700

Murphy
Ellis

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

JAN 18 1956

Mr. A. J. Jacobsen, Director
and Secretary-Treasurer
Mack-Long Uranium Corporation
Post Office Box 12188
Houston, Texas

Re: Docket No. DMEA-3952 (Uranium)
Mack-Long Group, et al.
Fremont County, Wyoming

Dear Mr. Jacobsen:

This is in response to your letter of January 13, 1956, in which you requested that the above-docketed application be held in abeyance for six months to enable your Corporation to perform certain work and submit additional data.

I regret to advise you that, since the present application was denied by our letter of January 9, 1956, it cannot be reactivated. However, as stated in the letter, we will be pleased to consider a new application if additional work on your part discloses evidence which might alter our previous conclusion in regard to the subject property.

The work which you mention your Corporation proposes to do in the near future, in our opinion, should provide sufficient information to judge the merits of your property.

The lack of specific data relating to the above-docketed application was called to the attention of Mr. J. E. Rosen, your representative in Washington, by our commodity engineers.

Enclosed are six copies (two extra) of application form MF-103. If you need additional forms or if we can assist you in any other way, please feel free to call upon us.

Sincerely yours,

E. O. Mitterdorf

Administrator

Enclosures

cc to: Docket
Admr.'s Reading File
Mr. Murphy
Code 700
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

FMMurphy/izm 1-17-56
cc: Region III (2)

R.S.B.

1-16-56 [illegible]

MACK-LANG URANIUM CORPORATION

P. O. BOX 12188

HOUSTON, TEXAS.

RECEIVED
JAN 16 1956

January 13, 1956.

RE: DMEA APPLICATION
MACK-LANG URANIUM CORPORATION
DATED: July 28, 1955.

DMEA-3952

United States Department of the Interior,
Defense Minerals Exploration Administration,
Washington, D. C.

Gentlemen:

We hereby request that action be deferred, for a period of six months, on the D. M. E. A. Application filed by this Corporation.

The Corporation is at the present time in the process of reorganizing, and for your information we are listing the individuals who have been elected to serve as Directors and Officers of the Company.

Mr. G. A. (Neal) Pickett, Director and President,
217 Avondale,
Houston, Texas.

Mr. Herbert W. Vogan, Director and Vice-President,
2355 Dunstan,
Houston, Texas.

Mr. M. N. Stafford, Director and Vice-President,
Jennings, Louisiana.

Mr. A. J. Jacobson, Director and Secretary-Treasurer
4511 Beech St.,
Bellaire, Texas.

In reviewing the application, the Directors and Officers are of the opinion that sufficient data is not presently available for proper consideration of the application, and are formulating the following plan to compile the required information.

A contour map, which was started in the spring of 1955, will be completed as soon as weather conditions permit. It is felt that this map is essential in order to locate the core holes drilled and to obtain geological information concerning the ancient river bed on which the claims were filed.

After completing the contour map, we plan to core drill, on a grid system, one or two of the claims in order to produce a justified evaluation of the claims. After these two operations have been completed we feel that we may have the data for the processing of the application.

Any suggestions, comments or recommendations which you can give us in this regard, or any procedures to follow, will be welcomed, appreciated and carried out.

Respectfully yours,

MACK-LANG URANIUM CORPORATION

BY: A. J. Jacobson
Secretary-Treasurer.

Surname copy

700

Murphy
Ellis
Guhan
Kilsgaard
Selfridge
Fyfrison

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

JAN 9 1956

Mack-Lang Uranium Corporation
Post Office Box 224
Riverton, Wyoming

Re: Docket No. DMEA-3952 (Uranium)
Mack-Lang group, et al.
Fremont County, Wyoming

Gentlemen:

Reference is made to your application for Government aid in an exploration project on the above-named property.

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

Careful study of all our information, although noting considerable sub-ore grade uranium mineralization on your property, indicates to us that the probability of discloseing significant ore reserves is not sufficiently promising to justify Government participation in an exploration program. We regret to advise you that, under these circumstances, your application for exploration assistance is denied. However, this denial is made without prejudice. If future limited drilling on your property reveals evidence which could materially alter this opinion, be assured we will be pleased to consider a new application.

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

Sincerely yours,

C. O. Mitchell

Administrator

FMMurphy/gla
1-3-56
cc to: Admr.'s Reading File
Operating Committee
Docket
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

Code 700
Mr. Murphy
DMEA Field Team, Region III (2)

1-5-56 lgm

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

January 4, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

From: John E. Crawford, Bureau of Mines Member
Uranium Commodity Committee

Subject: Supplemental Field Report, DMEA Docket 3952, Mack-Lang Uranium Corporation, Mack-Lang group, et al., Fremont County, Wyoming

I have reviewed the supplemental field report on the Mack-Lang Uranium Corporation, DMEA Docket 3952, dated December 27, 1955 and received in this office January 3, 1956. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The Chairman of the Operating Committee in a letter dated December 9, 1955, to the Field Team concluded that insufficient data were included in the field examiners' report to indicate a denial of the application for exploration assistance.

A memorandum of December 27 from the Field Team to the Chairman of the Operating Committee indicates that the applicant has not presented sufficient evidence of exploration targets to warrant DMEA consideration and that all the available information was contained in the examination report. The Field Team again recommend denial of the application for exploration assistance.

We reconcur in the recommendation of the Field Team in denial of the application.

The report is being forwarded to the Chief, Division of Minerals, in accordance with the routing slip attached thereto.

John E Crawford

John E. Crawford

RECEIVED
JAN 5 1956

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

January 4, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

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Uranium Commodity Committee

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BUREAU OF MINES
WASHINGTON 25, D. C.

January 4, 1956

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John E. Crawford

RECEIVED
JAN 5 1956

700

Murphy
Ellis

UNITED STATES
DEPARTMENT OF THE INTERIOR

DOCKET COPY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

WASHINGTON 25, D. C.

January 3, 1956

Summary of Proposed Project

Object: Denial of application for exploration aid.

Docket No.: DMEA-3952

Commodity: Uranium

Applicant: Mack-Lang Uranium Corporation
R. H. Richardson, President
P. O. Box 224
Riverton, Wyoming

Property: Owners of claim groups in secs. 30, 31, 32, and 34, T. 28 N., R. 93 W., and secs. 3, 5, 6, 7, 8, 17, 18, 19, and 30, T. 27 N., R. 93W., and in secs. 24, 25, 32, and 33, T. 27 N., R. 94 W., and secs. 35 and 36, T. 29 N., R. 101 W., comprising 134 claims.

Date of application: July 28, 1955 - received August 22, 1955.

Referred to Field Team: September 2, 1955.

Field Team Report: Received December 2, 1955.

Washington letter to Field Team requesting more information to substantiate its denial - December 9, 1955.

Field Team's response, dated December 27, 1955.

Amount of application: $430,225.00.

Work Proposed and Costs:

Core drilling, 4,020 holes totaling 160,800 feet @ $1.00/ft.	$160,800.00	
Assaying, 40200 samples @ $3.00 each	120,600.00	
Labor and supervision	46,200.00	
Engineering crew	12,925.00	
Operating materials & supplies	7,700.00	
New buildings, improvements and installation	24,000.00	
Operating equipment (rental)	38,000.00	
Miscellaneous	10,000.00	
Contingencies	10,000.00	
Total Estimated Cost		$430,225.00

Excerpts from Field Team report:

The Field Team recommends the subject application be denied, perhaps without prejudice.

Uranium mineralization occurs at intervals in the lower 200 feet of the Tertiary Wasatch formation. Radioactivity is associated with thin seams of carbonaceous material and dark grey clayey siltstones. Conglomeratic sandstone above and below these seams is also radioactive. Exposures of this material were found in shallow backhoe trenches, but no uranium minerals were visible.

The application submitted indicated that considerable exploration work had been completed on the subject property by drilling, trenching, radiometric surveys, etc. However, during the field examination the Applicant was unable to furnish specific information regarding drill-hole logs, location of holes, and collar elevations. Maps showing trench and drill-hole locations were not available. The chemical analyses submitted were meaningless because the locations of holes and trenches from which the samples were taken could not be determined.

The Field Team concluded that possibly 200,000 tons of sub-ore ($\geq$ 0.05 percent U_3O_8) might occur on the property, but found no indications of material of ore grade.

Commodity Members' comments:

U. S. Geological Survey - N. E. Nelson, December 6, 1955.

Concurs in Field Team's recommendation to deny the subject application.

U. S. Bureau of Mines - J. E. Crawford, December 8, 1955.

Concurs in Field Team's recommendation to deny the subject application.

Rare and Miscellaneous Metals Division - F. M. Murphy, January 3, 1956.

On December 9, 1955, Washington requested the Field Team to submit additional data to substantiate their recommendation to deny the application. In response to this request, the Field Team in its memorandum, dated December 17, covered the points raised. Therefore, this Division concurs in recommending denial of the subject application.

The field examiners could find no evidence of the channels mentioned by the Applicant. Therefore, it is recommended that the subject application be denied without prejudice, and if limited drilling by the Applicant indicates such ore-bearing channels do exist, then a new application might be considered.

Ernest Wm. Ellis

Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

1/5/56/gla

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

RECEIVED
DEC 29 1955

224 New Customhouse
Denver 2, Colorado

December 27, 1955

Memorandum

To: Chairman, Operating Committee, DMEA

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA-3952 (Uranium), Mack-Lang Uranium Corporation, Mack-Lang group, et al., Fremont County, Wyoming

Enclosed are the original and three copies of a joint memorandum report in reply to your letter of December 9, 1955 on the subject docket.

We believe that the applicant has presented insufficient evidence of significant exploration targets to warrant DMEA consideration of the proposed exploration program, or any modification of it. We further believe that exploration of deposits which contain uranium in amounts appreciably less than 0.1% is not warranted, even when these deposits may contain several hundred thousand tons of this low-grade material.

Denial of the subject application for exploration assistance, perhaps without prejudice, is again recommended.

E. N. Harshman

E. N. Harshman

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE

12-4-56
(date)

IN REPLY REFER TO:
Date Rec'd.

DEC 23 1955

BUREAU OF MINES
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Exploration Administration
Denver Federal Center
Denver, Colorado

December 22, 1955

RECEIVED
DEC 29 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw
E. N. Harshman

From: M. H. Bergendahl
Carl Belser

Subject: DMEA Docket 3952 (Uranium), Mack-Lang Uranium Corporation, Fremont County, Wyoming.

The chairman of the Operating Committee, in a letter dated December 9, 1955, concludes that insufficient data were included in the field examiners' report to indicate a denial of the subject application for exploration assistance. In this regard, Mr. Selfridge asked a number of specific questions to be answered by the field examiners.

The tenor of the reviews of this application, made in Washington before the field examination, was that the applicant presented little justification for an exploration program on his claims. Mr. Ralph Cushman, vice president in charge of exploration, accompanied the examiners in the field. He furnished very little information additional to what is contained in the application. All the facts and data observed on the claims by the examiners and presented to the examiners by Mr. Cushman are contained in the report. All the assay data from drilling furnished by Mr. Cushman are entered on pages 7, 8, and 9 of the examiners' report. The locations of the samples submitted for assay were copied by the examiner from the assay sheets submitted by Mr. Cushman. As stated in the report, these assays are useless because Mr. Cushman could locate but one hole in the field (and the assay data on this hole was incomplete). All the other holes can be located only with respect to the claims on which they were drilled. The location within claim boundaries of any hole drilled on that claim is impossible to determine. The locations of certain samples such as one identified on the assay sheet as Profile X, Well 1 (p. 9 of examiners' report) is as much a mystery to the examiners as to the readers of

Reviewed by
DMEA OPERATING COMMITTEE
1-4-56
(date)

this memorandum. It should be mentioned here that Mr. Cushman presented the assay sheets to the field team in Lander at 7:30 a.m., October 28, insisting that they be airmailed to the home office of the Mack-Lang Company that same afternoon. Mr. Cushman could give no additional information on sample locations other than that contained on the assay sheets. Mr. Cushman left for Houston at about 8:30 a.m., October 28.

At the time of the examination, Mr. Cushman stated that no map or maps existed showing locations of exploratory work done on the claims. No geologic work of any nature was done by or for the applicant.

Answers to questions by Mr. Selfridge in his letter of December 9, 1955, are as follows:

1. Yes. All claims were examined with the exception of the Pine Creek group. Mr. Cushman stated that no prospecting had been done on the Pine Creek group and that an examination would be of little value. There is no surface evidence on the Happy III group to indicate a channel, and the applicant could furnish no drill logs to confirm what he states "appears to have been an ancient stream bed". The stakes outlining this so-called ancient stream bed were present.

The applicant states (p. 3 of application) that the "ancient stream bed" is covered "with 24 to 36 feet of overburden". The outcrop examined on claim 19, Happy II group presented evidence, according to Mr. Cushman, of a northward extension of the invisible channel outlined by stakes in the Happy III group. The examiners found no evidence anywhere of any channel. The entire Wasatch formation is composed of lenticular sandstones, conglomerates, and thin beds and seams of silt and clay. It would take much careful surface and subsurface geologic mapping to outline a channel deposit in such lithology. It would take much more work than a few unlogged, unlocated drill holes and a single outcrop containing a lone log to convince the writers of the existence of a channel extending from the Happy III group northward several miles to the outcrop on claim 19 of the Happy II group.

2. No. In the opinion of the examiners, the applicant could not produce nor could the examining team find sufficient geologic data to justify any modification of his proposed program. All available geologic data is contained in the examiners' report.

3. Based on recent discussions with representatives of the Denver Exploration Branch of the U. S. Atomic Energy Commission, the examining team views with apprehension any exploration of mineralized areas containing no more than an estimated 0.05 percent U_3O_8, even though the material lies within a few tens of feet below the surface.

The Mack-Lang up-grader is still experimental and has not proved its efficiency. Mr. Cushman had no information regarding the percent recovery of this up-grader. He could present no data to confirm his estimate that the proposed exploration might discover "more than a million tons of ore, mostly low-grade--from .03 to .11 percent Uranium Oxide".

The examing team has submitted in its report all available information concerning the Mack-Lang claims. It is impossible, with the sketchy data furnished by the applicant and that obtained during the field examination to calculate accurately the tonnage of low grade material underlying the claims. The examining team reiterates that probably several hundred thousand tons of sandstone containing uranium in quantities less than .1 percent U_3O_8 is present near the surface on these claims.

M. H. Bergendahl

M. H. Bergendahl
Geologist

for John F. Shaw

Carl Belser
Mining Engineer

12-30-55 [illegible]

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

RECEIVED
DEC 29 1955

224 New Customhouse
Denver 2, Colorado

December 27, 1955

Memorandum

To: Chairman, Operating Committee, DMEA

From: Acting Executive Officer, DMEA Field Team, Region III

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Denial of the subject application for exploration assistance, perhaps without prejudice, is again recommended.

E. N. Harshman

E. N. Harshman

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
1-4-56

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA
Date Rec'd.
DEC 23 1955
BUREAU OF MINES
Denver, Colorado

Defense Minerals Exploration Administration
Denver Federal Center
Denver, Colorado

December 22, 1955

Memorandum

RECEIVED
DEC 29 1955

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw
E. N. Marshman

From: M. H. Bergendahl
Carl Belser

Subject: DMEA Docket 3952 (Uranium), Mack-Lang Uranium Corporation, Fremont County, Wyoming.

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Geologist

Carl Belser
Mining Engineer

12/16/55 gla

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

RECEIVED
DEC 16 1955

December 13, 1955

214 New Customhouse
Denver 2, Colorado

Memorandum

To: J. F. Shaw
E. N. Harshman

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3952 (Uranium), Mack-Lang Uranium Corporation, Mack--Lang group, et al., Fremont County, Wyoming

Enclosed is a copy of a letter from the Chairman of the Operating Committee dated December 9, 1955 on the subject docket. Will you please submit to this office the answers to the questions the Chairman of the Operating Committee has raised.

E. N. Harshman

E. N. Harshman

Enclosure
HMC:ab

cc: Chair. Op. Comm. (2)
Docket 3952
Chron.

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

RECEIVED
DEC 16 1955

December 13, 1955

Box New Customhouse
Denver 2, Colorado

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Enclosure
HMC:ab

cc: Chair. Op. Comm. (2)
Docket 3952
Chron.

Surname copy

700

Murphy
Ely
Selfridge
Johnson
Whitenburg

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

DEC - 9 1955

Mr. W. M. Traver
Executive Officer
DMEA Field Team, Region III
22h New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-3952 (Uranium)
Mack-Lang Uranium Corporation
Mack-Lang group, et al.
Fremont County, Wyoming

Dear Mr. Traver:

This is to acknowledge receipt of the "Joint Engineering and Geological Report" relating to the captioned docket, also the memorandum, dated November 30, 1955, in which the Field Team concurs in the field examiners' recommendation that the subject application should be denied.

In reviewing the application and the above-mentioned report it appears that the field examiners have not included sufficient data in their report with which to fully indicate a denial, namely:

1. Was the Happy III Group, where the Applicant mentions that stakes were driven to outline an ancient channel, examined?

2. Under "Introduction and Summary," the last paragraph reads: "The examining team could find no reason for an extensive drilling program at this time and recommend that the application be denied." In this regard, was a modified program contemplated or discussed with the Applicant?

3. Under the same heading as the above, the fourth paragraph reads: "The field examination confirmed the presence of large tonnages of low-grade material, but no evidence of ore was seen. The value of the low-grade material depends upon the successful operation of an upgrader, which the company is experimenting with in Texas. If successful, large quantities of this low-grade material occurring on or near surface may be commercial."

R.G.G.

In regard to the above, the following questions arise:

1. Do the field examiners have information which would lead them to believe that large deposits of low-grade uranium ore might possibly be discovered on the subject property by a well-planned exploration project (for example, deposits totaling 2,000,000 tons of 0.05 percent U_3O_8)? Although not commercial, this material would have a nominal value of 75 cents per ton (not including premiums, etc., which would double this value), or a total value of $1,500,000. If this tonnage and grade of material could be discovered, it is quite possible a means of up-grading the material to commercial grade would be found. In any case, even though unmined, such deposits would constitute a significant reserve for an emergency period, as it appears the deposits could be quickly mined by open pits.

We would appreciate the Field Team's opinion and answers to the above. In the meantime, we will withhold action in regard to the denial of the subject application.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

APPROVED:

P. F. Yopes (GCS)

Member, Bureau of Mines

Thor H. Kiilsgaard (GCS)

Member, Geological Survey

FMMurphy/gla
12-8-55

cc to: Admr.'s Reading File
Operating Committee
Docket
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA
Code 700
Mr. Murphy

12/9/55 gfa

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

RECEIVED
DEC - 9 1955

December 8, 1955

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

From: John E. Crawford, Bureau of Mines Member
Uranium Commodity Committee

Subject: Report of Examination, DMEA Docket 3952, Mack-Lang Uranium Corporation, Fremont County, Wyoming

I have reviewed the report of Mack-Lang Uranium Corporation, DMEA Docket 3952, dated November 30 and received in this office December 5. I have also discussed it with Jack Kratchman, Washington representative of the Atomic Energy Commission.

On July 29, 1955, the Mack-Lang Uranium Corporation applied for Federal assistance to explore for uranium in the Crooks Gap area of Fremont County, Wyoming. The exploration project would consist of 160,800 feet of dry drilling on 134 unpatented claims at a total estimated cost of $430,225.00.

A DMEA field examination of subject property was scheduled for and conducted on October 27, 1955. The examination confirmed the presence of large tonnages of low-grade material, but did not reveal evidence of uranium ore. The examiners further state that although the assays furnished by the applicant bear hole and claim numbers, it is impossible to determine the location with respect to each other of any two or more holes on the same claim. Thus the assay data are worthless to determine the extent and attitude of any probable ore body.

Inasmuch as there is a large amount of low-grade material apparently available, the problem at hand is metallurgical rather than explorational, and the examining team recommends that the application be denied.

We concur in the recommendation for denial of the application.

The report is being forwarded to the Chief, Division of Minerals, in accordance with the routing slip attached thereto.

John E Crawford
John E. Crawford

UNITED STATES
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BUREAU OF MINES
WASHINGTON 25, D. C.

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BUREAU OF MINES
WASHINGTON 25, D. C.

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DEC - 9 1955

December 8, 1955

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From: John E. Crawford, Bureau of Mines Member
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The report is being forwarded to the Chief, Division of Minerals, in accordance with the routing slip attached thereto.

John E. Crawford

12/6/55 gla

IN REPLY REFER TO:

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

December 6, 1955

Re: DMEA 3952
Mack-Lang Uranium Corp.
Mack-Lang Groups
Fremont County, Wyoming
$420,325.00 - Uranium

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

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

Subject: Review of Field Team report.

The applicant requested assistance in drilling a large deposit of low-grade detrital material on which considerable drilling has been done and from which a shipment has been made.

The examiners found that low-grade material exists on the claims and the applicant's estimate of large tonnages is substantially correct, but found no indications of material of ore grade. Until a process for upgrading the known material is devised no good purpose would be served by more drilling.

The conclusions appear to be justified, and I concur with the recommendation that the application be denied.

N. E. Nelson

N. E. Nelson

RECEIVED
DEC - 6 1955

IN REPLY REFER TO:

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

December 6, 1955

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M. E. Nelson

M. E. Nelson

MENelson:iml
G-12/6/55

cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641
J. O. Mosted, 3210

RECEIVED
DEC - 6 1955

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

December 6, 1955

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N. E. Nelson

N. E. Nelson

NENelson:iml
G-12/6/55

cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641
J. O. Kosted, 3210

RECEIVED
DEC - 6 1955

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

December 6, 1955

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Mack-Lang Uranium Corp.
Mack-Lang Groups
Fremont County, Wyoming
$420,325.00 - Uranium

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N. E. Nelson

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NENelson:iml
G-12/6/55

cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641
J. O. Rosted, 3210

RECEIVED
DEC - 6 1955

12/6/55 gla

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

November 30, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Joint Report of Examination, DMEA Docket 3952, (Uranium), Mack-Lang Uranium Corporation, Fremont County, Wyoming

Enclosed are the original and three copies of the report pertaining to the above application.

The field examiners recommend that the application be denied, and we concur in this recommendation.

E. N. Harshman

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

Enclosures

RECEIVED
DEC - 2 1955

Reviewed by
DMEA OPERATING COMMITTEE
12-5-55
(date)

RECEIVED
DEC - 8 1955

Building 20
Denver Federal Center
Denver 2, Colorado
November 22, 1955

REGION III

Memorandum

TRANSMITTED
NOV 30 1955

To: Executive Officer, DMEA Field Team, Region III

From: E. N. Harshman
John F. Shaw

Subject: Docket No. DMEA 3952, Mack-Lang Uranium Corporation, Fremont County, Wyoming

Enclosed are the original and 9 copies of a joint engineering and geologic report by Carl Belser, Mining Engineer, and Max Bergendahl, Geologist, covering Docket No. 3952.

The Mack-Lang Uranium Corporation applied for exploration assistance in the amount of $430,225.00 to explore 134 unpatented claims in the Crooks Gap area in Wyoming, by 160,000 feet of dry drilling. The field examination was made on October 27, 1955 by Carl Belser and Max Bergendahl. The field examination confirmed the presence of large tonnages of low-grade material. The value of the low-grade material depends on the successful operation of an upgrader, which the company is experimenting with in Texas. To date, upgraders have not been successful. The matter was discussed with D. L. Everhart, Acting Chief, Division of Raw Materials, Denver Exploration Branch, Atomic Energy Commission, who stated that the AEC has no interest in material containing less than 0.10 percent U_3O_8. The large amount of low-grade material near the surface presents a metallurgical problem and no exploration is warranted. It is recommended that the application be denied.

E. N. Harshman

E. N. Harshman
Member Field Team

John F. Shaw

John F. Shaw
Supervising Mining Engineer

JFS/mw

cc 9
E. N. Harshman
DMEA 3952
Chron.

Reviewed by
DMEA OPERATING COMMITTEE
12-5-55
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

JOINT REPORT OF EXAMINATION BY EXAMINING TEAM
REGION III

TRANSMITTED

NOV 30 1955

DMEA 3952

MACK-LANG, HAPPY, HAPPY II, HAPPY III, WAGON WHEEL, RED DESERT, MAGPIE AND PINE CREEK GROUPS

Mack-Lang Uranium Corporation

Fremont County, Wyoming

Uranium

Joint Engineering and Geological Report

By

Max Bergendahl, Geologist
Geological Survey

Carl Belser, Mining Engineer
Bureau of Mines

November 22, 1955

Reviewed by
DMEA OPERATING COMMITTEE
12-5-55
(13302)

DMEA 3952

MACK-LANG, HAPPY, HAPPY II, HAPPY III, WAGON WHEEL, RED DESERT, MAGPIE, AND PINE CREEK GROUPS MACK-LANG URANIUM CORPORATION FREMONT COUNTY, WYOMING

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Joint engineering and geologic report — Page

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Acknowledgments 1
Location, topography and climate 2
History and production 3
Ownership and extent 3
Present status 5
    Exploration and development 5
    Mining and milling equipment and other facilities 5
Geology and Ore Deposits 5
Proposed exploration with costs 9
Conclusions and recommendations 10

ILLUSTRATIONS

Figure — Follows Page

1. Location Map, Mack-Lang, Happy, Happy II, Happy III, Wagon Wheel, Pine Creek, and Red Desert Groups, Mack-Lang Uranium Corporation, Fremont County, Wyoming DMEA 3952 2

2. Property map, Mack-Lang Uranium Corporation, Fremont County, Wyoming 2

DMEA 3952

MACK-LANG, HAPPY, HAPPY II, HAPPY III, WAGON WHEEL, RED DESERT, MAGPIE, AND PINECREEK GROUPS MACK-LANG URANIUM CORPORATION FREMONT COUNTY, WYOMING

INTRODUCTION AND SUMMARY

Mack-Lang Uranium Corporation, 2205 W. Holcombe Blvd., Houston, Texas, applied for Defense Minerals Exploration Administration assistance on July 28, 1955 to explore for uranium on its holdings in the Crooks Gap area, Wyoming, consisting of 134 unpatented claims in the Mack-Lang, Happy, Happy II, Happy III, Wagon Wheel, Red Desert, Magpie, and Pine Creek groups. Total estimated cost for this proposed exploration was $430,225.00.

A field investigation by representatives of the Geological Survey and the Bureau of Mines was made on October 27, 1955.

Uranium mineralization occurs at intervals in the lower 200 feet of the Tertiary Wasatch formation. Radioactivity is associated with thin seams of carbonaceous material and dark grey clayey siltstones. Conglomeratic sandstone above and below these seams is also radioactive.

The field examination confirmed the presence of large tonnages of low-grade material, but no evidence of ore was seen. The value of the low-grade material depends upon the successful operation of an upgrader, which the company is experimenting with in Texas. If successful, large quantities of this low-grade material occurring on or near surface may become commercial.

?

The examining team could find no reason for an extensive drilling program at this time and recommended that the application be denied.

ACKNOWLEDGMENTS

The examining team was accompanied by R. L. Cushman, vice-president

of the applicant corporation. Charles Bromley and George Holmquist, geologists of the A.E.C., Rawlins, Wyoming, and Spencer Shannon, A.E.C. geologist, Crooks Gap, were consulted regarding the area.

The memorandums of John E. Crawford, N. E. Nelson, and George C. Selfridge were noted.

LOCATION, TOPOGRAPHY AND CLIMATE

The property submitted in the application consists of 134 unpatented claims in 8 groups scattered through sections 3, 5, 6, 7, 8, 17, 18, 19, and 30, T. 27 N., R. 93 W., sections 19, 30, 31, and 32, T. 28 N., R. 93 W., sections 24, 25, 32, and 33, T. 27 N., R. 94 W., and section 35, T. 29 N., R. 101 W., of the 6th principal meridian, Fremont County, Wyoming, (figures 1 and 2).

Five of the claims, the Pine Creek group in range 101 west, are about 45 miles west of the other claims. Mr. Cushman stated that no prospecting had been done on these claims and because of a lack of exposures on them, an examination would serve no useful purpose. These claims were, therefore, not examined.

The Magpie, Happy II, and Mack-Lang groups are on a south dipping, rolling hillside and Happy, Wagon Wheel, Happy III, and Red Desert groups are on a flat plain, cut by small ravines. Elevations range from about 7700 feet on the north to about 7200 feet on the south. Vegetation is scant. The surface is dry but the water table is from 40 to 100 feet below surface.

The country, bordering on the Red Desert, is semi-arid. A 14-mile dirt road which crosses Crooks Mountain at an altitude of 8200 feet connects the property with U. S. highway 287 from whence it is 44 miles to the ore buying depot at Riverton by dirt road and 71 miles by paved road. Lander is

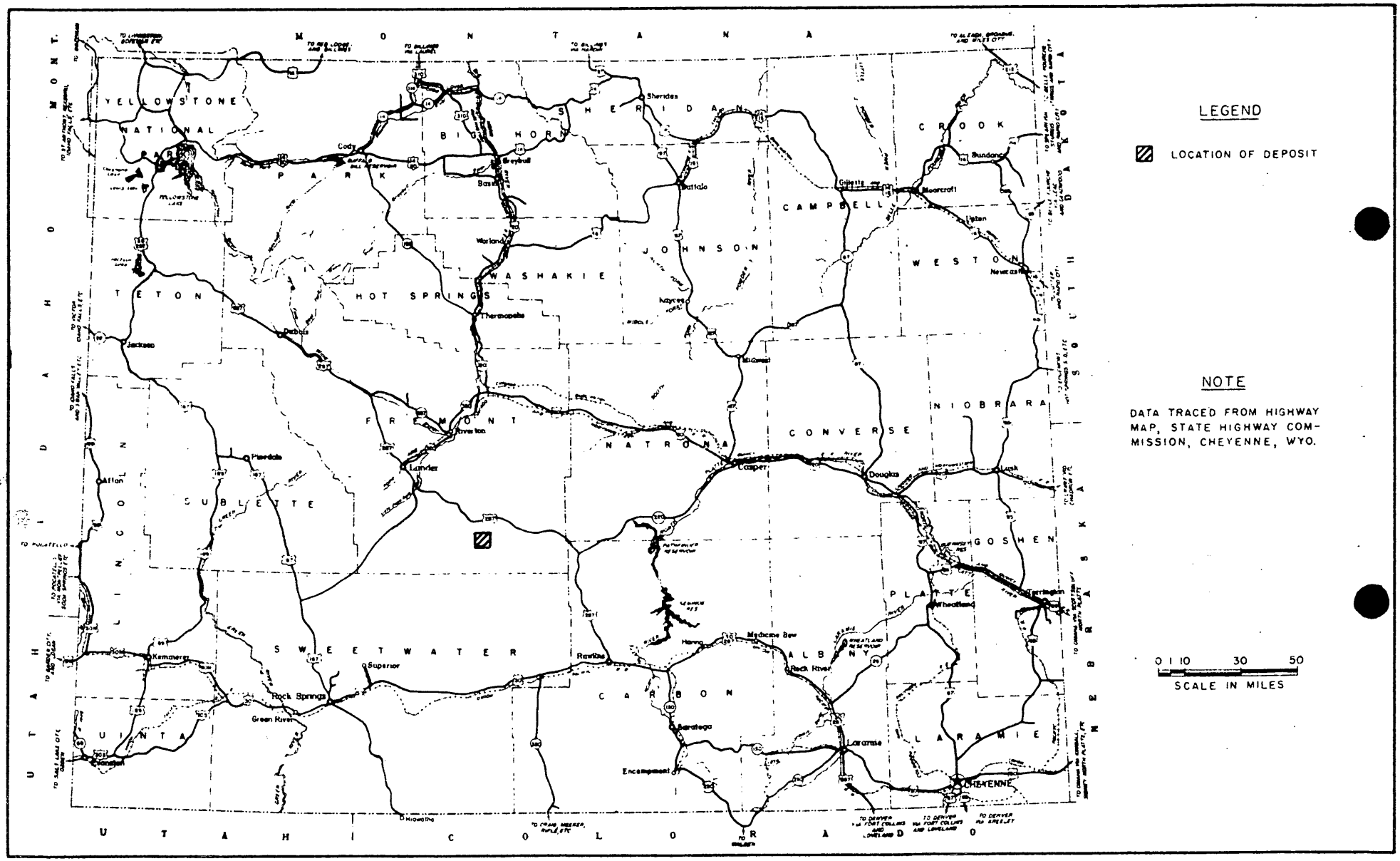

FIGURE 1 - LOCATION MAP, MACK-LANG, HAPPY, HAPPY II, HAPPY III, WAGON WHEEL, PINE CREEK, AND RED DESERT GROUPS, MACK-LANG URANIUM CORPORATION, FREMONT COUNTY, WYO. DMEA 3952

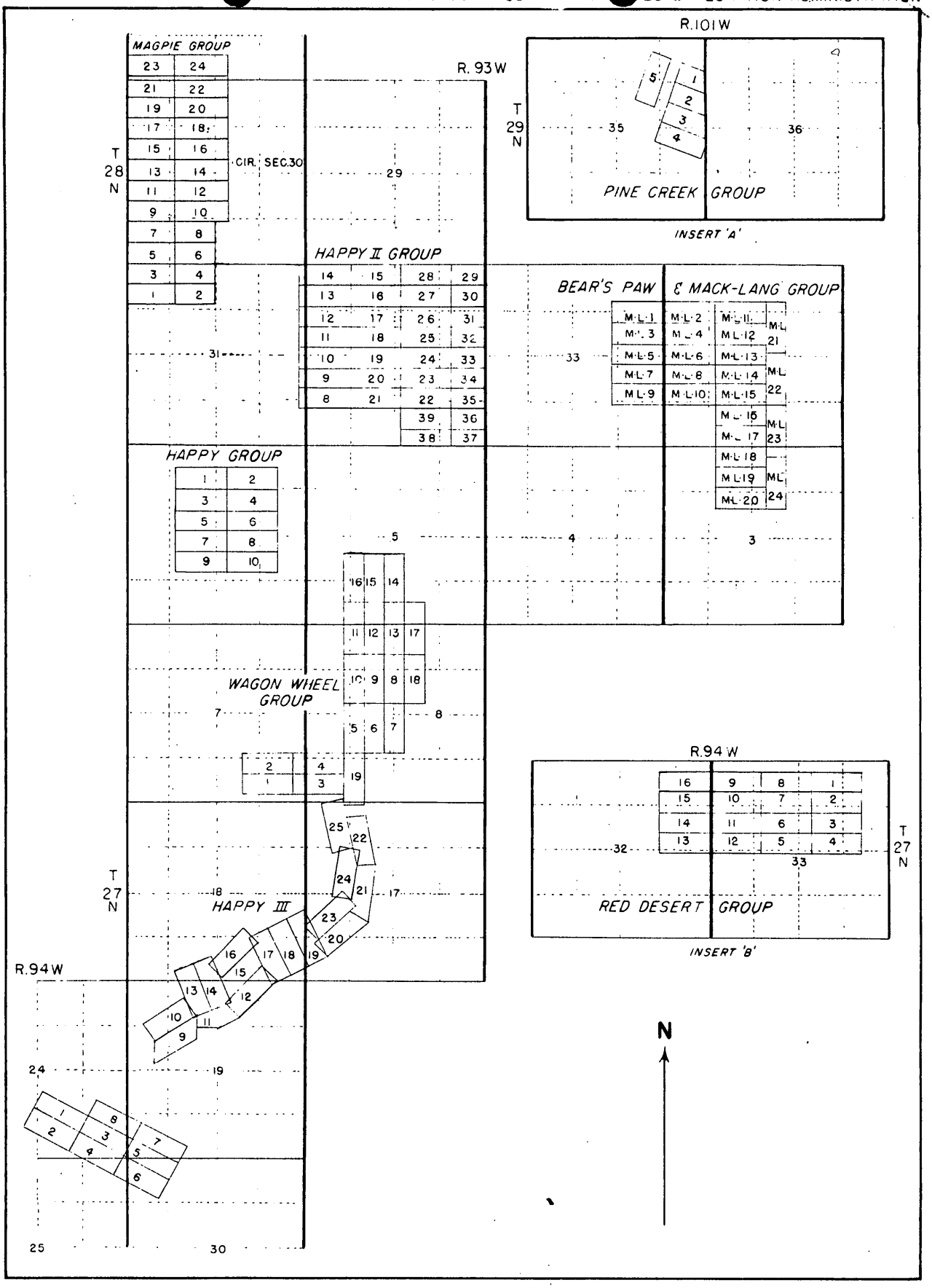

FIGURE 2–PROPERTY MAP, MACK-LANG URANIUM CORP., FREMONT COUNTY, WYOMING

1 0 2 MILES

about 60 miles northwest of the property and Rawlins via Bairoil, is about the same distance to the southeast. The Chicago and Northwestern Railroad services Lander and the Union Pacific Railroad passes through Rawlins. Labor, materials and supplies can be obtained at Rawlins or Lander. Outside work and transportation during the winter months would be interrupted by storms.

HISTORY AND PRODUCTION

Uranium was discovered at Lost Creek, about 6 miles south of the Red Desert group in the late 1940's. The Mack-Lang groups, with the exception of Happy III, were located, following A. E. C. activity in the area, on what were supposed to be radioactive anomalies, by Dewitt Langford, Frank Dayvault, C. L. Thompson, and R. L. Cushman in 1954, and were later transferred to the corporation. The Happy III group was located in 1954 by the Fort Bend Oil Company and later transferred to the Mack-Lang Uranium Corporation.

A number of pits and trenches were dug and a number of holes drilled. The only shipment consisted of 16 tons which was shipped on July 14, 1955, to the Government ore buying depot at Riverton where it was rejected because it only contained 0.05 percent U_3O_8. Since then the corporation has moved all equipment to their Pumpkin Buttes holdings.

OWNERSHIP AND EXTENT

The claims and transfers are all recorded in the records of the County Recorder of Fremont County, Wyoming as follows:

LOCATIONS

Claims	Locator	Book	Page	Date Located	Date Recorded
Magpie 1 - 24 incl.	R. G. Cushman et al.	74	396-419	10/8/54	11/20/54
Happy 1 - 10 "	"	74	250-259	9/25/54	11/17/54
Happy II 1-40 "	"	73	331-370	10/10/54	11/9/54
Mack-Lang 1-24 "	"	73	290-313	10/5/54	11/9/54
Pine Creek 1-5 "	"	74	235-239	9/19/54	11/17/54
Wagon Wheel 1-18 incl.	"	74	154-171	10/15/54	11/16/54
Red Desert 1 - 16 "	"	83	80-95	11/25/54	12/31/54
Happy III 1 - 22 "	Ft. Bend Oil Co.	75	431-452	9/25/54	11/26/54
Happy III 23-25 "	"	83	41-43	11/15/54	12/31/54

AMENDED LOCATIONS

Claims	Amended by	Book	Page	Date Amended	Date Recorded
Magpie 9,11,13,15,17 19,21,23,1,8,10,12,14 16,18,20,22,24	R. G. Cushman et al	83	56-79	12/30/54	12/31/54
Happy II 1 - 40 incl.	"	75	229-268	11/15/54	11/24/54
Wagon Wheel 9,19	"	83	44-43	12/30/54	12/31/54

ASSIGNMENT AND DEED

Claims	Grantor	Grantee	Book	Page	Date Inst.	Date Recorded
Magpie 1-24 incl.	R. G. Cushman et al	M.L.U.CORP.	79	44	11/30/54	12/9/54
Happy 1-10 "	"	"	79	42	11/30/54	12/9/54
Happy II 1-40 "	"	" (MacLang)	74	229	11/16/54	11/17/54
Happy II 1-40 "	"	"	79	34	11/30/54	12/9/54
Mack-Lang 1-24 "	"	" (MacLang)	74	231	11/16/54	11/17/54
Mack-Lang 1-24 "	"	"	79	36	11/30/54	12/9/54
Pine Creek 1-5 "	"	"	79	40	11/30/54	12/9/54
Wagon Wheel 1-18 "	"	" (MacLang)	74	233	11/16/54	11/17/54
Wagon Wheel 1-18 "	"	"	79	38	11/30/54	12/9/54
Wagon Wheel 19 "	"	" (MacLang)	84	540	1/7/55	1/12/55
Red Desert 1-16 "	"	"	84	540	1/7/55	1/12/55

ASSIGNMENT

Happy III 1 - 25	Fort Bend Oil Company	M.L.U.CORP.	135	305	6/29/55	8/2/55

All locations, assignments and deeds appear to be in order.

PRESENT STATUS

Exploration and Development

The claims have been explored by pits, trenches, access roads and a number of drill holes. Trenches up to 1000 feet in length have been dug on the Happy III group where R. L. Cushman estimates that an area of 30 acres contains low-grade uranium mineralization.

Mining and Milling Equipment and other Facilities

There is no mining or milling equipment on the property. Mr. Cushman states that Dr. Horang of Houston, Texas, is perfecting an upgrader for the applicant's low-grade material. Facilities are limited to a number of access roads.

GEOLOGY AND ORE DEPOSITS

The sedimentary rocks that are exposed on the Mack-Lang holdings comprise parts of the Fort Union formation and the Wasatch formation, both of Tertiary age. The Wasatch formation, in which the uranium occurs, overlies the Fort Union formation. The beds dip gently to the southwest, but in the southern claims, the rocks appear to be practically flat-lying. Details of the geology were not determined during this brief examination.

The occurrences of uranium on these claims are in the lower part of the Wasatch formation, less than 200 feet above the Fort Union-Wasatch contact. Thin seams and beds of carbonaceous material and thin beds of dark gray clayey siltstone are radioactive. Conglomeratic sandstone above and below these thin beds are also radioactive. Exposures of this material were found in shallow backhoe trenches, but no uranium minerals were visible.

At an outcrop on Happy II group, claim 19, the end of a moderately radioactive log, 30 inches in diameter, was exposed. A slight anomaly

(maximum of .1 MR/hr) is in the vicinity of this outcrop. According to the applicant, several such logs have been recently removed, all of which, when in place, were oriented about N 30° E. In this vicinity 8 to 10 holes, 200 feet apart and up to 175 feet deep, were drilled. The alignment of the tree trunks and penetration of additional large fragments of wood in drilling, leads the applicant to believe that a channel 100-150 feet wide and ½ mile long exists at the base of the Wasatch formation. No evidence of this channel was seen in the field. The 16 ton load of material shipped as ore was excavated from a pit adjacent to the outcrop on Happy II, claim 19.

According to the applicant, 11 anomalies have been found on the 134 claims. These visited by the field team were all below .2 MR/hr.

Other than claim validation, no work has been done on the Pine Creek group (5 claims), the Magpie group (24 claims), and the Wagon Wheel group (19 claims). Shallow holes (20 - 175 deep) were drilled with an air drill on the Mack-Lang group (24 claims), the Red Desert group (16 claims), the Happy group (10 claims), the Happy II group (30 claims), and the Happy III group (25 claims). Backhoe trenches are on the following claims:

Happy II group - claims 19, 23, 24, 33

Happy III group - claims 2, 5, 14, 21, 23, 24

The applicant was unable to furnish specific information regarding drill hole logs, locations of holes, and collar elevations. Maps showing trench and drill hole locations are apparently non-existent. The chemical analyses furnished by the applicant are meaningless because the locations of holes from which the samples were taken cannot be determined. No geologic mapping was done by the applicant.

No drilling or extensive field examinations have been done or are contemplated by the A.E.C. in the vicinity of the Mack-Lang holdings.

Examination of these claims substantiated the applicant's estimate of large tonnages of low grade uraniferous material, but no indications of ore were seen. There is no geologic evidence to indicate the presence of significant bodies of ore grade material on the subject claims and such material, if present, would probably be found in small isolated bodies located at random in the low grade uraniferous material. The low grade deposits are within 5 to 40 feet below the ground surface and may be within 2 or more stratigraphic intervals.

It may be of interest to note that the applicant's preliminary estimate of 200,000 tons of ore (p. 1 of application supplement) was made on claim 23 of the Happy II group, yet he presents no analytical data from drilling or backhoeing on this claim to confirm this estimate.

According to R. L. Cushman, the company's representative, holes were drilled with an air drill, and no dust collector was used. This may be partly responsible for a loss of considerable radioactive material in the samples.

The following assays were furnished by R. L. Cushman at the time of the examination:

Analyst: Mason-Farrow, Box 247, Riverton, Wyo.

Group	Claim no.	Hole no.	Depth in feet	Percent U_3O_8
Happy	4	36	2	.08
"	"	"	8	.07
"	"	"	9	.06
"	"	"	2	.03
"	"	"	15	.07
"	"	"	16	.05
"	"	"	18	.07
"	"	"	20	.06
"	"	"	22	.04
"	"	"	24	.06
"	"	"	30	.07
"	"	"	32	.04
"	"	"	36	.04
"	"	"	44	.04

Group	Claim no.	Hole no.	Depth in feet	Percent U_3O_8
Happy	4	36	46	.05
"	"	"	50	.06
"	"	"	52	.04
"	"	"	54	.04
Happy II	19	5	2	.03
"	"	"	4	.01
"	"	"	6	.01
"	"	"	8	.08
"	"	"	10	.04
"	33	37	2	.03
"	"	"	4	.03
"	"	"	8	.03
"	"	"	10	.07
"	"	"	12	.04
"	"	"	14	.04
"	"	"	16	.03
"	"	"	22	.04
"	"	"	24	.21
"	"	"	26	.03
"	"	"	28	.04
"	"	"	32	.02
"	"	"	34	.02
"	"	"	36	.03
"	"	"	38	.02
"	"	"	40	.25
"	"	"	42	.02
Happy III	21	16	0-2	.03
"	"	"	2-4	.01
"	"	"	6-8	.20
"	"	"	"	.12
"	"	"	8-10	.08
"	"	"	10-12	.04
"	"	"	14	.04
"	"	"	16	.03

Sample Identification and depth	Percent U_3O_8
Happy III no. 1 cross sec. sample	.03
" profile 4, sple. 2 10'	.06
" profile 4, S-3, D-4	.04
" profile 4, sple. 4	.05
" profile 4, sple. 6, D-5'	.06
" profile 4, sple. 7, D-3	.05
" profile 4, sple. 10, D-5	.04
" Well 29, sple. 2, D-12	.03
" Well 29, S-7, D-12	.04
" Well 29, D-10, depth 18'	.05
" Well 29, depth 28'	.04
" Well 29, sple. 16, depth 32'	.04
" Well 29, sple. 18, depth 36'	.04
" Well 29, sple. 20, depth 38'	.04
" Well 29, sple. 21, depth 40'	.06
" Well 29, depth 44'	.03
" Well 20, S-3, D-6	.09

Sample Identification and depth	Percent U_3O_8
Happy III, outcrop	.03
Profile 1, Hole 1, D-4-6	.03
" " D-6-8	.06
" " D-8-10	.03
" " depth 18-20	.04
" " D-20-21	.03
" " D-24-26	.03
" Hole A-1 depth 22-24	.03
" Well 2, D-2'-4'	.03
" " depth 4'-6'	.04
" " depth 14'-16'	.03
" " depth 16'-18'	.03
" " depth 20'-22'	.04
" " depth 22'-24'	.04
" " depth 24'-30'	.03
" " depth 26'-28'	.07
#4B	.03
Profile X, Well 1	.05
Lot #1	.03
Lot #2	.16
Lot #3	.04
Reddish ss - W end of claims	.064
Ditch X 0'-36'	.05
" 26'-36'	.06
Carbon well #4	.09

ORE RESERVES

At the present time there are no known ore reserves. If the Horang upgrader would work successfully at a profit on the low-grade material, the ore reserves would amount to several hundred thousand tons.

PROPOSED EXPLORATION WITH COSTS

The applicant proposed a single stage program of drilling thirty 40-foot holes per claim. His estimated costs follow:

Independent Contracts	$281,400.00
Labor, supervision, consultants	59,125.00
Operating Materials and Supplies	7,700.00
Operating Equipment	38,000.00
Rehabilitation and repairs	none
New buildings, improvements and installations	24,000.00

Miscellaneous	$10,000.00
Contingencies	10,000.00
Total (160,800 feet of holes)	$430,225.00
Cost per foot	$2.68

Under independent contracts the applicant lists drilling at $1.00 a foot which is reasonable for dry-core drilling. He also lists under the same heading $120,600.00 for 40,200 assays which could be cut to 10 percent by good counterwork. Under labor and supervision a driller, cook, backhoe operator, truck driver, $7200.00 in food, and about $20,000.00 of the engineering expenses could be cut. Five thousand dollars could be cut from the operating materials and supplies, $32,000.00 from operating equipment, $20,000.00 from new buildings, and $10,000.00 from contingencies. This totals about $219,000.00 and would reduce the cost estimate from $2.68 per foot to $1.37 per foot.

CONCLUSIONS AND RECOMMENDATIONS

The applicant's proposal is considered unsound for the following reasons:

1. The applicant's estimate of 200,000 tons of ore is based on assays from drilling in claim 23 of the Happy II group. No assays were presented to justify this assertion; furthermore, the locations of the holes were not plotted on any map. Thus, the outline and trend of this nebulous ore body cannot be determined.
2. The success of the entire venture depends on the effectiveness of an upgrader to enrich the low grade uraniferous material. To date, upgraders have not been successful.

3. The anomalies examined in the field were all less than .2 MR/hr. This does not indicate very much high grade material close to the surface.

4. The applicant proposed drilling on a grid, 30 holes per claim, throughout his entire holdings. On 48 of the claims, he has not done any work except validation. Much of the funds requested would be expended in prospecting, rather than in exploration of favorable areas. ?

5. The field examination confirmed the presence of large tonnages of low grade material - but no evidence of ore was seen. The analytical data show small amounts of .1% U_3O_8, but certainly not enough to warrant a loan of this magnitude.

The numbered drill holes and trenches are not located or identified on any map. The company's representative was able to identify but one hole on the property. Although the assays furnished by the applicant bear hole and claim numbers, it is impossible to determine the location with respect to each other of any two or more holes on the same claim. Thus the assay data are worthless to determine the extent and attitude of any probable ore body.

The large amount of low-grade material near surface indicates that the problem is metalurgical rather than explorational.

The examining team recommends that the application be denied.

12-2-55 gm

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

November 30, 1955

[illegible] New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region XIX

Subject: Joint Report of Examination, DMEA Docket 3958, (Uranium), Mach-Long Uranium Corporation, Fremont County, Wyoming

Enclosed are the original and three copies of the report pertaining to the above application.

The field examiners recommend that the application be denied, and we concur in this recommendation.

E. M. Hornbeck

E. M. Hornbeck
Acting Executive Officer, DMEA
Field Team, Region XIX

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
12-5-55
(date)

RECEIVED
DEC - 2 1955

Building 20
Denver Federal Center
Denver 2, Colorado
November 22, 1955

REGION III

Memorandum

TRANSMITTED

NOV 30 1955

To: Executive Officer, DMEA Field Team, Region III

From: E. N. Harshman
John F. Shaw

Subject: Docket No. DMEA 3952, Mack-Lang Uranium Corporation, Fremont County, Wyoming

Enclosed are the original and 9 copies of a joint engineering and geologic report by Carl Belser, Mining Engineer, and Max Bergendahl, Geologist, covering Docket No. 3952.

The Mack-Lang Uranium Corporation applied for exploration assistance in the amount of $430,225.00 to explore 134 unpatented claims in the Crooks Gap area in Wyoming, by 160,000 feet of dry drilling. The field examination was made on October 27, 1955 by Carl Belser and Max Bergendahl. The field examination confirmed the presence of large tonnages of low-grade material. The value of the low-grade material depends on the successful operation of an upgrader, which the company is experimenting with in Texas. To date, upgraders have not been successful. The matter was discussed with B. L. Evershart, Acting Chief, Division of Raw Materials, Denver Exploration Branch, Atomic Energy Commission, who stated that the AEC has no interest in material containing less than 0.10 percent U_3O_8. The large amount of low-grade material near the surface presents a metallurgical problem and no exploration is warranted. It is recommended that the application be denied.

E. N. Harshman
E. N. Harshman
Member Field Team

John F. Shaw
John F. Shaw
Supervising Mining Engineer

JFS/mw

cc 9
E. N. Harshman
DMEA 3952
Chron.

Reviewed by
DMEA CLEARANCE
12-5-55
(OCRO)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

JOINT REPORT OF EXAMINATION BY EXAMINING TEAM
REGION III

TRANSMITTED

NOV 30 1955

DMEA 3952

MACK-LANG, HAPPY, HAPPY II, HAPPY III, WAGON WHEEL, RED DESERT, MARTIN AND PINE CREEK GROUPS

Mack-Lang Uranium Corporation

Fremont County, Wyoming

Uranium

Joint Engineering and Geological Report

By

Max Bergendahl, Geologist
Geological Survey

Carl Belser, Mining Engineer
Bureau of Mines

November 22, 1955

DMEA 3952

MACK-LANG, HAPPY, HAPPY II, HAPPY III, WAGON WHEEL,
RED DESERT, MAGPIE, AND PINE CREEK GROUPS
MACK-LANG URANIUM CORPORATION
FREMONT COUNTY, WYOMING

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Proposed exploration with costs 9
Conclusions and recommendations 10

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DMEA 3952

MACK-LANG, HAPPY, HAPPY II, HAPPY III, WAGON WHEEL,
RED DESERT, MAGPIE, AND PINECREEK GROUPS
MACK-LANG URANIUM CORPORATION
FREMONT COUNTY, WYOMING

INTRODUCTION AND SUMMARY

Mack-Lang Uranium Corporation, 2203 W. Holcombe Blvd., Houston, Texas, applied for Defense Minerals Exploration Administration assistance on July 28, 1955 to explore for uranium on its holdings in the Crooks Gap area, Wyoming, consisting of 134 unpatented claims in the Mack-Lang, Happy, Happy II, Happy III, Wagon Wheel, Red Desert, Magpie, and Pine Creek groups. Total estimated cost for this proposed exploration was $430,225.00.

A field investigation by representatives of the Geological Survey and the Bureau of Mines was made on October 27, 1955.

Uranium mineralization occurs at intervals in the lower 200 feet of the Tertiary Wasatch formation. Radioactivity is associated with thin seams of carbonaceous material and dark grey clayey siltstones. Conglomeratic sandstone above and below these seams is also radioactive.

The field examination confirmed the presence of large tonnages of low-grade material, but no evidence of ore was seen. The value of the low-grade material depends upon the successful operation of an upgrader, which the company is experimenting with in Texas. If successful, large quantities of this low-grade material occurring on or near surface may become commercial.

The examining team could find no reason for an extensive drilling program at this time and recommended that the application be denied.

ACKNOWLEDGMENTS

The examining team was accompanied by R. L. Cushman, vice-president

of the applicant corporation. Charles Bromley and George Helmquist, geologists of the A.E.C., Rawlins, Wyoming, and Spencer Shannon, A.E.C. geologist, Crooks Gap, were consulted regarding the area.

The memorandums of John E. Crawford, N. E. Nelson, and George C. Selfride were noted.

LOCATION, TOPOGRAPHY AND CLIMATE

The property submitted in the application consists of 134 unpatented claims in 8 groups scattered through sections 3, 5, 6, 7, 8, 17, 18, 19, and 30, T. 27 N., R. 93 W., sections 19, 30, 31, and 32, T. 28 N., R. 93 W., sections 24, 25, 32, and 33, T. 27 N., R. 94 W., and section 35, T. 29 N., R. 101 W., of the 6th principal meridian, Fremont County, Wyoming, (figures 1 and 2).

Five of the claims, the Pine Creek group in range 101 west, are about 45 miles west of the other claims. Mr. Cushman stated that no prospecting had been done on these claims and because of a lack of exposures on them, an examination would serve no useful purpose. These claims were, therefore, not examined.

The Maggie, Happy II, and Mack-Lang groups are on a south dipping, rolling hillside and Happy, Wagon Wheel, Happy III, and Red Desert groups are on a flat plain, cut by small ravines. Elevations range from about 7700 feet on the north to about 7200 feet on the south. Vegetation is scant. The surface is dry but the water table is from 40 to 150 feet below surface.

The country, bordering on the Red Desert, is semi-arid. A 14-mile dirt road which crosses Crooks Mountain at an altitude of 8300 feet connects the property with U. S. highway 287 from whence it is 44 miles to the ore buying depot at Riverton by dirt road and 71 miles by paved road. Lander is

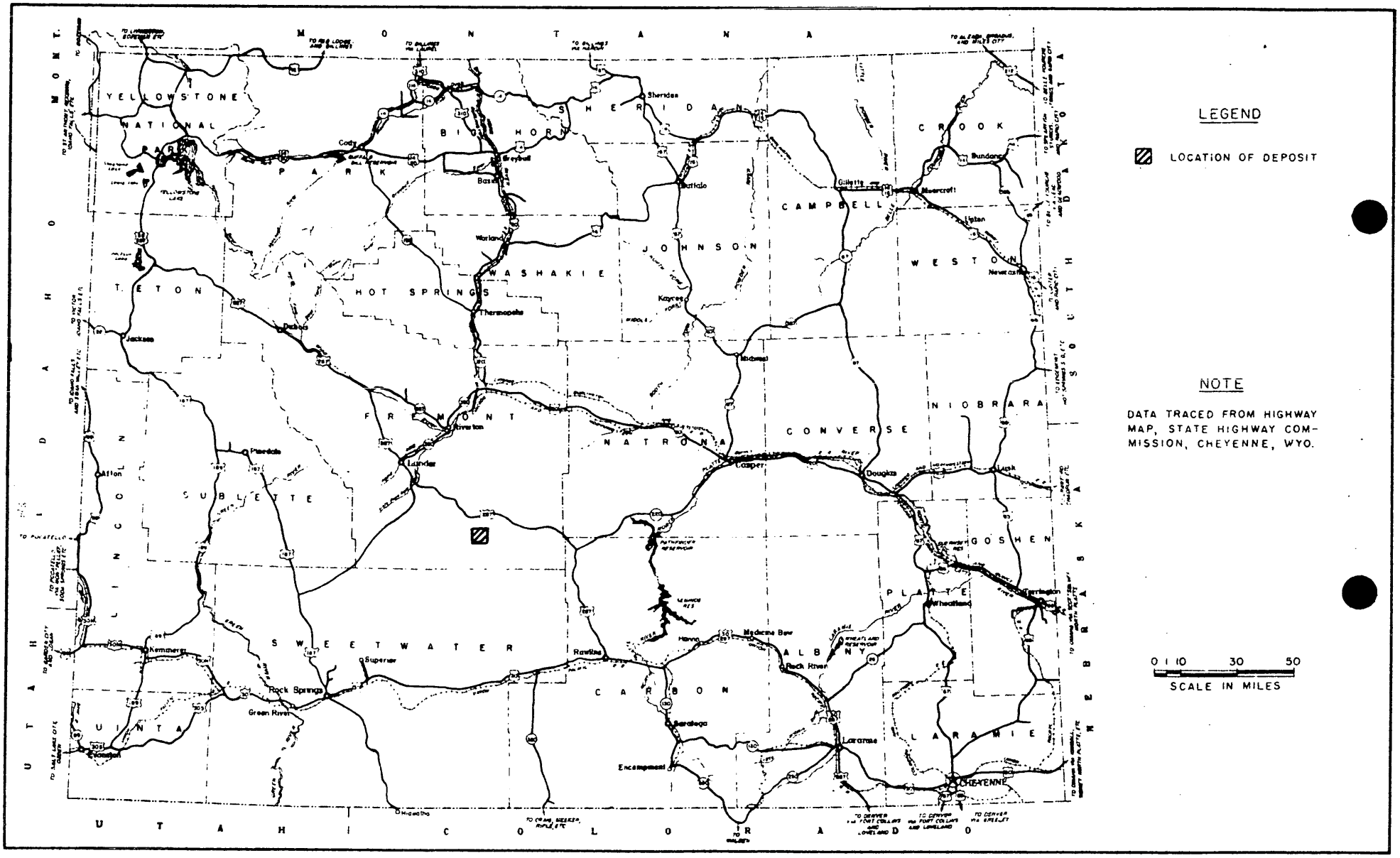

FIGURE 1 - LOCATION MAP, MACK-LANG, HAPPY, HAPPY II, HAPPY III, WAGON WHEEL, PINE CREEK, AND RED DESERT GROUPS, MACK-LANG URANIUM CORPORATION, FREMONT COUNTY, WYO. DMEA 3952

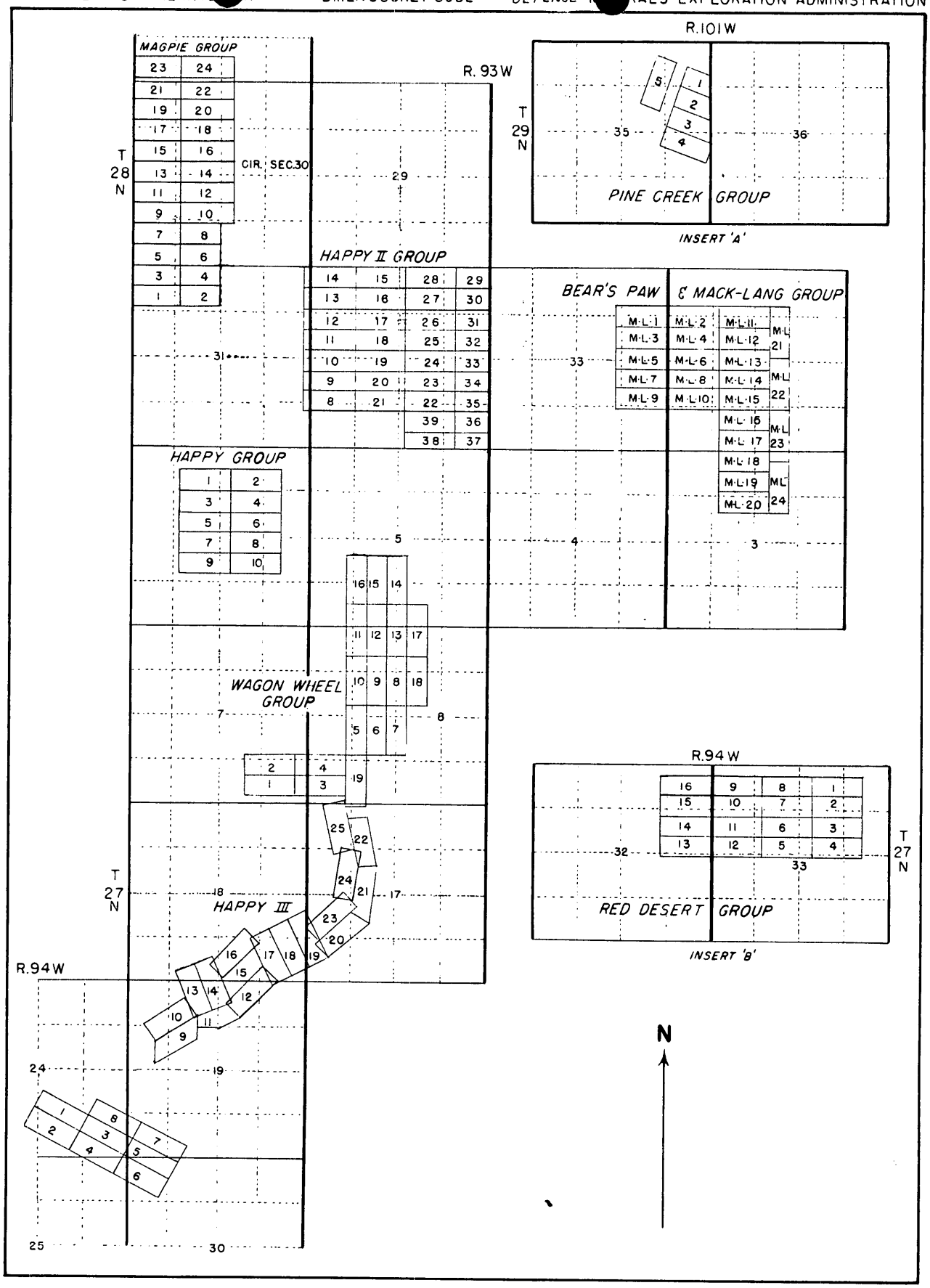

FIGURE 2–PROPERTY MAP, MACK-LANG URANIUM CORP., FREMONT COUNTY, WYOMING

1 0 2 MILES

about 40 miles northwest of the property and Rawlins via Bairoil, is about the same distance to the southeast. The Chicago and Northwestern Railroad services Lander and the Union Pacific Railroad passes through Rawlins. Labor, materials and supplies can be obtained at Rawlins or Lander. Outside work and transportation during the winter months would be interrupted by storms.

HISTORY AND PRODUCTION

Uranium was discovered at Lost Creek, about 6 miles south of the Red Desert group in the late 1940's. The Mack-Lang groups, with the exception of Happy III, were located, following A. E. C. activity in the area, on what were supposed to be radioactive anomalies, by Dewitt Langford, Frank Dayvault, C. L. Thompson, and R. L. Cushman in 1954, and were later transferred to the corporation. The Happy III group was located in 1954 by the Fort Bend Oil Company and later transferred to the Mack-Lang Uranium Corporation.

A number of pits and trenches were dug and a number of holes drilled. The only shipment consisted of 16 tons which was shipped on July 14, 1955, to the Government ore buying depot at Riverton where it was rejected because it only contained 0.05 percent U_3O_8. Since then the corporation has moved all equipment to their Pumpkin Buttes holdings.

OWNERSHIP AND EXTENT

The claims and transfers are all recorded in the records of the County Recorder of Fremont County, Wyoming as follows:

LOCATIONS

Claims	Locator	Book	Page	Date Located	Date Recorded
Magpie 1 - 24 incl.	H. G. Cushman et al.	74	396-419	10/8/54	11/20/54
Happy 1 - 10 "	"	74	250-259	9/23/54	11/17/54
Happy II 1-40 "	"	73	331-370	10/10/54	11/9/54
Mack-Lang 1-24 "	"	73	290-313	10/3/54	11/9/54
Pine Creek 1-5 "	"	74	235-239	9/18/54	11/17/54
Wagon Wheel 1-18 incl.	"	74	154-171	10/13/54	11/16/54
Red Desert 1 - 16 "	"	83	80-95	11/23/54	12/31/54
Happy III 1 - 22 "	Ft. Bend Oil Co.	75	431-452	9/23/54	11/26/54
Happy III 23-25 "	"	83	41-43	11/15/54	12/31/54

AMENDED LOCATIONS

Claims	Amended by	Book	Page	Date Amended	Date Recorded
Magpie 9,11,13,15,17 19,21,23,1,6,10,12,14 16,18,20,22,24	H. G. Cushman et al	83	56-79	12/30/54	12/31/54
Happy II 1 - 40 incl.	"	75	229-268	11/13/54	11/24/54
Wagon Wheel 9,19	"	83	44-43	12/30/54	12/31/54

ASSIGNMENT AND DEED

Claims	Grantor	Grantee	Book	Page	Date Inst.	Date Recorded
Magpie 1-24 incl.	H. G. Cush-	M.L.U.CORP.	79	44	11/30/54	12/9/54
Happy 1-10 "	man et al	"	79	42	11/30/54	12/9/54
Happy II 1-40 "	"	" (MacLang)	74	229	[illegible]/54	11/17/54
Happy II 1-40 "	"	"	79	34	11/30/54	12/9/54
Mack-Lang 1-24 "	"	" (MacLang)	74	231	11/16/54	11/17/54
Mack-Lang 1-24 "	"	"	79	36	11/30/54	12/9/54
Pine Creek 1-5 "	"	"	79	40	11/30/54	12/9/54
Wagon Wheel 1-18 "	"	" (MacLang)	79	233	11/16/54	11/17/54
Wagon Wheel 1-18 "	"	"	79	38	11/30/54	12/9/54
Wagon Wheel 19 "	"	" (MacLang)	84	540	1/7/55	1/12/55
Red Desert 1-16 "	"	"	84	540	1/7/55	1/12/55

ASSIGNMENT

Happy III 1 - 25	Fort Bend Oil Company	M.L.U.CORP.	135	305	6/29/55	8/2/55

All locations, assignments and deeds appear to be in order.

PRESENT STATUS

Exploration and Development

The claims have been explored by pits, trenches, access roads and a number of drill holes. Trenches up to 1000 feet in length have been dug on the Happy III group where R. L. Cushman estimates that an area of 30 acres contains low-grade uranium mineralization.

Mining and Milling Equipment and other Facilities

There is no mining or milling equipment on the property. Mr. Cushman states that Dr. Herzog of Houston, Texas, is perfecting an up-grader for the applicant's low-grade material. Facilities are limited to a number of access roads.

GEOLOGY AND ORE DEPOSITS

The sedimentary rocks that are exposed on the Mack-Lang holdings comprise parts of the Fort Union formation and the Wasatch formation, both of Tertiary age. The Wasatch formation, in which the uranium occurs, overlies the Fort Union formation. The beds dip gently to the southwest, but in the southern claims, the rocks appear to be practically flat-lying. Details of the geology were not determined during this brief examination.

The occurrences of uranium on these claims are in the lower part of the Wasatch formation, less than 200 feet above the Fort Union-Wasatch contact. Thin seams and beds of carbonaceous material and thin beds of dark gray clayey siltstone are radioactive. Conglomeratic sandstone above and below these thin beds are also radioactive. Exposures of this material were found in shallow backhoe trenches, but no uranium minerals were visible.

At an outcrop on Happy II group, claim 19, the end of a moderately radioactive log, 30 inches in diameter, was exposed. A slight anomaly

(maximum of .1 MR/hr) is in the vicinity of this outcrop. According to the applicant, several such logs have been recently removed, all of which, when in place, were oriented about N 30° E. In this vicinity 8 to 10 holes, 200 feet apart and up to 175 feet deep, were drilled. The alignment of the tree trunks and penetration of additional large fragments of wood in drilling, leads the applicant to believe that a channel 100-150 feet wide and ½ mile long exists at the base of the Wasatch formation. No evidence of this channel was seen in the field. The 16 ton load of material shipped as ore was excavated from a pit adjacent to the outcrop on Happy II, claim 19.

According to the applicant, 11 anomalies have been found on the 134 claims. These visited by the field team were all below .2 MR/hr.

Other than claim validation, no work has been done on the Pine Creek group (5 claims), the Magpie group (24 claims), and the Wagon Wheel group (19 claims). Shallow holes (20 - 175' deep) were drilled with an air drill on the Mack-Lang group (24 claims), the Red Desert group (16 claims), the Happy group (10 claims), the Happy II group (30 claims), and the Happy III group (25 claims). Backhoe trenches are on the following claims:

Happy II group - claims 19, 23, 24, 33

Happy III group - claims 2, 5, 14, 21, 23, 24

The applicant was unable to furnish specific information regarding drill hole logs, locations of holes, and collar elevations. Maps showing trench and drill hole locations are apparently non-existent. The chemical analyses furnished by the applicant are meaningless because the locations of holes from which the samples were taken cannot be determined. No geologic mapping was done by the applicant.

No drilling or extensive field examinations have been done or are contemplated by the A.E.C. in the vicinity of the Mack-Lang holdings.

Examination of these claims substantiated the applicant's estimate of large tonnages of low grade uraniferous material, but no indications of ore were seen. There is no geologic evidence to indicate the presence of significant bodies of ore grade material on the subject claims and such material, if present, would probably be found in small isolated bodies located at random in the low grade uraniferous material. The low grade deposits are within 5 to 40 feet below the ground surface and may be within 2 or more stratigraphic intervals.

It may be of interest to note that the applicant's preliminary estimate of 200,000 tons of ore (p. 1 of application supplement) was made on claim 23 of the Happy II group, yet he presents no analytical data from drilling or backhoeing on this claim to confirm this estimate.

According to R. L. Cushman, the company's representative, holes were drilled with an air drill, and no dust collector was used. This may be partly responsible for a loss of considerable radioactive material in the samples.

The following assays were furnished by R. L. Cushman at the time of the examination:

Analyst: Mason-Farrow, Box 247, Riverton, Wyo.

Group	Claim no.	Hole no.	Depth in feet	Percent U_3O_8
Happy	4	36	2	.08
"	"	"	8	.07
"	"	"	9	.06
"	"	"	7	.03
"	"	"	15	.07
"	"	"	16	.05
"	"	"	18	.07
"	"	"	20	.06
"	"	"	22	.04
"	"	"	24	.06
"	"	"	30	.07
"	"	"	32	.04
"	"	"	36	.04
"	"	"	44	.04

Group	Claim no.	Hole no.	Depth in feet	Percent U_3O_8
Happy	4	36	46	.05
"	"	"	50	.06
"	"	"	52	.04
"	"	"	54	.04
Happy II	19	5	2	.03
"	"	"	4	.01
"	"	"	6	.01
"	"	"	8	.03
"	"	"	10	.04
"	33	37	2	.03
"	"	"	4	.03
"	"	"	8	.03
"	"	"	10	.07
"	"	"	12	.04
"	"	"	14	.04
"	"	"	16	.03
"	"	"	22	.04
"	"	"	24	.21
"	"	"	26	.03
"	"	"	28	.04
"	"	"	32	.02
"	"	"	34	.02
"	"	"	36	.03
"	"	"	38	.02
"	"	"	40	.25
"	"	"	42	.02
Happy III	21	16	0-2	.03
"	"	"	2-4	.01
"	"	"	6-8	.20
"	"	"	"	.12
"	"	"	8-10	.06
"	"	"	10-12	.04
"	"	"	14	.04
"	"	"	16	.03

Sample Identification and depth	Percent U_3O_8
Happy III no. 1 cross sec. sample	.03
" profile 4, sple. 2 10'	.06
" profile 4, S-3, D-4	.04
" profile 4, sple. 4	.05
" profile 4, sple. 6, D-5'	.06
" profile 4, sple. 7, D-3	.05
" profile 4, sple. 10, D-5	.04
" Well 29, sple. 2, D-12	.03
" Well 29, S-7, D-12	.04
" Well 29, D-10, depth 18'	.05
" Well 29, depth 28'	.04
" Well 29, sple. 16, depth 32'	.04
" Well 29, sple. 18, depth 34'	.04
" Well 29, sple. 20, depth 38'	.04
" Well 29, sple. 21, depth 40'	.06
" Well 29, depth 44'	.03
" Well 20, S-3, D-6	.09

Sample Identification and depth	Percent U_3O_8
Nappy III, outcrop	.03
Profile 1, Hole 1, D-4-6	.03
" " D-6-8	.06
" " D-8-10	.03
" " depth 18-20	.04
" " D-20-21	.03
" " D-24-26	.03
" Hole A-1 depth 22-24	.03
" Well 2, D-2'-4'	.03
" " depth 4'-6'	.04
" " depth 14'-16'	.03
" " depth 16'-18'	.03
" " depth 20'-22'	.04
" " depth 22'-24'	.04
" " depth 24'-30'	.03
" " depth 26'-28'	.07
#43	.03
Profile X, Well 1	.05
Lot #1	.03
Lot #2	.16
Lot #3	.04
Reddish ss - W end of claims	.064
Ditch X 0'-36'	.05
" 26'-36'	.06
Carbon well #4	.09

ORE RESERVES

At the present time there are no known ore reserves. If the Herang upgrader would work successfully at a profit on the low-grade material, the ore reserves would amount to several hundred thousand tons.

PROPOSED EXPLORATION WITH COSTS

The applicant proposed a single stage program of drilling thirty 40-foot holes per claim. His estimated costs follow:

Independent Contracts	$281,400.00
Labor, supervision, consultants	59,125.00
Operating Materials and Supplies	7,700.00
Operating Equipment	38,000.00
Rehabilitation and repairs	none
New buildings, improvements and installations	24,000.00

Miscellaneous	$10,000.00
Contingencies	10,000.00
Total (160,800 feet of holes)	$430,225.00
Cost per foot	$2.68

Under independent contracts the applicant lists drilling at $1.00 a foot which is reasonable for dry-core drilling. He also lists under the same heading $120,600.00 for 40,200 assays which could be cut to 10 percent by good counterwork. Under labor and supervision a driller, cook, backhoe operator, truck driver, $7200.00 in food, and about $20,000.00 of the engineering expenses could be cut. Five thousand dollars could be cut from the operating materials and supplies, $32,000.00 from operating equipment, $20,000.00 from new buildings, and $10,000.00 from contingencies. This totals about $219,000.00 and would reduce the cost estimate from $2.68 per foot to $1.37 per foot.

CONCLUSIONS AND RECOMMENDATIONS

The applicant's proposal is considered unsound for the following reasons:

1. The applicant's estimate of 200,000 tons of ore is based on assays from drilling in claim 23 of the Happy II group. No assays were presented to justify this assertion; furthermore, the locations of the holes were not plotted on any map. Thus, the outline and trend of this nebulous ore body cannot be determined.
2. The success of the entire venture depends on the effectiveness of an upgrader to enrich the low grade uraniferous material. To date, upgraders have not been successful.

3. The anomalies examined in the field were all less than .2 MR/hr. This does not indicate very much high grade material close to the surface.

4. The applicant proposed drilling on a grid, 30 holes per claim, throughout his entire holdings. On 48 of the claims, he has not done any work except validation. Much of the funds requested would be expended in prospecting, rather than in exploration of favorable areas.

5. The field examination confirmed the presence of large tonnages of low grade material - but no evidence of ore was seen. The analytical data show small amounts of .1% U_3O_8, but certainly not enough to warrant a loan of this magnitude.

The numbered drill holes and trenches are not located or identified on any map. The company's representative was able to identify but one hole on the property. Although the assays furnished by the applicant bear hole and claim numbers, it is impossible to determine the location with respect to each other of any two or more holes on the same claim. Thus the assay data are worthless to determine the extent and attitude of any probable ore body.

The large amount of low-grade material near surface indicates that the problem is metalurgical rather than exploratorial.

The examining team recommends that the application be denied.

Department of ...

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

DMEA
14X4401(01) Revolving Fund, Defense Production Act, Interior (Allocated Working Fund to the Office of the Secy.)

T E L E T Y P E

NOV - 9 1955

W. M. TRAVER, EXECUTIVE OFFICER
DMEA FIELD TEAM, REGION III
224 NEW CUSTOMHOUSE BUILDING
DENVER 2, COLORADO

RE DOCKET NO. DMEA-3952, MACK-LANG URANIUM CORP. FREMONT COUNTY, WYOMING. WITH WINTER CONDITIONS APPROACHING, WASHINGTON REPRESENTATIVE ANXIOUS TO KNOW STATUS OF APPLICATION. PLEASE ADVISE THIS OFFICE.

George C. Selfridge

GEORGE C. SELFRIDGE
CHAIRMAN, OPERATING COMMITTEE

FMMurphy/izm
11/9/55
cc to: Admr.'s Reading File
Operating Committee
Docket
Code 700
Mr. Murphy
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA
Confirmation to Region III

MR

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

REFERENCE SLIP

DATE 11-10

REFERRED TO:

1. ~~TLO~~
2. Mr. Murphy
3.
4.

FOR:

..... Action	..... Recommendation
..... Approval	..... Record of .....
..... Comment	..... Referring to .....
..... Conference	..... Reply for signature of .....
..... Consideration	..... Rewriting
..... Filing	..... Signature
..... Instructions	..... Suggestions
..... Investigation	..... Your information
..... Initials	
..... Mailing	
..... Previous correspondence	

REMARKS:

Grace - Teletype attached came in this morning

Check (X) before the items needing attention.

Called J.E. Bacon and gave him the word. 11/10

ROBERT E. AD.

Initials of sender.

GPO 16—63815-1

George C. Selfridge

RECEIVED
NOV 10 1955

11-10-55
bjm

RECEIVED
NOV - 1 1955

DN 235 BUR MINES 11-9-55 4-12

GEORGE C SELFRIDGE

REURTEL DMEA 3952, MACK-LANG. PROPERTY EXAMINED 10-27 IN COMPEXX COMPANY WITH R L CUSHMAN XXX CUSHMAN, VICE PRESIDENT. REPORT IN PREPARATION.

J. W. TOWNSEND

Denver, Colo.

Surname Copy
700

Department of the Interior

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

DMEA
14X4401(01) Revolving Fund, Defense Production Act, Interior (Allocated Working Fund to the Office of the Secy.)

Murphy
Ellis
Kilsgaard
Lehn
Selfridge
Yeppner
Mittendorf

T E L E T Y P E

NOV - 9 1955

W. M. TRAVER, EXECUTIVE OFFICER
DMEA FIELD TEAM, REGION III
224 NEW CUSTOMHOUSE BUILDING
DENVER 2, COLORADO

RE DOCKET NO. DMEA-3952, MACK-LAND URANIUM CORP. FREMONT COUNTY WYOMING. WITH WINTER CONDITIONS APPROACHING, WASHINGTON REPRESENTATIVE ANXIOUS TO KNOW STATUS OF APPLICATION. PLEASE ADVISE THIS OFFICE.

George C. Selfridge

GEORGE C. SELFRIDGE (246)
CHAIRMAN, OPERATING COMMITTEE

FMMurphy/izm
11/9/55
cc to: Admr.'s Reading File
Operating Committee
Docket
Code 700
Mr. Murphy
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA
Confirmation to Region III

R.C.S.

RECEIVED
SEP 16 1955

September 12, 1955

Memorandum

To: John F. Shaw

From: Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA 3952 (Uranium), Mack-Lang Group, et al., Fremont County, Wyoming

The subject application in the amount of $430,225.00 is enclosed herewith. The brochure consists of:

1. Form MF-103 and supplementary information
2. Supplemental information
3. Claim map
4. Location map
5. Photocopy of memo from E. H. Nelson to E. W. Ellis
6. Photocopy of memo from John E. Crawford to E. W. Ellis
7. Photocopy of letter of transmittal from Chairman Operating Committee to Executive Officer W. M. Traver

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

W. H. KING

W. H. King

Enclosures

Copy to: E. H. Harshman
W. M. Traver (3)
Sec. Op. Com. (2)

RECEIVED

SEP 16 1955

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W. H. KING

W. H. King

Enclosures

Copy to: E. N. Harshman
W. N. Traver (3)

9/12/55 gla

MACK-LANG URANIUM CORPORATION
P.O.B. 244
Riverton, Wyoming

Washington Address:
2101 S Street N.W.,
Washington 8, D.C.

HO 2-4478

September 9, 1955

Mr. William M. Traver, Executive Officer
Defense Minerals Exploration Administration
Bureau of Mines
224 New Customhouse Building
Denver 2, Colorado.

Subject: DMEA Application #3952

Dear Mr. Traver:

This is to advise that the offices of the above corporation have been removed from Lander, Wyoming, to a more central location. All correspondence should, therefore, be addressed as follows:

Mack-Lang Uranium Corporation
P.O. Box 224
Riverton, Wyoming

Telephone #1140

Copies of this letter are being sent to Mr. Ernest W. Ellis, DMEA, Washington 25, D.C.

Very truly yours,

James E. Bacon

James E. Bacon
Technical Counselor

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

RECEIVED
SEP 12 1955

224 New Customhouse
Denver 2, Colorado

September 7, 1955

Memorandum

To: W. H. King (with Brochure)
N. A. Harshman

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3952 (Uranium), Mack-Lang Group, et al., Fremont County, Wyoming.

Enclosed is the subject application in the amount of $430,225.00. The brochure consists of:

1. Form MF-103 and accompanying answer sheets.
2. Claim Map.
3. Supplement giving additional information not included in application.
4. Location map of the subject area.

Also included is a copy of a letter from the Chairman of the Operating Committee with relevant memoranda by John E. Crawford and N. E. Nelson. A field examination and suitable report are requested.

W. A. Traver

Enclosures

JDC:jy

cc: Docket 3952
Sec. Oper. Comm. (2)
Chron.

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

RECEIVED
SEP 12 1955

224 New Customhouse
Denver 2, Colorado

September 7, 1955

Memorandum

To: W. H. King (with Brochure)
N. A. Harshman

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3952 (Uranium), Mack-Lang Group, et al., Fremont County, Wyoming.

Enclosed is the subject application in the amount of $430,225.00. The brochure consists of:

1. Form MF-103 and accompanying answer sheets.
2. Claim map.
3. Supplement giving additional information not included in application.
4. Location map of the subject area.

Also included is a copy of a letter from the Chairman of the Operating Committee with relevant memoranda by John E. Crawford and M. E. Nelson. A field examination and suitable report are requested.

W. M. Traver

Enclosures

JDC:jy

cc: Docket 3952
Sec. Oper. Comm. (2)
Chron.

Surname 700

Murphy
Ellis
Selfridge
Nelson
Yager

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

SEP - 2 1955

Mr. R. H. Richardson, President
Mack-Lang Uranium Corporation
340 Lincoln Street
Lander, Wyoming

Re: Docket No. DMEA-3952 (Uranium)
Mack-Lang group, et al.
Fremont County, Wyoming

Dear Mr. Richardson:

The application for assistance in exploring the subject property in Fremont County, Wyoming, under the captioned docket number, has been reviewed by the Rare and Miscellaneous Metals Division of the Defense Minerals Exploration Administration. It has been referred for a field examination to the Executive Officer of Region III at the following address:

Mr. W. M. Traver
Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

The Regional Office will contact you in regard to your project if additional information is required.

Sincerely yours,

C. O. Mittendorf

Administrator

FMurphy:am
8-31-55
cc to: Admr. Reading File
Docket
Code 700
Mr. Murphy
DMEA Field Team, Reg. III(2)

R.G.L.

Surname 700

FMurphy
Ellis
Selfridge

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

SEP -2 1955

Mr. W. M. Traver
Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-3952 (Uranium)
Mack-Lang Uranium Corporation
Mack-Lang group, et al.
Fremont County, Wyoming

Dear Mr. Traver:

The subject application is referred to Region III Field Team for investigation, a field examination, and recommendation. A copy of the application was forwarded to your office on August 23.

Enclosed are copies of memoranda from N. E. Nelson, dated August 26, and J. E. Crawford, dated August 30, 1955, members of the Uranium Commodity Committee.

The reviewers of the subject application concur in that the exploration program submitted is unrealistic both in scope of the area to be explored and the cost of the various exploration items. However, we are requesting a field examination, with the thought that a modified program to explore the ore-bearing channels, mentioned in the application, might be considered.

Sincerely yours,

Chairman, Operating Committee (24B)

Enclosures

APPROVED:

(24B)
Member, Bureau of Mines

(S) N. E. Nelson (24B)
Member, Geological Survey

FMurphy:am
8-31-55
cc to: Admr. Reading File
Operating Committee
Docket
Messrs. J. E. Crawford, Rm. 3641
T. H. Kiilsgaard, Rm. 5222
J. O. Hosted, Rm. 3210, GSA
Code 700
Mr. Murphy

R.G.S.

8/30/55 gla

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

RECEIVED
AUG 30 1955

August 30, 1955

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

From: John E. Crawford, Bureau of Mines Member
Uranium Commodity Committee

Subject: Application for assistance, DMEA Docket 3952, Mack-Lang Uranium Corporation, Fremont County, Wyoming

I have reviewed the attached application and supplemental information, Mack-Lang Uranium Corporation, DMEA Docket 3952; and I have discussed the data with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The Mack-Lang Uranium Corporation proposes to explore three groups of claims containing a total of 134 claims by (1) bulldozing roads, (2) conducting radioactivity surveys with car-mounted equipment on these roads, and (3) by drilling on some undetermined pattern the indicated ore channels on subject claims. The total estimated cost is $430,225.

The applicant has drilled three holes and assayed a total of 30 samples from these holes, of which only four assayed above the .10 percent minimum allowed by the Atomic Energy Commission. A 16-ton load of ore was sent from one of the subject claims to the Riverton Buying Station but no payment was made by the AEC because the lot assayed only .05 percent U_3O_8. From this information the applicant anticipates that the program will block out more than a million tons of low-grade ore, and at this assay, .05 percent, a million tons would be required to pay for the exploration costs.

The information submitted to this office indicates that the applicant justifies the expenditure of almost half a million dollars on 134 claims by the work done on three of these with rather unfavorable results at that. A venture of this nature can only be classified as prospecting.

The costs certainly warrant a review. The applicant estimates assaying costs at $120,600, yet he lists $8,000 for a laboratory; the purpose of the laboratory is not given. The cost of leasing the operating equipment based on the number of days of operation is high; it could be bought by the applicant for almost the same price.

Mr. Hosted would like to know the location of trenches on subject claims and the number and assay of samples taken from the 20 core holes drilled by the applicant. He would also like to see a geologic map of subject claims with indicated stream channels.

I recommend that the applicant be advised of the impracticability of a project of this magnitude with respect to loan purposes, and that he be advised to moderate his program for reconsideration by the DMEA. Until more evidence is presented to warrant this project as outlined, I would not approve of any consideration.

John E Crawford
John E. Crawford

Attachments

8/29/55 gla

IN REPLY REFER TO:

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

August 26, 1955

Re: DMEA 3952
Mack-Lang Uranium Corp.
Mack-Lang Group
Fremont Co., Wyoming
$430,225.00 - Uranium

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

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

Subject: Review of application.

This huge proposed project, for the carrying on of which assistance is asked, is unique as regards the nature of the deposit and the amount and type of work proposed.

The limited information afforded by the application makes a final appraisal impracticable. Considerable scattered work has been done on the 2600 acre property, but scanty data on only 12 claims of the 134 claims involved, are given us. Results of drilling 3 air core holes on three different claims are furnished, also sampling data on a 16 ton shipment from Claim 19 of Happy II Group.

Certainly a great volume of radioactive detrital material is suggested. Of the 30 samples listed:--

	3	assayed	0.01%	U_3O_8
	4	"	0.02%	"
	9	"	0.03%	"
	7	"	0.04%	"
	1	"	0.07%	"
	2	"	0.08%	"
	1	"	0.12%	"
	1	"	0.20%	"
	1	"	0.21%	"
	1	"	0.25%	"
Total	30	average	0.056%	(numerical)

Probably all samples were over 2 feet of hole, so the 0.056% is also a weighted average. The 16-ton sample sent to the sampling works at Riverton assayed 0.05%. To what extent selectivity is involved

in the choice of sampling localities, we are not informed but the 'hottest' spots probably were given the first attention.

As indicated by the cost estimate a very large sampling job is proposed. One pound of U_3O_8 in each ton of material, if known to be recoverable, could make high grade 'placer' ground. Nothing is said in the application about experimental mill work having been done. Unless it is known that a fair part of the U_3O_8 is recoverable large scale testing of the ground should wait.

Preliminary investigations, at least, by the Field Team appear, from the information at hand, to be warranted.

Referral to the Field Team is recommended.

N. E. Nelson

N. E. Nelson

IN REPLY REFER TO:

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

August 2[illegible], 1955

Re: DMEA 3952
Mack-Lang Uranium Corp.
Mack-Lang Group
Fremont Co., Wyoming
$430,225.00 - Uranium

Memorandum

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

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Preliminary investigations, at least, by the Field Team appear, from the information at hand, to be warranted.

Referral to the Field Team is recommended.

W. E. Nelson

W. E. Nelson

WNelson:iml
G-8/26/55

cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641
J. O. Hosted, 3210

August 23, 1955
Subject: DMEA-3952
Re: Exploration Assistance
Mack-Lang

Mack-Lang Uranium Corp.
340 Lincoln St.
Lander, Wyoming

Gentlemen:

The receipt of your application dated July 28, 1955 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3952 and referred to the Rare and Miscellaneous Metals Division.

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

Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

MACK-LANG URANIUM CORPORATION
TELEPHONE 846
340 LINCOLN STREET
Lander, Wyoming

July 29, 1955

Mr. C. A. Mittendorf, Administrator,
DEFENSE MINERALS EXPLORATION ADMINISTRATION,
U. S. Department of Interior,
Washington 25, D. C.

Dear Mr. Mittendorf:

Enclosed please find our "Application for Aid in an Exploration Project, Pursuant to DMEA Orders 1, Under the Defense Production Act of 1950, as Amended" on form MF-103 (Rev. April 1952) and supplemental pages numbered one to eighteen inclusive in quadruplicate.

Kindly acknowledge receipt of this application and inform us as to an approximate date when inspection of the properties may be made.

Respectfully submitted,

MACK-LANG URANIUM CORPORATION

R H Richardson

R. H. Richardson, President

RECEIVED
AUG 2 1955

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

MACK-LANG URANIUM CORPORATION
340 Lincoln St., Lander, Wyoming

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

RECEIVED
AUG 22 1955

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

Not to be filled in by applicant

Docket No. 3952
Metal or Mineral Uranium
Date Received 8.22.55
Estimated Cost $430,225
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address:

MACK-LANG URANIUM CORPORATION
LANDER, WYOMING — New address P.O.B. 224 Riverton, Wyoming

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

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

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

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

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract See schedule attached - Map. Schedule "A" Legal Descriptions of Mack-Lang Uranium claims.

(*b*) State any mine name by which the property is known. Mack-Lang

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Owner

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

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

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. See attached Schedule "B". "Recordation Data Uranium Claims, Mack-Lang Uranium Corporation"

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

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

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

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

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

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

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

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

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

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

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

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

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

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

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

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

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

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

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

(*b*) How do you propose to furnish your share of the costs? See attached

☐ Money ☐ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper. See attached

CERTIFICATION

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

Dated July 28, 1955

Mack-Lang Uranium Corporation
(Applicant)

By R H Richardson

R. H. Richardson, President

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

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

APPLICATION FOR AID IN AN EXPLORATION PROJECT
(Pursuant to DMEA Order No. 1, Under the Defense Production Act of 1950, as amended)

1. NAME OF APPLICANT

(A) The name of the applicant is, Mack-Lang Uranium Corporation, 340 Lincoln Street, Lander, Wyoming.

(B) The Corporation was organized in the state of Delaware, October 25, 1954.

(C) The names and addresses of the officers of the corporation are as follows:

Mr. R. H. Richardson Noble Hotel Lander, Wyoming	President
Mr. Ralph Cushman 5004 Rock Ledge Drive Riverside, California	Vice President
Mr. Charles L. Thompson P. O. Box 323 Chinook, Montana	Vice President
Mr. Robert Tucker Rock Springs, Wyoming	Secretary-Treasurer
Mr. W. H. Stafford Jennings, Louisiana	Director

(D) Not applicable.

2. GENERAL (No information required)

3. APPLICANTS PROPERTY RIGHTS

(A) Legal Description of properties
(See attached, "Map of Mack-Lang Uranium Corporation Group of Mining Claims" by Floyd Bishop, Professional Engineer and Land Surveyor--- Wyoming license 303)

(B) Property is known as "Mack-Lang Uranium Corporation" claims.

(C) The Mack-Lang Uranium Corporation is owner of all the properties herein indicated.

(D) Not applicable.

(E) No encumberances or liens are on the property.

(F) Book and Page Number of each recorded location notice
(See attached, Schedule "A" Recordation Data--Uranium Claims, Mack-Lang Uranium Corporation)

4. PHYSICAL DESCRIPTION

(A) Exploration operations to date consist of bulldozing approximately 25 miles of temporary roads for access and examination purposes, trenching with one half yard backhoe approximately 5000 feet for examination and sampling purposes. A limited amount of exposures have been made with the bulldozer for the same purpose.

The properties are readily available for examination. The topography ranges from level to sharply rolling with 40% level to moderately rolling. The Mack-Lang camp is approximately 14 miles from the U. S. Highway 287 on a graded dirt road on the north edge of the Red Desert. The claims lie adjacent to and extend 2 miles to the east and 6 miles to the southeast.

The properties are such that probable Uranium deposits will be recovered by surface operations.

(B) The Mack-Lang properties were all originally staked in 1954 so that there is no history of past production. The current operation consists of preliminary exploration work only. One 16 ton load of ore was delivered to the Riverton Buying Station for sampling purposes on July 14, 1955.

Only very incomplete data is available to base an estimate of approximate ore reserves; one hill which was trenched and drilled with 20 core holes indicates by assays and hole probes over 200,000 tons of uranium ore testing

4. PHYSICAL DESCRIPTION (Continued)

.05 to .10 per cent Uranium Oxide. Another deposit only partially examined appears to have been an ancient stream bed and consists of a sand and carbonaceous channel 100 to 150 feet wide and one half mile long, with 24 to 36 feet of overburden. The scintillator and hole probe indicate this to be a high grade bed of Uranium containing ore but no recoveries have been made with the drill to provide samples for analysis. where. ?

It is anticipated that additional exploration, coring and assaying of the property should result in blocking out large low grade ore bodies with smaller high grade deposits.

(C) The Mack-Lang properties are located at the area of contact of the Wasatch and Fort Union formations. The southern group of claims cover the contact of the Wasatch and Fort Union formation on a plunging anticline with 10 to 12 thousand feet of Cretaceous beds missing because of erosion or non-deposition. Water circulation through these beds may reach the contact because of the angular non-conformity. Carbonaceous beds indicate marsh conditions in the Wasatch on the southern group of claims.

The Northern group of claims presents considerable evidence of an old drainage channel in the top of the Fort Union formation at least three fourths of a mile wide. what claims ?

(D) The project is readily accessible by two graded roads leading from U. S. Highway No. 287 to the camp and claims. The properties are approximately 75 miles from the Atomic Energy Buying Station at Riverton and 90 miles from living quarters in Lander.

4. PHYSICAL DESCRIPTION (Continued)

(E) Manpower, materials, equipment, water and power are available to Mack-Lang for use and development purposes.

5. THE EXPLORATION PROJECT

(A) Exploration will be made for URANIUM ORE.

(B) The proposed plan of exploration consists of a continuation of already initiated action which may be briefly outlined as follows: Temporary roads are prepared by bull-dozer over the areas including the claims on a grid pattern. On slightly rolling and level land the roads are approximately 300 feet apart and from 100 to 500 feet apart on the steeper slopes.

Along the temporary roads or grids a profile is obtained by the use of scintillation and tape recording equipment mounted on a jeep. The use of a foot meter and the measuring phase of the recorder makes it possible to record data used in the preparation of surface maps. The boundries of the ore-bearing beds are located and staked at the same time from the data provided by the scintillator and recorder.

This preliminary information is then supplemented by drilling 4" core holes with the use of the air drill. Samples are taken every two feet in depth which are analyzed by wet assay or radiometric readings. From this data cross sectional maps will be prepared from which estimates of tonnage and grade of ore will be determined.

It is anticipated that this program will result in blocking out more than a million tons of Uranium ore mostly low grade--from .3 to .11 per cent Uranium Oxide with some high grade, the amount of which can only be roughly estimated at this time from surface assays and a small amount of drilling.

5. THE EXPLORATION PROJECT (Continued)

(C) The work already in progress will be accelerated greatly by the requested exploration project contract. It is estimated that exploration will be completed in approximately 12 months actual field time.

(D) Since the corporation was established in 1954 it has no history of operating experience. However, the personnel of the corporation in charge of the operation are experienced in closely related activities. Mr. R. H. Richardson, President of the Corporation, in charge of mining has many years of superivory experience in strip mining operations.

The Vice President in charge of exploration, Mr. Charles L. Thompson, is a graduate mining engineer and a member of the American Institute of Mining Engineers with more than thirty years of experience in mining and petroleum engineering work.

Mr. Ralph G. Cushman, Vice President in charge of development, is also qualified by many years of field and mining experience.

6. ESTIMATE OF COSTS

(A) Independent Contracts

Core Drilling and Assaying

It is anticipated that the core drilling and assaying will be contracted out to others at custom rates.

Core Drilling

Holes per claim	30	
Feet per hole	40	
Feet per claim	1200	
Cost per foot	$ 1.00	
Cost per claim		$1200.00

Assaying

Holes per claim	30	
Assays per hole	10	
Assays per claim	300	
Cost per assay	$ 3.00	
Cost per claim		$ 900.00

Cost of core drilling and assaying per claim	$2100.00
Number of claims	134
Total cost of drilling and assaying	$281,400.00

(B) Labor -- Supervision -- Consultants

1. Field Crew

Job Classification	Rate Per Month	Number Months	Total	
Cat operator	$300	12	$3600	
Back-hoe operator	$300	12	$3600	
Truck driver	$300	12	$3600	
Truck driver	$300	12	$3600	
Laborer	$250	12	$3000	
Driller	$550	12	$6600	
Supervisor	$750	12	$9000	
Cook	$250	12	$3000	
Field Crew Labor Cost				$39,000
Food cost for field crew (9 individuals @ 20 dollars per day, 360 days)				7,200
Total Field Crew Cost				$46,200

2. Engineering Crew

Job Classification	Rate Per Day	Expenses Per Day	Number Days	Total Costs
Engineer	$50	$8	75	$4,350
Surveyor	$35	$8	75	$3,225
Rodman	$12	$8	75	$1,500
Rodman	$12	$8	75	$1,500
Chainman	$10	$8	75	$1,350
Total Cost of Engineering Crew				$12,925

The engineering crew will secure data for contour maps of the properties, establishing elevations, bench marks, locating formation contacts, core holes, and roads.

(C) Operating Materials and Supplies

Equipment	Cost per Day: Fuel Oil	Gas	Lub. Oil	No. Days	Total
D-7 Caterpillar (dozer)	$6.00	--	$1.00	200	$1400
Back Hoe	$6.00	--	$1.00	200	$1400
Truck	--	$6.00	$1.00	300	$2100
Truck	--	$6.00	$1.00	150	$1050
Light Plant	--	$3.00	$ .50	300	$1050
Welding Plant	--	$6.00	$1.00	50	$ 350
Air Compressor	--	$6.00	$1.00	50	$ 350
Total Equipment and Supplies (Operating)					$7700

(D) Operating Equipment

Leased equipment -- certain equipment necessary in carrying on the exploration work is listed below with the rates and anticipated time of use.

Equipment	Rate per Day	Number Days	Total Cost	
D-7 Caterpillar (dozer)	$55	200	$11,000	
Back Hoe	$60	200	$12,000	
Truck	$25	300	$ 7,500	
Truck	$20	150	$ 6,000	
Trailer House	$ 4	350	$ 1,500	
Total Cost of Leased Equipment				$38,000

(E) Rehabilitation and Repairs

None

(F) New Buildings, Improvements and Installations

Estimated cost of construction, materials and labor on contract basis at the field camp site.

Bunk House	$3,000	
Furnishings--Bunk House	$1,000	
Cook House	$3,000	
Furnishings--Cook House	$2,000	
Laboratory Building	$3,000	
Laboratory Equipment	$5,000	
Wash House and Latrine	$3,000	
Portable Field Office	$4,000	
Total		$24,000

(G) Miscellaneous

Repairs and Maintenance of Equipment leased	$3,000	
Accounting	$1,000	
Pay Roll Taxes and Workmen's Compensation	$4,000	
Liability Insurance	$2,000	
Total Miscellaneous		$10,000

(H) Contingincies

Unanticipated Miscellaneous Costs	$10,000

SUMMARY OF COSTS

(Item 6 - Estimate of Costs)

(A)	INDEPENDENT CONTRACTS		$281,400	
(B)	LABOR--SUPERVISION--CONSULTANTS			
	Field Crew	$46,200		
	Engineering Crew	$12,925		
			$ 59,125	
(C)	OPERATING MATERIALS & SUPPLIES		$ 7,700	
(D)	OPERATING EQUIPMENT		$ 38,000	
(E)	REHABILITATION & REPAIRS		None	
(F)	NEW BUILDINGS, IMPROVEMENTS AND INSTALLATIONS		$ 24,000	
(G)	MISCELLANEOUS		$ 10,000	
(H)	CONTINGINCIES		$ 10,000	
	TOTAL ESTIMATED COST OF EXPLORATION PROJECT			$430,225

7. FINANCING

(A) Sharing of Cost

The Mack-Lang Uranium Corporation is prepared to furnish its Proportionate share (25%) of the financing in accordance with Section 7, DMEA No. 1.

(B) The Mack-Lang Uranium Corporation will furnish its share of the costs in cash from proceeds of short form stock ($300,000) issue now being sold.

Mack-Lang Uranium Corporation
340 Lincoln Street, Lander, Wyoming

SCHEDULE B

RECORDATION DATA URANIUM CLAIMS MACK-LANG URANIUM CORPORATION

Name of Claim	Grantor	Grantee	Kind of Inst.	Inst.Date	Date Rec.	Book	Page	Sec.	Twp.	Rge.
Magpie 1-24 incl.	R.G.Cushman,Agent	Public	Loc.Not.	10-8-54	11-20-54	74	396-419	19,30,31, 24,25,	28 28	93 94
Magpie 1-24 incl.	DeWitt Langford et al	Mack-Lang Uranium Corporation	Assignment and Deed	11-30-54	12-9-54	79	44	(Same description as above.)		
Magpie 9,11,13,15, 17,19,21,23,1-8,10, 12,14,16,18,20,22,24,	R.G.Cushman et al	Public	Amended Loc.Not.	12/30-54	12-31-54	83	56-79	(Same description)		
Happy 1-10 incl.	Ralph Cushman et al	Public	Loc.Not.	9-25-54	11-17-54	74	250-259	6	27	93
Happy 1-10 incl.	DeWitt Langford et al	MackLang Uranium Corporation	Assignment and Deed	11-30-54	12-9-54	79	42	6	27	93
Happy KI 1-40 incl.	R.G.Cushman et al	Public	Loc.Not.	10-10-54	11-9-54	73	331-370	4,5, 31,32,33	27 28	93 93
Happy II 1-40 incl.	DeWitt Langford et al	Mac -Lang Uranium Corporation	Assignment and Deed	11-16-54	11-17-54	74	229	(Same description as above.)		
Happy II 1-40 incl.	R.G.Cushman et al	Public	Amended Loc.Not.	11-15-54	11-24-54	75	229-268	19,30,31,32, 33, 4,5,	 28 27	 93 93
Happy II 1-40 incl.	DeWitt Langford et al	Mack-Lang Uranium Corporation	Assignment and Deed	11-30-54	12-9-54	79	34	(Same as above)		
~~Bears Paw 1-10 incl.~~	~~Robert N.Sias et al~~	~~Public~~	~~Loc.Not.~~	~~10-28-54~~	~~10-28-54~~	~~72~~ n	~~139-~~ 148	~~3,4,~~ 33,34,	~~27~~ 28	~~93~~ 93
~~Bears Paw 1-10 incl.~~	~~Robert N.Sias et al~~	~~Public~~	~~Amended Loc.Not.~~	~~10-1-54~~	~~11-17-54~~	~~74~~	~~240-~~ 249	~~(Same description)~~		

Mack-Lang Uranium Corporation,
340 Lincoln Street, Lander, Wyoming.

Name of Claim	Grantor	Grantee	Kind of Inst.	Inst.Date	Date Rec.	Book	Page	Sec.	Twp.	Rge.
MacLang 1-24 incl.	R.G.Cushman et al	Public	Loc.Not.	10-5-54	11-9-54	73	290-313	33,34,	28	93
MacLang 1-24 incl.	DeWitt Langford et al	MacLang Uranium Corp.	Assignment and Deed	11-16-54	11-17-54	74	231	33,34	28	93
MacLang 1-24 incl.	DeWitt Langford et al	Mack-Lang Uranium Corporation	Assignment and Deed	11-30-54	12-9-54	79	36	33,34	28	93
Pine Creek 1-5 incl.	DeWitt Langford et al	Public	Loc.Not.	9-19-54	11-17-54	74	235-239	35,36	29	101
Pine Creek 1-5 incl.	"	Mack-Lang Uranium Corporation	Assignment and Deed	11-30-54	12-9-54	79	40	35,36	29-	101
Wagon Wheel 1-18 incl.	R.G.Cushman et al	Public	Loc.Not.	10-15-54	11-16-54	74	154-171	5,7,8	27	93
Wagon Wheel 1-18 incl.	DeWitt Langford et al	Mac Lang Unanium Corporation	Assignment and Deed	11-16-54	11-17-54	74	233	5,7,8	27	93
Wagon Wheel 1-18 incl.	"	"	"	11-30-54	12-9-54	79	38	5,7,8	27	93
Wagon Wheel 9,19	R.G.Cushman et al	Public	Amended Loc.Not.	12-30-54	12-31-54	83	44 45	8, 17	27	93
Wagon Wheel 19	DeWitt Langford et al	Mac Lang Uranium Corporation	Assignment and Deed	1-7-55	1-12-55	84	540	8,17	27	93
Red Desert 1-16 incl.	DeWitt Langford et al	Public	Loc.Not.	11-25-54	12-31-54	83	80-95	32,33	27	94
Red Desert 1-16 incl.	"	Mack-Lang Uranium Corporation	Assignment and Deed	1-7-55	1-12-55	84	540	32,33	27	94

Mack-Lang Uranium Corporation
340 Lincoln Street, Lander, Wyoming.

SCHEDULE B
RECORDATION DATA URANIUM CLAIMS MACK-LANG URANIUM CORPORATION

Name of Claim	Grantor	Grantee	Kind of Inst.	Inst.Date	Date Rec.	Book	Page	Sec.	Twp.	Rge.
Happy III 1-22	Fort Bend Oil Co.	Public	Loc.Not.	9-25-54	11-26-54	75	431 to 452	17,18,19 24,25	27 27	93 94
Happy III 23-25	W.C.Scott,Agent	Public	Loc.Not.	11-15-54	12-31-54	83	41 to 43	8,17	27	93
Happy III 1-25	Fort Bend Oil Co.	Mack-Lang Uranium Corporation	Assignment	7-29-55	8-2-55	135	305	17,18,19 24,25	27 27	93 94

Mack-Lang Uranium Corporation
340 Lincoln Street, Lander, Wyoming

SUPPLEMENTAL TO

APPLICATION FOR AID IN AN

EXPLORATION PROJECT, PURSUANT TO

DMEA ORDER 1, UNDER THE DEFENSE

PRODUCTION ACT OF 1950, AS AMENDED

RECEIVED
AUG 25 1955

MACK-LANG URANIUM CORPORATION
340 Lincoln St., Lander, Wyoming

R. H. Richardson - President

Supplemental to Previously Submitted

APPLICATION FOR AID IN AN EXPLORATION PROJECT

(Pursuant to DMEA Order No. 1, Under the Defense Production Act of 1950, as amended) Dated: July 28, 1955.

Paragraph 4.

(A) The backhoe trenching work was performed on the following claims:

Happy II Claims No. 19, 23, 24, and 33

Happy III Claims No. 3, 5, 14, 21, 23, and 24

Bulldozing was performed on the following claims:

Happy II Claims No. 8, 9, 10, 19, 20, 21, 22, 23, 24, 34, and 35

Happy III Claims No. 3, 5, 14, 21, 23, and 24

The backhoe work was done for the purpose of studying the horizon and determining the dip of the formations. Ore samples were also obtained to supplement scintillator readings.

The bulldozing was done for temporary roads, to examine outcroppings and secure ore samples.

4. (B) The location (Claim No. 19, Happy II Group) for obtaining the sixteen ton load of ore was made by the geologist, Mr. Charles L. Thompson. It was selected upon the basis of being a representative sample from a representative area.

Mr. W. C. Scott, of Lander, Wyoming, Superintendent of Field Operation supervised the actual loading of the ore. The loading was done with the backhoe from an outcropping of ore. The ore was not sorted or picked over by hand.

The statement made relating to a preliminary estimate of 200,000 tons of ore at one location referred to Claim No. 23 in the Happy II Group.

The calculation was made upon the basis of the measured width and length of the body on the surface. The depth of the ore body was determined by core drilling and analysis of samples.

Mr. Charles L. Thompson, Geologist, and Mr. Ralph Cushman, Vice President in charge of exploration did the estimating. A photostat copy of the analysis is attached to each copy of this supplemental report.

The ancient streambed referred to is on portions of Claims 13, 14, 15, and 17 of the Happy III Group.

The edge of the area was determined by ground survey conducted with a lead shielded scintillator mounted on a jeep. A grid of the entire area was made and stakes driven to outline the boundries of the stream channel. Measurements were taken to determine the exact widths of the channel.

Drill holes and core holes were made to confirm the geological theory of the nature of the deposit. More and deeper core drilling will provide information on which to base estimates.

4. (E) Water will be obtained by drilling shallow wells. There is an ample supply of upper ground water at not more than 100 feet. This is confirmed by stockmen's wells, seismic drilling, oil field drilling and our own core hole drilling. This underground water is fed by springs from the near by mountains.

There are adequate water supplies for use in any phase of the development of these claims including the installation of an upgrading plant.

4. (E) Power. The commercial power line is approximately twenty miles distant. Power for use on the project will be generated by diesel generator.

Paragraph 5.

The coring was done by the use of an air core barrel. This type of equipment is relatively new but is on the market. It is used in lieu of the wet method in taking samples and has the advantage of lessening contamination of the wall of the hole.

The ore is found in clay, sandstone and carbonaceous material. Most of the uranium bearing ores in this section are secondary deposits and are gathered in stream channels by water action either hydrothermal or erosional.

Paragraph 6.

(B) Labor. To clarify: The "9 individuals" should read "8 individuals" @ $2.50 per day each, or $20.00 per day for 360 days. This gives a total food cost of $7,200 for the year. You will note this is the same total previously given.

NOTE: Supplemental Information

Since the preparation of the original application for aid, returns have been received from a number of samples submitted for analysis.

A summary of the analysis of samples taken from three representative core holes is attached for consideration. These summaries are found in Supplemental Schedules C, D and E.

Returns from these analysis supports the opinion of the management of Mack-Lang Uranium Corporation that the claims contain large quantities of low grade uranium ore.

SUPPLEMENTAL SCHEDULE "C"

SUMMARY OF URANIUM ORE ANALYSIS
(By Mason-Farrow, Box 247, Riverton, Wyoming)

HAPPY II GROUP

Claim No.	Hole No.	Depth	U_3O_8	Date Analyzed	Assay Number
19	5	2	.03	6/18/55	1635
19	5	4	.01	6/18/55	1634
19	5	6	.01	6/18/55	1638
19	5	8	.08	6/18/55	1636
19	5	10	.04	6/18/55	1637

SUPPLEMENTAL SCHEDULE "D"

SUMMARY OF URANIUM ORE ANALYSIS
(By Mason-Farrow, Box 247, Riverton, Wyoming)

HAPPY III GROUP

Claim No.	Hole No.	Depth	U_3O_8	Date Analyzed	Assay Number
21	16	0-2	.03	6/29/55	1688
21	16	2-4	.01	6/29/55	1689
21	16	6-8	.20	6/29/55	1690
21	16	6-8	.12	7/ 7/55	1693
21	16	8-10	.08	7/ 7/55	1691
21	16	10-12	.04	6/30/55	1692
21	16	14	.04	6/30/55	1694
21	16	16	.03	6/30/55	1695

SUPPLEMENTAL SCHEDULE "E"

SUMMARY OF URANIUM ORE ANALYSIS
(By Mason-Farrow, Box 247, Riverton, Wyoming)

HAPPY II GROUP

Claim No.	Hole No.	Depth	U_3O_8	Date Analyzed	Assay Number
33	37	2	.03	7/13/55	1763
33	37	4	.03	7/27/55	1773
33	37	8	.03	7/27/55	1780
33	37	10	.07	7/13/55	1770
33	37	12	.04	7/13/55	1768
33	37	14	.04	7/13/55	1769
33	37	16	.03	7/13/55	1765
33	37	22	.04	7/13/55	1775
33	37	24	.21	7/13/55	1762
33	37	26	.03	7/13/55	1776
33	37	28	.04	7/13/55	1766
33	37	32	.02	7/13/55	1774
33	37	34	.02	7/13/55	1771 (re-run)
33	37	36	.03	7/13/55	1767
33	37	38	.02	7/13/55	1761
33	37	40	.25	7/13/55	1779
33	37	42	.02	7/13/55	1764

Form No. 0-7
9/54 (1M)

COLORADO PLATEAU URANIUM ORE PROJECT
American Smelting and Refining Company
Ore Purchasing Agent for
U. S. Atomic Energy Commission
P. O. Box 986
Grand Junction, Colorado

Martin N. Gaines
Manager

July 26, 1955

Mack - Long Uranium Corporation
Lander, Wyoming

REPORT OF ASSAY RESULTS

LOT NO.	SCALE TICKET NO.	CLAIM	U_3O_8	V_2O_5	$CaCO_3$	CU
224	784	Happy #19	0.05	0.07	1.8	

We regret to advise that the U_3O_8 is below the 0.10 percent minimum allowed under the U. S. Atomic Energy Commission schedule and cannot be paid for.

Yours very truly,

H. C. Jackson
Office Manager

Mack-Lang Uranium Corporation
340 Lincoln Street, Lander, Wyoming

Crawford

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

MACK-LANG URANIUM CORPORATION
340 Lincoln St., Lander, Wyoming

RECEIVED
AUG 22 1955

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

RECEIVED
AUG 22 1955

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

Not to be filled in by applicant

Docket No. 3952
Metal or Mineral Uranium
Date Received 8.22.55
Estimated Cost $ 430,225
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address:

MACK-LANG URANIUM CORPORATION
LANDER, WYOMING

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

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

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

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

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract See schedule attached - Map. Schedule "A" Legal Descriptions of Mack-Lang Uranium claims.

(*b*) State any mine name by which the property is known. Mack-Lang

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Owner

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

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

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. See attached Schedule "B" "Recordation Data Uranium Claims, Mack-Lang Uranium Corporation"

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

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

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

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

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

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

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

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

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

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

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

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

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

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

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

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

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

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

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

(*b*) How do you propose to furnish your share of the costs? See attached

☐ Money ☐ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper. See attached

CERTIFICATION

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

Dated July 28, 1955

Mack-Lang Uranium Corporation
(Applicant)

By X R. H. Richardson

R. H. Richardson, President

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

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

APPLICATION FOR AID IN AN EXPLORATION PROJECT
(Pursuant to DMEA Order No. 1, Under the Defense Production Act of 1950, as amended)

1. NAME OF APPLICANT

(A) The name of the applicant is, Mack-Lang Uranium Corporation, 340 Lincoln Street, Lander, Wyoming.

(B) The Corporation was organized in the state of Delaware, October 25, 1954.

(C) The names and addresses of the officers of the corporation are as follows:

Mr. R. H. Richardson Noble Hotel Lander, Wyoming	President
Mr. Ralph Cushman 5004 Rock Ledge Drive Riverside, California	Vice President
Mr. Charles L. Thompson P. O. Box 323 Chinook, Montana	Vice President
Mr. Robert Tucker Rock Springs, Wyoming	Secretary-Treasurer
Mr. W. H. Stafford Jennings, Louisiana	Director

(D) Not applicable.

2. GENERAL (No information required)

3. APPLICANTS PROPERTY RIGHTS

(A) Legal Description of properties
(See attached, "Map of Mack-Lang Uranium Corporation Group of Mining Claims" by Floyd Bishop, Professional Engineer and Land Surveyor—Wyoming license 303)

(B) Property is known as "Mack-Lang Uranium Corporation" claims.

(C) The Mack-Lang Uranium Corporation is owner of all the properties herein indicated.

(D) Not applicable.

(E) No encumberances or liens are on the property.

(F) Book and Page Number of each recorded location notice
(See attached, Schedule "A" Recordation Data--Uranium Claims, Mack-Lang Uranium Corporation)

4. PHYSICAL DESCRIPTION

(A) Exploration operations to date consist of bulldozing approximately 25 miles of temporary roads for access and examination purposes, trenching with one half yard backhoe approximately 5000 feet for examination and sampling purposes. A limited amount of exposures have been made with the bulldozer for the same purpose.

The properties are readily available for examination. The topography ranges from level to sharply rolling with 40% level to moderately rolling. The Mack-Lang camp is approximately 14 miles from the U. S. Highway 287 on a graded dirt road on the north edge of the Red Desert. The claims lie adjacent to and extend 2 miles to the east and 6 miles to the southeast.

The properties are such that probable Uranium deposits will be recovered by surface operations.

(B) The Mack-Lang properties were all originally staked in 1954 so that there is no history of past production. The current operation consists of preliminary exploration work only. One 16 ton load of ore was delivered to the Riverton Buying Station for sampling purposes on July 14, 1955.

Only very incomplete data is available to base an estimate of approximate ore reserves; one hill which was trenched and drilled with 20 core holes indicates by assays and hole probes over 200,000 tons of uranium ore testing

4. PHYSICAL DESCRIPTION (Continued)

.05 to .10 per cent Uranium Oxide. Another deposit only partially examined appears to have been an ancient stream bed and consists of a sand and carbonaceous channel 100 to 150 feet wide and one half mile long, with 24 to 36 feet of overburden. The scintillator and hole probe indicate this to be a high grade bed of Uranium containing ore but no recoveries have been made with the drill to provide samples for analysis.

It is anticipated that additional exploration, coring and assaying of the property should result in blocking out large low grade ore bodies with smaller high grade deposits.

(C) The Mack-Lang properties are located at the area of contact of the Wasatch and Fort Union formations. The southern group of claims cover the contact of the Wasatch and Fort Union formation on a plunging anticline with 10 to 12 thousand feet of Cretaceous beds missing because of erosion on non-deposition. Water circulation through these beds may reach the contact because of the angular non-conformity. Carbonaceous beds indicate marsh conditions in the Wasatch on the southern group of claims.

The Northern group of claims presents considerable evidence of an old drainage channel in the top of the Fort Union formation at least three fourths of a mile wide.

(D) The project is readily accessible by two graded roads leading from U. S. Highway No. 287 to the camp and claims. The properties are approximately 75 miles from the Atomic Energy Buying Station at Riverton and 90 miles from living quarters in Lander.

4. PHYSICAL DESCRIPTION (Continued)

(E) Manpower, materials, equipment, water and power are available to Mack-Lang for use and development purposes.

5. THE EXPLORATION PROJECT

(A) Exploration will be made for URANIUM ORE.

(B) The proposed plan of exploration consists of a continuation of already initiated action which may be briefly outlined as follows: Temporary roads are prepared by bull-dozer over the areas including the claims on a grid pattern. On slightly rolling and level land the roads are approximately 300 feet apart and from 100 to 500 feet apart on the steeper slopes.

Along the temporary roads or grids a profile is obtained by the use of scintillation and tape recording equipment mounted on a jeep. The use of a foot meter and the measuring phase of the recorder makes it possible to record data used in the preparation of surface maps. The boundries of the ore-bearing beds are located and staked at the same time from the data provided by the scintillator and recorder.

This preliminary information is then supplemented by drilling 4" core holes with the use of the air drill. Samples are taken every two feet in depth which are analyzed by wet assay or radiometric readings. From this data cross sectional maps will be prepared from which estimates of tonnage and grade of ore will be determined.

It is anticipated that this program will result in blocking out more than a million tons of Uranium ore mostly low grade--from .3 to .11 per cent Uranium Oxide with some high grade, the amount of which can only be roughly estimated at this time from surface assays and a small amount of drilling.

5. THE EXPLORATION PROJECT (Continued)

(C) The work already in progress will be accelerated greatly by the requested exploration project contract. It is estimated that exploration will be completed in approximately 12 months actual field time.

(D) Since the corporation was established in 1954 it has no history of operating experience. However, the personnel of the corporation in charge of the operation are experienced in closely related activities. Mr. R. H. Richardson, President of the Corporation, in charge of mining has many years of superivory experience in strip mining operations.

The Vice President in charge of exploration, Mr. Charles L. Thompson, is a graduate mining engineer and a member of the American Institute of Mining Engineers with more than thirty years of experience in mining and petroleum engineering work.

Mr. Ralph G. Cushman, Vice President in charge of development, is also qualified by many years of field and mining experience.

6. ESTIMATE OF COSTS

(A) Independent Contracts

Core Drilling and Assaying

It is anticipated that the core drilling and assaying will be contracted out to others at custom rates.

Core Drilling

Holes per claim	30	
Feet per hole	40	
Feet per claim	1200	
Cost per foot	$ 1.00	
Cost per claim		$1200.00

Assaying

Holes per claim	30	
Assays per hole	10	
Assays per claim	300	
Cost per assay	$ 3.00	
Cost per claim		$ 900.00

Cost of core drilling and assaying per claim	$2100.00
Number of claims	134
Total cost of drilling and assaying	$281,400.00

(B) Labor — Supervision — Consultants

1. Field Crew

Job Classification	Rate Per Month	Number Months	Total	
Cat operator	$300	12	$3600	
Back-hoe operator	$300	12	$3600	
Truck driver	$300	12	$3600	
Truck driver	$300	12	$3600	
Laborer	$250	12	$3000	
Driller	$550	12	$6600	
Supervisor	$750	12	$9000	
Cook	$250	12	$3000	
Field Crew Labor Cost				$39,000
Food cost for field crew (9 individuals @ 20 dollars per day, 360 days)				7,200
Total Field Crew Cost				$46,200

2. Engineering Crew

Job Classification	Rate Per Day	Expenses Per Day	Number Days	Total Costs
Engineer	$50	$8	75	$4,350
Surveyor	$35	$8	75	$3,225
Rodman	$12	$8	75	$1,500
Rodman	$12	$8	75	$1,500
Chainman	$10	$8	75	$1,350
Total Cost of Engineering Crew				$12,925

The engineering crew will secure data for contour maps of the properties, establishing elevations, bench marks, locating formation contacts, core holes, and roads.

(C) Operating Materials and Supplies

Equipment	Cost per Day: Fuel Oil	Gas	Lub. Oil	No. Days	Total
D-7 Caterpillar (dozer)	$6.00	—	$1.00	200	$1400
Back Hoe	$6.00	—	$1.00	200	$1400
Truck	—	$6.00	$1.00	300	$2100
Truck	—	$6.00	$1.00	150	$1050
Light Plant	—	$3.00	$ .50	300	$1050
Welding Plant	—	$6.00	$1.00	50	$ 350
Air Compressor	—	$6.00	$1.00	50	$ 350
Total Equipment and Supplies (Operating)					$7700

(D) Operating Equipment

Leased equipment — certain equipment necessary in carrying on the exploration work is listed below with the rates and anticipated time of use.

Equipment	Rate per Day	Number Days	Total Cost	
D-7 Caterpillar (dozer)	$55	200	$11,000	
Back Hoe	$60	200	$12,000	
Truck	$25	300	$ 7,500	
Truck	$20	150	$ 6,000	
Trailer House	$ 4	350	$ 1,500	
Total Cost of Leased Equipment				$38,000

(E) Rehabilitation and Repairs

None

(F) New Buildings, Improvements and Installations

Estimated cost of construction, materials and labor on contract basis at the field camp site.

Bunk House	$3,000	
Furnishings—Bunk House	$1,000	
Cook House	$3,000	
Furnishings—Cook House	$2,000	
Laboratory Building	$3,000	
Laboratory Equipment	$5,000	
Wash House and Latrine	$3,000	
Portable Field Office	$4,000	
Total		$24,000

(G) Miscellaneous

Repairs and Maintenance of Equipment leased	$3,000	
Accounting	$1,000	
Pay Roll Taxes and Workmen's Compensation	$4,000	
Liability Insurance	$2,000	
Total Miscellaneous		$10,000

(H) Contingincies

Unanticipated Miscellaneous Costs	$10,000

SUMMARY OF COSTS

(Item 6 - Estimate of Costs)

(A)	INDEPENDENT CONTRACTS		$281,400	
(B)	LABOR--SUPERVISION--CONSULTANTS			
	Field Crew	$46,200		
	Engineering Crew	$12,925		
			$ 59,125	
(C)	OPERATING MATERIALS & SUPPLIES		$ 7,700	
(D)	OPERATING EQUIPMENT		$ 38,000	
(E)	REHABILITATION & REPAIRS		None	
(F)	NEW BUILDINGS, IMPROVEMENTS AND INSTALLATIONS		$ 24,000	
(G)	MISCELLANEOUS		$ 10,000	
(H)	CONTINGINCIES		$ 10,000	
	TOTAL ESTIMATED COST OF EXPLORATION PROJECT			$430,225

7. FINANCING

(A) Sharing of Cost

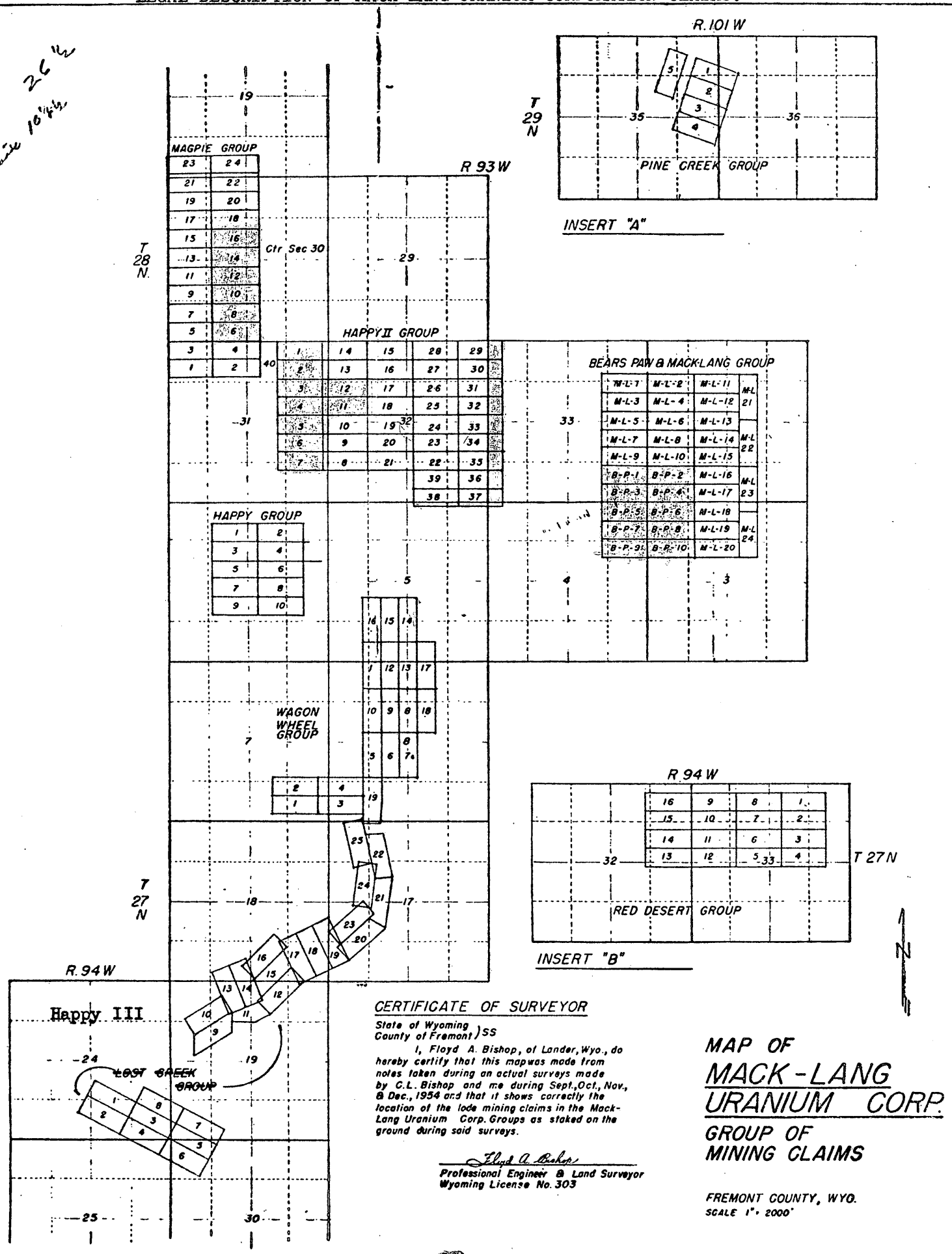
The Mack-Lang Uranium Corporation is prepared to furnish its Proportionate share (25%) of the financing in accordance with Section 7, DMEA No. 1.

(B) The Mack-Lang Uranium Corporation will furnish its share of the costs in cash from proceeds of short form stock ($300,000) issue now being sold.

Mack-Lang Uranium Corporation
340 Lincoln Street, Lander, Wyoming

SCHEDULE "A"

LEGAL DESCRIPTION OF MACK-LANG URANIUM CORPORATION CLAIMS.



CERTIFICATE OF SURVEYOR

State of Wyoming
County of Fremont) SS

I, Floyd A. Bishop, of Lander, Wyo., do hereby certify that this map was made from notes taken during an actual surveys made by C.L. Bishop and me during Sept., Oct., Nov., & Dec., 1954 and that it shows correctly the location of the lode mining claims in the Mack-Lang Uranium Corp. Groups as staked on the ground during said surveys.

Floyd A. Bishop
Professional Engineer & Land Surveyor
Wyoming License No. 303

MAP OF
MACK-LANG
URANIUM CORP.
GROUP OF
MINING CLAIMS

FREMONT COUNTY, WYO.
SCALE 1" = 2000'

Claims not owned by Mack-Lang Uranium Corp.

Mack-Lang Uranium Corporation
340 Lincoln Street, Lander, Wyoming

SCHEDULE D

RECORDATION DATA URANIUM CLAIMS MACK-LANG URANIUM CORPORATION

Name of Claim	Grantor	Grantee	Kind of Inst.	Inst.Date	Date Rec.	Book	Page	Sec.	Twp.	Rge.
Magpie 1-24 incl.	R.G.Cushman,Agent	Public	Loc.Not.	10-8-54	11-20-54	74	396-419	19,30,31, 24,25,	28 28	93 94
Magpie 1-24 incl.	DeWitt Langford et al	Mack-Lang Uranium Corporation	Assignment and Deed	11-30-54	12-9-54	79	44	(Same description as) (above.)		
Magpie 9,11,13,15, 17,19,21,23,1-8,10, 12,14,16,18,20,22,24,	R.G.Cushman et al	Public	Amended Loc.Not.	12/30-54	12-31-54	83	56-79	(Same description)		
Happy 1-10 incl.	Ralph Cushman et al	Public	Loc.Not.	9-25-54	11-17-54	74	250-259	6	27	93
Happy 1-10 incl.	DeWitt Langford et al	MackLang Uranium Corporation	Assignment and Deed	11-30-54	12-9-54	79	42	6	27	93
Happy II 1-40 incl.	R.G.Cushman et al	Public	Loc.Not.	10-10-54	11-9-54	73	331-370	4,5, 31,32,33	27 28	93 93
Happy II 1-40 incl.	DeWitt Langford et al	Mac -Lang Uranium Corporation	Assignment and Deed	11-16-54	11-17-54	74	229	(Same description as) (above.)		
Happy II 1-40 incl.	R.G.Cushman et al	Public	Amended Loc.Not.	11-15-54	11-24-54	75	229-268	19,30,31,32, 33, 4,5,	28 27	93 93
Happy II 1-40 incl.	DeWitt Langford et al	Mack-Lang Uranium Corporation	Assignment and Deed	11-30-54	12-9-54	79	34	(Same as above)		
~~Bears Paw 1-10 incl.~~	~~Robert H.Sias et al~~	~~Public~~	~~Loc.Not.~~	~~10-28-54~~	~~10-28-54~~	~~72~~ 72	~~139-~~ 148	~~3,4,~~ 33,34,	~~27~~ 28	~~93~~ 93
~~Bears Paw 1-10 incl.~~	~~Robert H.Sias et al~~	~~Public~~	~~Amended~~ Loc.Not.	~~10-1-54~~	~~11-17-54~~	~~74~~	~~240-~~ 249	~~(Same description)~~		

Mack-Lang Uranium Corporation,
340 Lincoln Street, Lander, Wyoming.

Name of Claim	Grantor	Grantee	Kind of Inst.	Inst.Date	Date Rec.	Book	Page	Sec.	Twp.	Rge.
MacLang 1-24 incl.	R.G.Cushman et al	Public	Loc.Not.	10-5-54	11-9-54	73	290-313	33,34,	28	93
MacLang 1-24 incl.	DeWitt Langford et al	MacLang Uranium Corp.	Assignment and Deed	11-16-54	11-17-54	74	231	33,34	28	93
MacLang 1-24 incl.	DeWitt Langford et al	Mack-Lang Uranium Corporation	Assignment and Deed	11-30-54	12-9-54	79	36	33,34	28	93
Pine Creek 1-5 incl.	DeWitt Langford et al	Public	Loc.Not.	9-19-54	11-17-54	74	235-239	35,36	29	101
Pine Creek 1-5 incl.	"	Mack-Lang Uranium Corporation	Assignment and Deed	11-30-54	12-9-54	79	40	35,36	29-	101
Wagon Wheel 1-18 incl.	R.G.Cushman et al	Public	Loc.Not.	10-15-54	11-16-54	74	154-171	5,7,8	27	93
Wagon Wheel 1-18 incl.	DeWitt Langford et al	Mac Lang Uranium Corporation	Assignment and Deed	11-16-54	11-17-54	74	233	5,7,8	27	93
Wagon Wheel 1-18 incl.	"	"	"	11-30-54	12-9-54	79	38	5,7,8	27	93
Wagon Wheel 9,19	R.G.Cushman et al	Public	Amended Loc.Not.	12-30-54	12-31-54	83	44 45	8,17	27	93
Wagon Wheel 19	DeWitt Langford et al	Mac Lang Uranium Corporation	Assignment and Deed	1-7-55	1-12-55	84	540	8,17	27	93
Red Desert 1-16 incl.	DeWitt Langford et al	Public	Loc.Not.	11-25-54	12-31-54	83	80-95	32,33	27	94
Red Desert 1-16 incl.	"	Mack-Lang Uranium Corporation	Assignment and Deed	1-7-55	1-12-55	84	540	32,33	27	94

Mack-Lang Uranium Corporation
340 Lincoln Street, Lander, Wyoming.

SCHEDULE B
RECORDATION DATA URANIUM CLAIMS MACK-LANG URANIUM CORPORATION

Name of Claim	Grantor	Grantee	Kind of Inst.	Inst.Date	Date Rec.	Book	Page	Sec.	Twp.	Rge.
Happy III 1-22	Fort Bend Oil Co.	Public	Loc.Not.	9-25-54	11-26-54	75	431 to 452	17,18,19 24,25	27 27	93 94
Happy III 23-25	W.C.Scott,Agent	Public	Loc.Not.	11-15-54	12-31-54	83	41 to 43	8,17	27	93
Happy III 1-25	Fort Bend Oil Co.	Mack-Lang Uranium Corporation	Assignment	7-29-55	8-2-55	135	305	17,18,19 24,25	27 27	93 94

Magpie 17 39 24 7 17

Happy II 30 9 30

Happy 10

W. Wh. } 43
Lostcr

Rd Des 16 ✓

M.L. 24 ✓

Pin Cr. 5 ✓

145 claims

Mack-Lang Uranium Corporation
340 Lincoln Street, Lander, Wyoming

SUPPLEMENTAL TO

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

RECEIVED
AUG 2 7 1955

MACK-LANG URANIUM CORPORATION
340 Lincoln St., Lander, Wyoming

X g. R. W. Richardson - President

Mack-Lang Uranium Corporation
340 Lincoln Street, Lander, Wyoming

Supplemental to Previously Submitted

APPLICATION FOR AID IN AN EXPLORATION PROJECT

(Pursuant to DMEA Order No. 1, Under the Defense Production Act of 1950, as amended) Dated: July 28, 1955.

Paragraph 4.

(A) The backhoe trenching work was performed on the following claims:

Happy II Claims No. 19, 23, 24, and 33

Happy III Claims No. 3, 5, 14, 21, 23, and 24

Bulldozing was performed on the following claims:

Happy II Claims No. 8, 9, 10, 19, 20, 21, 22, 23, 24, 34, and 35

Happy III Claims No. 3, 5, 14, 21, 23, and 24

The backhoe work was done for the purpose of studying the horizon and determining the dip of the formations. Ore samples were also obtained to supplement scintillator readings.

The bulldozing was done for temporary roads, to examine outcroppings and secure ore samples.

4. (B) The location (Claim No. 19, Happy II Group) for obtaining the sixteen ton load of ore was made by the geologist, Mr. Charles L. Thompson. It was selected upon the basis of being a representative sample from a representative area.

Mr. W. C. Scott, of Lander, Wyoming, Superintendent of Field Operation supervised the actual loading of the ore. The loading was done with the backhoe from an outcropping of ore. The ore was not sorted or picked over by hand.

The statement made relating to a preliminary estimate of 200,000 tons of ore at one location referred to Claim No. 23 in the Happy II Group.

The calculation was made upon the basis of the measured width and length of the body on the surface. The depth of the ore body was determined by core drilling and analysis of samples.

Mr. Charles L. Thompson, Geologist, and Mr. Ralph Cushman, Vice President in charge of exploration did the estimating. A photostat copy of the analysis is attached to each copy of this supplemental report.

The ancient streambed referred to is on portions of Claims 13, 14, 15, and 17 of the Happy III Group.

The edge of the area was determined by ground survey conducted with a lead shielded scintillator mounted on a jeep. A grid of the entire area was made and stakes driven to outline the boundries of the stream channel. Measurements were taken to determine the exact widths of the channel.

Drill holes and core holes were made to confirm the geological theory of the nature of the deposit. More and deeper core drilling will provide information on which to base estimates.

4. (E) Water will be obtained by drilling shallow wells. There is an ample supply of upper ground water at not more than 100 feet. This is confirmed by stockmen's wells, seismic drilling, oil field drilling and our own core hole drilling. This underground water is fed by springs from the near by mountains.

There are adequate water supplies for use in any phase of the development of these claims including the installation of an upgrading plant.

4. (E) Power. The commercial power line is approximately twenty miles distant. Power for use on the project will be generated by diesel generator.

Paragraph 5.

The coring was done by the use of an air core barrel. This type of equipment is relatively new but is on the market. It is used in lieu of the wet method in taking samples and has the advantage of lessening contamination of the wall of the hole.

The ore is found in clay, sandstone and carbonaceous material. Most of the uranium bearing ores in this section are secondary deposits and are gathered in stream channels by water action either hydrothermal or erosional.

Paragraph 6.

(B) Labor. To clarify: The "9 individuals" should read "8 individuals" @ $2.50 per day each, or $20.00 per day for 360 days. This gives a total food cost of $7,200 for the year. You will note this is the same total previously given.

NOTE: Supplemental Information

Since the preparation of the original application for aid, returns have been received from a number of samples submitted for analysis.

A summary of the analysis of samples taken from three representative core holes is attached for consideration. These summaries are found in Supplemental Schedules C, D and E.

Returns from these analysis supports the opinion of the management of Mack-Lang Uranium Corporation that the claims contain large quantities of low grade uranium ore.

SUPPLEMENTAL SCHEDULE "C"

SUMMARY OF URANIUM ORE ANALYSIS
(By Mason-Farrow, Box 247, Riverton, Wyoming)

HAPPY IX GROUP

Claim No.	Hole No.	Depth	U_3O_8	Date Analyzed	Assay Number
19	5	2	.03	6/18/55	1635
19	5	4	.01	6/18/55	1634
19	5	6	.01	6/18/55	1638
19	5	8	.08	6/18/55	1636
19	5	10	.04	6/18/55	1637

SUPPLEMENTAL SCHEDULE "D"

SUMMARY OF URANIUM ORE ANALYSIS
(By Mason-Farrow, Box 247, Riverton, Wyoming)

HAPPY III GROUP

Claim No.	Hole No.	Depth	U_3O_8	Date Analyzed	Assay Number
21	16	0-2	.03	6/29/55	1688
21	16	2-4	.01	6/29/55	1689
21	16	6-8	.20	6/29/55	1690
21	16	6-8	.12	7/ 7/55	1693
21	16	8-10	.08	7/ 7/55	1691
21	16	10-12	.04	6/30/55	1692
21	16	14	.04	6/30/55	1694
21	16	16	.03	6/30/55	1695

SUPPLEMENTAL SCHEDULE "E"

SUMMARY OF URANIUM ORE ANALYSIS
(By Mason-Farrow, Box 247, Riverton, Wyoming)

HAPPY II GROUP

Claim No.	Hole No.	Depth	U_3O_8	Date Analyzed	Assay Number
33	37	2	.03	7/13/55	1763
33	37	4	.03	7/27/55	1773
33	37	8	.03	7/27/55	1780
33	37	10	.07	7/13/55	1770
33	37	12	.04	7/13/55	1768
33	37	14	.04	7/13/55	1769
33	37	16	.03	7/13/55	1765
33	37	22	.04	7/13/55	1775
33	37	24	.21	7/13/55	1762
33	37	26	.03	7/13/55	1776
33	37	28	.04	7/13/55	1766
33	37	32	.02	7/13/55	1774
33	37	34	.02	7/13/55	1771 (re-run)
33	37	36	.03	7/13/55	1767
33	37	38	.02	7/13/55	1761
33	37	40	.25	7/13/55	1779
33	37	42	.02	7/13/55	1764

Form No. 0-7
9/54 (1M)

COLORADO PLATEAU URANIUM ORE PROJECT
American Smelting and Refining Company
Ore Purchasing Agent for
U. S. Atomic Energy Commission
P. O. Box 986
Grand Junction, Colorado

Martin N. Gaines
Manager

July 26, 1955

Mack - Long Uranium Corporation
Lander, Wyoming

REPORT OF ASSAY RESULTS

LOT NO.	SCALE TICKET NO.	CLAIM	U_3O_8	V_2O_5	$CaCO_3$	CU
224	784	Happy #19	0.05	0.07	1.8	

We regret to advise that the U_3O_8 is below the 0.10 percent minimum allowed under the U. S. Atomic Energy Commission schedule and cannot be paid for.

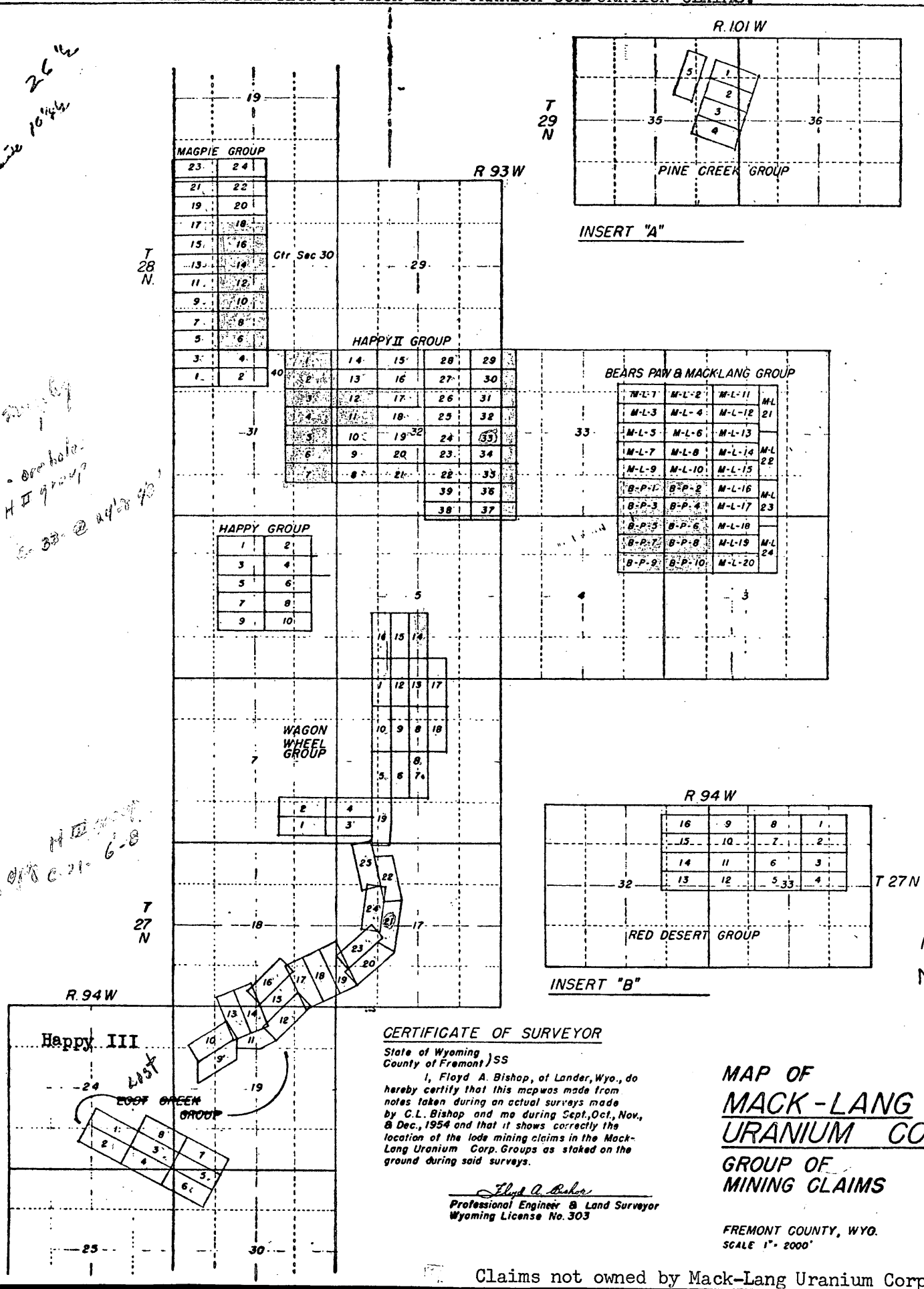
Yours very truly,

H. C. Jackson
Office Manager

Mack-Lang Uranium Corporation
340 Lincoln St[illegible]t, Lander, Wyoming

SCHEDULE "A"

LEGAL DESCRIPTION OF MACK-LANG URANIUM CORPORATION CLAIMS.



CERTIFICATE OF SURVEYOR

State of Wyoming
County of Fremont) SS

I, Floyd A. Bishop, of Lander, Wyo., do hereby certify that this map was made from notes taken during an actual surveys made by C.L. Bishop and me during Sept., Oct., Nov., & Dec., 1954 and that it shows correctly the location of the lode mining claims in the Mack-Lang Uranium Corp. Groups as staked on the ground during said surveys.

Floyd A. Bishop
Professional Engineer & Land Surveyor
Wyoming License No. 303

MAP OF
MACK-LANG
URANIUM CORP.
GROUP OF
MINING CLAIMS

FREMONT COUNTY, WYO.
SCALE 1" = 2000'

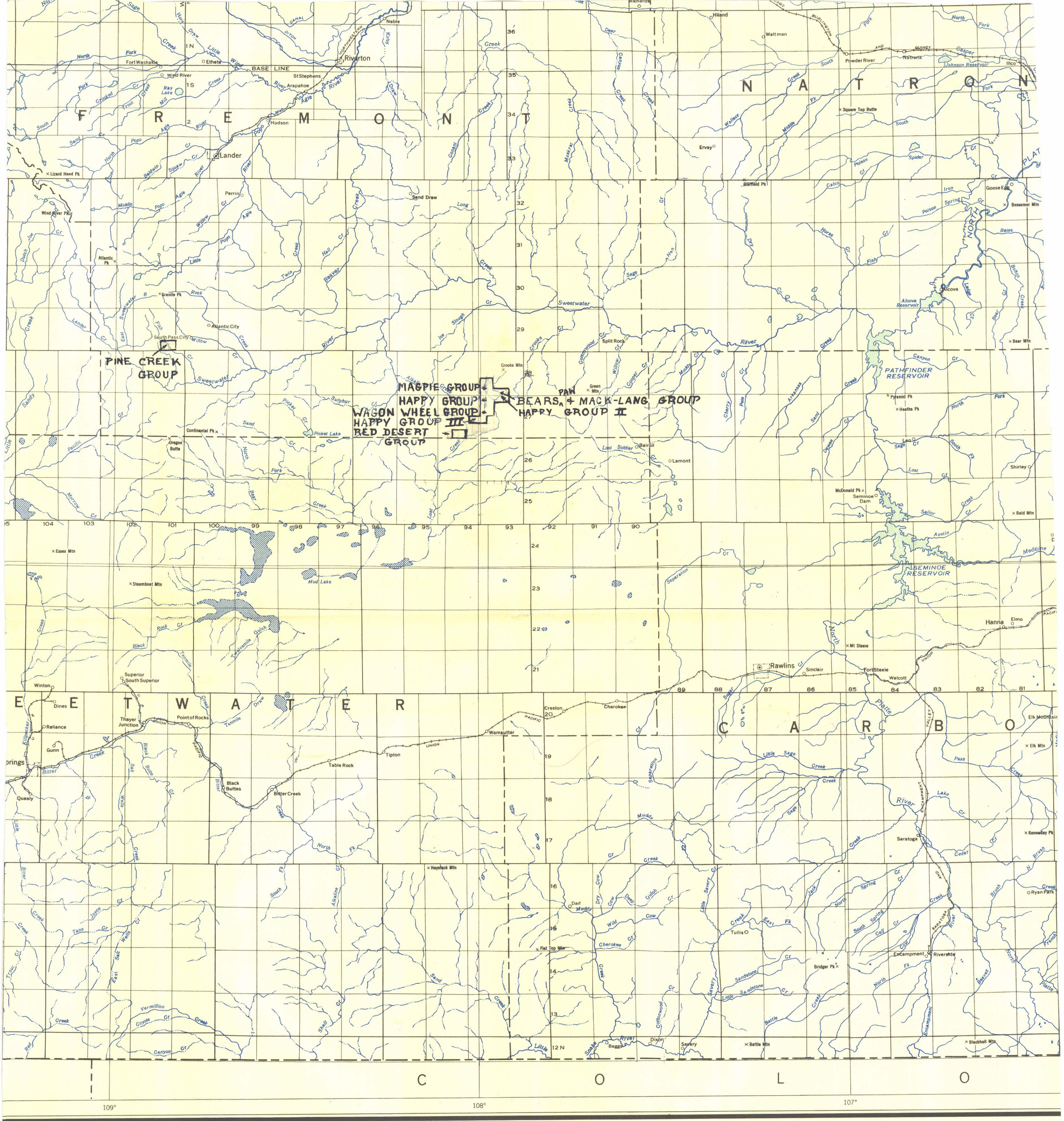
Claims not owned by Mack-Lang Uranium Corp.

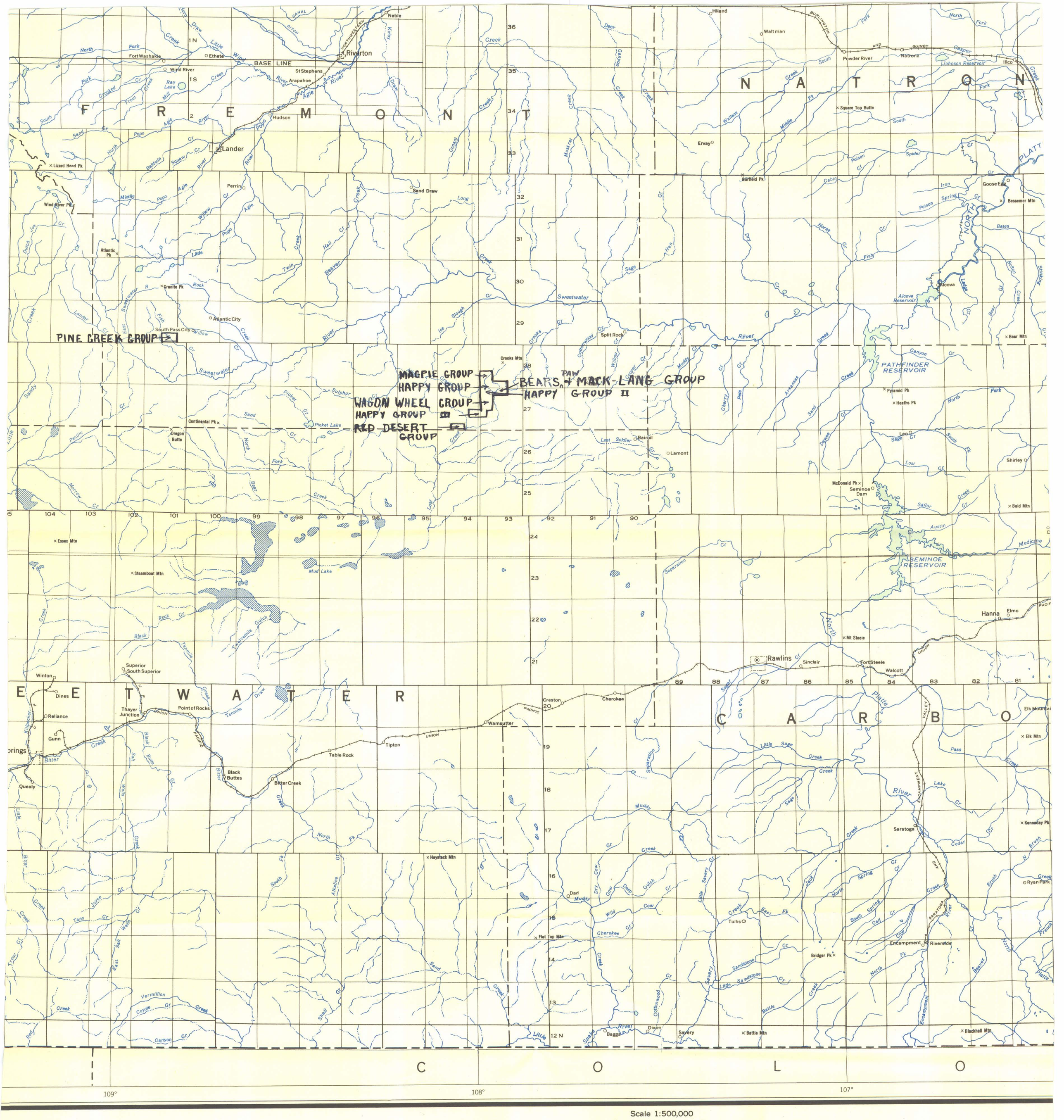
ELECTROTECHNICAL LABORATORY
NORRIS, TENNESSEE

OFFICIAL BUSINESS

Mr. Jay L.Chambers
Defense Minerals Exploration Administration
Interior Building
Washington 25, D. C.

KNOXVILLE, TENN.
AG 16 8 PM


F R E M O N T
N A T R O N
E E T W A T E R
C A R B O
C O L O
PINE CREEK GROUP
MAGPIE GROUP
HAPPY GROUP
WAGON WHEEL GROUP
HAPPY GROUP III
RED DESERT GROUP
BEARS PAW + MACK-LANG GROUP
HAPPY GROUP II
Riverton
Lander
Hudson
Ethete
Fort Washakie
Arapahoe
St Stephens
Hiland
Waltman
Powder River
Natrona
Illco
Ervay
Square Top Butte
Goose Egg
Bessemer Mtn
Alcova
Alcova Reservoir
PATHFINDER RESERVOIR
SEMINOE RESERVOIR
Rawlins
Sinclair
Fort Steele
Walcott
Hanna
Elmo
Winton
Superior
South Superior
Dines
Reliance
Gunn
Quealy
Thayer Junction
Point of Rocks
Black Buttes
Bitter Creek
Table Rock
Tipton
Wamsutter
Creston
Cherokee
Saratoga
Encampment
Riverside
Ryan Park
Tullis
Dixon
Savery
Dad
Lamont
Bairoil
Lander
Atlantic City
South Pass City
Perrin
Sand Draw
Split Rock
Lizard Head Pk
Wind River Pk
Atlantic Pk
Granite Pk
Continental Pk
Oregon Butte
Picket Lake
Crooks Mtn
Green Mtn
Pyramid Pk
Heaths Pk
McDonald Pk
Bald Mtn
Essex Mtn
Steamboat Mtn
Mud Lake
Haystack Mtn
Flat Top Mtn
Bear Mtn
Elk Mtn
Kennaday Pk
Mt Steele
Bridger Pk
Battle Mtn
Blackhall Mtn
Garfield Pk
Sweetwater River
Popo Agie River
Little Wind River
Bitter Creek
Little Snake River
Platte River
Encampment River
Saratoga River
Medicine Bow River
Little Sage Creek
Muddy Creek
Savery Creek
Separation Creek
Sand Draw
Long Draw
Deer Creek
Beaver Creek
Muskrat Creek
Conant Creek
Wind River Indian Reservation
Scale 1:500,000
Approximately 1 inch equals 8 miles
Miles
Kilometers
Lambert conformal conic projection
Standard parallels 33° and 45°
109°
108°
107°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C A R B O
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