NAVAJO ALLOTTED LAND (Continued)

Lease Number	Leasee	Date of Lease	Acreage
-5671	Cobb Nuclear Corp.	11/18/75	160.00
-5672	Cobb Nuclear Corp.	11/18/75	160.00
-5675	Phillips Uranium	10/23/75	160.00
-5676	Phillips Uranium	10/23/75	160.00
-5677	United Nuclear Corp.	10/10/75	160.00
-5678	United Nuclear Corp.	10/10/75	160.00
-5679	United Nuclear Corp.	10/10/75	160.00
-5680	United Nuclear Corp.	10/10/75	160.00
-5681	G. Warnock	10/23/75	160.00
-5682	Western Nuclear, Inc.	10/29/75	160.00
-5683	Western Nuclear, Inc.	10/29/75	160.00
-5684	Western Nuclear, Inc.	10/29/75	160.00
-5685	Pioneer Nuclear, Inc. (50% Texas (Nuclear)	11/5/75	160.00
-5686	Pioneer Nuclear, Inc. " "	11/10/75	160.00
-5687	Pioneer Nuclear, Inc. " "	11/5/75	160.00
-5688	Pioneer Nuclear, Inc. " "	11/10/75	160.00

LAGUNA PUEBLO LAND

Lease Number	Leasee	Date of Lease	Acreage
UL-1171	Continental Oil Company	5/30/73	1,575.00
UL-1836	Continental Oil Company	5/30/73	1,275.00
UL-1837	Continental Oil Company	5/30/73	2,560.00
UL-1838	Continental Oil Company	5/30/73	1,340.00
No. 8	Anaconda Company	7/26/76	320.00

Lease Number	Lessee	Lessor	Allot No.	Lease Approval Date
NOO-C-14-20				
-5651	Homestake Mining Co.	Kee Yazzie/Charlie Livingston	1382	12/17/75
-5652	Homestake Mining Co.	Mrs. Peter Livingston (or heirs)	1435	12/17/75
-5653	Homestake Mining Co.	John White (or heirs)	1395	12/17/75
-5655	Homestake Mining Co.	Esthon Yazzie (or heirs)	1389	12/17/75
-5656	Homestake Mining Co.	Tom Livingston	1390	12/17/75
-5657	Homestake Mining Co.	Yah na bah (or heirs)	1388	12/17/75
-5658	Homestake Mining Co.	Hos ka yazzie (or heirs)	1408	12/17/75
-5659	Homestake Mining Co.	Ge ken sosie (or heirs)	1407	12/17/75
-5654	Homestake Mining Co.	Abraham Livingston (or heirs)	1387	03/04/76
-5644	Homestake Mining Co.	Dan Charley (aka Dan Hill)	033990	12/29/75
-5660	Homestake Mining Co.	Ahe ti bah (or heirs)	1406	03/29/76
-5661	Homestake Mining Co.	James Begay	1409	03/04/76
-5662	Homestake Mining Co.	Juan Delgarito	1133	12/17/75
-5663	Homestake Mining Co.	Al che hoz pah (heirs)	1134	12/17/75
-5664	Homestake Mining Co.	Elth ka hoz pah (heirs)	1135	12/17/75
-5665	Anschutz Uranium Corp.	Kess wod (heirs)	1873	11/18/75
-5666	Anschutz Uranium Corp.	G bah (or heirs)	1179	12/11/75
-5667	Anschutz Uranium Corp.	Wilson Largo (or heirs)	1180	11/18/75
-5668	Cobb Nuclear Corp.	Barney Johnson (heirs)	042237	11/18/75
-5669	Cobb Nuclear Corp.	Eth nele wod (heirs)	042531	11/18/75
-5670	Cobb Nuclear Corp.	Bid ga ha (heirs)	042241	11/18/75
-5671	Cobb Nuclear Corp.	Eskachoa (heirs)	1385	11/18/75
-5672	Cobb Nuclear Corp.	Margerito Begay (heirs)	1132	11/18/75
-5675	Phillips Uranium	Mrs. Charley Hill (heirs)	033992	10/23/75
-5676	Phillips Uranium	Esthon ki (heirs)	1185	10/23/75
-5677	United Nuclear Corp.	Jennie Chavez Martinez	058072	10/10/75
-5678	United Nuclear Corp.	Als kay nas pah Martinez	058073	10/10/75
-5679	United Nuclear Corp.	Mary Charlie	058074	10/10/75
-5680	United Nuclear Corp.	Mrs. Cecil (Grace) Lewis	058075	10/10/75
-5681	G. Warnock	Walter Vandever (or heirs)	077411	10/23/75
-5682	Western Nuclear, Inc.	Hosh Kal elth ne ya	033989	10/29/75
-5683	Western Nuclear, Inc.	Lucy Anna (or heirs)	1182	10/29/75
-5684	Western Nuclear, Inc.	Mrs. Denet Chilly Begay (or heirs)	1184	10/29/75
-5685	Pioneer Nuclear, Inc. (50% Texas Nuclear)	Johnson Miller	1164	11/05/75

) Albuquerque STATE NM DATE OF INSPECTION May 1, 1985

ERIAL NUMBER OF TRACT	HOLDER OF PRIMARY TRACT INTEREST	TRACT STATUS	NUMBER OF INSPECTIONS	HOURS INSPECTION ONSITE/TOTAL	COMMODITY	TRACT TYPE
COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5	COLUMN 6	COLUMN 7
0-C-14-20-5681	TEDCO	Aban.	1	1.5 / 3.0	Uranium	Lease
0-C-14-20-8396	TEDCO	Aban.	1	1.5 / 3.0	Uranium	Lease
				/		
ss 1-10	TEDCO	Aban.	1	1.0 / 1.0	Uranium	Mining Claims
				/		
				/		
				/		
				/		
				/		
				/		

YPE OF INSPECTION (CHECK ONE) / / MINE / / EXPLORATION / / MINE ABANDONMENT
/ / TECH EXAM, EA / / INACTIVE / / OTHER

URPOSE OF INSPECTION Final lease examination for relinquishment of leases.

RIEF DESCRIPTION OF INSPECTION See attachment.

INE NAME _____ DESIGNATED OPERATOR _____
ATE ORIGINAL MINE PLAN SUBMITTED _____ DATE ORIGINAL MINE PLAN APPROVED _____
ATE MODIFIED MINE PLAN SUBMITTED _____ DATE MODIFIED MINE PLAN APPROVED _____
F APPROVED PLAN IS PENDING MODIFICATION, GIVE BRIEF DESCRIPTION OF MODIFICATION: _____

ATE ORIGINAL EXPL. PLAN SUBMITTED _____ DATE ORIGINAL EXPL. PLAN APPROVED _____
ATE MODIFIED EXPL. PLAN SUBMITTED _____ DATE MODIFIED EXPL. PLAN APPROVED _____

LM INSPECTOR(S) AND TITLES(S) George R. Tetreault, Jr., Mining Engineer

URFACE MANAGEMENT AGENCY FOR TRACT(S) Bureau of Indian Affairs

AME, TITLE, AND OFFICE OF SMA PERSONNEL PARTICIPATING IN INSPECTION _____

AME, TITLE, AND OFFICE OF OSM OR REGULATORY AUTHORITY PERSONNEL PARTICIPATING IN INSPECTION
None

AME, TITLE, AND OFFICE OF COMPANY REPRESENTATIVE(S) PARTICIPATING IN INSPECTION _____

OURS OF OFFICES TIME (PRE-INSPECTION) PREPARING FOR INSPECTION 0
OURS OF OFFICES TIME (POST-INSPECTION) REPORTING ON INSPECTION 1
OTAL TRAVEL TIME 2 TOTAL OFFICE TIME 1

AS A CONDITION OF NONCOMPLIANCE ENCOUNTERED DURING INSPECTION? / / YES /XX / NO
IF YES, PREPARE NONCOMPLIANCE REPORT

AS AN UNDESIRABLE EVENT ENCOUNTERED DURING INSPECTION? / / YES /XXX/ NO
IF YES, PREPARE UNDESIRABLE EVENT REPORT

ERSONNEL RESPONSIBLE FOR CONDUCTING INSPECTION George R. Tetreault, Jr.
George R. Tetreault, Jr.

IN REPLY REFER TO
TEDCO-5681

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
3550 Pan American Freeway, N.E.
P.O. Box 6770
Albuquerque, New Mexico 87107

JUL 23 1985

RECEIVED
JUL 25 1985
REAL PROPERTY MANAGEMENT
EASTERN NAVAJO AGENCY

Memorandum

To : Area Director, Navajo Area Office, BIA

From : Area Manager, Rio Puerco Resource Area, BLM

Subject: Navajo Allotted Uranium Lease N00-C-14-20-5681, Todilto Exploration and Development Corporation

An inspection of the subject lease was conducted May 1, 1985, and was found to be properly abandoned. Accordingly, there is no objection to the relinquishment of these leases and release of the lessee bonded liability.

Enclosure (Inspection Report)

cc: Superintendent, ENA, BIA

FILE COPY
Surname
1/13

Navajo Area Office
P.O. Box "M"
Window Rock, Arizona 86515-0714

ARPM/Minerals

JAN. 14 1986

Mr. George Warnock
3810 Academy Parkway South N.E.
Albuquerque, New Mexico 87109

Dear Mr. Warnock:

This is your official notification that Navajo Allotted Mining Lease No. NOO-C-14-20-5681 located in McKinley County, New Mexico has expired on its own terms on October 23, 1985.

An examination revealed the said lease has been properly reclaimed and abandoned; therefore, you are released from all liability for the lease, effective October 23, 1985.

Your bond is cancelled the same effective date (copy enclosed).

Sincerely,

/S/ Wilbur D. Wi...

Acting Assistant Area Director

Enclosure

cc: Navajo Tribal Minerals Section

bcc: TRR/1105-13
Minerals Chrono
300

333:DVMORGAN:sj:01/10/86

Form 5-154 b
October 1956

BOND NO. 4284810

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

BOND TO ACCOMPANY MINING LEASES

KNOW ALL MEN BY THESE PRESENTS, That we, GEORGE F. WARNOCK of Albuquerque, New Mexico, as principal, and HARTFORD ACCIDENT & INDEMNITY COMPANY of Hartford, Conn., as surety, are held and firmly bound unto the United States of America in the sum of TEN THOUSAND AND NO/100 ($10,000.) dollars, lawful money of the United States of America, for the payment of which well and truly to be made, we bind ourselves, and each of us, our and each of our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

Sealed with our seals and dated this 8th day of October, 1975

The condition of this obligation is such that, whereas the said principal, as lessee, entered into a certain indenture of lease, dated October 8, 1975 with WALTER VANDEVER, Or heirs, as the case may be.

, lessor, as obligee, for a lease of a tract of land described as follows: N ½, N½, Section 13, Township 13 North, Range 11 West, New Mexico Principal, Meridian, McKinley County, New Mexico

and located in the Navajo Reservation in the State of New Mexico for Uranium mining purposes for the period of 10 years from the date of approval thereof, and as much longer thereafter as the lease shall be continued in force in the manner provided for therein.

WHEREAS the surety hereby waives any right to notice of any modification of such lease, or obligation thereunder, whether effected by extension of time for performance, by commitment of such lease to unit, cooperative, or communitization agreement, by waiver, suspension, or change in rental, except an increase thereof, by minimum royalty payment, except an increase thereof, by compensatory royalty payment, or otherwise, this bond to remain in full force and effect notwithstanding.

WHEREAS the principal and surety agree that the neglect or forbearance of the lessor-obligee in enforcing against the lessee the payment of rentals or royalties or the performance of any other covenant, condition or agreement of the lease, shall not in any way release the principal and surety, or either of them, from any liability under this bond; and

WHEREAS the principal and surety agree that in the event of any default under such lease, the lessor-obligee may prosecute any claim, suit, action, or other proceeding against either the principal or surety without the necessity of joining the other.

Now, if the said principal.... herein shall faithfully carry out and observe all the obligations assumed in said indenture of lease, and shall observe all the laws of the United States, and regulations made, or which shall be made, thereunder, for the government of trade and intercourse with Indian tribes, and all the rules and regulations that have been or may hereafter be lawfully prescribed by the Secretary of the Interior relative to mining leases on the said Reservation, then this obligation shall be null and void; otherwise, to remain in full force and effect.

PROVIDED, That in event supervision over all the leased tract to which this bond applies is relinquished by the Secretary of the Interior and lessee shall have made all payments then due under the lease and shall have fully performed all obligations on his part to be performed up to the time of relinquishment of supervision, this bond shall be of no further force and effect.

The rate of premium charged on this bond is $ 10.00 per M ; the total premium paid is $ 100.00

Signed and sealed in the presence of—

WITNESSES:*

Louie E Wood
P. O. 209 4th S.W., Albuquerque, N.M.

Dorothy Master
P. O. 209 4th S.W., Albuquerque, N.M.

as to [signature] [SEAL]
George F. Warnock, Principal

Maurice H. Taggart
P. O. Drawer C, Albuquerque, N.M.

Isaac D. Russell
P. O. Drawer C, Albuquerque, N.M.

HARTFORD ACCIDENT & INDEMNITY CO.

as to [signature] [SEAL]
Florence S. De Valk, Attorney-in-fact

P. O. .....

P. O. .....

as to ..... [SEAL]

P. O. .....

P. O. .....

as to ..... [SEAL]

P. O. .....

*Two witnesses to each signature.

DEPARTMENT OF THE INTERIOR
BUREAU OF INDIAN AFFAIRS

OCT 23 1975
....., 19.....

APPROVED:

John J. Bitsoi
ACTING ASSISTANT Area Director.

U. S. GOVERNMENT PRINTING OFFICE : 1957—O-413432

Lipsch
10-22-75

23 [illegible]
CANCELLED: 10/23/85
Walter A. Shelburne
Acting Assistant AREA DIRECTOR JAN. 14 1988

RELEASE OF URANIUM LEASE

KNOW ALL MEN BY THESE PRESENTS: That Todilto Exploration & Dev. Corp. for a good and valid consideration does hereby release, relinquish, quitclaim and surrender to the lessor Brown Vandever, heirs, assigns and legal representatives, all right, title and interest in and to a certain uranium mining lease, made and entered into by and between Brown Vandever, lessor, and Todilto Exploration & Development Corp., as lessee, dated the 8th day of October, 19 75, insofar as same covers the following described land, to-wit:

Contract No. N00-C-14-20-5681

Section 13, Township 13N, Range 11W, and containing 160 acres, situated in the County of McKinley and State of _____, said lease being recorded in the office of the Recorder of Deeds in and for said county, in Book _____, Page _____.

Executed this 19th day of April, 19 85.

George F. Warnock, President of
Todilto Exploration & Development Corp.

Acknowledgement for individual

STATE OF NEW MEXICO)
ss
COUNTY OF BERNALILLO)

I, Ruth E. Mitchell, a Notary Public, in and for said County, in the State aforesaid, do hereby certify that G.F. Warnock, Pres. of Todilto Expl. & Dev. Co. personally know to me to be the same person whose name subscribed to the foregoing instrument, appeared before me this day in person, and acknowledged that he signed, sealed and delivered that said instrument as his free and voluntary act for the uses and purposes therein set forth.

Given under my hand and seal, this 19th day of April, 1985.

My commission expires 8-24-88

Ruth E. Mitchell
Notary Public

ENVIRONMENTAL ANALYSIS

Proposed
Exploration Plan
Todilto Exploration and Development Corporation

Navajo Allotted Lease
NOO-C-14-20-5681
McKinley County, New Mexico

U. S. Geological Survey
Conservation Division
P. O. Box 1715
Carlsbad, New Mexico 88220

Prepared By
Gregory Alan Edwards
Mining Engineer
June 21, 1976

Contents

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VII.	Matrix Analysis	14
VIII.	Determination and Recommendation	15

Maps

A. Project Location Map
B. Lease Location Map
C. Topography Map

Appendices

A. Geologists Memorandum Report
B. Archaeological Clearance
C. Comments from BIA
D. Relevant Correspondence

I. Description of the Proposed Action

The proposed action consists of an original exploration drilling program to explore for uranium ore bodies on lands covered by one (1) Navajo Allotted Uranium Lease. The Navajo allotted lease covered by this plan is NOO-C-14-20-5681 and is located approximately fifteen (15) miles north-northwest of Grants-Milan in McKinley County, New Mexico. The proposed exploration plan was submitted by Todilto Exploration and Development Corporation (TEDCO) on April 12, 1976, under the provisions of 25 CFR 177.6. The proposed action was submitted to the Bureau of Indian Affairs in Window Rock, Arizona, on May 4, 1976, for their review. Their recommendations for the protection of nonmineral resources and for the reclamation of the land surface are in Appendix C. No other actions by other Federal or State agencies is pending.

The land covered by allotted Lease NOO-C-14-20-5681 is in the N/2 of the N/2 of Section 13 in Township 13 North, Range 11 West, N.M.P.M. The acreage covered by the lease is approximately 160 acres. TEDCO acquired the lease October 8, 1975, at the Navajo Allotted Land Uranium #7 sale at Window Rock, Arizona

The Energy Research and Development Administration (ERDA) controls the mineral rights to the S/2 of the N/2 and the SE/4 of Section 13, Township 13 North, Range 11 West. The surface rights are held by the Navajo Nation. TEDCO holds this property under a lease from ERDA. In addition, TEDCO has leased the SW/4 of Section 13, Township 13 North, Range 11 West and the N/2 of the NW/4 of Section 19, Township

13 North, Range 10 West, from the Santa Fe Pacific Railroad Company (SFP). The locations of allotted lease -5681 and the ERDA and SFP properties are shown on Map C. TEDCO is currently mining by strip mine methods from the ERDA and SFP properties. TEDCO has received approval from ERDA for an underground mining plan which may be in operation in mid-July, 1976.

The purpose of this proposed exploration plan is to find and delineate uranium ore bodies on the lands covered by allotted lease -5681. If commercial deposits or uranium ore are discovered, it would be mined concurrently with the uranium ore from the adjacent leases.

The proposed exploration plan provides for the drilling of a total of 104 holes to an average depth of 130 feet. The drilling depth would vary from twenty-five (25) feet to five hundred (500) feet. The 4 3/4 inch holes would be drilled with rotary drill rigs with a maximum hole diameter of about five (5) inches. About one (1) in five (5) holes would be cored. Additional offset drilling is requested by TEDCO if it is necessary to delineate particular uranium ore bodies.

The primary hosts for uranium mineralization are the Westwater Canyon Member of the Morrison Formation and the Todilto Limestone Formation. Twenty-one (21) holes would be drilled on the steeply sloping flank of Haystack Mountain and would be collared in one of the members of the Morrison Formation. Due to the steep surface slope and structural relief, the members of the Morrison Formation outcrop within the lease property. Few drill holes are expected to penetrate the Westwater Canyon Member. The remainder of the holes will be in

those areas of gently sloping terrain which slopes away from the base of Haystack Mountain. These holes would be collared in either the Bluff Formation or Summerville Formation of the San Rafael Group.

Each hole would be probed by a geophysical logging truck for the length of the hole to record data relating to radioactivity and the formations encountered. The results recorded on electrical logs would be comprised of Gamma, self-potential and resistivity curves.

Two truck mounted rotary drill rigs and supporting equipment would be used to carry out the proposed drilling program. The two drill rigs would be Fayling 1000's. The supporting equipment would consist of two 2.5 ton water trucks and two pickups for use by the drilling crew. Two geological field vehicles would be used in the area during the drilling program.

One new access road would be built prior to the initiation of the proposed drilling program on the steep north flank of Haystack Mountain. A new road is necessary in this area to provide access to the proposed drill sites. The new access road would be eighteen (18) feet wide and approximately 1 1/4 miles long. The access road would be built using a D-7-F bulldozer.

No new road construction will be required for access to the proposed drill hole sites located to the west and north of Haystack Mountain. The terrain at the location of these is gently sloping. Existing roads and trails would be used wherever possible.

Few drill sites would require site preparation. Site disturbance approximately equal in area to the size of the drill rig is the only

surface disturbance expected on those sites requiring site preparation. All drill holes would be drilled using air unless circulation problems require using water and foam. For those holes requiring drilling mud, portable mud pits would be used. Therefore, no dug mud pits would be required.

Total surface disturbance due to road construction is expected to involve approximately 2 3/4 acres. Approximately two (2) acres of land would be disturbed by site preparation.

Noise levels are expected to range from 75 to 90 decibels. The drilling crews will work eight hour shifts but would not be subjected to maximum noise on a continuous basis. TEDCO does not currently have on-site noise level measuring devices.

All working holes shall be temporarily plugged with 6"x6" pointed wooden plugs. The State Engineer's hole abandonment procedures will be followed upon final abandonment of the hole. All areas of surface disturbances caused by drill site and road construction or off-road usage shall be bladed, contoured and revegetated.

TEDCO has had an archaeological survey performed on the lease property by Charles H. Carroll of the University of New Mexico. The survey has been approved and archaeological clearance granted by the National Park Service (See Appendix B). Nine (9) archaeological sites were observed and marked in the field by the survey crew. No drilling operations will occur within the site areas unless mitigative measures are developed with the U. S. Park Service, Chaco Center.

All trash and debris shall be transported from the lease area and disposed of in the covered land fill dump at the Haystack Mine.

TEDCO desires to commence road construction and drilling activities concurrently around mid-June to the first of July. The exploration drilling activities are expected to take two months for completion of the initial phase. Offset drilling operations would extend this two months time period.

II. Description of the Existing Environment

The lease area is situated in the Ambrosia Lake District of the Colorado Plateau's Physiographic Plateau. The topography is precipitous with many cliffs forming around the benches and mesas. The most prominent feature in the area is Haystack Mountain which was the location of the first uranium discovery in New Mexico (See Map C). Haystack Mountain is a flat topped mesa elongated in an east-west direction. The highest point on Haystack Mountain lies at an elevation of 7833 feet. The terrain drops rapidly from the top of Haystack Mountain to an elevation of around 7100 feet. The terrain on the remainder of the lease property slopes generally towards the northwest. The lowest point on the lease property lies at an elevation of about 7,010 feet. The total relief within the property is about 823 feet.

The climate in the area in which the lease property is contained is considered to be semi-arid. The average annual rainfall is about twelve (12) inches. Most of this rainfall occurs in July or August. No perennial streams exist within the area. Streamflow occurs usually

for short durations only after periods of significant precipitation.

Existing vegetation in the area is typical of the semi-arid climate. It consists of sage brush and the wild grasses common to the area on the lower areas of the property. Native grasses are almost nonexistent in the area. Junipers grow on some of the higher benches and along the flank of Haystack Mountain.

The wildlife in the area consists of rabbits, rattlesnakes, lizards and other animals typical of Northwest New Mexico. An occasional coyote or bobcat may also be found on the property.

The primary existing land use is grazing. About 1/2 acre of land in the northwest corner of the leasehold is fenced off. This is the honestead of Mary V. Delgarito. According to the conditions of the lease, consent shall be obtained from the landowner prior to any drilling in the immediate area of the Delgarito homestead.

III. Description of the Geology

Figure 1 on the following page is a stratigraphic chart for the Haystack Mountain area. It shows the relative positions of all of the formations in the area. The highest stratigraphic member to be encountered is the Brushy Basin Member of the Morrison Formation. The primary hosts for uranium in this area are the Westwater Canyon Member and the Todilto Limestone Member. The formations to be penetrated are the Brushy Basin, Westwater Canyon and Recapture Members of the Morrison Formation and the Bluff Sandstone, Summerville Formation and Todilto Limestone of the San Rafael Group. The drill holes will bottom in the Entrada Sandstone.

System	Series	Group	Formation		Rock Type	Thickness (Ft.)
Quaternary	Recent and Pleistocene				Sand, gravel, loess	0-100
					Cinders, basalt	0-200
			UNCONFORMITY			
Cretaceous	Upper	Mesaverde	Gallup sandstone		Sandstone	60-120
			Mancos shale		Shale	850-900
	Lower		Dakota sandstone		Sandstone, shale, coal	50-100
			UNCONFORMITY			
Jurassic	Upper		Morrison fm.	Brushy Basin mbr.	Mudstone, siltstone, ss.	45-100
				Westwater Canyon mbr	Sandstone	125-185
				Recapture mbr.	Siltstone, mudstone	125-245
		San Rafael	Bluff sandstone		Sandstone	100-300
			Summerville formation		Sandstone, siltstone, shale	150-200
			Todilto limestone		Limestone	25-35
			Entrada sandstone		Sandstone	135-150
			Carmel formation		Sandstone, siltstone	35-50
			UNCONFORMITY			
Triassic	Upper	Glen Canyon	Wingate sandstone		Sandstone	110-120
			Chinle formation		Mudstone, siltstone, sandstone, conglomerate	1200-1600
	Lower and Middle(?)		UNCONFORMITY Moenkopi formation		Siltstone, mudstone	25-50
			UNCONFORMITY			
Permian	Leonard		San Andres limestone		Limestone, sandstone	95-130
			Glorieta sandstone		Sandstone	200-375
			Yeso formation		Siltstone, sandstone, mudstone, limestone	850-1000
	Wolfcamp		Abo formation		Siltstone, sandstone, conglomerate	600-650
Pennsylvanian(?)					Conglomerate, arkose, sandstone, shale, limestone	0-150
			UNCONFORMITY			
Precambrian					Granite, gneiss, metarhyolite, schist	

After W. L. Chenoweth

Stratigraphic chart, Haystake Butte and vicinity, northeast flank of the Zuni Uplift, New Mexico

Structurally the beds dip northeast at three (3) to five (5) degrees. Minor normal faults displace beds from 3 to 85 feet in the area. The faulting trends east-west and northeasterly. No geologic hazards are known or expected to exist in the exploration area.

No aquifers are expected to exist within the lease property which will be penetrated by the drilling. The Westwater Canyon Member is a potential aquifer in other areas, but in this area it outcrops all around Haystack Mountain. Therefore, little water is expected to be encountered during drilling operations.

IV. Environmental Effects and Mitigative Measures

The proposed drilling program's most significant impact on the environment would be the disturbance of the land surface by the preparation of drill sites and access roads and the resultant destruction of the accompanying vegetation. The total surface disturbance, which would be expected as a result of the proposed drilling program, is about 4 3/4 acres. This includes about 2 3/4 acres for road construction and about 2 acres for drill site preparation.

Additional damage to the existing surface vegetation could result from the careless burning of refuse. Possible littering could also degrade the appearance of the property. Serious erosional damage and possible damage to archaeological sites could stem from improperly located drill sites and access roads.

The loss or contamination of groundwater could result from failure to properly control any artesian water encountered in the drill holes. Pollution of the groundwater could be caused by the

introduction of contaminating fluids and solids into the holes. Surface water pollution could result from allowing drilling mud to enter drainages.

The wildlife in the area could be displaced by disturbances caused by the drilling operations. Some air pollution could be generated by the drilling operations and related activities.

The proposed drilling program could adversely affect the lease lands as discussed above. However, these damages could be satisfactorily prevented or rectified by enforcing the applicable provisions of the lease terms and conditions as well as those provisions of the pertinent State and Federal regulations. The protection and restoration measures of the proposed exploration plan also makes adequate provisions to protect the environment.

All areas of surface disturbance will be restored to a condition which approximates, as close as possible, the natural conditions. Upon termination of lease operations, surface disturbances caused by drill site and road construction or off-road usage would be bladed, contoured and revegetated.

The only new access road construction which would be required would be the 1 1/4 miles of new road to access the proposed drill sites on the flank of Haystack Mountain. All construction would be performed in such a manner as to prevent unnecessary damage to vegetation, timber, soil, existing roads, bridges, cattle guards, fences and other improvements. It will be necessary to remove some Junipers during road construction. However, the access road will

be chosen in such a fashion as to minimize damage to vegetated areas. Road construction will be performed so as to prevent damage to watersheds or pollution of the water resources. Water bars will be constructed where necessary to prevent erosion.

Those proposed drill sites which would be accessed by the 1 1/4 miles of new access road on the flank of Haystack Mountain would be located directly on the roadway. No additional site preparation or surface disturbance would be necessary for these drill sites.

Some site preparation would be conducted, when necessary, on the remaining drill sites. Since portable mud pits would be used for those holes where drilling mud is needed, no surface disturbance for mud pits would be required. For many of these drill sites the surface disturbance would only be the drilled hole and a small area possibly twenty (20) feet in diameter surrounding it and the tracks from the drilling vehicles. This would be a total surface disturbance of about 2/3 acre for the remaining holes if no site preparation is necessary. Some sites will require leveling and preparation. This additional surface disturbance would involve about 1 1/3 acres for a total surface disturbance for site preparation of 2 acres. Leveling of drill sites would be done only where necessary.

No open fires would be permitted on the lease property. All trash and debris would be collected and transported from the lease area and disposed of in the covered landfill dump at the Haystack Mine. All archaeological sites were identified by the archaeological survey conducted at TEDCO's request. The locations of the access

road and proposed drill sites would be modified so as to avoid disturbing those archaeological sites. All drill sites and access roads would be bladed, contoured and reseeded where necessary to prevent erosion and restore the surface vegetation.

Little or no artesian water is expected within the exploration area. Any hole which encounters artesian pressure would be plugged full depth with cement. All others would be filled with drilling mud in accordance with the State Engineer's specifications to prevent groundwater contamination. In addition, the holes shall be capped at the surface with a cement plug to a minimum depth of five (5) feet. The driller would exercise caution when drilling to avoid contaminating the hole with chemicals or solids. Since any drilling mud which is required would be confined to the portable mud pits, little spillage is expected. Since the quantities of drilling mud used would be small, the effects of spillage is also expected to be minimal.

The wildlife in the area should not be significantly affected by the proposed drilling program. Adequate surrounding habitat exists for the displaced members. Any displacement of wildlife would be temporary. The possibility of any significant amounts of air pollution is remote due to the lack of any sizeable contributory sources.

Should the exploration plan culminate in a producing mining operation, the total impact on the environment would be temporarily increased by the surface disturbance from the mine construction.

The only construction which would be necessary on the lease property would be the mine shaft and lift facilities. The ore would be stock-piled and handled at the site of the existing Haystack Mining operations. Surface disturbance and any other environmental effects such as surface subsidence, air pollution and contamination or depletion of groundwater reserves would be mitigated by preventative measures specified under an approved mining plan.

V. Alternatives to the Proposed Action

No other exploration method or modification of the proposed exploration plan would minimize or reduce the possible environmental damage. Therefore, the only alternative to the proposed action is to refuse to allow exploration activities to be conducted on the lease property.

VI. Unavoidable Adverse Environmental Effects

The only appreciable unavoidable adverse effect on the environment would be the disturbance of a portion of the leasehold surface from the construction of access roads and drill sites and the resultant destruction of any accompanying vegetation. New access road construction of 1 1/4 miles of an eighteen (18) foot wide roadway will be required on the flank of Haystack Mountain before drilling operations can commence in that area. A total of about 2 3/4 acres would be disturbed by this road construction. Construction would be carried out in such a manner as to minimize the effect on the environment and the terrain as much as possible. No site disturbance for drill site

DMO Albuquerque STATE NM DATE OF INSPECTION April 16, 1985

SERIAL NUMBER OF TRACT	HOLDER OF PRIMARY TRACT INTEREST	TRACT STATUS	NUMBER OF INSPECTIONS	HOURS OF INSPECTION ONSITE/TOTAL	COMMODITY	TRACT TYPE
COLUMN 1	COLUMN 2	COLUMN 3	COLUMN 4	COLUMN 5	COLUMN 6	COLUMN 7
N00-C-14-20-5681	TEDCO	Aban.	1	1.5 / 2.5	Uranium	Lease
N00-C-14-20-8396	TEDCO	Aban.	1	1.5 / 2.5	Uranium	Lease
				/		
Tess 1-10	TEDCO	Aban.	1	1 / 1.0	Uranium	Mining Claims
				/		
				/		
				/		
				/		
				/		
				/		

TYPE OF INSPECTION (CHECK ONE) / / MINE / XX / EXPLORATION / / MINE ABANDONMENT
/ / TECH EXAM, EA / / INACTIVE / / OTHER

PURPOSE OF INSPECTION Examination of lease to determine if necessary reclamation for relinquishment was completed.

BRIEF DESCRIPTION OF INSPECTION See attachment.

MINE NAME _____ DESIGNATED OPERATOR _____

DATE ORIGINAL MINE PLAN SUBMITTED _____ DATE ORIGINAL MINE PLAN APPROVED _____

DATE MODIFIED MINE PLAN SUBMITTED _____ DATE MODIFIED MINE PLAN APPROVED _____

IF APPROVED PLAN IS PENDING MODIFICATION, GIVE BRIEF DESCRIPTION OF MODIFICATION: _____

DATE ORIGINAL EXPL. PLAN SUBMITTED _____ DATE ORIGINAL EXPL. PLAN APPROVED _____

DATE MODIFIED EXPL. PLAN SUBMITTED _____ DATE MODIFIED EXPL. PLAN APPROVED _____

BLM INSPECTOR(S) AND TITLES(S) George R. Tetreault, Jr., Mining Engineer; Brian Lloyd, Volunteer; John Andrews, E.S.

SURFACE MANAGEMENT AGENCY FOR TRACT(S) Bureau of Indian Affairs

NAME, TITLE, AND OFFICE OF SMA PERSONNEL PARTICIPATING IN INSPECTION None.

NAME, TITLE, AND OFFICE OF OSM OR REGULATORY AUTHORITY PERSONNEL PARTICIPATING IN INSPECTION None

NAME, TITLE, AND OFFICE OF COMPANY REPRESENTATIVE(S) PARTICIPATING IN INSPECTION Norm Derks

HOURS OF OFFICES TIME (PRE-INSPECTION) PREPARING FOR INSPECTION 0

HOURS OF OFFICES TIME (POST-INSPECTION) REPORTING ON INSPECTION 1

TOTAL TRAVEL TIME 2.0 TOTAL OFFICE TIME 1

WAS A CONDITION OF NONCOMPLIANCE ENCOUNTERED DURING INSPECTION? / / YES / XX / NO
IF YES, PREPARE NONCOMPLIANCE REPORT

WAS AN UNDESIRABLE EVENT ENCOUNTERED DURING INSPECTION? / / YES / XX / NO
IF YES, PREPARE UNDESIRABLE EVENT REPORT

PERSONNEL RESPONSIBLE FOR CONDUCTING INSPECTION George R. Tetreault
George R. Tetreault, Jr.

Lease -8396

All reclamation has been completed. All exploration drill sites have been reclaimed. The road constructed on Haystack Mountain was reseeded and blocked. The old Federal Mine was operated on the site prior to leasing to TEDCO. There were two open adits which TEDCO agreed to reclaim. They did an excellent job of blocking and reclaiming the two adits and should be commended. Both of the former mine sites are in the range of 100-200 uR/hr. The Southwest mine site has an allottee's home on it. In the area of the two adits are hotspots that range 200-400 uR/hr. On the site of an old ore storage pad, there is a spot measuring 480 uR/hr. On the roads there are numerous hotspots between 70-100 uR/hr. In some places it looks like the company operating the mine used ore/waste to grade the roads.

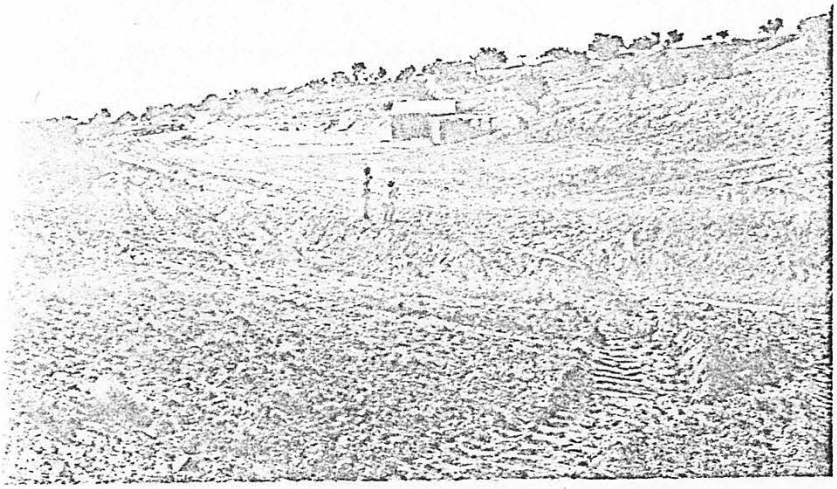
Lease -5681 Claims

All reclamation has been completed. All exploration drill sites have been reclaimed. The road constructed on Haystack Mountain was reseeded and blocked.

Tess 1-10

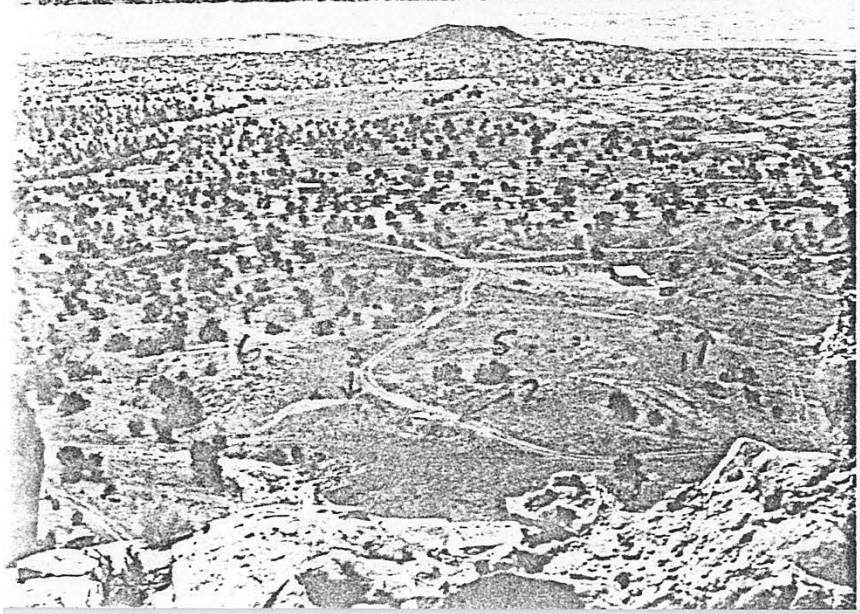
The roads constructed for exploration on these claims have been reseeded and blocked. All drill sites reclaimed.

Will recommend release of these leases to BIA. Also recommend that the BIA have a radiation study done on Lease -8396 in order to determine what future reclamation should be done and which areas are safety hazards and should be avoided by the allottees.



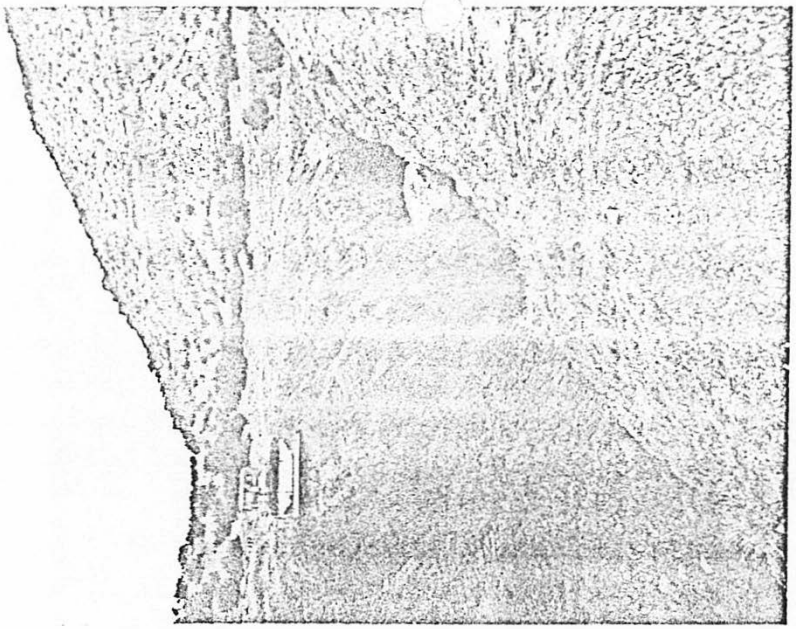
Looking east across the reclaimed main adit site

The reworked collapsed stope area



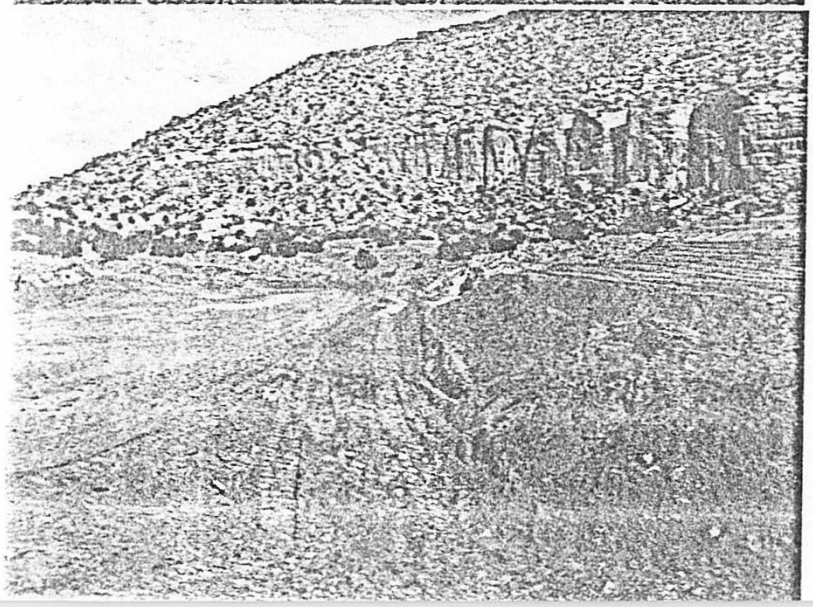
The site of the old Federal Mine:

1. Main adit 2. Ore haul adit
3. Tipel 4. Collapsed stope area
5&6. Old ore pad & waste areas



The main adit of the old Federal Mine

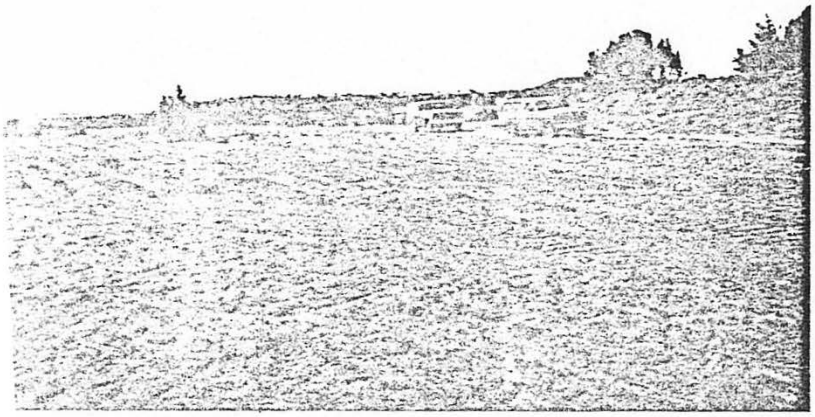
Reclamation of the main adit



Fully reclaimed adit

The ore haulage adit

The reclaimed tipel and or haulage adit



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
3550 Pan American Freeway, N.E.
P.O. Box 6770
Albuquerque, New Mexico 87107

IN REPLY REFER TO
TEDCO -5681

RECEIVED
1985 JUL 25 PM 2:10
AREA DIRECTOR, NAVAJO AREA OFFICE

ARPMO
ASST.
MINERALS dwm
CODE COMPL.
APPRAISALS
ENG. SEC.
FILE

JUL 23 1985

Memorandum

To : Area Director, Navajo Area Office, BIA

From : Area Manager, Rio Puerco Resource Area, BLM

Subject: Navajo Allotted Uranium Lease N00-C-14-20-5681, Todilto Exploration and Development Corporation

An inspection of the subject lease was conducted May 1, 1985, and was found to be properly abandoned. Accordingly, there is no objection to the relinquishment of these leases and release of the lessee bonded liability.

Enclosure (Inspection Report)

cc: Superintendent, ENA, BIA

JUL 26 1985

TODILTO

EXPLORATION AND DEVELOPMENT CORPORATION

G. WARNOCK
PRESIDENT

H.B. (CHICK) WARNOCK
SENIOR VICE PRESIDENT

V. MONDRAGON
VICE PRESIDENT/CONTROLLER

LEASE COMP
APPRAISAL
BUS. LIC.
BR. SEC.
FILE

February 20, 1985

Mr. Thomas Lynch
Real Property Management
Bureau of Indian Affairs
Navajo Area Office
Window Rock, AZ 86515

RE: B.I.A. Lease #N00-C-14-20-5681
N½ N½ Section 13, T13N, R11W

Dear Mr. Lynch:

On reviewing our land holdings in the Grants area we have decided to formally abandon the above referenced lease.

No additional exploration work has been performed since that already reported to B.I.A. in our 1984 Annual Operations Report.

Sincerely,

N.J. Dircks
Exploration Manager

NJD:bm

RECEIVED
FEB 21 1985
NAV... OFFICE

3810 ACADEMY PARKWAY SOUTH N.E., ALBUQUERQUE, NEW MEXICO 87109. (505) 345-8391

STATEMENT TO ACCOMPANY RELEASE

The undersigned Todilto Expl. & Dev. Corp. Lessee (Assignee), in a certain uranium mining lease executed by Brown Vandever, lessor, in connection with the release, relinquishment, and surrender of all right, title, and interest in and to the foregoing lease on the following described land, to wit: N½N½

of Sec. 13 T. 13N R. 11W, containing 160 acres, more or less, hereby furnishes the following information with respect to conservation and protection of the property described herein:

1. Number of drill holes made by lessee. 105 for total of 20,044 ft.

2. (a) Have all drill holes on lands surrendered been properly plugged and abandoned, including holes drilled by lessee and holes drilled prior to acquiring lease rights, if obtained by assignment? Yes

   (b) Has drilling information, including a drill hole location map, been furnished to the U. S. Geological Survey? Yes

3. (a) Has the surface of the land been restored to its original condition insofar as practicable? Yes - 8,000 ft. of drill access road (2.75 acres) - tilled & seeded; entrance to roads blocked.

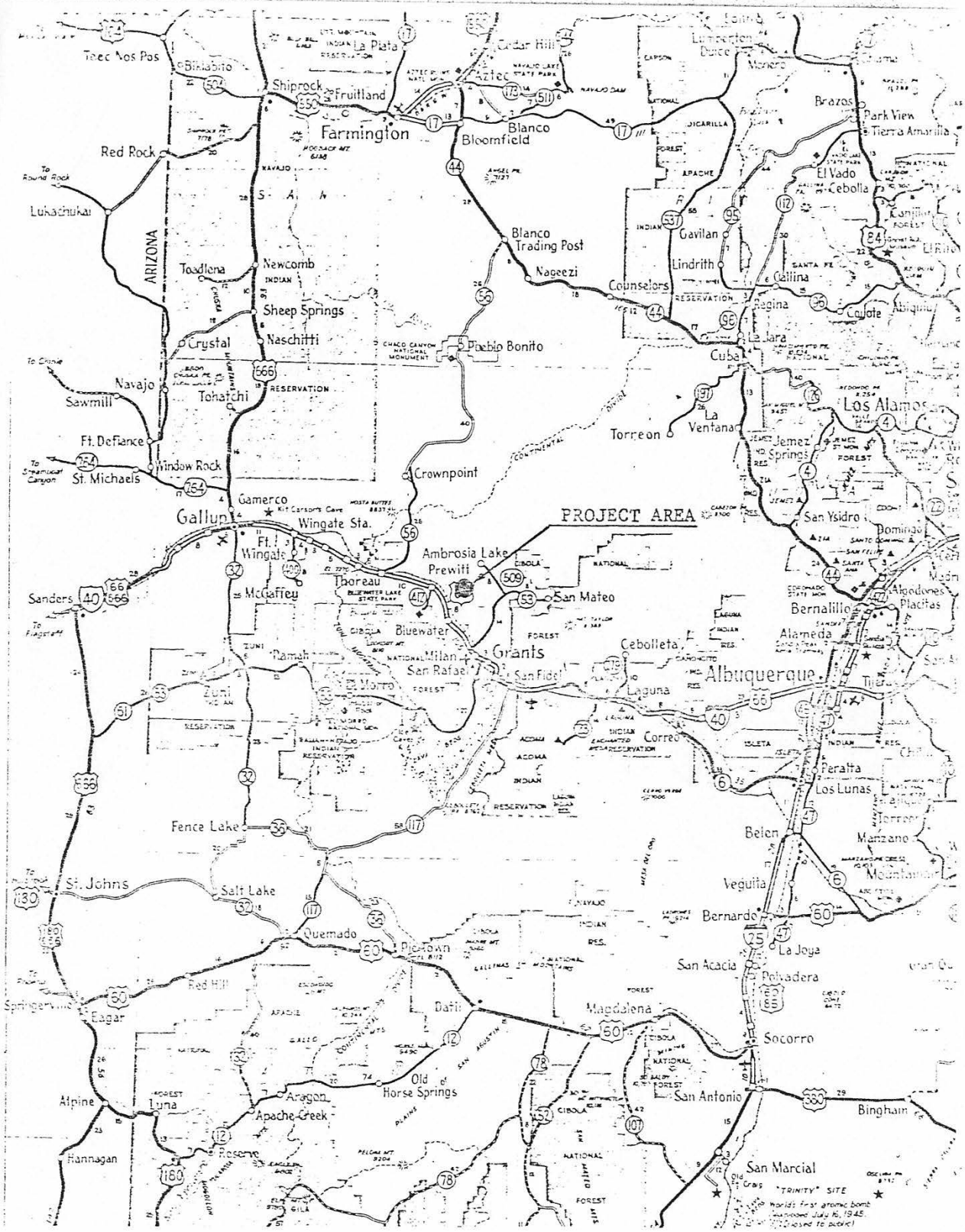
   (b) Have shaft and tunnel entrances to underground workings, if any, been sealed to the satisfaction of the U. S. Geological Survey? N/A - none on lease

4. Has the lease been recorded? Yes

5. Have the lessors asserted any unliquidated or unsettled claim against the lessee or assignee's operations on the lands described above? No, and none pending or unsettled.

Date April 19 1985

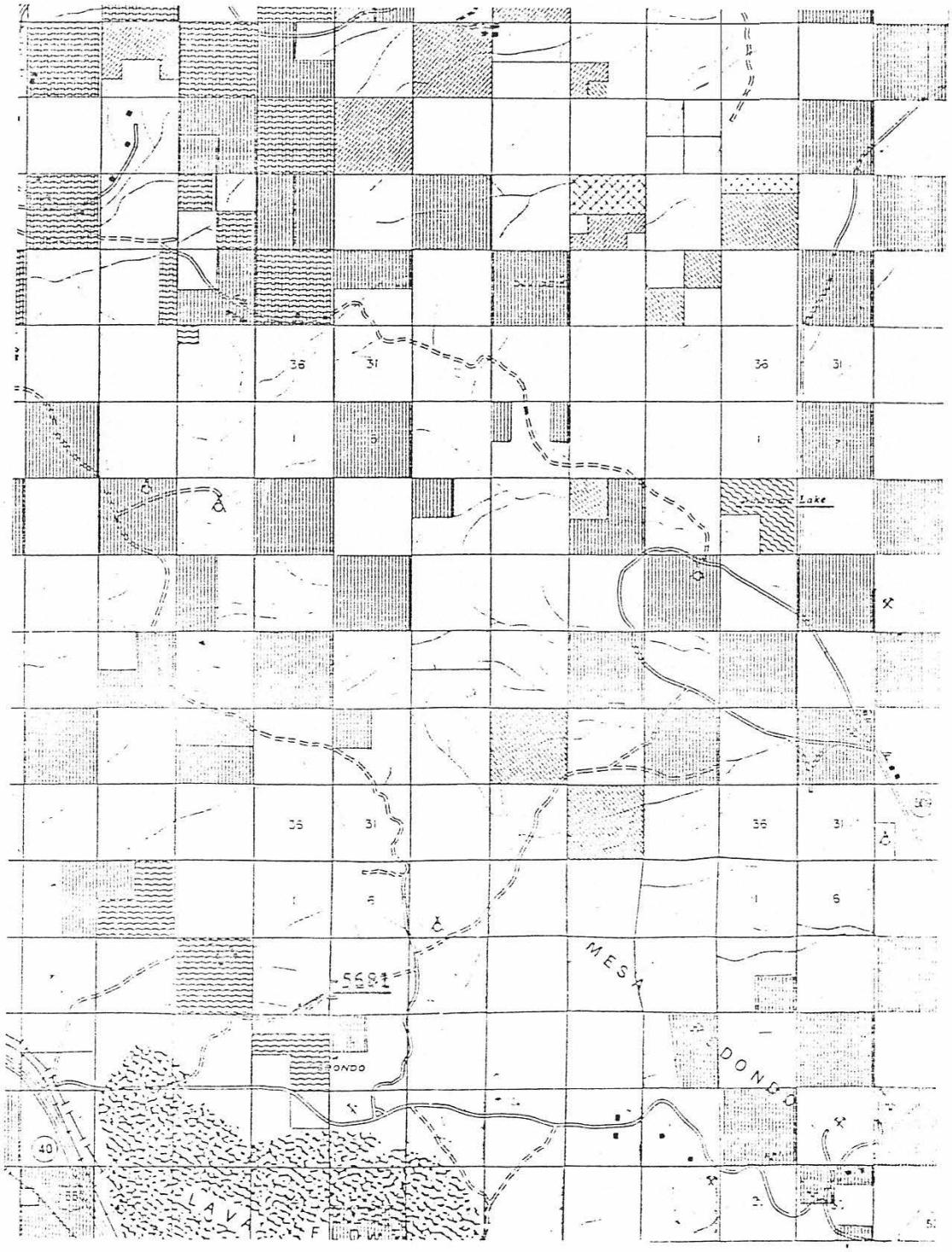
Lessee or record holder
George F. Warnock, President



MAP A

PROJECT LOCATION MAP

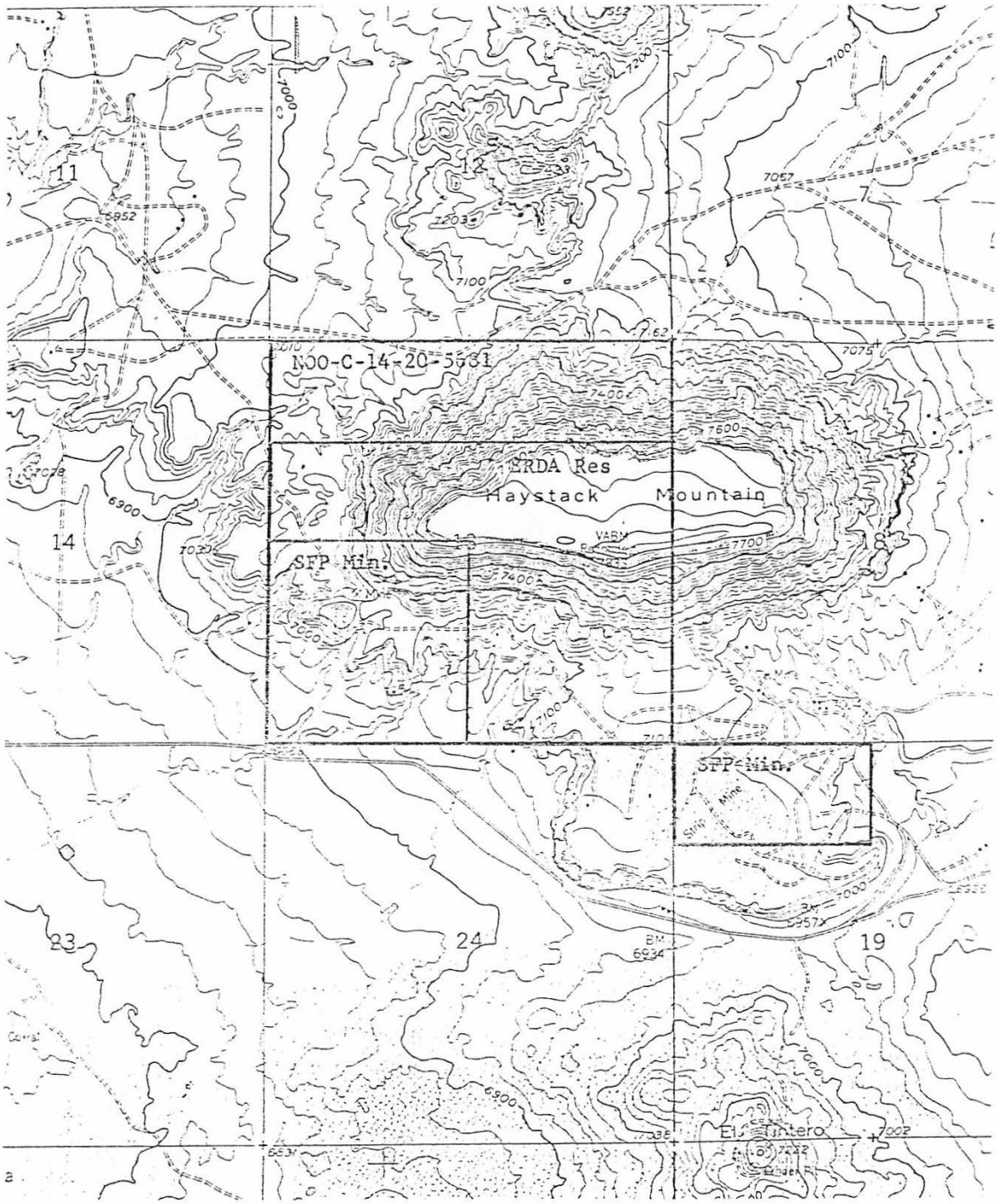
MAP B



MAP B

LEASE LOCATION MAP

MAP C



MAP C

TOPOGRAPHY MAP