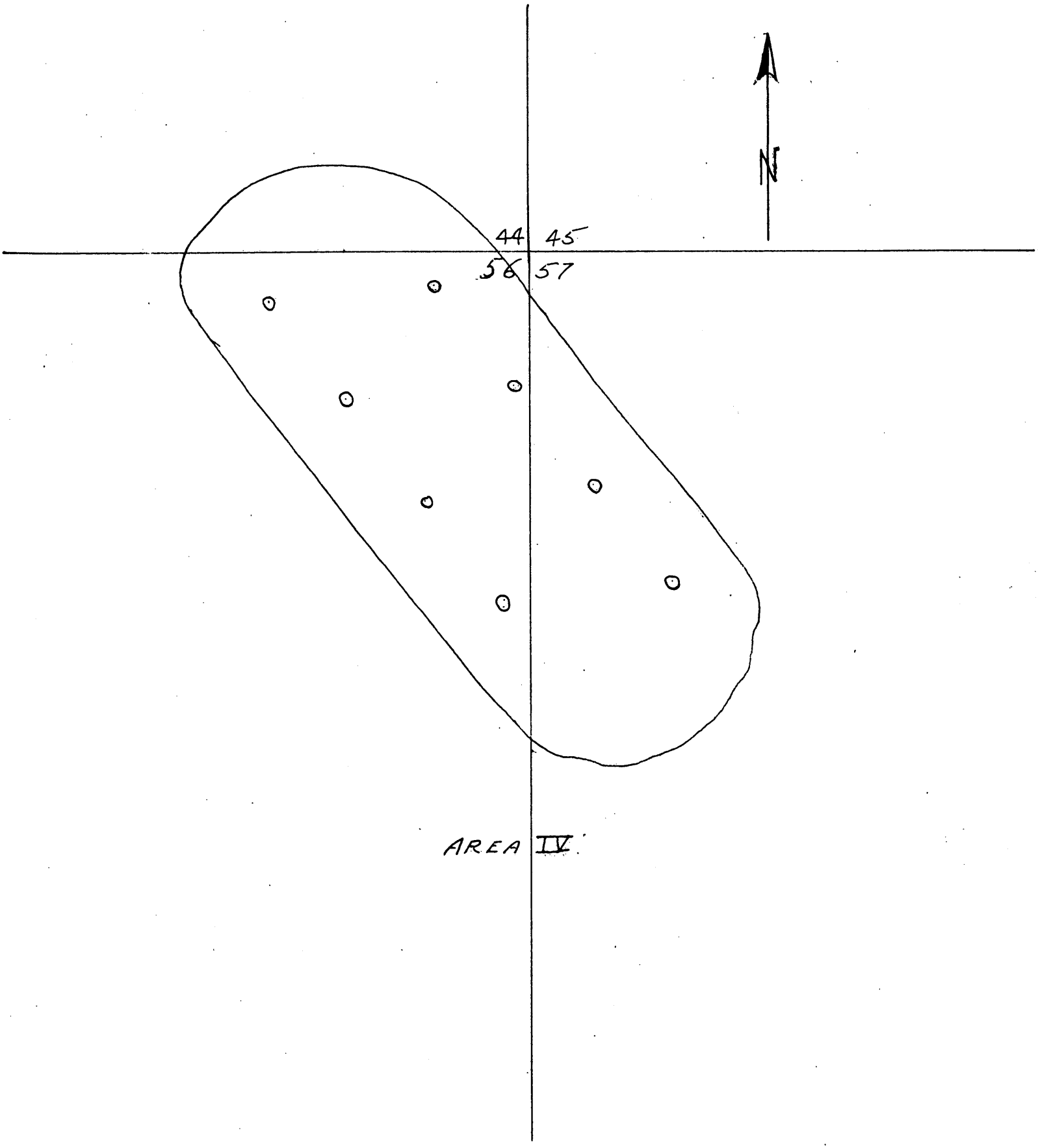


PROPOSED EXPLORATION, AREA IV, TEXAS MERCURY CO.
BREWSTER CO., TEXAS

0 200' 400
SCALE 1" = 200'

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6508

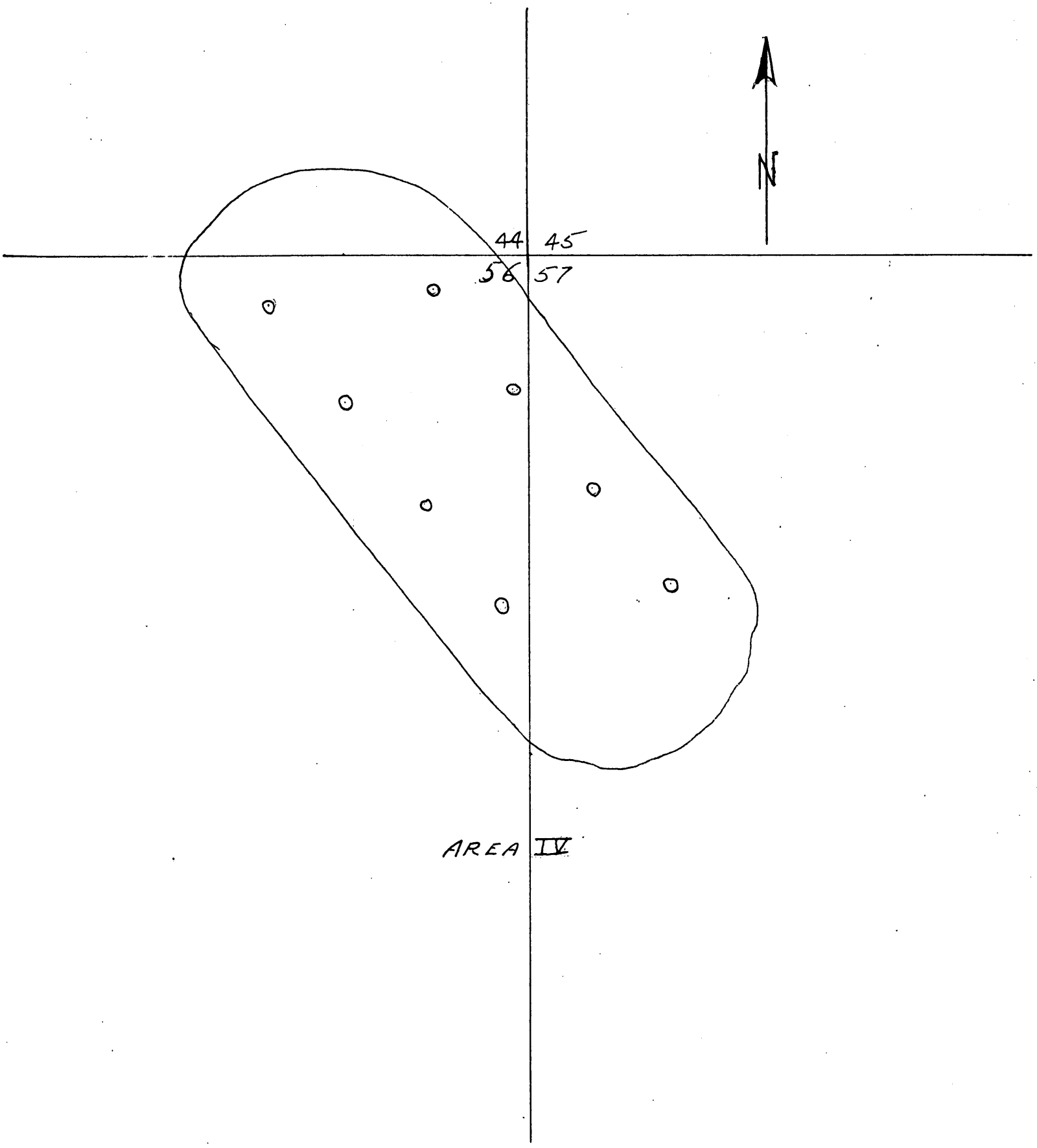


PROPOSED EXPLORATION, AREA IV, TEXAS MERCURY CO.
BREWSTER CO., TEXAS

0 200' 400
SCALE 1" = 200'

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6508

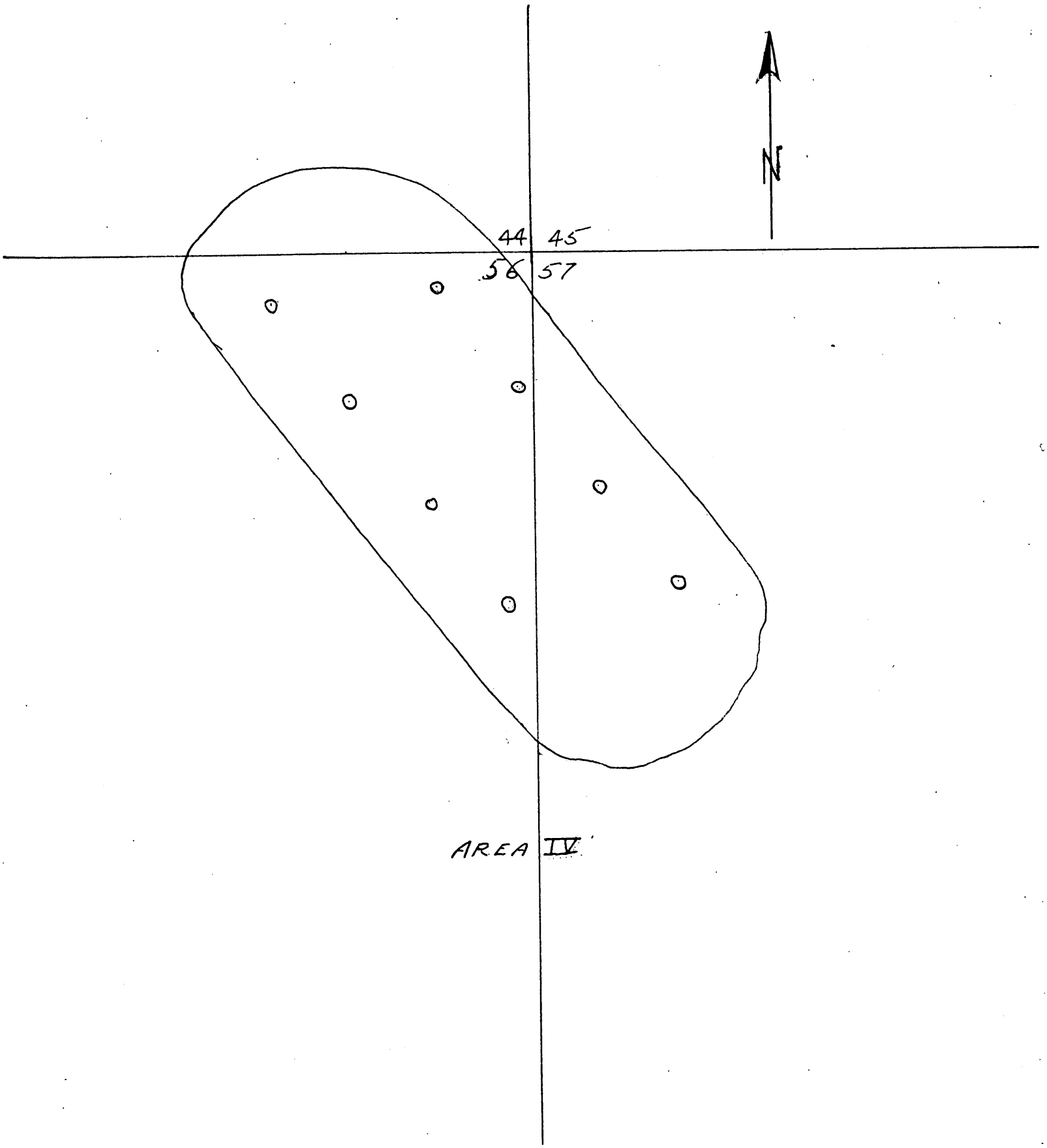


PROPOSED EXPLORATION, AREA IV, TEXAS MERCURY CO.
BREWSTER CO., TEXAS

0 200' 400
SCALE 1" = 200'

DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6508

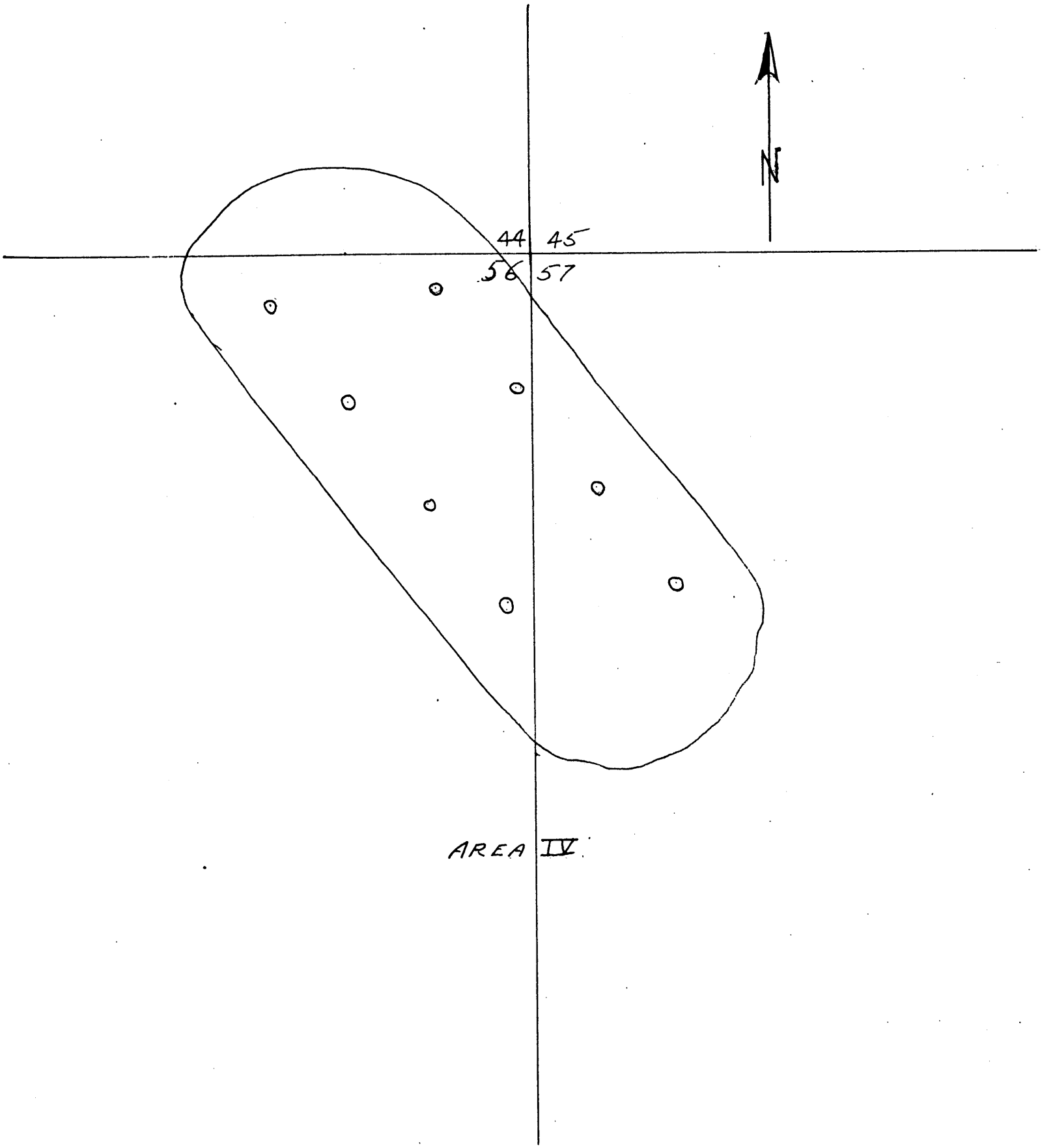


PROPOSED EXPLORATION, AREA IV, TEXAS MERCURY CO.
BREWSTER CO., TEXAS

0 200' 400
SCALE 1" = 200'

DEPARTMENT OF THE INTERIOR
U. S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6508



PROPOSED EXPLORATION, AREA IV, TEXAS MERCURY Co.
BREWSTER CO., TEXAS

0 200' 400
SCALE 1" = 200'

INSTRUCTIONS FOR USE

1. Identify Agency of Addressee
2. Void Previously Used Block
3. Write Clearly
4. Send Surplus Envelop[illegible]pply Room for Reissue

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	STOP		STOP

Use other side first

☆ GPO : 1963—O694-569

Standard Form No. 65
November 1961
General Services Administration
General Regulation No. 27

U.S. Government Messenger Envelope

65-105

NAME (OR TITLE) OF ADDRESSEE, AGENCY, ORGANIZATIONAL UNIT, ADDRESS, AND ROOM		NAME (OR TITLE) OF ADDRESSEE, AGENCY, ORGANIZATIONAL UNIT, ADDRESS, AND ROOM	
Mary ~~[illegible]~~ Secretary	STOP		STOP
~~Chief Geologist~~	STOP	~~Mrs Branch Room 10 [illegible] Bldg.~~	STOP
Intrior Dept	STOP	~~Mr Bartel Room 4234 GSA Bldg.~~	STOP
Geological Survey Library ~~Room 1032 GSA~~ Bldg.	STOP	Catherine Curlin Room 4454, Int. Bldg.	STOP
~~Dorothy Seater Room 3276 GSA Bldg.~~	STOP		STOP
~~[illegible]~~	STOP		STOP
~~Mr Walker~~	STOP		STOP
~~Personnel Rm 5238 GS~~	STOP		STOP
~~Mr Bartel Rm 4234 GSA~~	STOP		STOP
Millie White Br. of Military Geology	STOP		STOP

Use other side

Use STOP only when messenger service between Government buildings in Washington, D.C., is required or wherever a STOP system is used. Your mailroom has STOP information.

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
5/3/67	R.M. Smith	120
5/3/67	Kirkemo	110
		220

AIRMAIL

Mr. W. R. Ransome
Texas Mercury Company
P. O. Box 19508
Dallas, Texas 75219

Re: OME-6508 (Mercury)
Texas Mercury Company
Secs. 43-46 and 56-58, Block G12
Brewster County, Texas

Dear Mr. Ransome:

This will acknowledge your oral request of April 26, 1967, to Mr. J. W. Hasler, OME Field Officer, Region III, Denver, to withdraw the referenced application owing to unfavorable results in other similar nearby areas. Accordingly, we shall consider this application as having been withdrawn and place it in our inactive files.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

cc: Director's Reading File
Division File
Economic Geology File
OME Docket
OME Reading File
OME Region III
Mr. Smith
OM

a 5-3-67

23263

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
FEDERAL CENTER, DENVER, COLORADO 80225
Office of Minerals Exploration

OFFICIAL COPY
O. M. E.
RECEIVED
APR 28 1967

April 26, 1967

Memorandum

To: Chief, OME

From: Field Officer, Region III

Subject: OME-6548 (Mercury)
Texas Mercury Company
Subsections 43, 46 and 56 and 58, Block G-12
Brewster County, Texas

Enclosed is a copy of a specimen draft of Exhibit A. of a proposed contract which indicates by pencilled notations several details of the proposed work where additional information is needed. This information was sent to me in a memorandum dated February 15, 1967.

In the process of obtaining the necessary information it became evident that much of the additional information required a request from the applicant to more fully detail the information required in the proposed contract.

Consequently, the applicant was contacted today through Mr. W. R. Ransone. It was his opinion that much additional work had been completed in other areas other than those submitted in his request for financial assistance through the OME, and it has been ascertained that many of the targets are small, and that after considerable drifting and exploring of these areas very little production has resulted. In view of these facts, Mr. Ransone has requested that the application be withdrawn.

It is therefore recommended that the subject application be withdrawn at the applicant's request.

J. William Hasler
J. William Hasler,
Field Officer, Region III
Office of Minerals Exploration

Enclosure

RMSmith/gla
DRAFT 2/10/67

EXPLORATION CONTRACT
TEXAS MERCURY COMPANY
OME-~~6414~~ 6508

EXHIBIT A

The purpose of the project is to explore by detailed geochemical sampling in a grid pattern of 6-foot percussion drill holes followed by deep rotary drilling, if warranted, from prepared surface sites in three areas where reconnaissance geochemical sampling has revealed mercury anomalies for concealed mercury ore bodies in breccia pipes, cave ~~XXXX~~-fill structures, and veins in the Devils River limestone of Cretaceous age.

The work shall be confined to three areas designated Area II, Area III, and Area IV indicated by hachures on Figure ___ entitled "Texas Mercury Co. Leases...," attached and made part hereof. The percussion drilling and sampling of area IV has already been completed.

Description of the Work

Stage I

The work shall be confined to Area IV and shall consist of bulldozing access roads and drill sites, rotary drilling 10 vertical holes, sampling the drill cuttings and analyzing the samples for mercury. Eight of the holes shall be approximately 100 feet deep and two holes may be approximately 300 feet deep. The tentative locations of the 100-foot holes are shown on Figure 4 entitled "Proposed exploration, Area IV, Texas Mercury Co.," attached and made part hereof. The locations of the 300-foot holes shall be selected to explore the more favorable areas found by the 100-foot holes.

Stage II

The work in Stage II shall be confined to Areas II and III. The initial work shall consist of percussion drilling 400 holes each approximately 6 feet deep in grid patterns ~~and~~ on approximately 53-foot centers, and of sampling the drill cuttings and analyzing the samples for silver, manganese, copper, lead, and mercury. It is estimated that 200 holes will be required in Area II and 200 holes in Area III as shown on Figure 2 and Figure 3, respectively, attached and made part hereof. It is further estimated that _____ samples will be required.

The remaining work shall consist of bulldozing access roads and drill sites, rotary drilling approximately 100 ? vertical holes, sampling the drill cuttings, and analyzing the samples for mercury.

It is estimated that 50 ? holes will be required in Area II and 50 ? holes in Area III according to the following schedule:

Area II		
?	45 holes 100 feet deep	4,500 feet
	5 holes 100 feet deep	500 "
Area III		
?	45 holes 100 feet deep	4,500 feet
	5 holes 100 feet deep	500 "
		10,000 "

The locations of the 300-foot holes shall be selected to explore the more favorable areas found by the 100-foot holes. It is further estimated that _____ samples will be required.

Estimated Costs of the Work

Stage I

Actual Costs

Category (1) Independent Contracts

Bulldozing roads and drill sites,

26 hours @ $15.00/hour $ 390.00

Rotary Drilling,

1,400 feet @ $1.65/ft. 2,310.00

Assays for mercury,

___ samples @ $5.00/sample

or

Spectrographic analyses for mercury,

including maps and interpretative

reports, _____ samples @ $10.00/sample

Category (2) Personal Services 1/

None except:

Subcategory (a) Supervision and Technical Services

1 - Supervisor-geologist-engineer,

___ months @ $850.00/month

1 - Assistant sampler, surveyor,

____ months @ $400.00/month

Category (3) Operating Materials and Supplies

Rock bits for rotary drill,

20 bits @ $40.00/bit $ 800.00

Are the bits included in the bid for rotary drilling?

Fuel and lubricants, compressor

?

Category (4) Operating Equipment

Subcategory (c) Depreciation

1 - vacuum collector for samples,

___ months @ $141.19/month

Category (7) Miscellaneous

Vehicle mileage, 4-wheel drive pickup,

___ miles per month,

___ miles @ $0.12/mile

Sample bags,

___ bags @ $0.06/bag

Stage II

Actual Costs

Category (1) Independent Contracts

Percussion drilling 400 holes,

2,400 feet @ $1.00/foot $2,400.00

Spectrographic analyses for

Ag, Mn, Cu, Pb, and Hg,

400 samples @ $7.50/sample

or ___ samples @ _____

Bulldozing roads and drill sites,

250 hours @ $15.00/hour 3,750.00

Rotary drilling,

10,000 feet @ $1.65/foot $16,500.00

Assays for mercury,

___ samples @ $5.00/sample

or ___ ?

Category (2) Personal Services[1/]

None except:

Subcategory (a) Supervision and Technical Services

1 - Supervisory-geologist-engineer,

___ months @ $850.00/month

1 - Assistant sampler, surveyor,

___ months @ $400.00/month

Category (3) Operating Materials and Supplies

? Rock bits for rotary drill,

148 bits @ $40.00/bit

Fuel and Lubricants, compressor

?

Category (4) Operating Equipment

To be used on both the 6-foot and 100-foot holes?

Subcategory (c), Depreciation

1 - Vacuum collector for samples,

____ months @ $141.19/month

Category (7) Miscellaneous

Vehicle Mileage, 4-wheel drive pickup

_____ miles per month,

_____ miles @ $0.12/mile

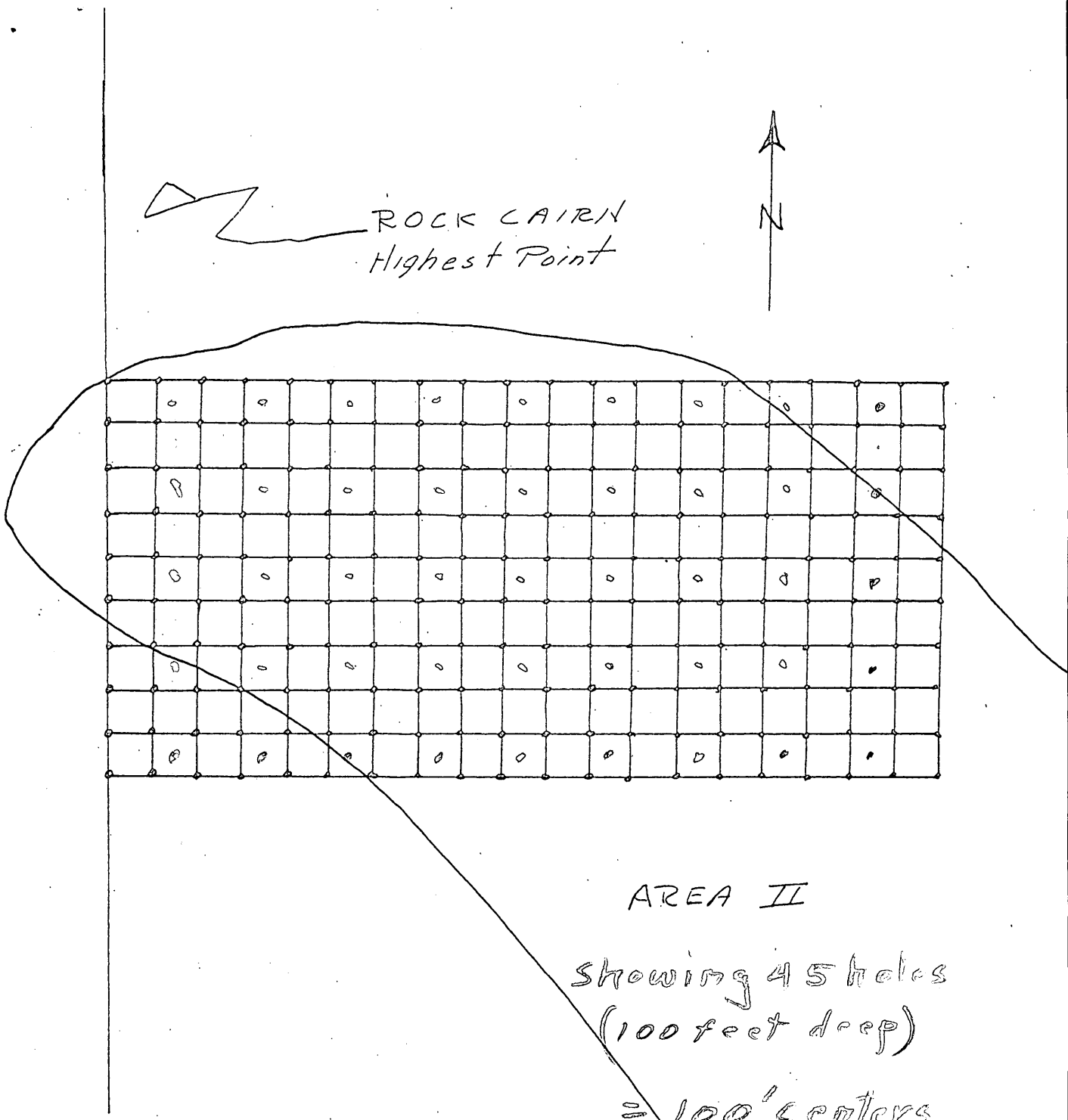
Sample bags,

___ bags @ $0.06/bag

1/ The Government will contribute only to the proportion of the time actually devoted to the project.

PARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6508



PROPOSED EXPLORATION, AREA II, SECTION 58, TEXAS MERCURY CO.,
BREWSTER CO., TEXAS

0 200 400

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
2/13/67	R M Smith	120
	On leave	120
		110
		220
		120M

FEB 15 1967

AIRMAIL

Memorandum

To: Field Officer, Region III

From: Chief, Office of Minerals Exploration

Subject: OME-6508 (Mercury)
Texas Mercury Company
Secs. 43-46 and 56-58, Block G12
Brewster County, Texas

Enclosed are two copies of a specimen draft of Exhibit A of a proposed contract which indicates by penciled notations several details of the proposed work where additional information is needed. The original copy should be completed and returned; the other is for your files.

Please add any work items that are required and delete those that are not applicable. Also please give us your evaluation of the proposal to drill 90 holes each 100 feet deep in Areas II and III as illustrated on the attached print of Area II.

~~FRANK E. JOHNSON~~

for Frank E. Johnson

Enclosures

cc: Director's Reading File
Division File
Economic Geology File
OME File
OME Reading File
Mr. Smith
130

RMSmith/gla 2-13-67

23263

Washington Office copy

RMSmith/gla
DRAFT 2/10/67

EXPLORATION CONTRACT
TEXAS MERCURY COMPANY
OME-~~6414~~-6508

EXHIBIT A

The purpose of the project is to explore by detailed geochemical sampling in a grid pattern of 6-foot percussion drill holes followed by deep rotary drilling, if warranted, from prepared surface sites in three areas where reconnaissance geochemical sampling has revealed mercury anomalies for concealed mercury ore bodies in breccia pipes, cave-core-fill structures, and veins in the Devils River limestone of Cretaceous age.

The work shall be confined to three areas designated Area II, Area III, and Area IV indicated by hachures on Figure ___ entitled "Texas Mercury Co. Leases...," attached and made part hereof. The ~~geochemical~~ sampling of Area IV has already been completed, percussion drilling and

Description of the Work

Stage I

The work shall be confined to Area IV and shall consist of bulldozing access roads and drill sites, rotary drilling 10 vertical holes, sampling the drill cuttings and analyzing the samples for mercury. Eight of the holes shall be approximately 100 feet deep and two holes may be approximately 300 feet deep. The tentative locations of the 100-foot holes are shown on Figure 4 entitled "Proposed exploration, Area IV, Texas Mercury Co.," attached and made part hereof. The locations of the 300-foot holes shall be selected to explore the more favorable areas found by the 100-foot holes.

Stage II

The work in Stage II shall be confined to Areas II and III. The initial work shall consist of percussion drilling 400 holes each approximately 6 feet deep in grid patterns ~~and~~ on approximately 53-foot centers, and of sampling the drill cuttings and analyzing the samples for silver, manganese, copper, lead, and mercury. It is estimated that 200 holes will be required in Area II and 200 holes in Area III as shown on Figure 2 and Figure 3, respectively, attached and made part hereof. It is further estimated that _____ samples will be required.

The remaining work shall consist of bulldozing access roads and drill sites, rotary drilling approximately 100 ? vertical holes, sampling the drill cuttings, and analyzing the samples for mercury.

It is estimated that 50 ? holes will be required in Area II and 50 ? holes in Area III according to the following schedule:

Area II		
?	45 holes 100 feet deep	4,500 feet
	5 holes 100 feet deep	500 "
Area III		
?	45 holes 100 feet deep	4,500 feet
	5 holes 100 feet deep	500 "
		10,000 "

The locations of the 300-foot holes shall be selected to explore the more favorable areas found by the 100-foot holes. It is further estimated that _____ samples will be required.

Estimated Costs of the Work

Stage I

Actual Costs

Category (1) Independent Contracts

Bulldozing roads and drill sites,

26 hours @ $15.00/hour $ 390.00

Rotary Drilling,

1,400 feet @ $1.65/ft. 2,310.00

Assays for mercury,

___ samples @ $5.00/sample

or

Spectrographic analyses for mercury,

including maps and interpretative

reports, _____ samples @ $10.00/sample

Category (2) Personal Services 1/

None except:

Subcategory (a) Supervision and Technical Services

1 - Supervisor-geologist-engineer,

___ months @ $850.00/month

1 - Assistant sampler, surveyor,

____ months @ $400.00/month

Category (3) Operating Materials and Supplies

Rock bits for rotary drill,

20 bits @ $40.00/bit $ 800.00

Are the bits included in the bid for rotary drilling?

Fuel and lubricants, compressor

?

Category (4) Operating Equipment

Subcategory (c) Depreciation

? 1 - vacuum collector for samples,

___ months @ $141.19/month

Category (7) Miscellaneous

Vehicle mileage, 4-wheel drive pickup,

___ miles per month,

___ miles @ $0.12/mile

Sample bags,

___ bags @ $0.06/bag

Stage II

Actual Costs

Category (1) Independent Contracts

Percussion drilling 400 holes,

2,400 feet @ $1.00/foot $2,400.00

Spectrographic analyses for

Ag, Mn, Cu, Pb, and Hg,

400 samples @ $7.50/sample

or ___ samples @ _____

Bulldozing roads and drill sites,

250 hours @ $15.00/hour 3,750.00

Rotary drilling,

10,000 feet @ $1.65/foot $16,500.00

Assays for mercury,

___ samples @ $5.00/sample

or ___ ?

Category (2) Personal Services[1/]

None except:

Subcategory (a) Supervision and Technical Services

1 - Supervisory-geologist-engineer,

___ months @ $850.00/month

1 - Assistant sampler, surveyor,

___ months @ $400.00/month

Category (3) Operating Materials and Supplies

? Rock bits for rotary drill,

148 bits @ $40.00/bit

Fuel and Lubricants, compressor

?

Category (4) Operating Equipment

To be used on both the 6-foot and 100-foot holes?

Subcategory (c), Depreciation

1 - Vacuum collector for samples,

____ months @ $141.19/month

Category (7) Miscellaneous

Vehicle Mileage, 4-wheel drive pickup

_____ miles per month,

_____ miles @ $0.12/mile

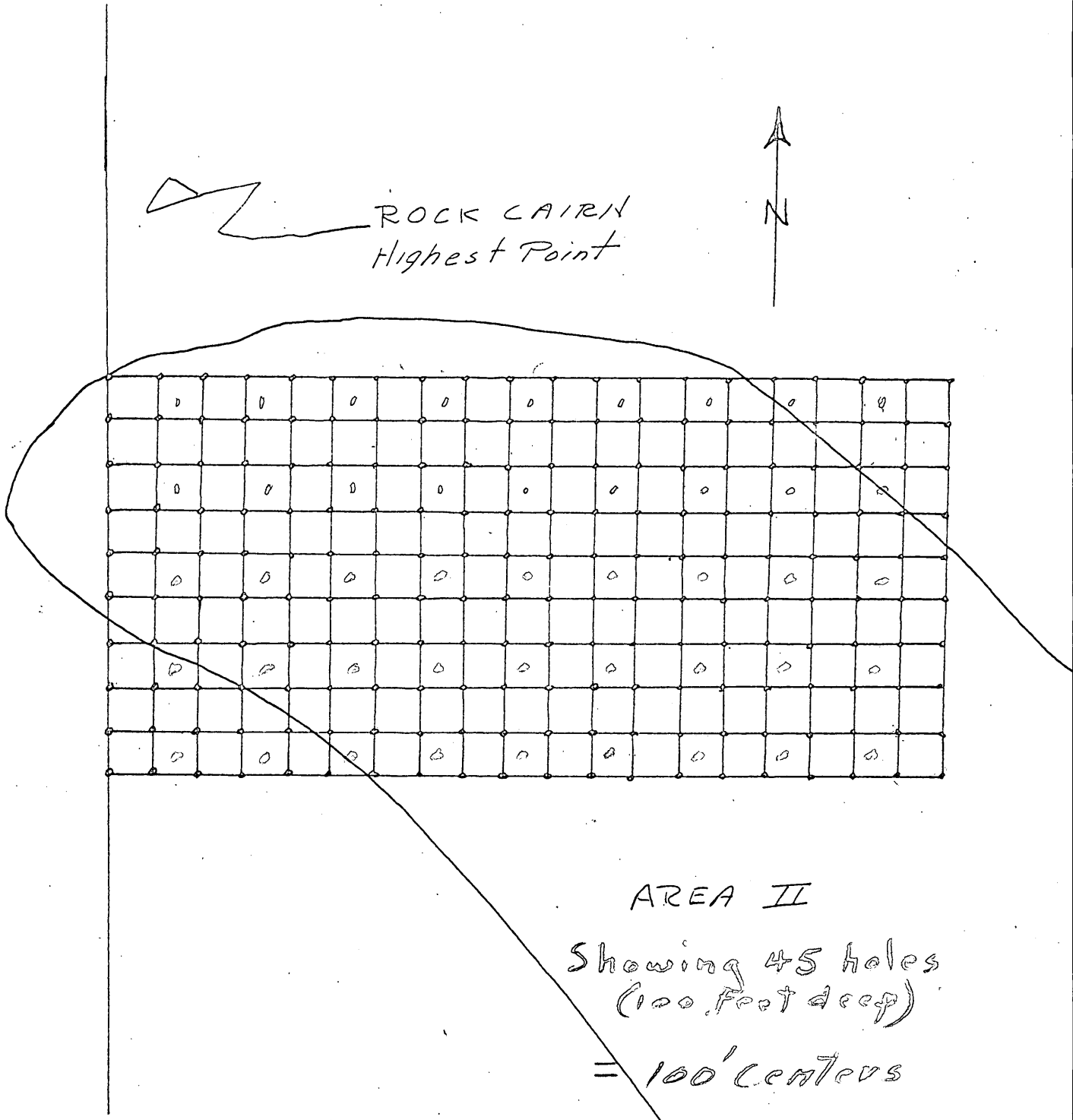
Sample bags,

___ bags @ $0.06/bag

1/ The Government will contribute only to the proportion of the time actually devoted to the project.

PARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION
DOCKET 6508



PROPOSED EXPLORATION, AREA II, SECTION 58, TEXAS MERCURY CO.,
BREWSTER CO., TEXAS

0 200 400

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
Denver Federal Center - Building 25 - Room 2284
Denver, Colorado 80225

January 23, 1967

Memorandum

To: Chief, OME

From: Field Officer, Region III

Subject: OME-6508 (Mercury)
Texas Mercury Company
Secs. 43-46 and 56-58, Block G 12
Brewster County, Texas

This is in reply to your memorandum of December 5, 1966 relative to the October 10, review of the subject docket, concerning whether or not the jackhammer holes on 52.8 foot centers is prospecting or exploration. Under the present circumstances I definitely feel that the jackhammer drilling is exploration rather than prospecting. The jackhammer holes are a necessary prerequisite to the deep drilling because of the spotty or sporadic nature of ore bodies, even though the applicant may have combined geochemical and geologic data from geologic mapping.

Search for "blind" ore bodies by geochem. samples taken in rock below the zone of surface contamination.

J. William Hasler

J. William Hasler,
Field Officer, Region III
Office of Minerals Exploration

still need justif. for a 1/2 III

Denver Federal Center-Building 25- Room 2284
Denver, Colorado 80225

OFFICIAL COPY
O. M. E.
RECEIVED
FEB 1 1967

OME-6508
Brewster County

January 30, 1967

(OME-6507 was
Denied Waiver)
Presidio County

Texas Mercury Company
3806 Cedar Springs Road
Dallas, Texas 75209

Dear Ransone:

In reply to your letter dated January 20, 1967 regarding the possible application in the area lying immediately north of the Shafter silver mine in Presidio County, Texas I should like to make the following observations: During an examination of a similar type that you submitted last year (OME-6507) it was felt that only a moderate amount of preliminary geochemical and geophysical surveys had been made which indicates that the property was still in the prospect stage insofar as the Office of Minerals Exploration program was concerned.

According to your letter of January 20th, it appears a large amount of expense is necessary to complete initial geochemical and geological surveying, and this would possibly be considered as still being in the prospecting stage rather than in a stage of exploration.

The OME program, as you know, is designed to explore for definite target or definite target areas which do have a chance of discovering substantial reserves of silver or copper, or the other commodities which are listed as being eligible under the present program.

My recommendations at this time would be for you to complete the initial geochemical and geological work and establish some definite target trends and zones of mineralization and then apply for the exploration loan. You would, I'm sure, have a much better chance for an approval or at least the program would be more along the lines that would fit into the OME policy.

Sincerely,

J. William Hasler

J. William Hasler,
Field Officer, Region III
Office of Minerals Exploration

cc: Chief, OME
OME chron
Hasler chron
"R"

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
12/5	RM Smith	1208
12/5/66	Kirkemo	120
		110
12/5	cal	220
		120

AIRMAIL

DEC 5 1966

Memorandum

To: Field Officer, Region III

From: Chief, Office of Minerals Exploration

Subject: OME-6508 (Mercury)
Texas Mercury Company
Secs. 43-46 and 56-58, Block G12
Brewster County, Texas

The Applicant's reply of November 18, 1966, to your letter of November 2 furnishes justification for part of the proposed exploration but does not contain enough information to prepare a contract.

Area II is said to be geologically favorable because it is at the same stratigraphic horizon as the Luisa mine which is some unknown distance to the west. Is the Luisa mine the same mine as the Lone Star?

Area III was not mentioned in your letter to the Applicant. Geologic justification is needed before we can approve work in this area.

Area VI was omitted from the Applicant's proposal. The omission is now adequately justified.

We shall appreciate your comments on the last paragraph of our memorandum of October 10.

FRANK E. JOHNSON

Frank E. Johnson

cc: Director's Reading File
Division File
Economic Geology File
OME Reading File
Docket
130
Smith

MMerrithew/mm (12/5/66)

23263

TEXAS MERCURY COMPANY
3806 CEDAR SPRINGS ROAD
DALLAS, TEXAS 75219

MAILING ADDRESS
P. O. BOX 19508

AREA CODE 214
LAKESIDE 1-5145

November 18, 1966

OFFICIAL COPY
O. M. E.
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RMA | 120 8

Mr. J. William Hasler
Field Officer, Region III
Office of Minerals Exploration
U. S. Department of the Interior
Federal Center
Denver, Colorado 80225

RE: OME-6508 (Mercury)
Texas Mercury Company
Secs 43-46 and 56-58, Block G-12
Brewster County, Texas

Dear Mr. Hasler:

In reply to your letter of November 2, we are willing and would be able to furnish Performance Bond on your standard Form 25 as enclosed with your letter.

Area II is at the same stratigraphic level as is Area I, where more than a thousand flasks of mercury were produced from the Luisa Mine and where we are currently mining commercial ore at a depth a few feet below that of the Luisa Mine. From our geological studies, this area appears to be denuded of Grayson, but it also appears to be that part of the Devil's River limestone immediately below the contact. I completely fail to see any connection between this and the quote from Professional Paper 312 concerning mining of ore at Maggie Sink and Two-Forty-Eight pipes. So far as we have been able to determine, there has been no commercial ore found in any pipes exposed at the surface as are both Maggie Sink and Two-Forty-Eight. Contrary to this, the best ore deposit in the Chisos Mine was in a covered pipe which came to within 450' of the surface and which was mined to a depth of 750' below the surface. Also, one of the most commercial mines in the area, the Study Butte Mine, occurred in a Latite Sill which is not related to either the Grayson or the Devil's River in any way. In other words, while we agree with

justification area II

There is more

Professional Paper 312 in general, there are some very obvious exceptions, some of which were not known at the time the paper was written.

Area IV was selected by us for the very same reasons which you have chosen. We thought this was an excellent possibility for ore bodies in cave fill in the upper part of the limestone under the Grayson. The same would be true of Area VI, except that on the ground it is obviously Grayson which has slumped down the fault which dips northward and crosses the southern part of Section 45. This is a very large fault and the upthrown side forms a high mountain with a very steep north face down which the Grayson and Buda have slipped. Mr. Davis and I have visited this area in person. Incidentally, it is quite inaccessible, whereas Area IV is quite accessible, and we have built a good road to it already in preparation for additional exploration work. Therefore, I cannot go along with your thought of working in Area VI, and while I regard Area IV as important, Area II at this time is much closer to mercury ore. As I mentioned above, we are mining commercial ore just west of Area II in Section 57.

Area IV never in question

justification for omitting Area VI

justification for Area II (vague)

Yours very truly,

TEXAS MERCURY COMPANY

W. R. Ransone

W. R. Ransone

WRR:sg

cc. Roger Davis
cc. Carroll Deely

still need justification for exploring Area VI

Office of Minerals Exploration

November 2, 1966

Mr. W. R. Ransone
Texas Mercury Company
P. O. Box 19508
Dallas, Texas 75219

Subject: OME-6508 (Mercury)
Texas Mercury Co.
Secs 43-46 and 56 - 58, Block G-12
Brewster County, Texas

Dear Mr. Ransome:

A review of your application by Washington referred to the above captioned docket has resulted in a number of questions that should be resolved with reference to your proposed exploration. The first and possibly most important question involves the land you have under lease or prospecting permit from the State of Texas, upon which a lien and subordination agreement cannot be obtained. In the event that a contract would be considered, the Texas Mercury Company would be required to furnish a Performance Bond on Standard Form 25 (enclosed). Would the company be willing and able to furnish such a Performance Bond? This applies as well to the land owned by Billings and Waters if they will not subordinate their ground.

L&S. not needed if P. Bond is furnished

The following areas of exploration are somewhat in question:

When Area II is plotted on the geologic map it is evident that the area is stratigraphically below the most favorable zone which is the upper 50 feet of the Devils River limestone. Area II is also on Tres Cuevas Mountain in the area described in the Prof. Paper 312 (USGS), p. 65, "... only pockets of ore have been found in the Maggie Sink and Two-Forty-Eight pipes."

This is NOT the question we asked. NO

Area III — our question is totally omitted

Area IV straddles the favorable contact of the Devils River limestone and the overlying Grayson clay. The possibility of concealed cave-fill ore bodies in the upper 50 feet of the limestone under the clay near this anomaly appears to be the best geologic target in the three areas to be explored.

See our letter of Oct. 10 (copied incorrectly)

On your geochemical anomaly map (Fig. 1) there is shown an anomaly near the center of Section 45. When plotted on the geologic map, this anomaly appears to be related to a small outcrop of Grayson clay which is partly covered by alluvium. You did not mention this apparently favorable setting, so we wonder whether some deep drilling should be considered in this area. We have numbered this anomaly Area VI (see enclosed map).

Our inclination is to divide the work into two stages, exploring the more favorable areas IV and VI in Stage I and then, if warranted, exploring the less favorable areas II and III in Stage II. Your views on the foregoing question are requested. Sorry I missed contacting you in Phoenix October 20th. This correspondence has been delayed because I was in the field almost continually during October.

Sincerely yours,

J. William Hasler

J. William Hasler,
Field Officer, Region III
Office of Minerals Exploration

cc: Chief, OME
Hasler chron
OME chron
OME-6508

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
10/10	R McSmith	120
10/10/66	Kirkemo	120
		110
10/10	Cal	220
		120M

OCT 1 0 1966

Memorandum

To: Field Officer, Region III

From: Chief, Office of Minerals Exploration

Subject: OME-6508 (Mercury)
Texas Mercury Company
Secs. 43-46 and 56-58, Block G12
Brewster County, Texas

Please refer to your Report of Examination dated September 1966 in which you recommend an OME contract to explore Areas II, III, and IV. We concur in your conclusion that additional exploration is warranted, but we shall appreciate your additional conclusions and recommendations on the following observations, most of which relate to the geology. Enclosed is a print of part of the geologic map in USGS Prof. Paper 312 on which the three areas of proposed exploration are plotted.

When Area II is plotted on the geologic map it is evident that the area is stratigraphically below the most favorable zone which is the upper 50 feet of the Devils River limestone. Area II is also on Tres Cuevas Mountain in the area described in the Prof. Paper (p. 55) as containing "fracture-roots" of ore bodies that are "now removed by erosion ... in particular near Tres Cuevas Mountain ...."

Area III is even lower in the stratigraphic section in an area that contains non-commercial cinnabar-bearing fractures and also includes a known breccia pipe. Either of these features could account for the geochemical anomaly in this area. Of all the many known breccia pipes, only the Chisos (6 miles east of Area III) contained a large ore body. Area III is in the Maggie Sink area. According to the Prof. Paper (p. 63) "... only pockets of ore have been found in the Maggie Sink and Two-Forty-Eight pipes."

Area IV straddles the favorable contact of the Devils River limestone and the overlying Grayson clay. The possibility of concealed cave-fill ore bodies in the upper 50 feet of the limestone under the clay near this anomaly appears to be the best geologic target in the three areas to be explored.

23263

On the Applicant's geochemical anomaly map (Fig. 1) there is shown an anomaly near the center of Section 45. When plotted on the geologic map, this anomaly appears to be related to a small outcrop of Grayson clay which is partly covered by alluvium. The Applicant has not mentioned this apparently favorable setting, so we wonder whether some deep drilling should be considered in this area. We have numbered this anomaly Area VI.

Our inclination is to divide the work into two stages, exploring the more favorable areas IV and VI in Stage I and then, if warranted, exploring the less favorable areas II and III in Stage II.

In the event of a contract, a Performance Bond on Standard Form 25 would be required to protect the Government's interest in possible production from land owned by the State of Texas. Lien and Subordination Agreements would not be required, therefore, on land owned by Billings and Waters. If a contract is offered, is the Applicant willing and able to furnish a Performance Bond?

Your views and those of the Applicant on the foregoing questions are requested.

We question whether the jackhammer holes on 52.8-foot centers as proposed by the Applicant are prospecting or exploration. In either case, they may not be necessary. The Applicant seems to have paid very little attention to geology. Perhaps the deep holes could be located by using the present geochemical data combined with geologic mapping. Do you consider the jackhammer holes a necessary prerequisite to the deep drilling?

FRANK E. JOHNSON

Frank E. Johnson

Enclosure

cc: Director's Reading File
Division File
Economic Geology File
OME File
OME Reading File
Mr. Smith
130

RMSmith/gla 10-10-66

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
FEDERAL CENTER, DENVER, COLORADO 80225
Office of Minerals Exploration

OFFICIAL COPY
O. M. E.
RECEIVED
1966

INITIALS	CODE
	120
	~~110~~
	120

September 28, 1966

To: Chief, OME

From: Field Officer, Region III

Subject: Report of examination -- OME-6508 (Mercury)
Texas Mercury Company
Secs. 43 to 46, and 56 to 58 incl.
Brewster County, Texas

Transmitted herewith are the original and one copy, including figures, of the report of examination on the above-mentioned subject; five sets of prints for inclusion in the contract and a copy each of the following:

August 25, 1966 letter to Messrs. Eugene McDermott, Roger Davis and Carroll Deely from W. R. Ransone

August 31, 1966 letter to J. W. Hasler, Field Officer, Region III from W. R. Ransone

Report on T-4 tunnel

Figure on T-4 tunnel near BH No. 4, Section 57, Brewster County, Texas.

It is concluded that the chances of finding a moderate new discovery of mercury in the area proposed by the applicant are fairly good. The 52.8 foot interval of drill holes is adequate to test for occurrences of buried breccia-pipes domes or chimneys that may contain deposits of mercury ore.

It is therefore recommended that the exploration program herein outlined be considered and that a contract be executed to perform the exploration work, as outlined in the report of examination.

The sections involved in the application are held under lease and/or prospecting permits from the State of Texas as well as from individual owners in which the applicant states some of the land owners will not execute lien and subordination agreements. The lands owned by the state will require the execution of Standard Performance Bond 25. If these problems can be solved a contract should be in order.

J. William Hasler

UNITED STATES

DEPARTMENT OF THE INTERIOR

STEWART L. UDALL, SECRETARY

OFFICIAL
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O. M. E.
RECEIVED
OCT 3 1966
INITIALS

U. S. GEOLOGICAL SURVEY

OFFICE OF MINERALS EXPLORATION

REPORT OF EXAMINATION

REGION III

OME DOCKET-6508 (MERCURY)

TEXAS MERCURY COMPANY

SECS. 43 TO 46 and 56 to 58, INCL.

BREWSTER COUNTY, TEXAS

By

J. William Hasler

Geologist

September 1966

FIELD
EXAM REPORT

Contents

	Page
Introduction and summary	1
The property	2
Geology and ore deposits.	4
Resume of applicant's geochemical work	7
Proposed exploration	10
Proposed rotary and jackhammer drill holes	12
Conclusions and recommendations.	13
Estimate of costs	14

Illustrations

Proposed exploration, area II, section 58, Texas Mercury Co., Brewster Co., Texas	In back
Proposed exploration, area III, section 44, Texas Mercury Co., Brewster Co., Texas	In back
Proposed exploration, Area IV, Texas Mercury Co., Brewster Co., Texas	In back
Texas Mercury Co. leases showing areas of proposed exploration Brewster Co., Texas	In back

Introduction and summary

The Texas Mercury Company, Dallas, Texas applied to the Office of Minerals Exploration for financial assistance to explore for mercury on several land sections held under lease, sublease, and prospecting permits, from the State of Texas, as well as from individual owners.

The application was referred to the field and an examination was made July 13-14 by J. W. Hasler, Geologist, U. S. Geological Survey. Mr. Hasler was accompanied by Mr. W. Ransone, Mr. Roger H. Davis and Mr. John H. Baker representing the applicant company. During the field examination it was ascertained that proposed work in Area I had been essentially completed and that area V did not appear promising enough to continue further exploration work at this time as well as being rather inaccessible.

The applicant was requested to furnish a revised cost estimate and this was transmitted to the Field Officer, Region III on August 4, 1966. Additional data was furnished on August 31, 1966, concerning the results of their drill hole No. 4 in Section 57, Brewster County, Texas.

The applicant is presently producing mercury and it is felt that his present geochemical work is sound and that there is a possibility of discovering a moderate reserve of mercury by further exploring the more promising areas discovered by geochemical methods, to further test possible buried breccia pipes and associated structures for new occurrences of mercury. It is therefore recommended that a modified exploration program be conducted and that a contract be executed to complete the proposed exploration program as herein outlined, providing the land ownership problem can be solved, either through a Standard Performance Bond 25, or lien and subordination agreements.

The property N. and E. of Amarilla Mtn.

The property is located just north of Highway No. 170, seven miles west of Terlingua, [Presidio and] Brewster County, Texas. The property to be explored is easily accessible from Alpine, Texas by travelling south on State Highway 118 to Study Butte, thence west on State Highway 170 to Terlinqua. The sections and fractional sections of land are held by the Texas Mercury Company as follows:

No

Block G 12 (1) All of Sections 43, 45, and 57: By virtue of a mineral lease from Virginia O. Billings, William H. Billings and Louise V. Waters, a copy of which lease is attached, such lease is subject to a 7-1/2% royalty. There are no other encumbrances.

Block G 12 (2) Part of Sections 46 and all of 56: By virtue of prospecting permits from the state of Texas, convertible to mineral leases subject to a 5-1/4% royalty. There are no other encumbrances.

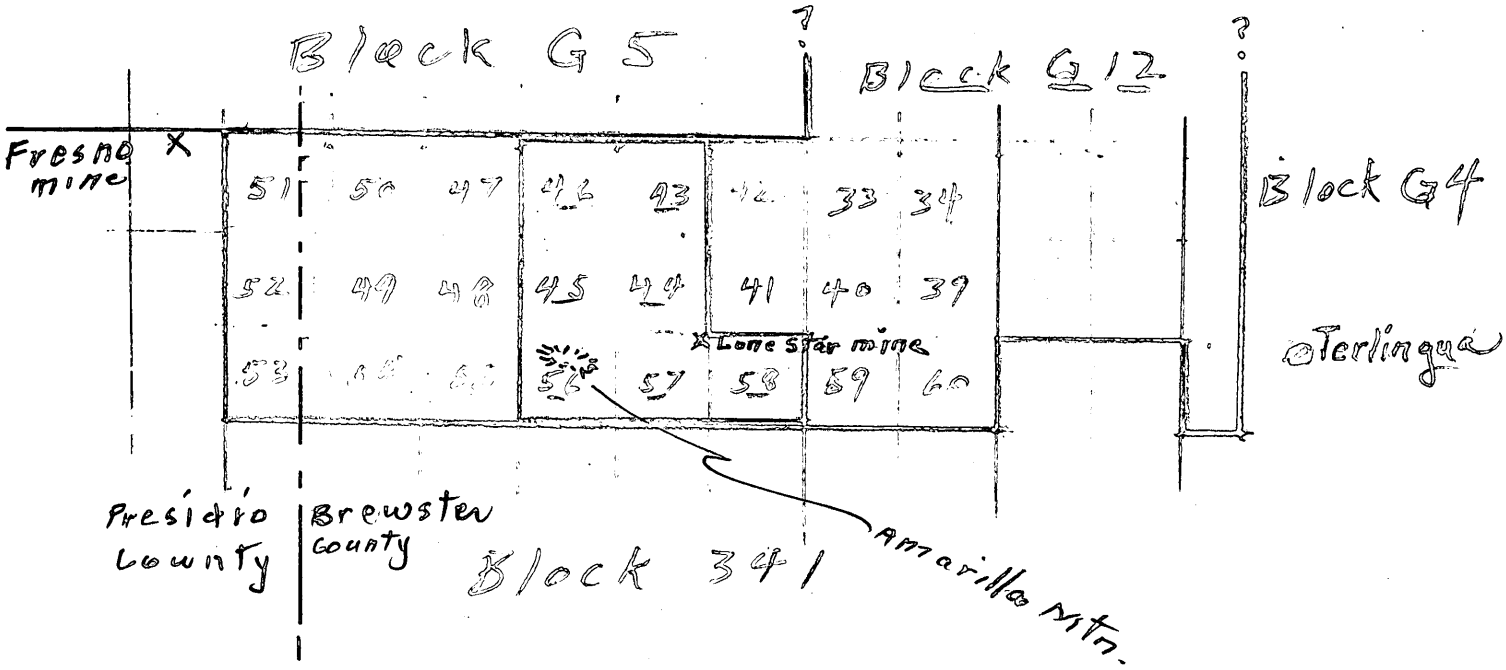
Block G 12 (3) Parts of Sections 44 and 58: By virtue of a sub-lease from W. H. Pulliam, the owner of mineral leases from the State of Texas, a copy of which sub-lease is attached, such sub-lease is subject to 10% royalty. There are no other encumbrances.

As to the lands under lease or prospecting permit from the State of Texas, attached is a copy of a letter from the Commissioner of the General Land Office, State of Texas, in which he states that he is not authorized to execute any such lien and subordination as is requested by MME Form 52. Waters and Billings verbally have refused to subordinate.

The Luisa Mine, last worked in 1957, was placed in operation by Texas Mercury Company in June, 1965. According to published reports of the

(Sample, Tres Cuevas, Lone Star-Maggie group)

Bureau of Mines, up to 1957 the Luisa Mine produced one thousand (1,000) flasks of mercury. A total of twenty (20) flasks have been produced since Texas Mercury Company placed the mine in operation. It appears that the mineable ore has been depleted, and operations have been discontinued at this location. Our workings in Section 58 are being placed in operation at this time. The location of the Luisa Mine is shown on the map (Fig. 2), accompanying the application. The ore was processed at the Texas Mercury Company-owned plant, located along the center of the south line in the northeast quarter of section 57. The plant has a total capacity of eighty (80) to one hundred (100) tons per day.



Geology and Ore Deposits[1/]

The Terlingua quicksilver district, which has produced more than 150,000 flasks of quicksilver, is in the southern part of the Big Bend region of southwestern Texas. It is a narrow, east-west area about 20 miles long and lies mainly in southwestern Brewster County. The district is connected by graded road with the nearest railroad, 84 miles north of its center.

Quicksilver minerals were first discovered in the district in the latter part of the 19th century, but there was no substantial production until 1900. Although there are about 20 mines and many prospects, more than 90 percent of the quicksilver came from the Chisos-Rainbow, Mariposa, and Study Butte mines. The most productive years were during World War I; since 1946 the district has been idle. Future production depends upon the discovery of new ore bodies--which will be costly--and the working of deposits now considered of too low grade to be profitable.

1959 ($227 per flask) Oct. 1966 $485-505

The area is mountainous and arid; its sparse vegetation is typical of desert regions. The altitudes range from 2,100 feet to 4,200 feet. Only two streams cross the district, and considerable stretches of these are dry during summer months. Because of the concentration of the scanty rainfall into torrential showers, and because of the wide range in hardness between different rocks, erosion is vigorous and has carved a rugged terrain.

The rocks consist of marine sedimentary rocks of Cretaceous age, and lavas and associated clastic beds and hypabyssal intrusive rocks, all of Tertiary age. Cretaceous sedimentary rocks, beginning with the oldest are: Devils River limestone (1,500 + feet thick), Grayson formation (80 to 200 feet), Buda limestone (50 to 100 feet), Boquillas

flags (about 1,100 feet), Terlingua clay (about 1,000 feet), Aguja formation (about 800 feet of sandstones and clays), and Tornillo clay (600 to 1,000 feet). All are fossiliferous. Rocks of Tertiary age, collectively termed Chisos volcanics include tuffs, clays, conglomerates, and lavas, ranging from trachytes through andesites to basalt. Intrusive rocks are in the form of dikes, sills, laccoliths, and plugs and range in composition from rhyolite to basalt. Many igneous rocks have a high content of soda, represented in their mineral compositions as soda orthoclase, sodic pyroxenes, and analcite.

Domes, grabens, and breccia pipes are unusually abundant and well formed. The Terlingua uplift, an irregular dome with a structural relief of several thousand feet, underlies about half the district and is believed to have been formed by igneous uplift. Smaller domes, found throughout the district, are clearly the result of igneous intrusions. The grabens are bounded by normal faults, which together include most of the normal faults of the district. The vertical displacement of the grabens below adjacent blocks is as much as 2,000 feet. Masses of breccia with a pipelike or chimneylike shape have been designed descriptively as breccia-filled pipes, or simply breccia pipes. They range from 75 feet to 500 feet in diameter, and one has been explored vertically for more than 800 feet. The nature of the breccia and its walls indicate that the pipes were formed by collapse of bedded rocks into solution caverns.

Quicksilver minerals have been found in veins and tabular and pipelike bodies in both sedimentary and igneous rocks. Cinnabar is the principal ore mineral but there are minor quantities of native mercury, chlorides of

mercury, and other rare mercury minerals. Associated minerals are calcite, clay, pyrite, hydrocarbon compounds, and less commonly, several other minerals. The deposits are classified as: deposits formed in altered rock along the contact between the Devils River limestone and Grayson formation (limestone-clay contact deposits); Cave-fill breccia deposits in calcite veins in the Boquillas flags, deposits in breccia pipes (collapse or cave fill structures), and deposits along fractures in igneous rocks. Their distribution is directly related to fractures and breccia pipes and to the physical and chemical character of enclosing sedimentary rocks and is believed to be indirectly related to the Terlingua monocline and the igneous rocks in the district.

The quicksilver deposits were formed from hydrothermal solutions of igneous origin at temperatures below 300° C. and mercury minerals are believed to have been formed from hydrothermal solutions as cinnabar and as primary chlorides. Mineralizing solutions ascended breccia pipes and fractures and the ore minerals were deposited in parts of these channels lying less than 2,000 feet below the surface. Pipes in ls. commonly terminate upward at base of overlying Terlingua clay. Cave-fill deposits are in Devils River ls just under the overlying Grayson clay. Deposits in igneous rocks commercially unimportant except at Study Butte.

1/ Yates, Robert G., and Thompson, George A., 1959, Geology and Quicksilver Deposits of the Terlingua District, Texas, Geological Survey Professional Paper 312, p. 1.

Resume of Applicant's Geochemical Work

The Terlingua mercury district of Texas was selected as a site for exploration for new mercury deposits after careful consideration and after on-the-ground examinations of it and other areas. Past performance of its mines, good accessibility, reasonably good terrain, and availability of mineral leases were influencing factors. Of great importance was the written opinion of many authorities that additional commercial deposits could and should exist. This was stated on page 52 in the comprehensive Geological Survey Professional Paper 312, "GEOLOGY AND QUICKSILVER DEPOSITS OF THE TERLINGUA DISTRICT OF TEXAS," as follows: "The future of the Terlingua Quicksilver District depends largely on exploration." for deposits that do not reach the surface.

Since ordinary geological techniques and core drill follow-up had found no new deposits during the 1940's and 1950's, including work done by the U. S. Bureau of Mines (Report of Investigations: "Terlingua Mercury Deposits, Brewster and Presidio Counties, Texas," by A. M. Evans and W. M. Traver, Jr.) and others, it was decided to try near-surface geochemistry, and this to be followed up by a vacuum-type drill on a close-spaced pattern of rotary drill holes. The western part of the district, from California Hill in Section 59, Block 12, Brewster County, to the Fresno Mine in Section 106, Block 341, Presidio County, was selected. This area had fewer known mines, apparently had been subjected to less prospecting, and yet appeared to have as interesting geology as the area east of California Hill. It was also thought that there would be less contamination of the near-surface samples from old mine dumps, etc.

Accordingly, a geochemical survey was commenced in December, 1964, taking samples on a grid pattern 528 feet apart, or about 100 samples per square mile. As of September, 1965, thirty-three (33) square miles have been surveyed and 10,516 samples taken. These samples were taken by hand, using a nut auger where soil existed, and a pick where only rock was on the surface, and varied in depth from a few inches to a few feet. This survey was conducted and the samples analyzed by Geochemical Surveys of Dallas, Texas, on a contract basis. All samples were analyzed for mercury, silver and several trace elements. The mercury analysis was done using a Beckman ultra-violet absorption instrument, sensitive to parts per million by weight. All analysis values of 100 or greater were assayed using the potassium thiocyanate method developed by New Idria Mining and Chemical Company, and published in Bureau of Mines Information Circular 8033, "MINING AND FURNACING MERCURY ORE AT THE NEW IDRIA MINE, SAN BENITO COUNTY, CALIFORNIA," by R. K. Linn and W. F. Dietrich, 1961. Checks of accuracy of analysis were made by sending samples to outside laboratories and also to New Idria Mining and Chemical Company.

The gross geochemical survey appeared to be very successful because groups of high concentrations appeared over and around the Fresno Mine in Section 106, the Luisa Mine in Section 57, the Mariposa Mine in Section 59, and generally over local closed anticlinal and fault closures along the very large Terlingua monocline which crosses the area plunging from northwest to southeast. Selected areas were then detailed by taking near-surface samples on a grid basis 52.8 feet apart in the areas previously indicated as anomalously high in mercury by the wider-spaced

(528' grid) samples. Such fine surveys were carried out in several parts of several sections, including Sections 52, 57, 59, 43, 45, 46, 96, etc.

The next step planned in the exploration program was to take five-foot samples by jackhammer in the high concentration areas delineated by the fine survey (52.8' grid) (Fig. 2). This was to be done on a limited basis, checking only points having a value of 100 or over on the Beckman instrument, and was to serve two purposes: First, to completely eliminate all near-surface contamination, and secondly to eliminate any locations where high concentrations did not persist to five-foot depth, thus reducing to a minimum the locations (or area) where follow-up vacuum drilling would be needed. All samples were to be assayed.

The last step planned in the exploration program prior to actual mining was to employ a relatively new drill, unusually qualified for obtaining good samples. The vacuum drill shown in the picture accompanying the application draws all cuttings through the drill pipe by means of a vacuum pump. These are recovered and sacked continuously in transparent polyethylene bags. There is no loss of circulation, as previously experienced in the district, when mud or air were circulated under pressures. Samples from brecciated, faulted zones and from the tops and floors of caves should be obtained rather than lost as they have been in the past. Since the known mercury deposits occur under these conditions, this drill should sample the most mineralized portions of the hole. This drill will be used to depths not more than 300 feet.

The vacuum drill has the following unique advantages:

(1) Uncontaminated samples recovered through pipe bore.

(2) Samples not reground between pipe and wall as in conventional drilling.

(3) Uniform pipe bore produces constant uniform velocity to carry cuttings to surface in the same relation to each as they left bottom; i.e., fines stay closely associated with heavier cuttings.

(4) All drilled bore holes vary widely in diameter; consequently, the return drilling medium continuously changes velocity which in turn tends to separate the fine cuttings from the large. This causes the fines from one zone to be sampled with larger cuttings from a different zone to result in erroneous values. This is eliminated with the vacuum drill.

(5) Vacuum drilling is effective only in dry formations. Terlingua district formations are dry and well suited to vacuum-type drilling.

Proposed exploration

Area I, as shown in the original application has been drilled by the applicant, and was withdrawn by the applicant in a letter from the applicant dated March 7, 1966. Isn't this the Luisa mine area?

Area II, adjacent to and lying immediately southeast of Area I in Section 58, has been delineated on the map attached hereto, Fig. ___, scale 1" = 1,000', where the soil samples of 528' centers have been contoured on a 100 value. Before drilling this area, we estimate that we will need 200 six-foot jackhammer holes on 52.8' grid. These jack- ? hammer holes are necessary to get below surface contamination because

the Devils River Limestone outcropping in Area II and Area I is very hard and no penetration is possible without some kind of power drill. These will be analyzed, and we estimated a drill program to evaluate these will require forty-five (45) 100-foot holes and five (5) 300-foot holes.

Considerable access roads have already been built, but several days' bulldozer work will be required for each drill location.

Area III, lying in Section 44, is shown on the same map (Fig. ___), as Area II, and here again we will require 200 jackhammer holes for analysis and forty-five (45) 100-foot core holes and five (5) 300-foot holes.

In this area, also, a number of access roads have already been built, but several days' bulldozer work will be required for each drill location.

52.8' grid (1000 scale map) does not refine the data. It simply confirms the 528' grid (1000 scale map) The entire area is to be deep-drilled.

In Area IV, a detailed geochemical survey has been completed on a grid of sample points placed 52.8' apart, and a map (Fig. 3) is attached hereto which has been contoured on values of 100 and above. We estimate at least (8) 100-foot holes will be required and two (2) 300-foot holes. This area lies in Sections 45, 56 and 57.

waste of money ?

An access road has already been built to this area. Several days bulldozer work will be required for each individual location.

In Area V in Section 46, as in Area IV, a detailed geochemical survey has been completed and is shown on the map attached hereto (Fig. 4), accompanying the application. Results of the geochemical data in this area are not encouraging enough to include in the proposed exploration program and is therefore deleted.

Proposed rotary and jackhammer drill holes should be drilled as follows:

Area II	No. of holes	Depth	Total footage
Rotary drill	45	100 ft. each	4500'
Rotary drill as offset holes	5	300 ft. each	1500'
Jackhammer holes	200	6 ft. each	1200'
			7,200
Area III			
Rotary drill	45	100 ft. each	4500'
Rotary drill as offset holes	5	300 ft. each	1500'
Jackhammer holes	200	6 ft. each	1200'
Area IV			
Rotary drill	8	100 ft. each	800'
	2	300 ft. each	600'
			1400'

Total footage:

Jackhammer holes	2400 ft.
Rotary drill holes	13400 ft.

Conclusions and Recommendations

It is concluded that the chances of finding a moderate new discovery of mercury in the areas proposed by the applicant are fairly good. The 52.8 foot interval of drill holes is adequate to test for occurrence of buried breccia-pipes domes or chimneys that may contain deposits of mercury ore.

Prospecting? See letter 1/23/67

The applicant has completed a very detailed, thorough, and expensive geochemical exploration program to date with an honest attempt to find additional deposits of mercury.

It is therefore recommended that the exploration program herein outlined be duly considered and that a contract be executed to perform the exploration work as outlined in Areas II, III and IV in the original proposal.

Ralph Erickson and Garland Gott of our Exploration Research Branch reviewed the costs for assay and feel that they are too high. Some correspondence with them asking for another bid may be advantageous.

The drilling costs quoted by Walters Drilling Company are actual costs.

The cost item for the superintendent is also an actual figure as he operates the company-owned retort plant which is located along the center of the south line in the Northeast Quarter of Section 57, as well as supervising the development and exploration work. Approximately three-quarters of his time should be attributed to the exploration contract or $950.00/month for 8 months, for a total of $7,600.00, as he will also be supervising the operation of the plant. The costs for the assistant for assaying and surveying should also be reduced accordingly.

reduce to 1/4

?

7. Estimate of Costs:

(a) Independent Contracts

(1) Geochemical Surveys, Dallas, Texas - Analysis and interpretation of 400 samples taken with jackhammer - Samples analyzed by a technique devised by Geochemical Surveys for measuring a Beckman Mercury Vapor Meter, Model K-23, and correlated with values of samples, taken on reconnaissance survey. High values then assayed for mercury by Perkin-Elmer Atomic Absorption Spectrophotometer-400 samples @ $10.00/ sample	$4,000.00	
(2) Walters Drilling Company, Inc., Dallas, Texas - Rotary drill crew -		
13,400 feet @ $1.65/foot	22,110.00	
4,900 feet @ $1.65/foot (additional close-in drill holes)	8,085.00	
2400' jackhammer holes @ 1.00 ft.	2,400.00	
(3) Gay-Mar Construction Company, Marathon, Texas - Bulldozer work for locations and roads (D-6) - 267 hours @ $15/hour	4,000	$40,595.00

(b) Personal services (all available).

(1) Superintendent (Baker) 8 mos. @ $1,250 3/4 time at 8 mos. = $937.50/month	7,500.00 ?	
(2) Assistant for assay, survey, etc., (Kay) 8 mos. @ $850.00/mo.	5,100.00 ?	
(3) Labor for jackhammer samples 400 holes @ $6/each	2,400.00 ?	
(4) Labor - one man as helper 8 mos. @ $400.00/mo.	3,200.00	18,200.00

(c) Operating materials and supplies.

(1) Bits, 4-1/2" rock, 168 @ $40/each	6,720.00 ind. contr.	
(2) Bags, 5,600 @ 6 ¢ each	336.00 ind. contr.?	
(3) Fuel for compressor and truck	3,200.00 ?	
(4) Miscellaneous (Includes equipment maintainance, oil, grease, assay supplies, survey supplies, etc.)	5,824.00	16,080.00

(d)	Operating equipment (Texas Mercury Co. owned)		
	(1) Vacuum Unit for use with core drill - Cost $8,471.73 - 1/60 charged plus $100/mo. maintenance - 8 mos. @ $241.19/mo.	$1,929.52	
	(2) 4-wheel drive pickup-Cost $1,800 - 1/36 charged plus operation and maintenance $125/mo. - 8 mos. @ $175./mo.	1,400.00	
	(3) Chevrolet Sedan - Cost $3,000 - 1/36 charged plus $100. operations - 8 mos. @ $183.33	1,466.67	4,796.19
(e)	Initial rehabilitation and repairs		None
(f)	New buildings, fixtures, installations		None
(g)	Miscellaneous		None
			$79,671.19

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
FEDERAL CENTER, DENVER, COLORADO 80225

Office of Minerals Exploration

OFFICIAL COPY
O. M. E.
RECEIVED
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INITIALS CODE
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October 4, 1966

Memorandum

To: Chief, OME

From: Field Officer, Region III

Subject: OME-6508 (Mercury)
Texas Mercury Company
Secs. 43 to 46 and 56 to 58, incl.
Brewster, Texas

In preparing the report of examination on OME Docket-6507 which pertains to the applicant's Ruidosa Prospect Area, I noted a letter from the applicant which elucidated on the costly assaying figure quoted in his original cost estimate. This letter should have accompanied OME Docket 6508 as well. It may be of assistance to you if a contract is negotiated on the Terlingua property.

The letter, dated July 20, 1966, showed a copy was sent to Washington.

J. William Hasler

J. William Hasler,
Field Officer, Region III
Office of Minerals Exploration

TEXAS MERCURY COMPANY
3806 CEDAR SPRINGS ROAD
DALLAS, TEXAS 75219

MAILING ADDRESS
P. O. BOX 19508

AREA CODE 214
LAKESIDE 1-5145

July 20, 1966

Mr. J. W. Hasler, Field Officer
United States Geological Survey
Office of Minerals Exploration
Region III, Room 2284, Building 25
Denver Federal Center
Denver, Colorado 80225

RE: OME-6507 (Silver)
Texas Mercury Company
Secs. 38, 50 and 60, Block 2
D & P Ry. Co. Survey
Presidio County, Texas

Dear Sir:

Following your visit to Terlingua, we have revised the cost estimates on the silver application captioned above, and a new Page 6 is enclosed for substitution in our original application. In line with the questions which you asked, you will note that under 7.(a)(1) Geochemical Surveys will collect all samples in the field and make analysis for silver, manganese, copper, lead and mercury, and their customary charge for this service is $16,000 per month which, of course, includes a reasonable profit. As a total of four thousand samples are to be collected and analyzed for five metals, this computes to a $12.00 price per sample. We feel this is certainly a reasonable figure. We are having these samples analyzed for these additional metals because some of them are indicator metals. Also, any of them except mercury could be present in this area in commercial quantities. We may have the samples analyzed for still other metals if we deem it necessary. Under Item 7.(a)(2), Geochemical Surveys will charge for analysis of the core cuttings $3.50 for silver, plus $1.00 additional for each other metal which may appear to be called for at the time, making a maximum of $6.50 for analysis for silver, manganese, copper and lead. We do not feel that an analysis of these cuttings for mercury will be required. Under Item 7.(a)(3), the $1.65 per foot figure is actual for the current drilling and not an estimate. We have reviewed the other items insofar as we can to give a more accurate cost for each item.

3.00 4.00 1.75 2.00 5.00

400 ?

rotary ?

Since visiting the Ruidosa area with you, I found that we had already enlarged the geological map to a scale of 1" = 1,000'. A copy of this is enclosed, and you will find it fits very well with the chemical maps as prepared by Mr. Kay. A good common point is the Juan Benevides Ranch house. The last point that we visited together was point #27 which is still on Cretaceous, the Permian outcrop being essentially east of us. The additional points on the line are in sequence due east from this point and are north of the road. They do not cross over the Tertiary outcrop. You may remember that Mr. Davis went still further east and could see east turnover of the large Loma Plata Anticline, and he also thought he saw southeast dip suggesting a domal structure.

Also enclosed herewith are the geochemical maps on the other metals, and I think you will find it interesting to note how closely the mercury follows the silver.

For your information, the prospecting permits under which we hold rights within the Ruidosa area are issued for a period of one year, subject to extension for a full five year term by the Commissioner of the General Land Office of the State of Texas. This gives the holder exclusive right to prospect within that area and may be converted at any time during the term of the permit to a lease from the State of Texas by a first rental payment of $2.00 per acre, with subsequent rental payments of $1.00 per acre annually. The lease issued by the State is for a primary term of five years and as long thereafter as minerals are produced in paying quantities with the payment of a one-sixteenth royalty to the State.

Yours very truly,

TEXAS MERCURY COMPANY

W. R. Ransone

W. R. Ransone

WRR:sg
Enclosures
cc. Office of Minerals Exploration
Washington, D. C. - w/enclosures
cc. John Baker - w/enclosures

Ruidosa Prospect Area

7. Estimate of Costs:

(a) Independent Contracts.

(1) Geochemical Surveys, Dallas, Texas - for collection of all samples in the field, analysis for silver, manganese, copper, lead and mercury content by Perkin-Elmer Atomic Absorption Spectrophotometer (comparable to assay) of each sample, mapping and interpretative reports -
three months @ $16,000/mo., or
4,000 samples @ $12.00/sample high — $ 48,000.00

(2) Geochemical Surveys, Dallas, Texas - for analysis for silver content of core cuttings - 1,650 samples @ $6.50 each high — 10,725.00

(3) Walters Drilling Company, Inc., Dallas, Texas - core drill and crew - 6,400 feet @ $1.65/ft. — 10,560.00

(b) Personal Services

Supervision @ $1,000.00 per month for six months — 6,000.00

(c) Operating materials and supplies, including bits, etc. — 2,900.00

(d) Operating equipment (Texas Mercury Co.-owned)

(1) Vacuum Unit for use with core drill - Cost $8,471.73 - 1/60 charged plus $100/mo. maintenance. - 3 mos. @ $241.19/mo. ? — 723.57

(2) 4-wheel drive pickup - Cost $1,800.00 - 1/36 charged plus operation and maintenance $125/mo. - 6 mos. @ $175/mo. ? — 1,050.00

(e) Initial rehabilitation and repairs — -0-

(f) New buildings, fixtures, installations — -0-

(g) Miscellaneous — -0-

$ 79,958.57

TEXAS MERCURY COMPANY
3806 CEDAR SPRINGS ROAD
DALLAS, TEXAS 75219

MAILING ADDRESS
P. O. BOX 19508

AREA CODE 214
LAKESIDE 1-5145

August 31, 1966

Mr. J. W. Hasler, Field Officer
United States Geological Survey
Office of Minerals Exploration
Region III, Room 2284, Building 25
Denver Federal Center
Denver, Colorado 80225

Dear Sir:

Enclosed is a sketch which Mr. Baker made of the drift in the vicinity of the drill hole #4, his letter describing it and my letter covering a later conversation with him.

I enjoyed our brief visit yesterday, and thanks again for your cooperation. I'll look forward to receiving the Silverton photographs.

Yours very truly,

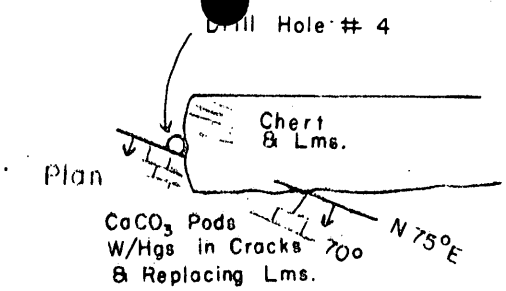
TEXAS MERCURY COMPANY

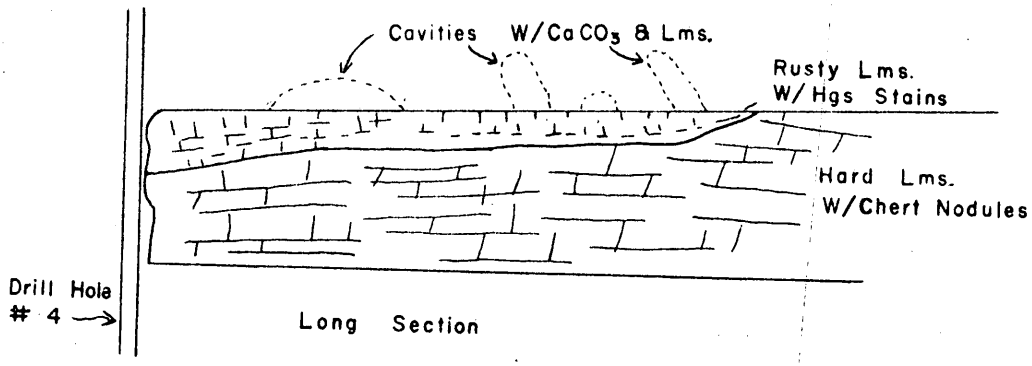
W. R. Ransone

W. R. Ransone

WRR:sg

Enclosures





T-4 TUNNEL NEAR BH#4

SECTION 57

BREWSTER COUNTY, TEXAS

Scale 1" = 10

8-18-66

GEOCHEMICAL SURVEYS
3806 CEDAR SPRINGS ROAD
DALLAS, TEXAS 75219

MAILING ADDRESS
P. O. BOX 19508

TELEPHONE
LAKESIDE 1-5145

August 25, 1966

Mr. Eugene McDermott
Mr. Roger Davis
Mr. Carroll Deely

Gentlemen:

Enclosed is a report in letter form from Baker and a plan and cross section of the T-4 Tunnel, which was drifted in from the mountainside to our Core Hole #4, on top of the Tres Cuevas Mountain, Section 57. Since receiving this report and sketch, I have talked with Baker and there is considerable visible ore which, in a grab sample, assayed 22#/ton. He is currently cleaning out the area immediately at the end of the tunnel and stockpiling the ore. His next plan will be to raise on the ore body.

Yours very truly,

TEXAS MERCURY COMPANY

W. R. Ransone

WRR:sg

Enclosures

cc. John Baker

REPORT ON T-4 TUNNEL

Enclosed is a rough sketch of the T-4 Tunnel near the boreholes. There is a definite near-vertical plane in the left side; while it does not look like a fault with movement, there is much calcite on the south side of it. There are ruggy type Calcite Concretions, some as large as a football, each containing considerable cinnebar in the cracks and in instances the cinnebar appears to be replacing the limestone.

I have had some color in the back of the tunnel along with the calcite lined cavities for the last 20 to 30 feet. I assumed the mineralization was following a bed of calcite just above. Possibly this bed has been dropped down south of the fault plane at the face. I would guess the entire face south of the fault zone would run over one pound/ton, with spots going ±10#/ton.

I plan to sort out some of the better ore and stockpile it on the dump and blast another round before starting work on ore handling facilities. I blasted the northwest half of the last round and put it over the dump and then blasted the south part.

I think this showing to date looks real encouraging. I only hope it is of good size.

John Baker

July 20, 1966

Official
~~OFFICIAL~~
COPY
O. M. E.
RECEIVED
JUL 25 1966
WITH CODE
gla 120 m
120 m

Mr. J. W. Hasler, Field Officer
United States Geological Survey
Office of Minerals Exploration
Region III, Room 2284, Building 25
Denver Federal Center
Denver, Colorado 80225

RE: OME-6508 (Mercury)
Texas Mercury Company
Secs. 43 to 46 and 56 to 58, incl.
Brewster County, Texas

Dear Sir:

Following your visit to Terlingua, we have revised the cost estimates on the mercury application captioned above and new pages 9 and 9A are enclosed in substitution for those previously sent you on March 7, 1966, for substitution in our original application. In line with the questions which you asked, you will note that under 7.(a)(1), Geochemical Surveys will do more than one analysis and their customary charge per sample is $10.00, which, of course, includes a reasonable profit. Under Item 7.(a)(2), the $1.65 per foot figure is actual for the current drilling and not an estimate. Under Item 7.(a)(3), we are unable to get competitive bids because of the remoteness of the area and sometimes have to wait for several days before we can get a bulldozer at all. We have tried a bulldozer larger than a D-6, but since we are primarily moving large boulders rather than dirt, we find the larger bulldozer too unwieldy. We have reviewed the other items insofar as we can to give a better cost per each item.

I am enclosing on a transparent material an enlarged geological map on a scale of 1" = 1,000', which can be placed over the geochemical maps to show the structure at Area 2 and/or any other locality

nearby. The survey mound in the northeast of Section 57 is a good point in common. As I mentioned to you, we have mapped the topography and we have done some detailed geology where we have found this map too general, but there is a limit to how much material we want to take out of our files and place in yours.

Yours very truly,

TEXAS MERCURY COMPANY

W. R. Ransone

WRR:sg

Enclosure

cc. Office of Minerals Exploration
Washington, D. C.
w/enclosures

cc. John Baker
w/enclosures

7. Estimate of Costs:

(a) Independent Contracts.		
(1) Geochemical Surveys, Dallas, Texas - Analysis and interpretation of 400 samples taken with jackhammer - Samples analyzed by a technique devised by Geochemical Surveys for measuring minute quantities of mercury vapor with a Beckman Mercury Vapor Meter, Model K-23, and correlated with values of samples taken on reconniasance survey. High values then assayed for mercury by Perkin-Elmer Atomic Absorption Spectrophotometer-400 samples @ $10/sample	$ 4,000.00	
(2) Walters Drilling Company, Inc., Dallas, Texas - Core drill crew - 14,700 feet @ $1.65/foot	24,255.00	
(3) Gay-Mar Construction Company, Marathon, Texas - Bulldozer work for locations and roads (D-6) - 267 hours @ $15/hour	4,000.00	$32,255.00
(b) Personal services (all available).		
(1) Superintendent (Baker) 8 mos. @ $1,250/mo.	10,000.00	
(2) Assistant for assay, survey, etc., (Kay) 8 mos. @ $850/mo.	6,800.00	
(3) Labor for jackhammer samples - 400 holes @ $6/each	2,400.00	
(4) Labor - one man as helper - 8 mos. @ $400/mo.	3,200.00	22,400.00
(c) Operating materials and supplies.		
(1) Bits, 4-1/2" rock, 168 @ $40/each	6,720.00	
(2) Bags, 5,600 @ 6¢/each	336.00	
(3) Fuel for compressor and truck	3,200.00	
(4) Miscellaneous	5,824.00	16,080.00

(d) Operating equipment (Texas Mercury Co. owned)		
(1) Vacuum Unit for use with core drill - Cost $8,471.73 - 1/60 charged plus $100/mo. maintenance - 8 mos. @ $241.19/mo.	$ 1,929.52	
(2) 4-wheel drive pickup - Cost $1,800 - 1/36 charged plus operation and maintenance $125/mo. - 8 mos. @ $175/mo.	1,400.00	
(3) Chevrolet Sedan - Cost $3,000 - 1/36 charged plus $100 operations - 8 mos. @ $183.33	1,466.67	4,796.19
(e) Initial rehabilitation and repairs		None
(f) New buildings, fixtures, installations		None
(g) Miscellaneous		None
		$75,351.19

6508

U. S. Geological Survey - Denver Federal Center
Building 25 - Room 228A
Denver, Colorado 80225

July 6, 1966

Mr. W. R. Ransone
Texas Mercury Company
P.O. Box 19508
Dallas, Texas 75219

Dear Mr. Ransone:

This letter is in reply to yours dated June 30, 1966, relative to a field examination in references to field docket OME-6507 and OME-6508, during the week of July 11, 1966.

My present plans are that I will leave Denver and fly to El Paso and will arrive there at 12:40 p.m. July 12. I will drive directly to Terlingua that day and will arrive there late that night as it will be quite some distance.

Would you please make reservations for me at the Big Bend National Park immediately east of Terlingua as you and Mr. Davis also have reservations there.

We can examine the Mercury property there and then proceed to the silver area near Huidosa.

Sincerely yours,

J. William Hasler
Field Officer, Region III
Office of Minerals Exploration

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION

U. S. Geological Survey -- Denver Federal Center
Building 25-Room 2284
Denver, Colorado 80225

March 10, 1966

OFFICIAL
COPY
O. M. E.
RECEIVED
MAR 14 1966

Memorandum

To: Chief, OME

From: Field Officer, Region III

Subject: OME-6508 (Mercury)
Texas Mercury Company
Sec. 43 to 46 and 56 to 58 inclusive
Brewster County, Texas

Enclosed is the original of a request to modify the application for financial assistance from a total estimated cost of $100,000 to $72,230. The request for modification resulted from drilling currently being done on the subject property.

left side of docket

J. William Hosler

U. S. Geological Survey -- Denver Federal Center
Building 25 - Room 2284
Denver, Colorado 80225

February 11, 1966

Mr. W. R. Ransone
Texas Mercury Company
P. O. Box 19508
Dallas, Texas 75219

Re: OME-6508 (Mercury)
Texas Mercury Company
Secs. 43 to 46 and 56 to 58 inclusive
Brewster County, Texas

Dear Mr. Ransone:

This letter is in reply to yours dated February 4, 1966 relative to your having already commenced with core drilling in the first area covered in the above request for exploration assistance.

Due to a heavy backlog of reports of examination as well as contractual obligations, it will be after March 1st before I can get to your application for a field examination, therefore it would be wise for you to modify your application. My inability to get to your property later than February answers the number (2) phase of your request.

The modified application should be submitted in the same manner as an original application, by submitting, that is, an original and one copy of all pertinent information to either Region III OME in Denver, or to Chief, OME, Washington, D. C.

Sincerely yours,

J. William Hasler,
Field Officer, Region III
Office of Minerals Exploration

cc: Chief OME
OME-6508 (Mercury)
Chron
Hasler

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
1/6/66	Selfridge	120
1/10	Johnson	110
		220
		120M

JAN 10 1966

Memorandum

To: Field Officer, Region III

From: Chief, Office of Minerals Exploration

Subject: OME-6508 (Mercury)
Texas Mercury Company
Secs. 43 to 46 and 56 to 58, inclusive
Brewster County, Texas

Last fall, representatives of the subject Applicant stopped in Washington to discuss its application and also OME-6507. At that time they were asked to furnish additional information which we have not received to date. During the conference the impression was gained that mineral exploration was wholly new to them and, for that reason, we are referring the Texas Mercury Company applications to Region III for a field examination.

During the conference it was determined that they did not mean core drilling, but non-core drilling. A rather ambitious program has been set up under this application without a detailed breakdown of costs and detail of local geology, and with possibly development drilling rather than exploration drilling, et cetera. At least, for a first stage it might be well to first test the anomalous areas already delineated without going into any of the jackhammer sampling. Costs and rate of performance will have to be worked out with the Applicant. Contamination should be taken into consideration. Costs per foot should be secured rather than costs per hour. If a contract is to be recommended on the land of Billings and Waters, we should have a letter from them stating that they will not sign a subordination agreement. Any work done on any of the holdings will require a Performance Bond in the amount of the Government's participation.

There may be some question regarding the method of analysis and the cost thereof. For the soil samples, possibly the usual methods would suffice. If necessary for background, it is suggested that you contact Garland Gott and/or Fred Ward in Building 25, Denver Federal Center, for information that may aid you in making this examination.

GCSelfridge/gla (1-10-66)
cc to: Director's Reading File
Division File
Economic Geology File
OME File
OME Reading File
Mr. Selfridge (2)

(Signed) FRANK E. JOHNSON

Frank E. Johnson

23263

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
1/6/66	Selfridge	120
		110
		220
		120M

JAN 10 1966

Texas Mercury Company
P. O. Box 19508
Dallas, Texas 75219

Re: OME-6507 (Silver)
Texas Mercury Company
Secs. 38, 50, and 60, Block 2
B & P Ry. Co. Survey
Presidio County, Texas
and
OME-6508 (Mercury)
Texas Mercury Company
Secs. 43 to 46 and 56 to 58, inclusive
Brewster County, Texas

Gentlemen:

At the conference last fall with Messrs. Ransone, Davis, and Usry, mention was made of certain information necessary to complete the subject applications. Except for the rush of work, we should have contacted you sooner. In order that no more time might be lost, we are referring the subject applications to Mr. J. W. Hasler, Field Officer, U. S. Geological Survey, Office of Minerals Exploration, Region III, Room 2284, Building 25, Denver Federal Center, Denver, Colorado 80225.

The Regional Office will notify you in case additional information concerning the applications is needed.

Sincerely yours,

Frank E. Johnson
Chief, Office of
Minerals Exploration

GCSelfridge/gla (1-10-66)
cc to: Director's Reading File
Division File
Economic Geology File
Docket OME-6507
Docket OME-6508
OME Reading File
OME Region III Mr. Selfridge

23263

Texas Mercury Company
P. O. Box 19508
Dallas, Texas 75219

Re: OME-6508 (Mercury)
Brewster County, Texas

Gentlemen:

Your application for exploration assistance, dated October 7, 1965, submitted to our Washington office, has been assigned Docket No. OME-6508.

Please identify all future correspondence relating to your application by this docket number.

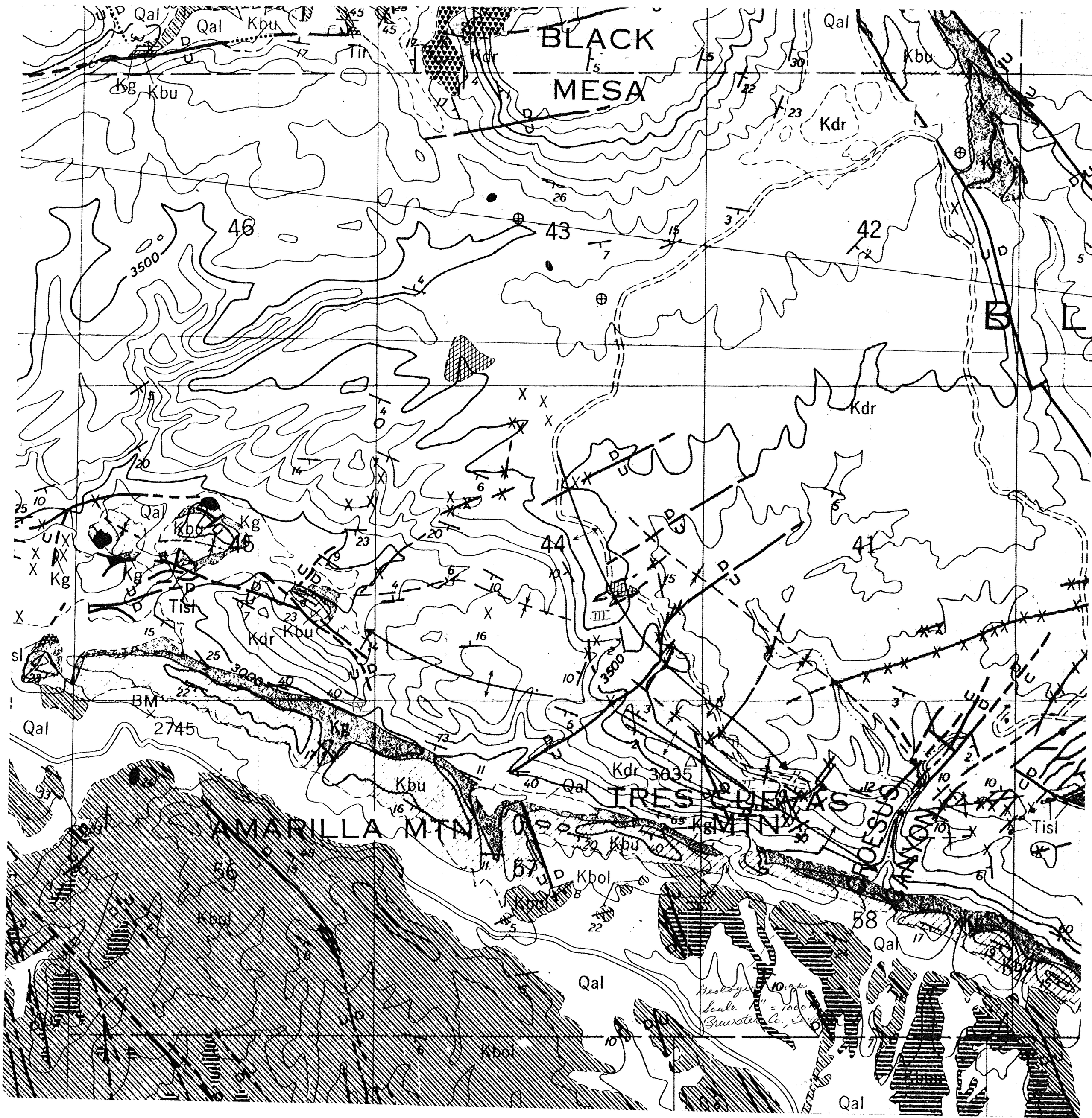
Sincerely yours,

Frank E. Johnson
Chief, Office of
Minerals Exploration

Copy to: Region III w/cy application and attachments

TERLINGUA 3(e)-(g)

TERLINGUA 3(e)-(g)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BM
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TRES CUEVAS MTN
AMARILLA MTN
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Kbol
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Geologic map
Scale 1" = 1000'
Brewster Co.

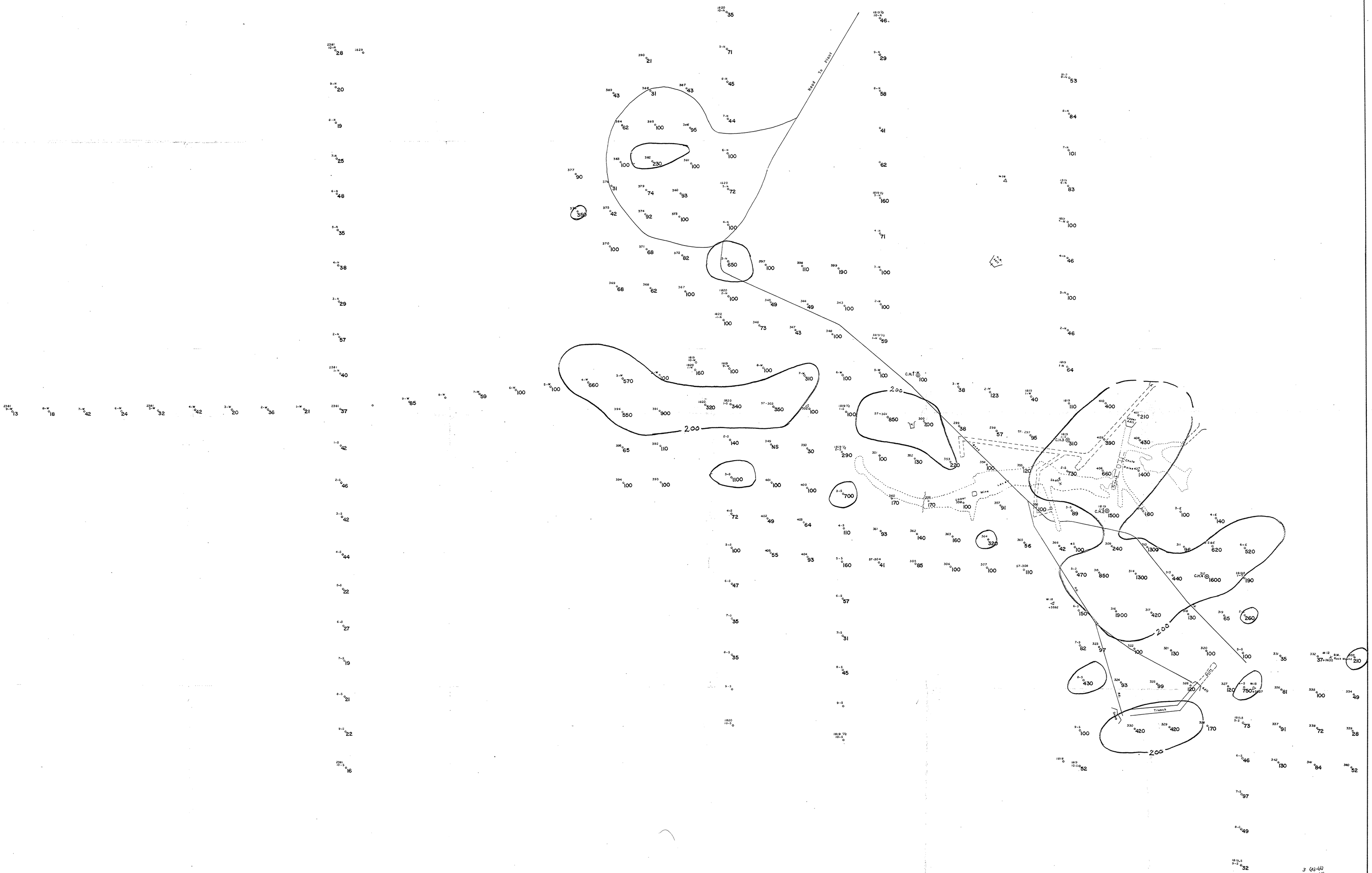

FIG 2 3 (4)-(5)
3 (4)-(8)
5 (4)-(5) (1)

TERLINGUA PROSPECT

BREWSTER COUNTY, TEXAS

SCALE 1" = 50'

DETAIL SAMPLES SECTION 57

CONTOUR ON VALUE AT 6'

10-5-65

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OCT 8 1965
INITIALS

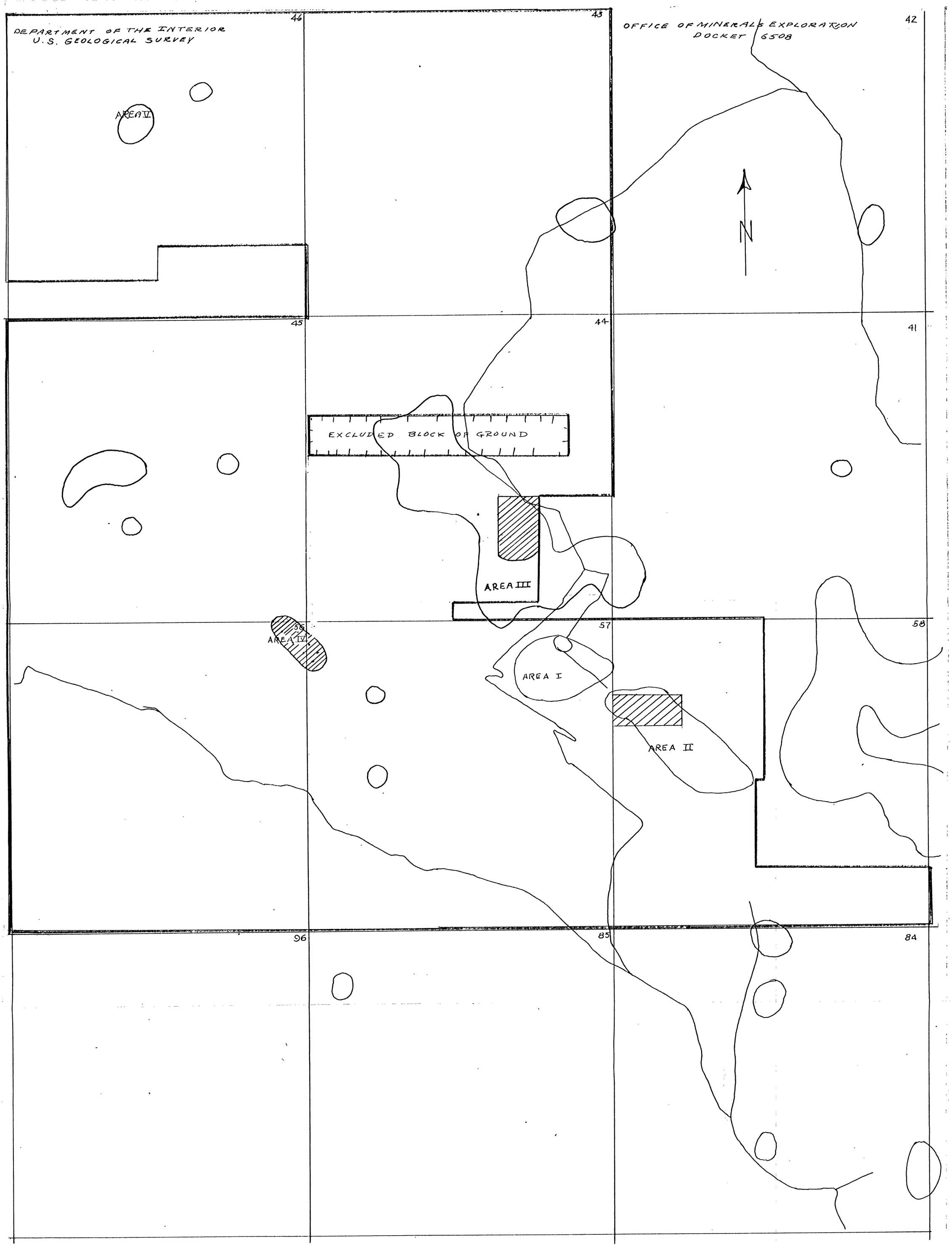

FIGURE TEXAS MERCURY CO. LEASES SHOWING AREAS OF PROPOSED EXPLORATION BREWSTER CO., TEXAS.

0 1/2 1 MILE

SCALE 1" = 1000'

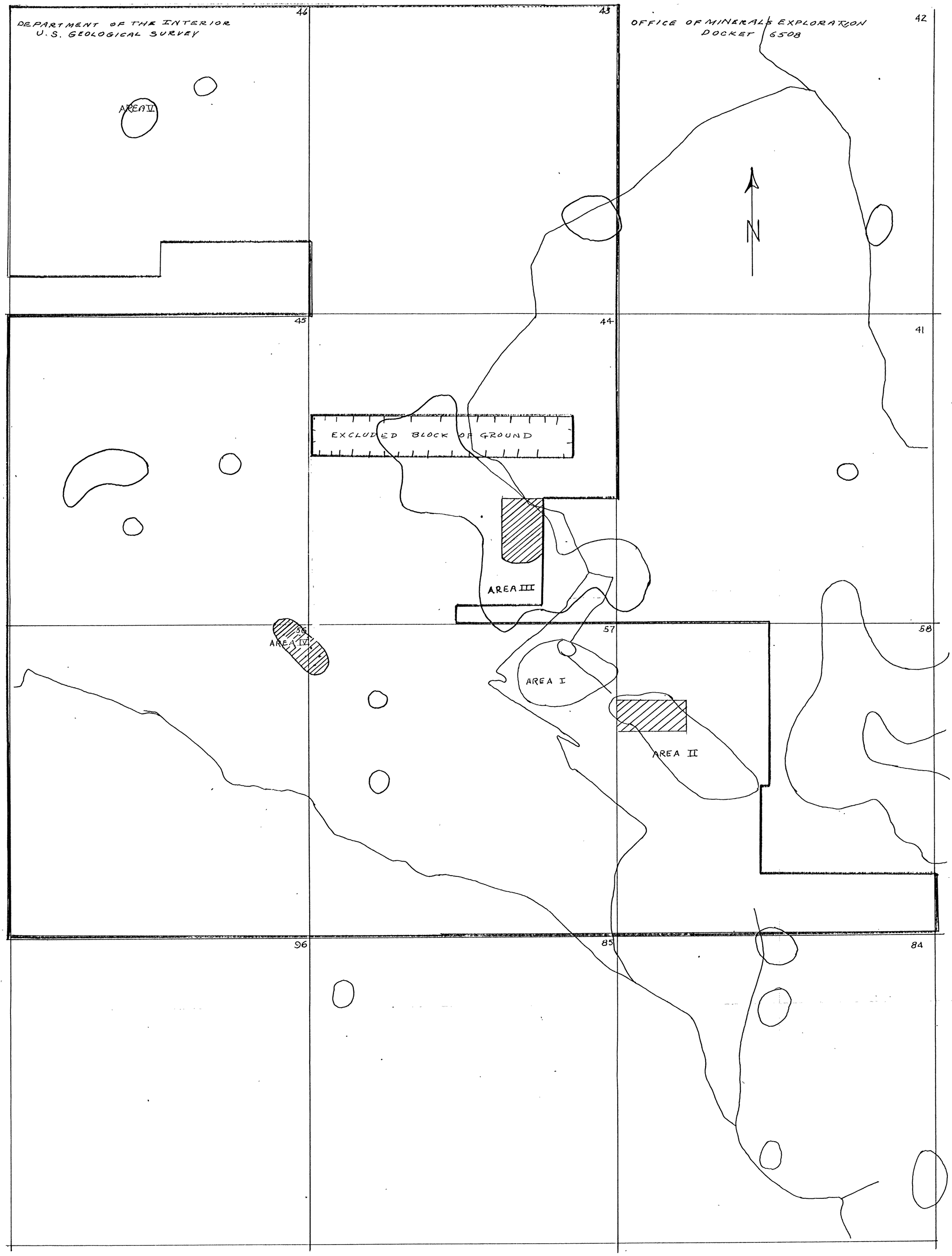

FIGURE TEXAS MERCURY CO. LEASES SHOWING AREAS OF PROPOSED EXPLORATION BREWSTER CO., TEXAS.

0 1/2 1 MILE

SCALE 1" = 1000'

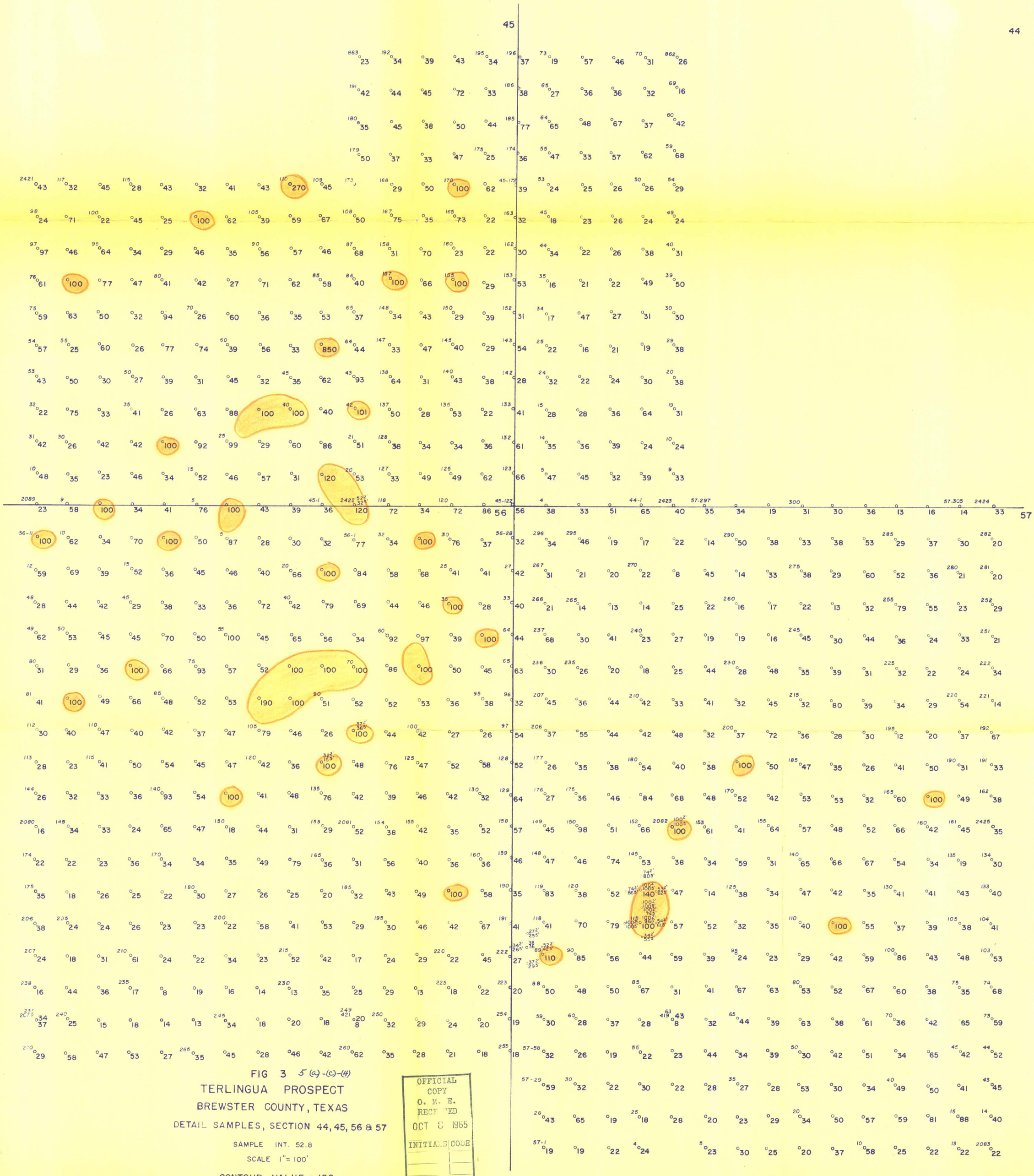

FIG 3 5(a)-(c)-(4)

TERLINGUA PROSPECT

BREWSTER COUNTY, TEXAS

DETAIL SAMPLES, SECTION 44, 45, 56 & 57

SAMPLE INT. 52.8

SCALE 1" = 100'

CONTOUR VALUE = 100

10-5-65

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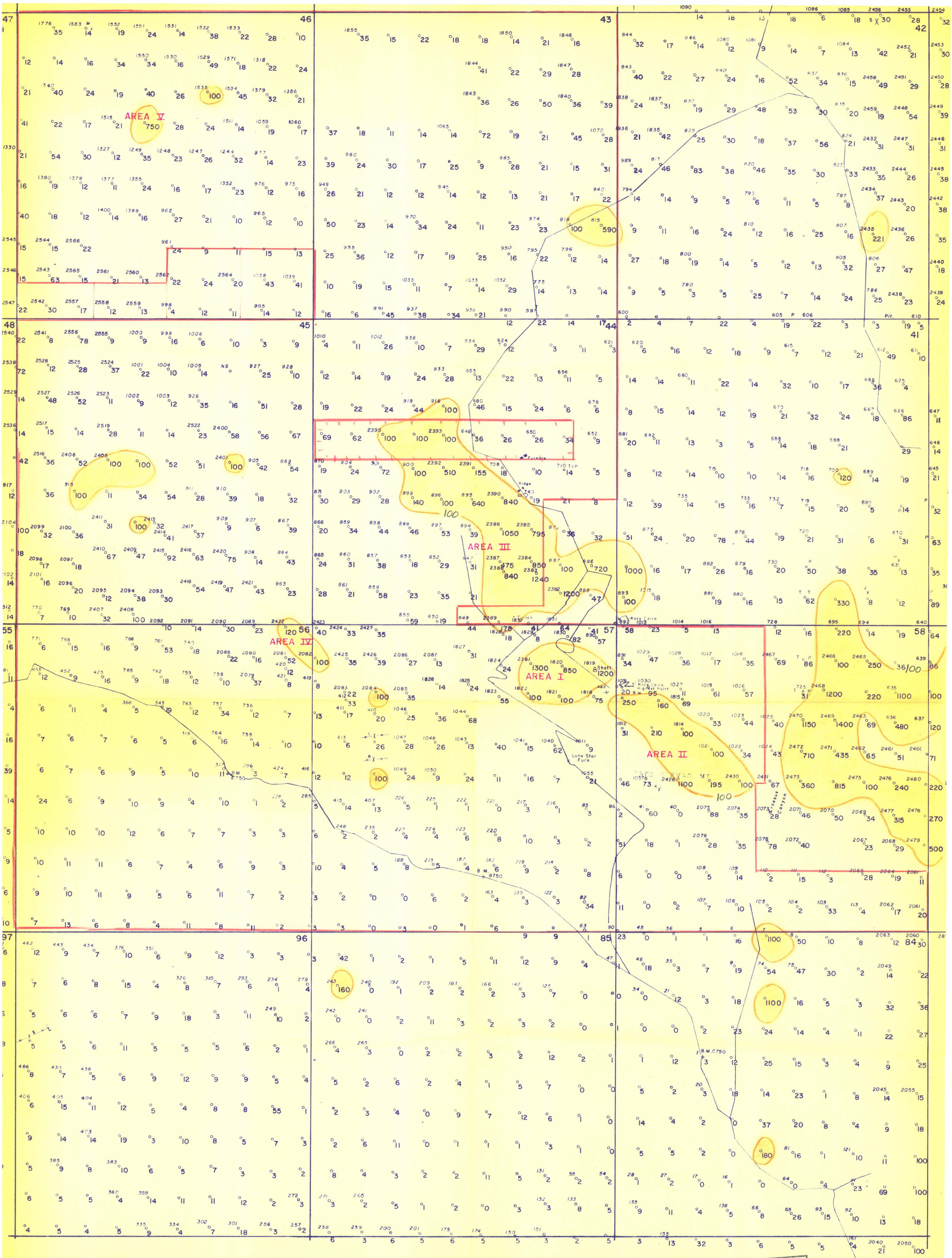

FIG 1 - 2-(b) 5-(a)-(c) (2+3)

TERLINGUA PROSPECT

BREWSTER & PRESIDIO COUNTIES, TEXAS

0 1/2 1 MILE

SCALE 1" = 1000'

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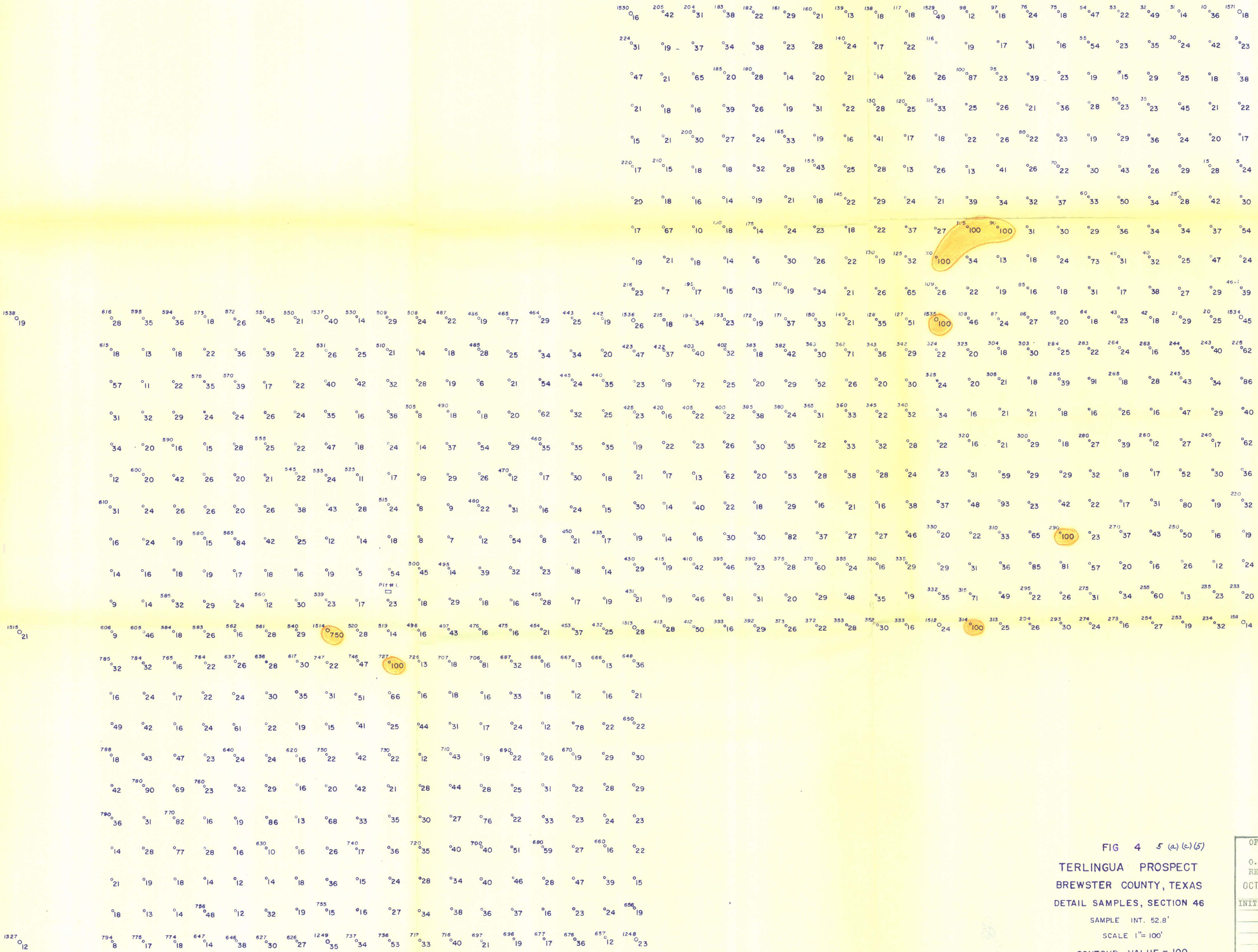

FIG 4 5 (a) (c) (5)

TERLINGUA PROSPECT

BREWSTER COUNTY, TEXAS

DETAIL SAMPLES, SECTION 46

SAMPLE INT. 52.8'

SCALE 1" = 100'

CONTOUR VALUE = 100

10-5-65

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